USDA NRCS Natural Resources Conservation Service

Comprehensive Nutrient Management Plan

For:

WIN Production
Route 1 Box 3
New Salem, IL 62357
PROJECT #: 238-05038A

Prepared in Cooperation with the:
USDA – Natural Resources Conservation Service
And
Soil and Water Conservation District

WINCHESTER SERVICE CENTER
656 North Main
Winchester, Illinois 62694
(217) 742-3369

LICENSED PROFESSIONAL ENGINEER
TERRY L. FELDMANN
0062-052169
STATE OF ILLINOIS
Exp. 11/30/07

Approved Conservation Planner and Certified CNMP Specialist

As an Approved Conservation Planner, I certify that I have reviewed this CNMP for technical adequacy and that the elements of the CNMP are technically compatible, reasonable and implementable.

MANURE AND WASTEWATER HANDLING AND STORAGE
Signature Terry L. Feldmann Date: 2/15/06
Name & Title: TERRY L. FELDMANN, PE TSP # 301179

LAND TREATMENT PRACTICES
Signature Jim E. McQuilkin Date: 2/15/06
Name & Title: JIM E. McQUILKIN, CCA TSP # 05-5164

NUTRIENT MANAGEMENT PLAN
Signature Jim E. McQuilkin Date: 2/15/06
Name & Title: JIM E. McQUILKIN, CCA TSP # 05-5164

Owner/Operator

As the owner/operator of this CNMP, I certify that I, as the decision maker, have been involved in the planning process and agree the items/practices listed in each element are needed. I understand that I am responsible for keeping all the necessary records associated with the implementation of this CNMP. It is my intent to implement/accomplish this CNMP in a timely manner as described in the plan.

Signature: _____ Date: _____

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SECTION 1
CNMP Purpose and Conditions

Purpose of the Comprehensive Nutrient Management Plan (CNMP)

The Comprehensive Nutrient Management Plan (CNMP) is a conservation system for your animal feeding operation. It is designed to address, at a minimum, the soil erosion and water quality concerns on your operation. The following soil erosion and water quality concerns have been identified on your farm:

Soil Erosion Concerns	Water Quality Concerns	Other Concerns Addressed
Sheet and Rill Erosion	Mortality Disposal	Acres Available for Manure Application
	Manure Storage Capacity	Maximize Nutrient Utilization
		Animal Drinking Water QTY
		Profitability
		Regulations
		Time Available for Manure Application

Manure and Nutrient Management is managing the source, rate, form, timing, placement and utilization of manure, other organic by-products, bio-solids, and other nutrients in the soil and residues. The goal is to effectively and efficiently use the nutrient resources to adequately supply soils and plants to produce food, forage, fiber, and cover while minimizing the transport of nutrients to ground and surface water and environmental degradation.

Nitrogen and Phosphorus vs. Water Quality

Nitrogen and Phosphorus are two nutrients that have the potential to impair the quality of our groundwater and surface water. Nitrogen leaching out the root zone may enter a tile and be transported to surface water or it may leach to the groundwater. The EPA Drinking Water Maximum Contaminant Level (MCL) for Nitrates is 10 mg/L. Phosphorus leachate, or runoff entering the surface water may contribute to excessive algae growth, which may cause low oxygen levels in surface water. This in turn may impair aquatic life. This manure and nutrient management plan will help to protect the groundwater and surface water.

Conditions:

The State of Illinois has several regulations which apply to your facility including but not limited to the Livestock Management Facilities Act 510 ILCS 77/1, the Illinois Environmental Protection Act 415 ILCS 5/27, and the Illinois Dead Animal Disposal Act 225 ILCS 610 and 415 ILCS 5/1. Your CNMP provides the basic information on how the wastes produced from your operation, and/or applied on your fields, will be utilized. Following your CNMP will help keep you in compliance with the State of Illinois Pollution Abatement Regulations.

Note: If the number of livestock change (10% or more), your fields change, your rotation changes, the method of storage changes, or if the method of application needs to change contact the plan developer to get this plan revised.

Utilization of Excess Manure: If wastes will be utilized on land not controlled by you an agreement shall be signed by the individual, broker, or group accepting the waste stating: THE ANIMAL WASTE WILL BE APPLIED TO LAND TO MEET THE MINIMUM "NRCS FIELD OFFICE TECHNICAL GUIDE" STANDARDS FOR WASTE UTILIZATION (633) AND NUTRIENT MANAGEMENT (590); OR HAVE A "NUTRIENT MANAGEMENT PLAN" (NMP) DEVELOPED ON THEIR LAND WITH NRCS OR APPROVED 3RD PARTY ASSISTANCE.

SECTION 2
Farm Overview
(Site plan, Plat maps, Topo maps)

Land Base

Most of the sites are occupied by buildings, driveways, grain storage, and associated grassed areas (lawn-landscape). All of the application fields are with an agreement with area landowner and operators.

All fields have been identified as reasonably close to the site (<5 miles). These fields are rated to have high phosphorus supplying power. Fields are planned to receive manure at a rate of no or minimal buildup, applying at P crop removal rates. The LMFA and NRCS standard 590/633 allow a buildup of up to 300 lb/acre of P1, it is not desirable to reach this level.

Most of the land application fields are in the river bottoms and relatively flat to gently rolling.

Livestock Management Facilities Act Waste Application Provisions

- Waste applied within 1320' (1/4 mile) of any residence not owned by the facility shall be injected or incorporated on the day of application.
- Waste shall not be applied within:
    1. 200' of surface water unless the water is up-gradient or there is adequate diking to prevent runoff, and
    2. 150' of a potable water supply well.
- Waste shall not be applied in a 10-year flood plain unless the injection or incorporation method of application is used.
- Livestock waste shall not be applied in waterways.
- Waste that is spread on frozen or snow-covered land shall be limited to areas which:
    1. Land slope is 5% or less, or
    2. Adequate erosion control practices exist
- The certified livestock manager shall inspect all berm tops, exterior sides, non-submerged interior sides for evidence of erosion, burrowing animal activity, and other indications of berm degradation at least every two weeks and keep an inspection log.
- Livestock waste shall not be applied during a rainfall or to saturated soil and conservative application rates shall be used in the case of a high water table or shallow earth cover to fractured bedrock. Caution shall be exercised in applying livestock waste, particularly on porous soils, so as not to cause nitrate or bacteria contamination of the groundwater.

{attached any *easements associated with the plan*}

SECTION 3
Emergency Response Plan

In Case of an Emergency Storage Facility Spill, Leak, or Failure:

Implement the following first containment steps and where containment material is located:

a. Stop all other activities to address the spill.
b. Use skid loader or tractor with blade to contain or divert spill or leak, if possible.
c. Call for help & excavator if needed.
d. Pump waste back in lagoon or into tank and land application.
e. Complete the clean-up and repair the necessary components.
f. Assess the extent of the emergency and determine how much help is needed.

In Case of an Emergency Land Application Manure/Waste Discharge

Implement the following first containment steps and where containment material is located:

a. Stop all other activities to deal with the emergency.
b. Call for help if needed.
c. Contain the spill or runoff from entering the stream or waterway using straw bales, saw dust, or soil material.
d. Assess the extent of the emergency and determine how much help is needed.
e. Properly land apply.

1. Emergency Contacts:

Department / Agency	Phone
Pike County Sheriff	911 or 217-285-4471
Fire Department	911 or 217-833-2341
Ambulance & Rescue	911
Electric Company – REA	800-468-4732 or 217-742-3128
Natural Gas Company – Ameren CIPS	888-789-2477
Propane Company –	
Electrician – B-K Electric	217-833-2488
Rendering Company	815-232-7917 or 800-892-5177
Emergency Response Contacts:	
1st Brian Bradshaw	Home 217-833-2194 Office 217-285-1317 Cell 217-248-2194
2nd Brian Bradshaw	217-248-1318

2. Available equipment/supplies for responding to emergency:

Equipment Type	Contact Person	Phone Number
Backhoe, bulldozer, dump trucks, scraper	Brian Bradshaw Eric Bradshaw	Home 217-833-2194 Office 217-285-1317 Cell 217-248-2194

3. Contacts to be made by farm's Owner or Operator as Soon As Possible within 24 hours:

Organization	Phone
Natural Resources Conservation Service Pike co,	217-285-5448
Health Department Office –Pike Co.	217-285-4407
Illinois Emergency Management Agency (IEMA)	1-800-782-7860 217-782-7860
Illinois EPA	217-782-3397
Illinois Department of Agriculture	217-785-2427
Maurer Stutz, Inc. – Engineers (Terry Feldmann or Carrie Tengman)	309-693-7615

Provide the following information:

a. Your Name
b. Farm Identification and directions from nearest town

c. Description of emergency
d. Estimate of the amounts, area covered, and distance traveled.
e. Has manure reached surface waters or major field drains?
f. Is there any obvious damage: employee injury, fish kill, or property damage?
g. What is currently in progress to contain situation?

4. Additional containment measures, corrective measures, or property restoration measures.

SECTION 4
Manure and Wastewater Handling and Storage Component

Existing Facility Description

The existing facility is a five building, swine, farrow to wean operation. It consists of one gestation and breeding building, two farrowing buildings of which one has a small nursery room, and two gilt developer barns. All of the existing buildings have a 2'-deep shallow below building concrete pits which flow to a precast concrete lift station via gravity pvc manure transfer pipes. The lift station pumps manure and wastewater into the four existing earthen holding ponds which are connected by pvc piping. Mortalities are currently composted in a concrete composter that is slightly smaller than needed.

Proposed System Summary

Manure Transfer/Waste Storage Facility/Critical Area Planting (634/313/342)

The facility proposes to expand by adding an additional gestation building with a 6' deep below building pit which will provide 12 months of storage for the sows in this barn plus some additional capacity as needed for other buildings. Outside dimensions will be 77ft wide by 533'-4" long with a 6ft deep manure storage pit. The building will require approximately 778cy of flatwork concrete, 275cy of formwork concrete, 496cy of precast concrete. The pit floor will be 5 inches thick and the exterior walls will be 8 inches thick. There will be 44 - 14" round columns on 9 inch thick footings. There will be 44 - 8" x 10" x 12ft long precast concrete beams throughout the building.
As shown in the attached calculations, the pit will store manure 210,410 cft of manure.
Excavation for the structure will be approximately 13,300cy.
Vegetation will be established for the 1.0 acres of land disturbed around the proposed building and the proposed composter addition.
The farrowing building is also planned to expand by attaching another building to the existing one. Manure from this building will be collected in a 2' deep shallow pit, pull-plug, recharge system. A gravity sewer will connect to the existing sewer and flow to the lift station for storage in the existing earthen holding ponds. Manure could also be pumped to the new gestation building pit. The overall site will have a storage capacity of approximately 9-10 months.

Manure and wastewater production was calculated using the attached spreadsheets and was used to prepare reports for this operation and are included at the end of this section.

Subsurface Drain/Underground Outlet/Pipeline (606/620/516)

The seasonal high water table will require a subsurface drainage tile to control buoyant forces on the concrete pit. Therefore, approximately 1550ft of subsurface drain tile will be installed around the proposed building prior to construction.
To supply additional drinking water for the animals, 7,920 feet of 2.5" diameter PVC pipeline is planned to connect the site to an existing well located down the bluff. Sharing the same installation and length, an 8" diameter PVC manure transfer pipeline is planned from the facility to the application fields down the bluff. A new offsite manure transfer

pump is proposed. Additionally, 560ft of 1.25" diameter PE waterline and 2 hydrants will supply the composter.

Composting Facility/Heavy Use Area Protection/Access Road (317/561/560)

An expansion composting facility will also be added to the operation. This composting facility will consist of an additional thirty-one (31) bins that are 16' x 10 each with 4.0ft high walls. The addition will require 71cy of formed concrete and 110cy of flatwork concrete. The floor will be 5 inches thick. A 6,570sqft roof structure is also proposed for the facility. The heavy use area will include the area 18ft in front of the proposed composter addition. This area will use about 5148tons of aggregate. An access road approximately 1270ft long is proposed from the existing access road and will connect to the heavy use area in front of the composter and to an area near the new gestation barn.

The following pages list proposed practices, and operation and maintenance procedures that should be adhered to for this facility.

Any changes in animal numbers, average weights, or manure storages will require this plan to be updated. Call Maurer-Stutz, Inc. at (309)693-7615

Manure and Wastewater Storage and Handling - Record Keeping (See Record Keeping – Appendix D)

{*Insert permitting documents if applicable*}

Concept Plan Practices

Planned Practices	Quantity	Year of Installation
Subsurface Drain (606)		
A conduit, such as corrugated plastic tubing, tile, or pipe, installed beneath the ground surface to collect and/or convey drainage water.		
Perimeter Drainage Tile		
— Regulates water table and ground water flows.	1550 ft	2006
Manure Transfer (634)		
A manure conveyance system using structures, conduits, or equipment to transfer animal manure and other associated residues to a manure storage facility or for final utilization.		
— Agitator Pump	1each	2006
— 8” SDR forcemain	7920 ft	2006
— 8” gravity from farrowing.	380 ft	2006
— Bedding and haunching	130 ton	2006
Critical Area Planting (620)		
Establishing permanent vegetation on sites that have or are expected to have high erosion rates.		
Vegetation around proposed building		
— around building and composter for vegetation re-establishment.	1.0ac	2006
— mulching	1.0ac	2006
Waste Storage Facility (313)		
A waste storage impoundment made by constructing an embankment and/or excavating a pit or dugout, or by fabricating a structure.		
Excavation		
— Pit under building	14,800cyd	2006
Reinforced Concrete		
— Flatwork	778 cyd	2006
— Formwork	370 cyd	2006
— Precast	496 cyd	2006
Composting Facility (317)		
A treatment component of an agricultural management system for the biological stabilization of organic material to reduce the pollution potential of organic agricultural wastes to surface and ground water.		
Reinforced Concrete		
— Flatwork	110 cyd	2006
— Formwork	71 cyd	2006
Roof Structure	6570 sqft	2006

Heavy Use Area Protection (561) The stabilization of areas frequently and intensively used by people, animals or vehicles by establishing vegetative cover, by surfacing with suitable materials, and/or by installing needed structures.		
Aggregate		
— Drive area in front of composter.	148 ton	2006
Pipeline (516) Pipeline having an inside diameter of 8 inches or less used to convey water from a source of supply to points of use for livestock, wildlife, or recreation.		
Waterline to site		
— 2.5"PVC from well to site	7920ft	2006
— Freeze proof hydrant	1 each	2006
— 1.25" PE pipeline to composter	560ft	2006
Trenching		
— Earthwork to install waterlines	8480 ft	2006
Access Road (560) A travel-way for equipment and vehicles constructed as part of a conservation plan.		
One-way traffic to composter and deep pit	1270 ft	2006
Waste Utilization (633) Manure use on land in an environmentally acceptable manner while maintaining or improving soil, air, water, and plant resources.		
Waste Utilization Incentive		
— Annual use for manure application	400 ac	2006

Facility Management Plan

Operation and Maintenance

Manure Transfer (634)

For a liquid transfer system, manure is considered “too dry” or “frozen” when the material can be stacked or will not visibly flow as a slurry or liquid.

<u>To prevent plugging in pipe transfer systems:</u>

- Dry, dense “clumps” of manure/ bedding or frozen manure shall not be placed in reception pit/pipe. Frozen manure shall be allowed to thaw before placing in the transfer pipe. Water shall be added to dry material. Care shall be given to avoid foreign objects such as wood, concrete or metal entering the system.
- Changes made in the type of bedding materials originally proposed for the system may result in plugging or blockage of the transfer system. A change to sand bedding will almost certainly cause a sand buildup at the outlet and plug the transfer pipe. Please contact the NRCS/SWCD office for planning assistance if you are considering a switch to sand bedding in a system not initially designed for sand.

<u>Each time the system is emptied, the following shall be checked:</u>

- Condition of the reception box. Look for deterioration of the box material. Examine the connection area of the box and transfer pipe. If an additional pipe enters the box (milkhouse line), check for any blockages.
- Condition of the transfer pipe. Look for low areas or blowholes over the pipe for signs of pipe joint problems.

Critical Area Planting (620)

Use of the area shall be managed as long as necessary to stabilize the site and achieve the intended purpose. Control or exclude pests that will interfere with the timely establishment of vegetation.

Waste Storage Facility (313)

- The outside above ground portions of the pits shall be periodically checked for concrete deterioration and cracks. Cracks that open up less than 0.1 inch should be monitored and can be filled with elastomeric joint sealant. A structural engineer should investigate cracks that open further or begin to move laterally.
- Monitor the manure elevation in the pit at least weekly with a flashlight. Immediately investigate any unexpected level changes. Manure level decreases indicate pit leakage. Manure level increases could indicate ground or surface water inflow, or excessive waterer leaks
- Keep pumping ports covered when not in use to prevent accidental or unauthorized access.
- All portals and pumping openings shall be covered and locked to keep animals and humans from entering the pit.
- Maintain at least 1 foot of clearance between the manure level and bottom of slats to maintain pit ventilation and prevent overflow of manure
- Keep out any foreign materials that cannot be pumped or agitated.
- Minimize the amount of waste feed entering the manure pit

• Do not allow hypodermic needles, medicine packaging, veterinarian supplies, etc. to drop through slats into storage. • Pits should be thoroughly agitated before and during pumping to prevent solids buildup and to provide a consistent product for land application. Solids buildup should be limited to 6 inches or less. • When possible agitate manure only when animals are not present; if **Composting Facility (317)** • Manage the compost piles for temperature, odors, moisture, and oxygen, as appropriate. Make adjustments throughout the composting period to insure proper composting processes. • Closely monitor temperatures above 165 ^{o}F. Take action immediately to cool piles that have reached temperatures above 185 ^{o}F. • Do not allow the operation of any equipment that exceeds the design limit on or within twenty feet of the structure. • Do not allow human entry into any enclosed structure without safety equipment, that includes ladders and breathing apparatus • Maintain all electrical and mechanic equipment in good operating condition by following the manufacturer's recommendations. • Maintain grounding rods and wiring for all electrical equipment in good condition. • All fences, railings, and/or warning signs shall be maintained to provide warning and/or prevent unauthorized human or livestock entry. • Immediately repair any vandalism, vehicular or livestock damage to the structure, earthen areas surrounding the structure, or any appurtenances. **Pipeline (516)** • Protecting pipeline from damage by farm equipment, vehicles, and livestock. • Checking for leaks and improper operation. • Repair any damage as soon as possible. • Repairing any eroded areas that are hazardous to the pipeline. Reestablish vegetative cover immediately where erosion has occurred. • Marking pipeline locations in areas where potential damage could occur by other activities. • Recording on a map the location of pipeline and approximate depth. • Checking to ensure needed volume of water is being supplied at the designed pressure. • Opening/closing valves to prevent excessive water hammer		

• Inspecting quick connects to ensure proper operation and adequate designed delivery rate. • Inspecting and testing valves, pressure regulators, pumps, switches and other appurtenances. • Checking for debris, minerals, algae and other materials that may restrict system flow; and draining and/or providing for cold weather • operation of the system. **Composting** • Do not allow the operation of any equipment that exceeds the design limit on or within twenty feet of the structure. • Do not allow human entry into any enclosed structure without safety equipment, that includes ladders and breathing apparatus • Maintain all electrical and mechanic equipment in good operating condition by following the manufacturer's recommendations. • Maintain grounding rods and wiring for all electrical equipment in good condition. • All fences, railings, and/or warning signs shall be maintained to provide warning and/or prevent unauthorized human or livestock entry. • Immediately repair any vandalism, vehicular or livestock damage to the structure, earthen areas surrounding the structure, or any appurtenances.		

Mortality Management:

On Farm Composting – mortalities will be composted on the farm in an existing building that has been expanded to accommodate the additional animals.
Mortality Composting will be managed in accordance with 8 Illinois Administrative Code CH.I, '90 Subchapter b, Section e – "Disposal of swine by composting"

Manure and Wastewater Storage and Handling - Record Keeping (See Record Keeping – Appendix D)

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

PROJECT: WIN Finishers
PROJECT NO.: 238-05038A
COMPUTATION BY: BAC DATE: 3/14/06 SH. NO.: 1
CHECKED BY: DATE: OF: 1

Subject: Animal Waste Produced

		Animal Data												
			Actual		ASAE D384.2		NRCS		VS		TS		AU
				Weight	Manure	Weight	Manure	Manure					
		Animals	Quantity	lbs	cf/d-a	lbs	cf/d/AU	CF/day	lbs/d/AU	lbs/day	lbs/d/AU	lbs/day	
	1	Lact. Sow	440	450	0.41	423	0.97	191.9	5.40	1069.2	6.00	1188.0	198.0
	2	Gest. Sow	2184	400	0.18	440	0.41	357.4	2.13	1860.8	2.50	2184.0	873.6
	3	Gilt	750	350	0.21	200	1.05	275.6	2.92	766.5	3.28	861.0	262.5
Proposed	4	Gest. Sow	2650	400	0.18	440	0.41	433.6	2.13	2257.8	2.50	2650.0	1060.0
Proposed	5	Lact. Sow	540	450	0.41	423	0.97	235.5	5.40	1312.2	6.00	1458.0	243.0
	6	Nursery	50	12	0.04	27.5	1.40	0.8	8.80	5.3	10.60	6.4	0.6
	7				0.00	0	0.00	0.0	0.00	0.0	0.00	0.0	0.0
	8				0.00	0	0.00	0.0	0.00	0.0	0.00	0.0	0.0
	9				0.00	0	0.00	0.0	0.00	0.0	0.00	0.0	0.0
		Total	6614					1495		7272		8347	2638

Rainfall Data	
Location	Pike, Illinois
Precip for storage period	37.2 in
Annual Lake Evap	36.5 in
% Evap for storage period	100%
1 Yr 24 Hr Strom Event	2.6 in
10 Yr 1 Hr Strom Event	
25 Yr 24 Hr Strom Event	5.6 in
Storage Period	12.0 Months
VS Loading Rate	3.72 lb/d*1000 CF
ODOR Loading Rate	2.27 lb/d*1000 CF

Location Data

Animals	Holding Pond				Covered Stack					Uncovered Stack					Rect. Tank						Circular Tank		Pasture		Settling Basin	
	P1	P2	P3	P4	CS 1	CS 2	CS 3	CS 4	CS5	UCS1	UCS2	UCS 3	UCS 4	UCS 5	RT1	RT2	RT3	RT4	RT5	RT 6	CT 1	CT 2	Pas 1	Pas 2	Basin 1	Basin 2
1: Lact. Sow	35.00%	20.00%	7.0%	6.00%											22%	10%										
2: Gest. Sow	28.00%	9.00%	5.00%	6.00%														52%								
3: Gilt	31.00%	20.00%	7.00%	7.00%															18%	17%						
4: Gest. Sow																			100%							
5: Lact. Sow	41%	20%	5%	4%													30%									
6: Nursery	35%	20%	7%	5%												33%										
Lagoon treat																										
Runoff	0%	0%	0%	0%																						
25Y Runoff	0.0%	0%	0%	0%																						

*Values calculated above are based on data from the Livestock Waste Facilities Handbook

MAURER STUTZ, INC.
ENGINEERS SURVEYORS

PROJECT: WIN Finishers
PROJECT NO.: 238-05038A
COMPUTATION BY: BAC DATE: 3/14/06 SH. NO.: 1
CHECKED BY: DATE: OF: 1

Subject: Animal Waste Produced

Additions Data							
			Bedding				
Animals	Wash Gal/day	Flush Gal/day	Type	Rate lbs/d/AU	Amount lbs/day	Density lb/CF	Amount CF/day
1: Lact. Sow*	787				0	0	0.00
2: Gest. Sow*	82				0	0	0.00
3: Gilt*	38				0	0	0.00
4: Gest. Sow*	83				0	0	0.00
5: Lact. Sow*	738				0	0	0.00
6: Nursery*					0	0	0.00
*					0	0	0.00
*					0	0	0.00
*					0	0	0.00
**							0.00
**	0						0.00
**							0.00
**							0.00
**							0.00
**							0.00
Lagoon treat**	0						0.00
Total					0		0.00

*Values calculated above are based on data from the Livestock Waste Facilities Handbook

S:\238\2005 project numbers\23805038 (WIN Production)\CNMP\AG Calcs\WIN Production AWM V.9.3 (with 8ft pit)

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

PROJECT: WIN Finishers
PROJECT NO.: 238-05038A
COMPUTATION BY: BAC DATE: 3/14/06 SH. NO.: 1
CHECKED BY: DATE: OF: 1

Subject: Runoff Calculations

Normal Runoff

Area = 0 Area = 0 Area = 0

	Concrete (CN=97)				Earth (CN=90)				Roof (CN=100)			
	Months	R	P	Total CF	Months	R	P	Total CF	Months	R	P	Total CF
X	JAN		1.74	0	JAN	15	1.74	0	JAN	100	1.74	0
X	FEB		1.76	0	FEB	10	1.76	0	FEB	100	1.76	0
X	MAR		3.18	0	MAR	16	3.18	0	MAR	100	3.18	0
X	APR		3.91	0	April	22	3.91	0	April	100	3.91	0
X	May		4.11	0	May	22	4.11	0	May	100	4.11	0
X	June		3.3	0	June	27	3.3	0	June	100	3.3	0
X	July		4.07	0	July	30	4.07	0	July	100	4.07	0
X	AUG		3.03	0	AUG	27	3.03	0	AUG	100	3.03	0
X	SEPT		3.22	0	SEPT	30	3.22	0	SEPT	100	3.22	0
X	OCT		2.85	0	OCT	26	2.85	0	OCT	100	2.85	0
X	NOV		3.4	0	NOV	20	3.4	0	NOV	100	3.4	0
X	DEC		2.6	0	DEC	15	2.6	0	DEC	100	2.6	0
	Total		37.2	0	Total			0	Total			0

Net Normal Ruoff = 0 CF

25 YR - 24HR Storm Event

Concrete (CN=97)			Earth (CN=90)			Roof (CN=100)		
CN	97		CN	90		CN	100	
S	0.31	in	S	1.11	in	S	0.00	in
I	5.57	in	I	5.57	in	I	5.57	in
Q	5.22	in	Q	4.43	in	Q	5.57	in
Vol	0.00	CF	Vol	0.00	CF	Vol	0.00	CF

Net Storm Event Runoff = 0 CF

Notes

Concrete Areas: Earthen Areas: Roofed Areas:
Assume All Roofs Guttered

NO EXTERNAL RUNOFF GOES INTO LAGOONS

MAURER & STUTZ, INC.
ENGINEERS SURVEYORS

PROJECT: WIN Finishers
PROJECT NO.: 238-05038A
COMPUTATION BY: BAC DATE: 3/14/06 SH. NO.: 1
CHECKED BY: DATE: OF: 1

Subject: Animal Waste Produced

Facility Volumes (CF/day)

	Holding Pond				Covered Stack					Uncovered Stack					Rect. Tank						Circular Tank		Pasture		Settling Basin	
Facility	P1	P2	P3	P4	CS 1	CS 2	CS 3	CS 4	CS5	UCS1	UCS2	UCS 3	UCS 4	UCS 5	RT1	RT2	RT3	RT4	RT5	RT 6	CT 1	CT 2	Pas 1	Pas 2	Basin 1	Basin 2
Manure	349.54	172.95	62.43	61.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.22	19.47	70.66	185.84	483.25	46.86	0.00	0.00	0.00	0.00	0.00	0.00
Wash	81.95	42.80	13.21	11.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.16	10.53	29.61	5.70	12.02	0.86	0.00	0.00	0.00	0.00	0.00	0.00
Flush	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bedding	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Runoff	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily Vol	431.50	215.74	75.64	72.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65.38	29.99	100.27	191.54	495.26	47.72	0.00	0.00	0.00	0.00	0.00	0.00
Annual Vol	155339	77667	27230	26277	0	0	0	0	0	0	0	0	0	0	23536	10798	36097	68955	178295	17179	0	0	0	0	0	0
Density lb/cf	0	0	0	0	50	50	50	50	50	60	60	60	60	60	0	0	0	0	0	0	0	0	0	0	0	0
Annual Tons	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual Gal	1161469	580717	203600	196474	0	0	0	0	0	0	0	0	0	0	175978	80736	269900	515576	1333113	128450	0	0	0	0	0	0
# LOADS	194	97	34	33	0	0	0	0	0	0	0	0	0	0	30	14	45	86	223	22	0	0	0	0	0	0
TIME	97	49	17	17	0	0	0	0	0	0	0	0	0	0	15	7	23	43	112	11	0	0	0	0	0	0

Facility	Manure	Wash	Flush	Bedding	Runoff	Total V
Total CF/d	1494.9	231.1	0.0	0.0	0.0	1726.0

APPLICATION INFROMATION

TYPE	SIZE	UNITS	LOAD/HR	# LOADS
LIQUID	6000	GAL	2	356
SOLID	0.1	bu	2	0

Annual Manure & Wates Water Volumes

Facility	Manure	Wash	Flush	Bedding	Runoff	Total V
Total CF	545649	84355	0	0	0	630004

Storage Volumes (CF/Period)

	Holding Pond				Covered Stack					Uncovered Stack					Rect. Tank						Circular Tank		Pasture		Settling Basin	
Storage	P1	P2	P3	P4	CS 1	CS 2	CS 3	CS 4	CS5	UCS1	UCS2	UCS 3	UCS 4	UCS 5	RT1	RT2	RT3	RT4	RT5	RT 6	CT 1	CT 2	Pas 1	Pas 2	Basin 1	Basin 2
Period (M)	12	12	12	12											12	12	12	12	12	12						
Period (D)	365	365	365	365	0	0	0	0	0	0	0	0	0	0	365	365	365	365	365	365	0	0	0	0	0	0
Required Vol																										
CF	157496	78746	27608	26642	0	0	0	0	0	0	0	0	0	0	23863	10948	36599	69913	180771	17418	0	0	0	0	0	0
GALLONS	1177600	588782	206428	199203	0	0	0	0	0	0	0	0	0	0	178422	81858	273648	522737	1351628	130234	0	0	0	0	0	0
TONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Designed Vol																										
CF	125567	64620	24080	24394	0	0	0	0	0	0	0	0	0	0	18113	8190	27135	57664	281795	17864	0	0	0	0	0	0
GALLONS	938864	483166	180048	182390	0	0	0	0	0	0	0	0	0	0	135427	61237	202888	431155	2106982	133566	0	0	0	0	0	0
TONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Extra																										
CF	(31929)	(14126)	(3528)	(2249)	0	0	0	0	0	0	0	0	0	0	(5750)	(2758)	(9464)	(12248)	101024	446	0	0	0	0	0	0
GALLONS	(238737)	(105616)	(26380)	(16813)	0	0	0	0	0	0	0	0	0	0	(42995)	(20621)	(70760)	(91581)	755353	3332	0	0	0	0	0	0
TONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Storage Volumes	Required Vol CF	Required Vol GALLONS	Designed Vol CF	Designed Vol GALLONS	Extra CF
Total	630004	4710541	649421	4855723	19417

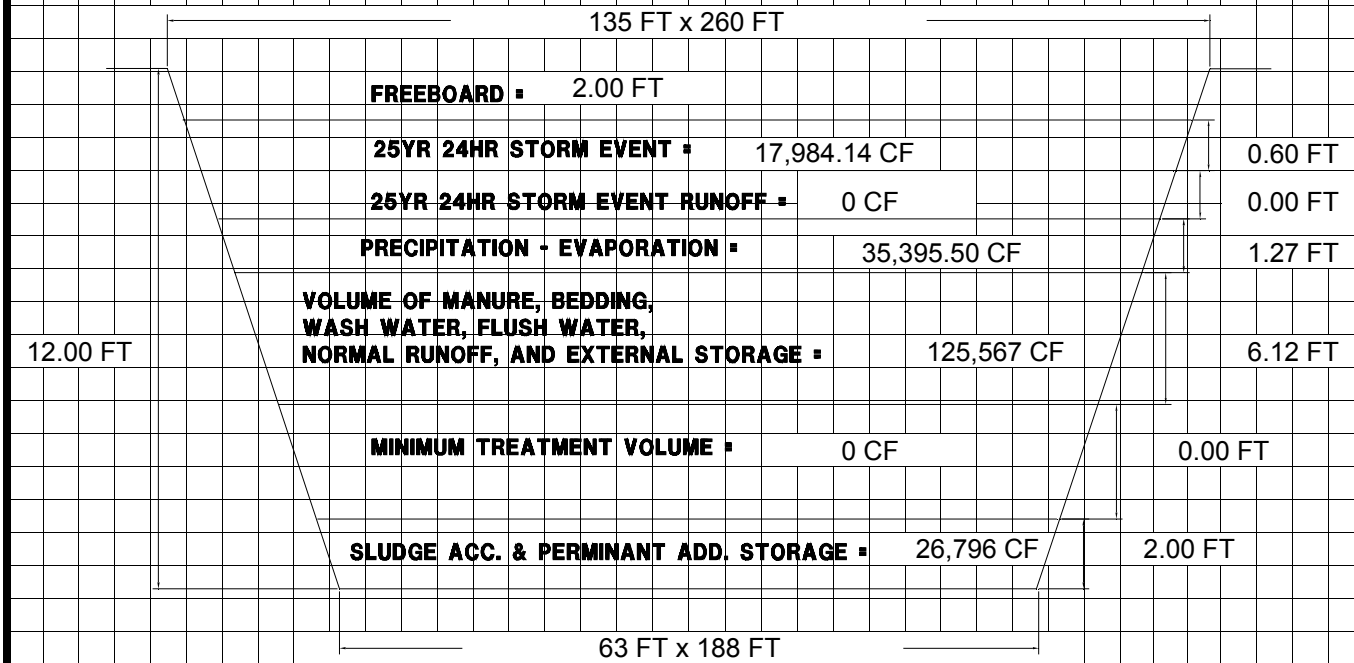
PASTURE 1 ACRES	
PASTURE 2 ACRES	

(FIGURES 0.50 IN COVER ON ENTIRE PASTURE)

MAURER STUTZ, INC.
ENGINEERS SURVEYORS

PROJECT: WIN Finishers
PROJECT NO.: 238-05038A
COMPUTATION BY: BAC DATE: 3/14/06 SH. NO.: 1
CHECKED BY: DATE: OF: 1

Subject: Holding Pond 1 Design Sheet, P1



EARTHEN STORAGE

TOTAL DEPTH	12.00 FT
FREEBOARD	2.00 FT
RESIDUAL SOLIDS	2.00 FT
MINIMUM TREATMENT	0.00 FT
PRECIP-EVAP DEPTH	1.27 FT
25 YR, 24-HR Runoff V	0 CF
25 YR, 24-HR Runoff D	0.00 FT
25 YR, 24-HR EFF	0.60 FT
WORKING DEPTH	6.12 FT

Deminsions	
BOTTOM WIDTH	63 FT
BOTTOM LENGTH	188 FT
INSIDE SLOPE	3.0 FT
TOP WIDTH	135 FT
TOP LENGTH	260 FT
START PUMPING	-
STOP PUMPING	-

25 YR, 24-HR VOL	17,984 CF	≈	0.13 MG
PRECIP-EVAP VOL	35,396 CF	≈	0.26 MG
WORKING VOLUME	125,567 CF	≈	0.94 MG
MINIMUM TREATMENT	0 CF	≈	0.00 MG
RESIDUAL SOLIDS	26,796 CF	≈	0.20 MG
TOTAL RAMP VOL	0 CF	≈	0.00 MG
FREEBOARD	62,137 CF	≈	0.46 MG
TOTAL VOLUME	271,296 CF	≈	2.03 MG

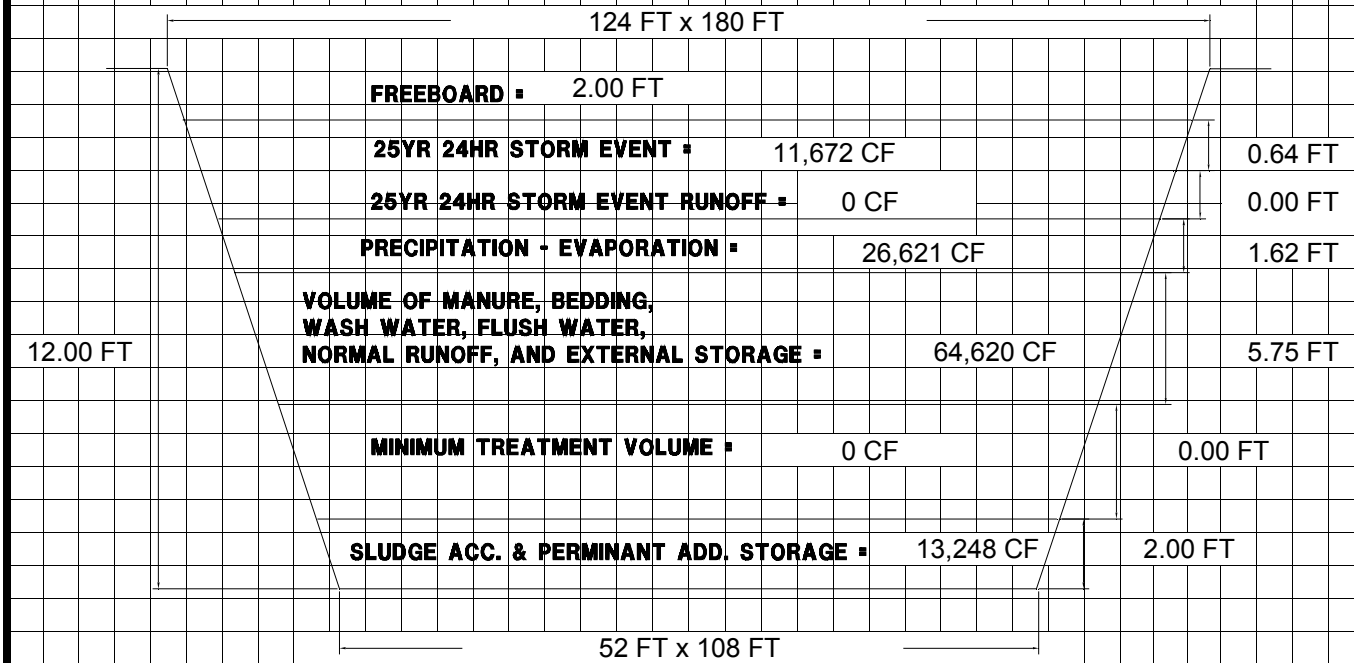
ACTUAL PRECIP	37.2 in
ACTUAL EVAP	36.5 in
25 YR, 24-HR ACT	5.6 in

CALCULATE

MAURER STUTZ, INC.
ENGINEERS SURVEYORS

PROJECT: WIN Finishers
PROJECT NO.: 238-05038A
COMPUTATION BY: BAC DATE: 3/14/06 SH. NO.: 1
CHECKED BY: DATE: OF: 1

Subject: Holding Pond 2 Design Sheet, P2



EARTHEN STORAGE

TOTAL DEPTH	12.00 FT
FREEBOARD	2.00 FT
RESIDUAL SOLIDS	2.00 FT
MINIMUM TREATMENT	0.00 FT
PRECIP-EVAP DEPTH	1.62 FT
25 YR, 24-HR Runoff V	0 CF
25 YR, 24-HR Runoff D	0.00 FT
25 YR, 24-HR EFF	0.64 FT
WORKING DEPTH	5.75 FT

Deminsions	
BOTTOM WIDTH	52 FT
BOTTOM LENGTH	108 FT
INSIDE SLOPE	3.00 FT
TOP WIDTH	124 FT
TOP LENGTH	180 FT
START PUMPING	-
STOP PUMPING	-

25 YR, 24-HR VOL	11,672 CF	≈	0.09 MG
PRECIP-EVAP VOL	26,621 CF	≈	0.20 MG
WORKING VOLUME	64,620 CF	≈	0.48 MG
MINIMUM TREATMENT	0 CF	≈	0.00 MG
RESIDUAL SOLIDS	13,248 CF	≈	0.10 MG
TOTAL RAMP VOL	0 CF	≈	0.00 MG
FREEBOARD	41,088 CF	≈	0.31 MG
TOTAL VOLUME	157,248 CF	≈	1.18 MG

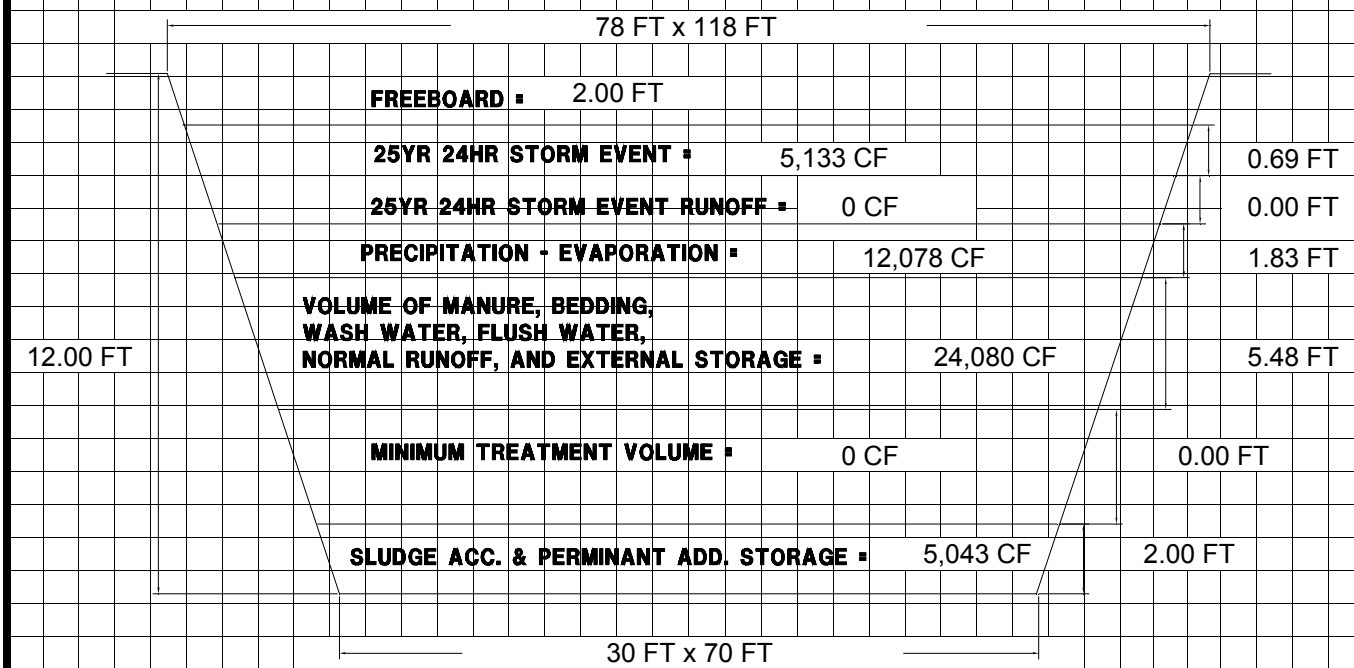
ACTUAL PRECIP	37.2 in
ACTUAL EVAP	36.5 in
25 YR, 24-HR ACT	5.6 in

CALCULATE

MAURER STUTZ, INC.
ENGINEERS SURVEYORS

PROJECT: WIN Finishers
PROJECT NO.: 238-05038A
COMPUTATION BY: BAC DATE: 3/14/06 SH. NO.: 1
CHECKED BY: DATE: OF: 1

Subject: Holding Pond 2 Design Sheet, P3



EARTHEN STORAGE

TOTAL DEPTH	12.00 FT
FREEBOARD	2.00 FT
RESIDUAL SOLIDS	2.00 FT
MINIMUM TREATMENT	0.00 FT
PRECIP-EVAP DEPTH	1.83 FT
25 YR, 24-HR Runoff V	0 CF
25 YR, 24-HR Runoff D	0.00 FT
25 YR, 24-HR EFF	0.69 FT
WORKING DEPTH	5.48 FT

Deminsions	
BOTTOM WIDTH	30 FT
BOTTOM LENGTH	70 FT
INSIDE SLOPE	2.0 FT
TOP WIDTH	78 FT
TOP LENGTH	118 FT
START PUMPING	-
STOP PUMPING	-

25 YR, 24-HR VOL	5,133 CF	≈	0.04 MG
PRECIP-EVAP VOL	12,078 CF	≈	0.09 MG
WORKING VOLUME	24,080 CF	≈	0.18 MG
MINIMUM TREATMENT	0 CF	≈	0.00 MG
RESIDUAL SOLIDS	5,043 CF	≈	0.04 MG
TOTAL RAMP VOL	0 CF	≈	0.00 MG
FREEBOARD	16,883 CF	≈	0.13 MG
TOTAL VOLUME	63,216 CF	≈	0.47 MG

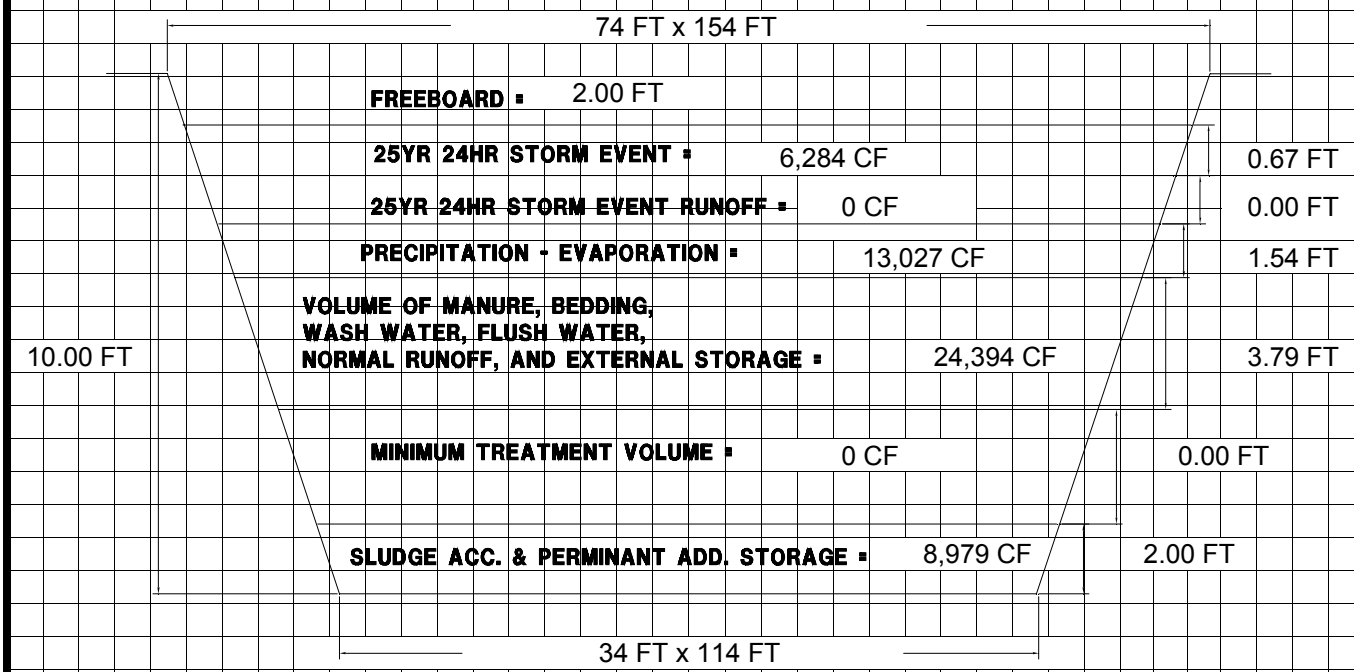
ACTUAL PRECIP	37.2 in
ACTUAL EVAP	36.5 in
25 YR, 24-HR ACT	5.6 in

CALCULATE

MAURER STUTZ, INC.
ENGINEERS SURVEYORS

PROJECT: WIN Finishers
PROJECT NO.: 238-05038A
COMPUTATION BY: BAC DATE: 3/14/06 SH. NO.: 1
CHECKED BY: DATE: OF: 1

Subject: Holding Pond 2 Design Sheet, P4



EARTHEN STORAGE

TOTAL DEPTH	10.00 FT
FREEBOARD	2.00 FT
RESIDUAL SOLIDS	2.00 FT
MINIMUM TREATMENT	0.00 FT
PRECIP-EVAP DEPTH	1.54 FT
25 YR, 24-HR Runoff V	0 CF
25 YR, 24-HR Runoff D	0.00 FT
25 YR, 24-HR EFF	0.67 FT
WORKING DEPTH	3.79 FT

Deminsions	
BOTTOM WIDTH	34 FT
BOTTOM LENGTH	114 FT
INSIDE SLOPE	2.0 FT
TOP WIDTH	74 FT
TOP LENGTH	154 FT
START PUMPING	-
STOP PUMPING	-

25 YR, 24-HR VOL	6,284 CF	≈	0.05 MG
PRECIP-EVAP VOL	13,027 CF	≈	0.10 MG
WORKING VOLUME	24,394 CF	≈	0.18 MG
MINIMUM TREATMENT	0 CF	≈	0.00 MG
RESIDUAL SOLIDS	8,979 CF	≈	0.07 MG
TOTAL RAMP VOL	0 CF	≈	0.00 MG
FREEBOARD	21,011 CF	≈	0.16 MG
TOTAL VOLUME	73,693 CF	≈	0.55 MG

ACTUAL PRECIP	37.2 in
ACTUAL EVAP	36.5 in
25 YR, 24-HR ACT	5.6 in

CALCULATE

MAURER STUTZ, INC.
ENGINEERS SURVEYORS

PROJECT: WIN Finishers
PROJECT NO.: 238-05038A
COMPUTATION BY: BAC DATE: 3/14/06 SH. NO.: 1
CHECKED BY: DATE: OF: 1

Subject: Rectangular Tank Volumes

Covered	X	Precip	

Existing Farrowing, RT1

TOTAL DEPTH		2.00
SPACE		0.00
Bottom not pumpable		0.50
25 YR, 24-HR		0.00
PRECIP-EVAP		0.00
WORKING DEPTH		1.50
Inside Width		75.00
Inside Length		161.00
25YR 24HR Runoff		0.00
Working Volume		18112.50
Total Volume		24150.00
Lid Thickness		0.00
Wall Thickness		0.00
Footing Overhang		0.00
Footing Overhang Thickness		0.00
Floor Thickness		0.00
C Y Footings		0.00
C Y Floor (to Outside of Wall)		0.00
C Y Walls		0.00
C Y Lid		0.00
CY Total		0.00
Allowance %	0%	0.0
*Concrete work walls cost Est.	0	0
*Concrete flat work cost Est.	0	0
*includes allowance for rebar, waterstop, and labor		lump sum
Excavation/backfill, perimeter tile and monitoring port		0
Total Estimated cost		$ -
Allowances %	0%	0
Grand Total Estimated Cost		$ -

Covered	X	Precip	

Existing Farrowing 2, RT2

TOTAL DEPTH		2.00
SPACE		0.00
Bottom not pumpable		0.50
25 YR, 24-HR		0.00
PRECIP-EVAP		0.00
WORKING DEPTH		1.50
Inside Width		30.00
Inside Length		182.00
25YR 24HR Runoff		0.00
Working Volume		8190
Total Volume		10920.00
Lid Thickness		0.00
Wall Thickness		0.00
Footing Overhang		0.00
Footing Overhang Thickness		0.00
Floor Thickness		0.00
C Y Footings		0.00
C Y Floor (to Outside of Wall)		0.00
C Y Walls		0.00
C Y Lid		0.00
CY Total		0.00
Allowance %	0%	0.0
*Concrete work walls cost Est.	0	0
*Concrete flat work cost Est.	0	0
*includes allowance for rebar, waterstop, and labor		lump sum
Excavation/backfill, perimeter tile and monitoring port		0
Total Estimated cost		$ -
Allowances %	0%	0
Grand Total Estimated Cost		$ -

MAURER STUTZ, INC.
ENGINEERS SURVEYORS

PROJECT: WIN Finishers
PROJECT NO.: 238-05038A
COMPUTATION BY: BAC DATE: 3/14/06 SH. NO.: 1
CHECKED BY: DATE: OF: 1

Subject: Rectangular Tank Volumes

Covered	x	Precip		Covered	x	Precip	
Proposed Farrowing, RT3				**Existing Gestation, RT4**			
TOTAL DEPTH		2.00		TOTAL DEPTH		2.00	
SPACE		0.00		SPACE		0.00	
Bottom not pumpable		0.50		Bottom not pumpable		0.50	
25 YR, 24-HR		0.00		25 YR, 24-HR		0.00	
PRECIP-EVAP		0.00		PRECIP-EVAP		0.00	
WORKING DEPTH		1.50		WORKING DEPTH		1.50	
Inside Width		90.00		Inside Width		72.17	
Inside Length		201.00		Inside Length		532.67	
25YR 24HR Runoff		0.00		25YR 24HR Runoff		0.00	
Working Volume		27135.00		Working Volume		57664	
Total Volume		36180.00		Total Volume		76885.59	
Lid Thickness		0.00		Lid Thickness		0.00	
Wall Thickness		0.00		Wall Thickness		0.00	
Footing Overhang		0.00		Footing Overhang		0.00	
Footing Overhang Thickness		0.00		Footing Overhang Thickness		0.00	
Floor Thickness		0.00		Floor Thickness		0.00	
C Y Footings		0.00		C Y Footings		0.00	
C Y Floor (to Outside of Wall)		0.00		C Y Floor (to Outside of Wall)		0.00	
C Y Walls		0.00		C Y Walls		0.00	
C Y Lid		0.00		C Y Lid		0.00	
CY Total		0.00		CY Total		0.00	
Allowance %	0%	0.0		Allowance %	0%	0.0	
*Concrete work walls cost Est.	0	0		*Concrete work walls cost Est.	0	0	
*Concrete flat work cost Est.	0	0		*Concrete flat work cost Est.	0	0	
*includes allowance for rebar, waterstop, and labor		lump sum		*includes allowance for rebar, waterstop, and labor		lump sum	
Excavation/backfill, perimeter tile and monitoring port		0		Excavation/backfill, perimeter tile and monitoring port		0	
Total Estimated cost		$ -		Total Estimated cost		$ -	
Allowances %	0%	0		Allowances %	0%	0	
Grand Total Estimated Cost		$ -		Grand Total Estimated Cost		$ -	

S:\238\2005 project numbers\23805038 (WIN Production)\CNMP\AG Calcs\WIN Production AWM V.9.0 (with 8ft pit)

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

PROJECT: WIN Finishers
PROJECT NO.: 238-05038A
COMPUTATION BY: BAC DATE: 3/14/06 SH. NO.: 1
CHECKED BY: DATE: OF: 1

Subject: Rectangular Tank Volumes

Covered	x	Precip		Covered	x	Precip	
Proposed Gestation, RT5				**Existing Gilt/Finisher, RT 6**			
TOTAL DEPTH		8.00		TOTAL DEPTH		2.00	
SPACE		0.50		SPACE		0.00	
Bottom not pumpable		0.50		Bottom not pumpable		0.50	
25 YR, 24-HR		0.00		25 YR, 24-HR		0.00	
PRECIP-EVAP		0.00		PRECIP-EVAP		0.00	
WORKING DEPTH		7.00		WORKING DEPTH		1.50	
Inside Width		75.67		Inside Width		38.17	
Inside Length		532.00		Inside Length		312.00	
25YR 24HR Runoff		0.00		25YR 24HR Runoff		0.00	
Working Volume		281795.08		Working Volume		17864	
Total Volume		322051.52		Total Volume		23818.08	
Lid Thickness		0.00		Lid Thickness		0.00	
Wall Thickness		0.67		Wall Thickness		0.00	
Footing Overhang		0.50		Footing Overhang		0.00	
Footing Overhang Thickness		0.75		Footing Overhang Thickness		0.00	
Floor Thickness		0.42		Floor Thickness		0.00	
C Y Footings		17.01		C Y Footings		0.00	
C Y Floor (to Outside of Wall)		632.51		C Y Floor (to Outside of Wall)		0.00	
C Y Walls		240.35		C Y Walls		0.00	
C Y Lid		0.00		C Y Lid		0.00	
CY Total		889.88		CY Total		0.00	
Allowance %		889.9		Allowance %		0.0	
*Concrete work walls cost Est.		0		*Concrete work walls cost Est.		0	
*Concrete flat work cost Est.		0		*Concrete flat work cost Est.		0	
*includes allowance for rebar, waterstop, and labor		lump sum		*includes allowance for rebar, waterstop, and labor		lump sum	
Excavation/backfill, perimeter tile and monitoring port				Excavation/backfill, perimeter tile and monitoring port			
Total Estimated cost		$ -		Total Estimated cost		$ -	
Allowances %		0		Allowances %		0	
Grand Total Estimated Cost		$ -		Grand Total Estimated Cost		$ -	

S:\238\2005 project numbers\23805038 (WIN Production)\CNMP\AG Calcs\WIN Production AWM V.9.0 (with 8ft pit)

animal type	animal capacity	turns/yr	animal number	avg weight lbs	mortality %	carcass total lbs
prewean piglets	8300	17.3	143590	7	10.0%	100513
Gestating Sow	4834	1	4834	400	6.8%	131485
Gilt	750	1	750	350	4.0%	10500
Lacating Sow	980	1	980	450	6.8%	29988
Nursery	50	26	1300	12	1.0%	156
					total	272642

Note that death loss must be the expected high (not catostrophic) for a 3 month period (ie the expect annual peak)

N content- finished compost	18	Lb N/Kwt carcass
N produced per year	4907.553	lb N in finished compost
SPF Area for finished compost	**49.08**	acres (assuming 100 LB N/Acre)
Weight of finished compost	136.3	tons of finished compost
	9088	cu ft of finished compost
Volume of finished compost	337	cu yd of finished compost

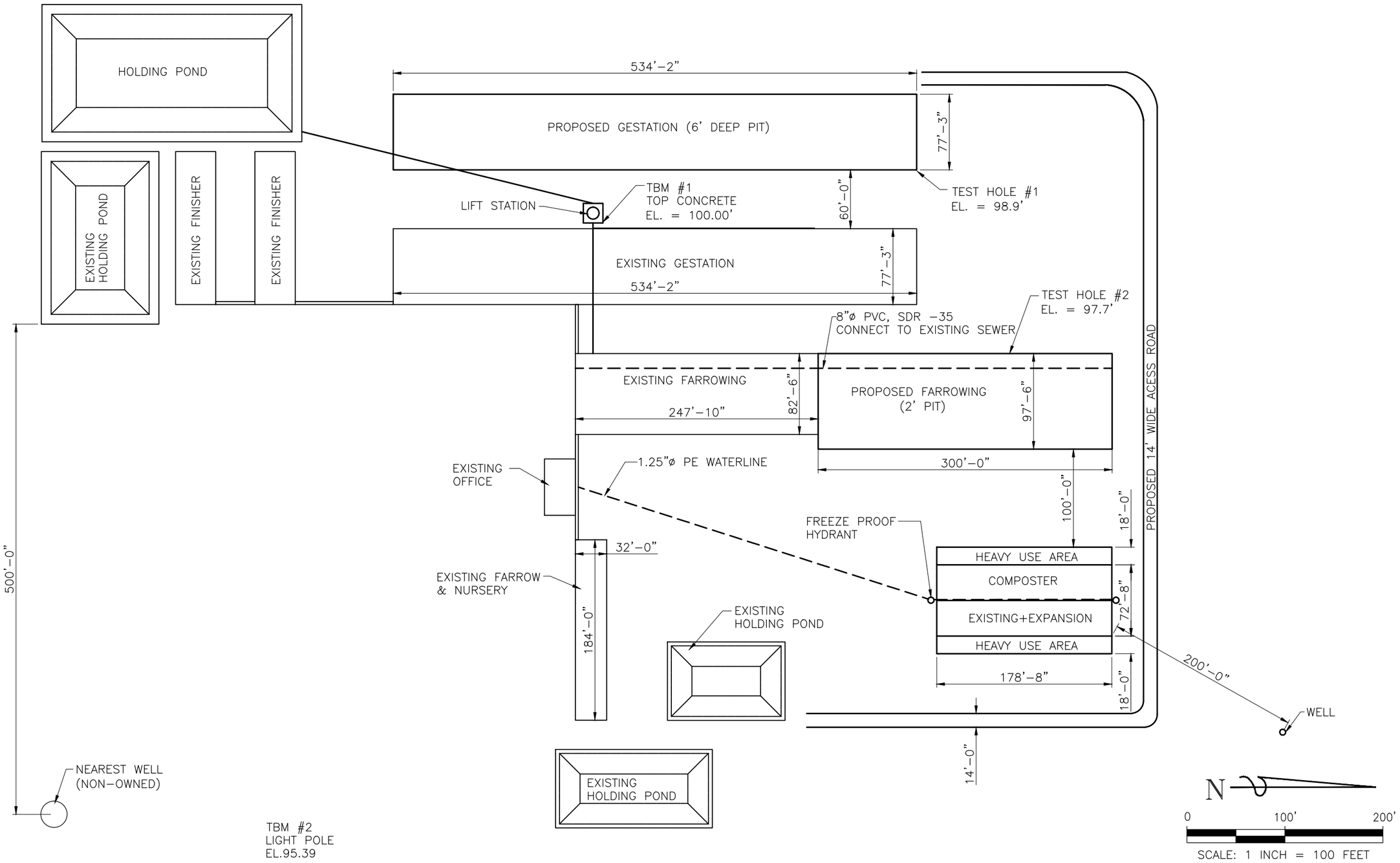
mortality composting size

	Farm name	Win Production		
1. Carcass weight info based on 3 month peak	lb carcass/yr	272,642	lbs/yr	
	lb carcass/day	747	lbs/day	
2. Bin volumes	volume needed for lb carcass to decompose	20	ft^3/lb carcass/day for a 3 month period	
	bin volume	14,939	ft^3/3 months	
	ave compost height	5.0	ft	
3. Bin Areas	area of existing primary bins	768	ft^2 existing	
	compost surface area	2,220	ft^2	
	minimum surface area needed	0.010	ft^3/lb carcass	
	minimum primary bin surface area	687	ft^2/3 months	
5. Bin Size	estimated bin length	16.00	ft	
	estimated bin width inside dimension	9.50	ft	
	estimated bin area	152	ft^2	
4. # of Bins	# primary bins	15	bins	
	# secondary bins	15	bins	
	total # bins needed	30	bins	additional
6. Annual Sawdust Req.	Volume of sawdust/yr	1008.77466	cu yard/yr	

by Maurer Stutz, Inc.

concrete needed

bin length	16.00	ft
bin width	9.50	ft
bin height	4.00	ft
# bins	30.00	bins
pad width outside bins	2	ft
bin orientation	2	1 for single row 2 for back to back
concrete surface area	5505.4167	ft^2
outside wall thickness	8	in
	0.67	ft
Center/Back wall thickness	8	in
	0.67	ft
Divider wall thickness	6	in
	0.50	ft
floor thickness	5	in
	0.42	ft
concrete used for floor	2293.92	ft^3
	84.96	yd^3
concrete used for outside walls	170.67	ft^3
	6.32	yd^3
concrete used for inside walls	1656.00	ft^3
	61.33	yd^3
THICKENED ENTRANCE FOOTER	8	in
	0.67	ft
ENTRANCE FOOTER	400.00	ft^3
	14.81	yd^3
total concrete needed	167.43	yd^3
allowance formed	1.05	
allowance	1.10	
concrete formed	71	yd^3
concrete flat	110	yd^3
total concrete	181	yd^3



THE CONTRACTOR/BUILDER SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE DESIGNER IMMEDIATELY.

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FIELD BOOK: X
REVISIONS: 0
DESIGNED BY: BAC
CHECKED BY: TLF
DRAWN BY: JEA
CHECKED BY: TLF

SHEET TITLE: SITE PLAN
PROJECT: WIN PRODUCTION

CLIENT: WIN PRODUCTION

PROJECT: 238-05038A
DATE: 02/13/06

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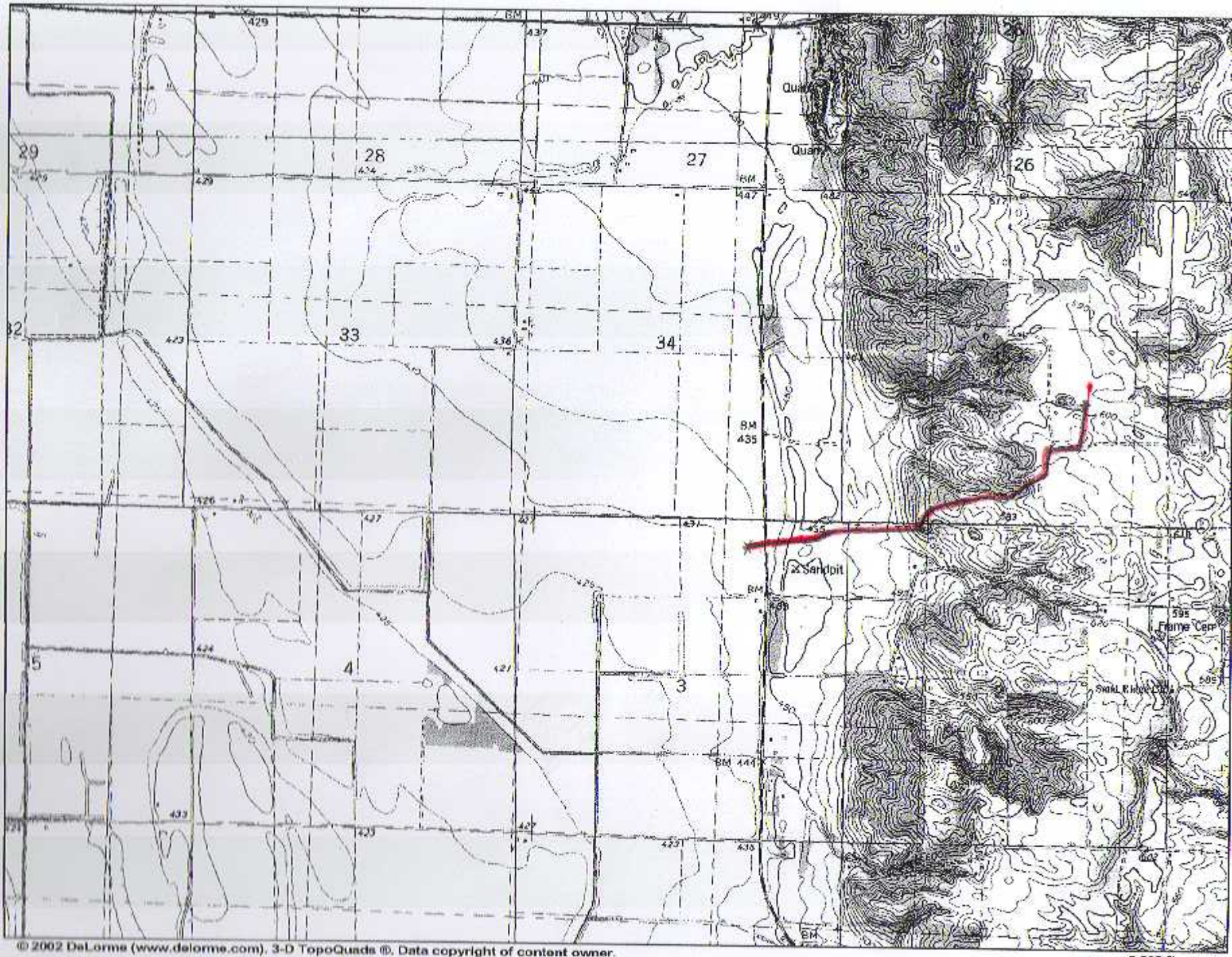

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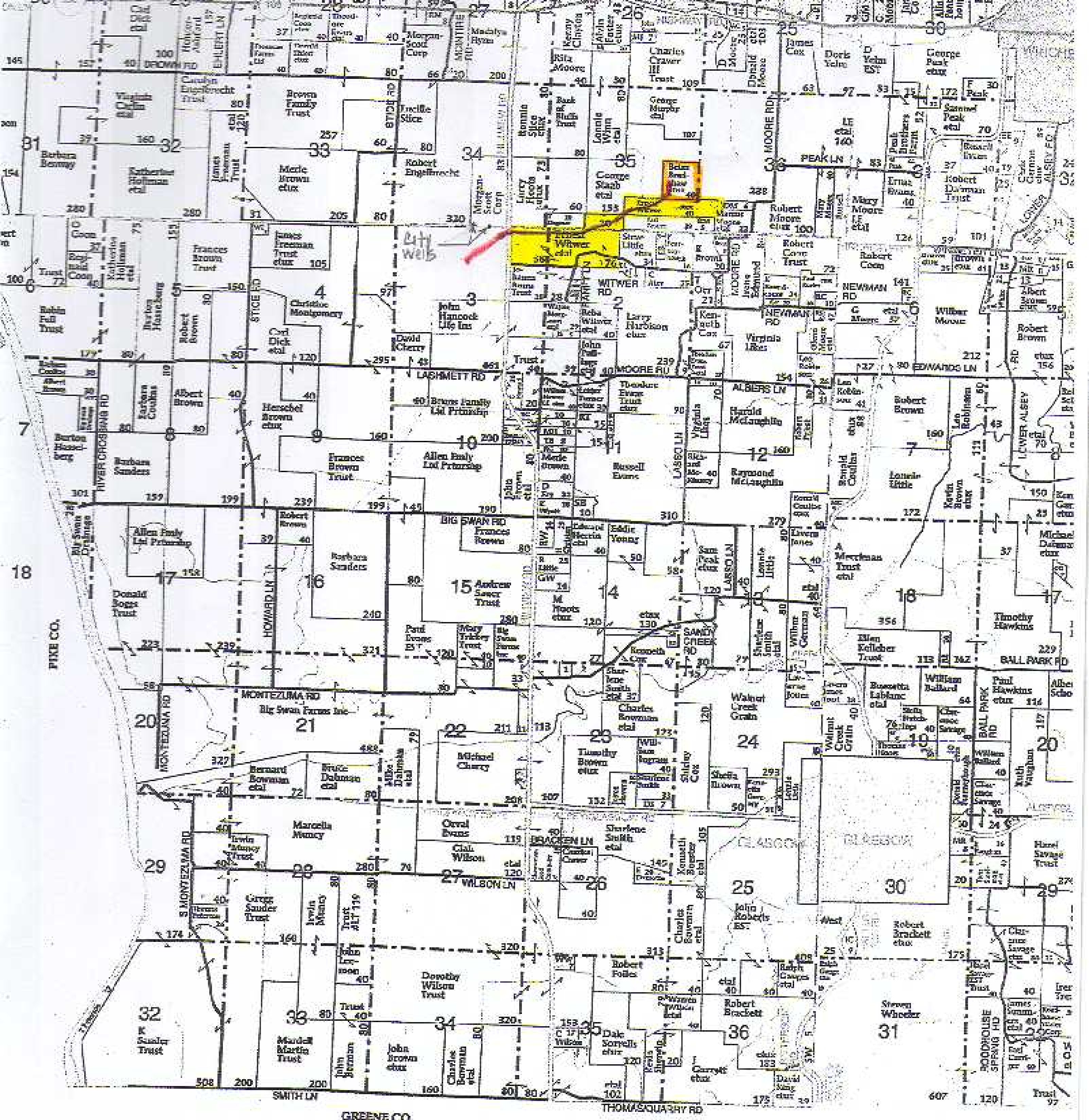

BROWN RD
EHLERT LN
Virginia Coplin etal
Barbara Benney
Katherine Hoffman etal
James Freeman Trust
Brown Family Trust
Lucille Stice
STICE RD
Robert Engelbrecht
Merle Brown etux
Morgan-Scott Corp
MCINTIRE RD
Rita Moore
Bonnie Stice etux
Bank of Bluffs Trust
Lonnie Winn etal
George Murphy etal
Charles Craver III Trust
George Staab etal
Larry Hoots etux
MOORE RD
James Cox
Doris Yelm
D Yelm EST
George Peak etux
Samuel Peak etal
PEAK LN
Peak Brothers Farm
Ernie Evans
Robert Dawson Trust
Mary Moore LE etal
Robert Moore etux
Ernest Witwer etal
City Wells
Steve Little etux
R Brown
Robert Coon Trust
Robert Coon
NEWMAN RD
Wilber Moore
Robert Brown etux
WITWER RD
Larry Harbison etux
Ken-neth Cox
Virginia Likes
John Hancock Life Ins
Frances Brown Trust
Christine Montgomery
Carl Dick etal
David Cherry
Robert Brown
Burton Hasselberg
Robin Fell Trust
LASHMETT RD
MOORE RD
ALBERS LN
EDWARDS LN
Brown Family Ltd Prtnrshp
Theodore Evans Trust etux
Harold McLaughlin
Robert Brown
Albert Brown
Herschel Brown etux
RIVER CROSSING RD
Burton Hasselberg
Barbara Sanders
Frances Brown Trust
Allen Ealy Ltd Prtnrshp
Merle Brown
Russell Evans
Raymond McLaughlin
Lonnie Little
LOWER ALSEY
LASSO LN
BIG SWAN RD
Allen Ealy Ltd Prtnrshp
Robert Brown
Barbara Sanders
Frances Brown
Eddie Young
Sam Peak etux
Lonnie Little
A Merriman Trust etal
Michael Dahman etux
Big Swan Drainage
Donald Boggs Trust
HOWARD LN
Andrew Sauer Trust
M Hoots etux
Timothy Hawkins
PIKE CO.
Paul Evans EST
Mary Trickey Trust
Kenneth Cox
SANDY CREEK RD
Ellen Kelleher Trust
BALL PARK RD
MONTEZUMA RD
Big Swan Farms Inc
Michael Cherry
Sharlene Smith etal
Charles Bowman etal
Walnut Creek Grain
William Ballard
Paul Hawkins etux
BALL PARK RD
Bernard Bowman etal
Bruce Dahman etal
Mike Dahman etal
Timothy Brown etux
Shirley Cox
Sheila Brown
Ruth Vaughan
Marcella Muncy
Orval Evans
Clair Wilson
BRACKEN LN
Sharlene Smith etal
GLASGOW
Hazel Savage Trust
S MONTEZUMA RD
WILSON LN
Gregg Sauder Trust
Irwin Muncy
John Roberts EST
Robert Brackett etux
Robert Foiles
Dorothy Wilson Trust
Robert Brackett
Steven Wheeler
ROODHOUSE SPRING RD
K Sauder Trust
Mardell Martin Trust
John Brown etux
Charles Bowman etal
Dale Sorrells etux
J Carryer etux
SMITH LN
GREENE CO.
THOMAS QUARRY RD

Bradshaw Property Line
Witwer Property Line

TITLE 8: AGRICULTURE AND ANIMALS
CHAPTER I: DEPARTMENT OF AGRICULTURE
SUBCHAPTER b: ANIMALS AND ANIMAL PRODUCTS (EXCEPT MEAT AND POULTRY INSPECTION ACT REGULATIONS)

PART 90
ILLINOIS DEAD ANIMAL DISPOSAL ACT

Section

90.5 Definitions
90.10 Plant Facilities
90.20 Plant Premises
90.30 Annual Truck Permits (Repealed)
90.40 Truck Operator's Records (Repealed)
90.50 Odors and Insects Shall Be Controlled
90.60 Salmonella Control For Renderers and Blenders
90.70 Inspection of Premise (Repealed)
90.80 Identification of Receptacles
90.90 Records (Repealed)
90.100 Transportation and Transactions (Repealed)
90.105 Owner Transportation to Landfill
90.110 On-The-Farm Disposal
90.120 Collection Center
90.130 Disposal By Collection Center of Unusable Materials

AUTHORITY: Implementing and authorized by the Illinois Dead Animal Disposal Act [225 ILCS 610].

SOURCE: Regulations Relating to the Disposal of Dead Animals, filed January 17, 1972, effective January 27, 1972; filed December 6, 1972, effective December 16, 1972; codified at 5 Ill. Reg. 10458; amended at 7 Ill. Reg. 852, effective January 10, 1983; amended at 8 Ill. Reg. 5937, effective April 23, 1984; amended at 13 Ill. Reg. 3681, effective March 13, 1989; amended at 16 Ill. Reg. 11773, effective July 8, 1992; amended at 18 Ill. Reg. 14917, effective September 26, 1994; amended at 20 Ill. Reg. 294, effective January 1, 1996; amended at 28 Ill. Reg. 13415, effective October 1, 2004.

NOTE: In this Part, superscript numbers or letters are denoted by parentheses; subscript are denoted by brackets.

Section 90.5 Definitions

For the purposes of this Part, the following definitions shall apply:

"Compost" means the humus-like product of the process of composting waste, which

may be used as a soil conditioner.

"Composting" means the biological treatment process by which microorganisms decompose the organic fraction of waste, producing compost.

"Fish" means the bodies and parts of bodies of all animal aquatic life and the parts or waste thereof.

"Poultry" means chickens, turkeys, domestic game birds, and domestic water fowl.

"Poultry litter" means a nitrogen source such as manure or cake (i.e., the wet, compact crust that forms around feeders and waterers or litter such as found in layer operations and slatted-floor breeders).

"Straw" or "bulking agent" means straw or any alternative carbon source including, but not limited to, corn stover, soybean pods and trash, hay, sawdust, grass clippings, rice and peanut hulls, tomatoes, peat moss, pomace of grapes, wood chips, bark, shredded brush, and leaves.

(Source: Added at 16 Ill. Reg. 11773, effective July 8, 1992)

Section 90.10 Plant Facilities

If, upon first inspection, the facility of the renderer, blender or collection center fails to meet the requirements set forth in Section 10 of the Illinois Dead Animal Disposal Act [225 ILCS 610/10] and the rules of this Part, the applicant shall be granted sixty (60) days in which to correct the deficiencies specified. At the end of the period for correcting the deficiencies, another inspection shall be made. If upon inspection the deficiencies have been corrected, a license shall be issued.

(Source: Amended at 18 Ill. Reg. 14917, effective September 26, 1994)

Section 90.20 Plant Premises

a) Plants shall be separated by a permanent wall and apart from any other part of the business operation.

b) The location of new plant facilities shall be in compliance with local zoning ordinances before the Department will issue a license.

(Source: Amended at 8 Ill. Reg. 5937, effective April 23, 1984)

Section 90.30 Annual Truck Permits (Repealed)

(Source: Repealed at 8 Ill. Reg. 5937, effective April 23, 1984)

Section 90.40 Truck Operator's Records (Repealed)

(Source: Repealed at 8 Ill. Reg. 5937, effective April 23, 1984)

Section 90.50 Odors and Insects Shall Be Controlled

a) The licensee shall maintain the facilities in such sanitary manner as to eliminate, insofar as possible, all odors and insects.

b) In the case of collection centers, all rendering materials shall be picked up at the collection center and transported to the rendering plant daily, except during subfreezing weather.

(Source: Amended at 8 Ill. Reg. 5937, effective April 23, 1984)

Section 90.60 Salmonella Control For Renderers and Blenders

a) A separate building or storage area shall be provided for the purpose of storing the finished products in order to avoid contamination after completion of processing.

b) No tools or equipment used in handling the unfinished product shall be used in storage areas, or in handling of finished product.

c) Renderers and blenders shall provide toilet, showering, dressing, and disinfecting facilities.

d) Live steam shall be provided for scrubbing and cleaning floors and equipment.

e) Rodent and vermin control shall be diligently practiced. Uncontrolled animals and birds shall not be tolerated on the premises.

f) Buildings and surrounding grounds shall be kept clean and free from refuse, trash, or the accumulation of product or products of processing, including paunch manure.

g) Any authorized representative of the Department shall be allowed access to inspect inventory during regular business hours and to take samples at the request of the Federal government, the licensee or manufacturer using the product, for the purpose of laboratory diagnosis to determine if salmonella is present.

(Source: Amended at 8 Ill. Reg. 5937, effective April 23, 1984)

Section 90.70 Inspection of Premise (Repealed)

(Source: Repealed at 8 Ill. Reg. 5937, effective April 23, 1984)

Section 90.80 Identification of Receptacles

All barrels used for transporting and storage of scrap or used cooking grease and oils shall be clearly marked "inedible" with letters of such size as to be readily distinguishable. Barrels shall be embossed or imprinted with a code assigned by the Department to the licensee.

(Source: Amended at 8 Ill. Reg. 5937, effective April 23, 1984)

Section 90.90 Records (Repealed)

(Source: Repealed at 8 Ill. Reg. 5937, effective April 23, 1984)

Section 90.100 Transportation and Transactions (Repealed)

(Source: Repealed at 8 Ill. Reg. 5937, effective April 23, 1984)

Section 90.105 Owner Transportation to Landfill

When an owner or person employed by the owner is transporting a dead animal to a landfill that is open and willing to accept animals, the following guidelines shall be followed:

a) The most direct route shall be utilized.

b) The bed of the vehicle transporting the animal shall have covering to prevent leakage to the road surface (e.g., plastic covering or barrels).

c) The animal shall be covered during transport.

(Source: Added at 20 Ill. Reg. 294, effective January 1, 1996)

Section 90.110 On-The-Farm Disposal

Persons disposing of animals, poultry, fish, or parts of bodies thereof, other than to a licensed renderer, shall comply with the following:

a) Disposal by Burning

1) No open burning will be permitted.

2) Any disposal by burning must be performed with an incinerator that is in compliance with the Illinois Environmental Protection Act [415 ILCS 5].

b) Disposal by Burying

1) Burial shall be on the premises owned or operated by the owner of the dead animal.

A) Location shall be in an area where runoff will not contaminate water supplies or allow leachate to discharge into streams, ponds or lakes.

i) Dead animals shall not be buried less than 200 feet from a stream, private potable water supply well, or any other potable water supply source, except in accordance with Section 14.2(b) of the Illinois Environmental Protection Act.

ii) Dead Animals shall not be buried within the applicable 200 or 400 foot minimum setback zone of an existing community water supply well as established pursuant to Section 14.2 of the Illinois Environmental Protection Act.

B) Dead animals shall not be buried less than 200 feet from any existing residence not owned or occupied by the owner of the animal.

C) No more than a ratio of one pound of dead animals per one square foot of surface area shall be buried on an annual basis. No more than 3,000 pounds of dead animals shall be buried in each site location, and the same site shall not be used more frequently than once every two years for burial purposes. There shall be no more than three site locations within a radius of 120 feet.

2) Burial depth shall be sufficient to provide at least a six-inch compacted soil cover over the uppermost part of the carcass. Precautions shall be taken to minimize soil erosion.

3) The abdominal cavity of large carcasses shall be punctured to allow escape of putrefactive gasses.

4) Lime or other chemical agent shall not be used to prevent decomposition.

5) Precautions shall be taken at the site of burial necessary to prevent any

disturbance by animal or mechanical means.

6) Disease and nuisance vectors are to be minimized and controlled.

7) Final cover or settling shall be limited to a 5% or less slope differential from the normal gradient of its general surroundings.

8) Burial site locations shall be available for inspection by Department personnel during normal working hours.

c) Disposal of poultry by composting. Persons disposing of poultry by means of composting shall comply with the following requirements:

1) The composter shall meet the following criteria:

A) A roof shall cover the entire composting area.

B) An impervious, weight-bearing foundation such as concrete shall be used.

C) Rot-resistant building materials such as preservative-treated lumber shall be used.

D) The composter shall consist of primary and secondary bins.

E) The size of the composter shall be based on the farm's projected mortality rate of poultry, in which one pound of dead poultry per cubic foot of primary compost space per day is provided.

2) Composting shall comply with the following guidelines:

A) A mixture of one part dead poultry (by weight), one and one-half part poultry litter, and one-tenth part of straw shall be used. For example: 400 pounds of dead poultry will require 600 pounds of poultry litter and 40 pounds of straw.

B) Layering shall be done in the following order, starting from the floor: (First layer) Straw, poultry litter, straw, birds, and poultry litter. Second and subsequent layers: straw, birds, and poultry litter.

C) A 36-inch probe-type thermometer shall be inserted daily into the pile to check the temperature. Within two to four days, the temperature should peak between 135° F. and 150° F.

D) Once the temperature begins to fall from the peak (normally 7 to 10 days), the material shall be removed to the secondary treatment bin.

E) After 7 to 10 days in the secondary bin, the compost may be agronomically distributed over land under cultivation or reused in the composting process. For the purpose of this subsection (c)(2)(E), the agronomic rate is the annual application rate of poultry compost, either alone or in combination with other nutrient supplying materials, that is necessary to achieve a reasonable crop yield without exceeding crop nutrient requirements.

3) The composted material may be substituted for up to one-half of the poultry litter and one-half of the straw.

d) Disposal of fish by composting. Persons disposing of fish by means of composting shall comply with the following requirements:

1) The composter shall meet the following criteria:

A) A roof shall cover the entire composting area.

B) An impervious, weight-bearing foundation such as concrete shall be used.

C) Rot-resistant building materials such as preservative-treated lumber shall be used.

2) The base layer shall meet the following criteria:

A) Use 6 to 12 inches thick of a bulking agent.

B) Be no more than 6 to 8 feet wide, but as long as necessary to accommodate the day's supply of compost material.

3) Composting shall meet the following guidelines:

A) Composting layer shall consist of a mixture of one part fish, three parts bulking agent and one part recycled compost (if available) or bulking agent and shall be mixed prior to use in the composting layer. The mixing of the materials for the composting layer shall be done in a manner to prevent leakage (e.g., stock tank, bucket, mixing drum).

B) The cover layer shall consist of two parts bulking agent and two parts recycled compost (if available) or two parts bulking agent and should reach a thickness of 6 to 12 inches.

C) Layering shall be done in the following order starting from the concrete: base layer, composting layer (fish, bulking agent and recycled compost), and cover layer. The composting and cover layers are piled on top of the base layer to form a trapezoid no higher than 4 feet.

D) Additions to the compost pile are done by adding new material to the end of the pile.

E) A probe-type thermometer shall be inserted daily into the pile to check the temperature. The temperature should peak between 140° F. and 165° F. The material can be recycled after it has composted for at least 2 to 3 weeks, and its temperature has dropped to air temperature.

F) After the temperature has dropped to air temperature (normally 2 to 3 weeks), the composted material may be used in the composting layer, or after one month, the composted material may be agronomically distributed over land under cultivation or reused in the cover layer. For the purpose of this subsection, the agronomic rate is the annual application rate of fish compost, either alone or in combination with other nutrient supplying materials, that is necessary to achieve a reasonable crop yield without exceeding crop nutrient requirements.

e) Disposal of swine by composting. Persons disposing of swine by means of composting shall comply with the following requirements:

1) The composter shall be located entirely over impervious foundation materials.

A) One of two foundations shall be used:

i) impervious soil (permeability equal to or less than 1 x 10(-7) cm/sec. as defined in Section 651.0703 "Geotechnical considerations in waste facility siting", Agricultural Waste Management Field Handbook, Soil Conservation Service, U.S. Department of Agriculture, 1992). A 4 to 6 inch base of ungraded (varying particle size) field lime over the soil

foundation is suggested as a runoff control measure.

ii) an impervious, weight-bearing foundation such as concrete or asphalt.

2) Surface water shall be diverted away from the composter.

3) Location shall be in an area where runoff will not contaminate water supplies or allow leachate to discharge into streams, ponds or lakes.

A) Composter shall not be constructed less than 200 feet from a stream, private potable water supply well, or any other potable water supply source, except in accordance with Section 14.2(b) of the Illinois Environmental Protection Act.

B) Composter shall not be constructed within the applicable 200 or 400 foot minimum setback zone of an existing community water supply well as established pursuant to Section 14.2 of the Illinois Environmental Protection Act.

4) The composter shall consist of primary and secondary bins. The size of the composter shall be based on the farm's projected mortality rate of swine during any three-month period. The primary and secondary bins shall each contain a minimum of 10 square feet of composting area for each 1000 pounds of carcass to be composted.

5) The composter shall be constructed of permanent rot-resistant wall materials, such as preservative-treated wood, concrete, or precast concrete such as highway lane dividers. Each composter bin shall be three sides of a rectangle or square. One side of the bin shall be left open for loading, unloading and mixing the compost. In emergency situations, hay bales of 48 inches or greater in diameter may be used on a temporary basis in the above configuration of side walls.

6) Composting shall comply with the following guidelines:

A) Coarse sawmill sawdust, shredded cornstalks, chopped straw, coarse-ground corn cobs, and other materials possessing like properties and having similar particle size are recommended for the carbon source.

B) It is expected that the carbon source will be required in the ratio of approximately one cubic foot of sawdust per ten pounds of carcass (3.7 cubic yards of carbon source per 1000 pounds of carcass). A

supply of carbon source shall be stockpiled and maintained on the premises at all times when the composter is in operation.

C) Each compost bin shall have a layer of carbon source a minimum of 10 inches deep placed on the floor before the first carcass is placed in the bin. There shall be a minimum of 10 inches of carbon source between the carcass and each of the vertical walls of the bin. The carcass shall be covered with a minimum of 10 inches of carbon source. The carbon source shall be added to the pile as composting begins, daily or as frequently as needed to sustain a 10 inch cover of carbon source over all carcasses in the bin's uppermost layer.

D) A compost thermometer with a probe at least 36" long shall be obtained and used daily to measure the temperature of the compost in the middle of each bin. The compost temperature should reach 135 to 160° F. (57° to 71° C.) and be recorded daily. Compost temperature indicates microbial activity and stage of composting process. The composting process shall be managed in such a way that the heating and decomposition can proceed to completion. If aerobic composting does not begin with 7 days, i.e., if temperatures do not rise above 135° F., the compost pile shall be turned and moisture content of the carbon source adjusted to allow the process to proceed. Temperature records shall be available for examination until the compost is disposed of as in subsection (e)(6)(G).

E) The carbon source and carcasses may be placed in the bin until the bin is full.

F) All compost from the primary bin shall be allowed to undergo a second composting phase as follows:

i) When the temperature surrounding the last carcass placed in the composter drops below 130° F. (typically up to three months after the last carcass addition), the compost in that bin shall be transferred to a second bin and allowed to reheat, through a second composting cycle. Moisture shall be added to the compost as needed to promote further composting activity.

ii) Compost shall remain in the second bin for the duration of the secondary composting cycle (typically three months). Temperature of the compost shall be measured using the

compost thermometer to monitor the composting process.

G) Finished compost shall be agronomically distributed over land under cultivation or reused in the composting process. Finished compost may be returned to the primary composting bin in the ratio of up to 50 percent finished compost to fresh carbon source. For the purpose of this subsection, the agronomic rate is the annual application rate of swine compost, either alone or in combination with other nutrient supplying materials that is necessary to achieve a reasonable crop yield without exceeding crop nutrient requirements.

f) Disposal of cattle, sheep or goats by composting. Persons disposing of cattle, sheep or goats by means of composting shall comply with the following requirements:

1) Carcasses of those animals dying of suspect neurological causes shall not be composted.

2) The composter shall be located entirely over impervious foundation materials. One of two foundations shall be used:

A) Impervious soil (permeability equal to less than 1×10^{-7} cm/sec., as defined in Section 651.0703 (Geotechnical considerations in waste facility siting) of the Agricultural Waste Management Field Handbook, Soil Conservation Service, U.S. Department of Agriculture, 1992). A 4 to 6 inch base of ungraded (varying particle size) field lime over the soil foundation is suggested as a runoff control measure.

B) An impervious, weight-bearing foundation such as concrete or asphalt.

3) Surface water shall be diverted away from the composter.

4) Location shall be in an area where runoff will not contaminate water supplies or allow leachate to discharge into streams, ponds or lakes.

A) The composter shall not be constructed less than 200 feet from a stream, private potable water supply well, or any other potable water supply source, except in accordance with Section 14.2(b) of the Illinois Environmental Protection Act.

B) The composter shall not be constructed within the applicable 200-

or 400-foot minimum setback zone of an existing community water supply well as established pursuant to Section 14.2 of the Illinois Environmental Protection Act.

C) A composting site shall be located at least 1/4 mile from the nearest occupied residence (other than a residence located on the same property as the facility).

5) The composter shall consist of at least two bins, allowing operation as primary and secondary composting sequences.

6) The composter shall be constructed of permanent rot-resistant materials, such as preservative-treated wood or concrete.

7) The size of the composter shall be based on the facility's greatest projected mortality rate of animals during any three-month period of the year.

8) The composter bin minimum width dimension shall be large enough to allow placement of the largest carcass with at least one foot of space all around the carcass for carbon source material, or at least one foot greater than the width of the loader bucket used for turning the compost, whichever is larger.

9) A composting thermometer with a minimum probe length of 36" shall be kept available at the facility for monitoring progress of the compost process.

10) Records of carcass additions, composter operation and land application of finished compost shall be maintained on the premises.

11) Composting shall comply with the following guidelines:

A) Coarse sawmill sawdust, shredded corn stalks, chopped straw, coarse-ground corn cobs, and other materials possessing like properties and having similar particle size are recommended as the carbon source.

B) A supply of carbon source materials shall be stockpiled and maintained on the premises at all times when the composter is in operation.

C) Finished compost from the carcass composting process (secondary bins) may be re-used in an amount appropriate to maintaining

proper composting operation (up to 50% volume of re-used finished compost suggested).

D) Each carcass placed on the floor of a primary bin shall be underlain with at least 12 inches of absorbent carbon source material.

E) Carcasses weighing more than 300 lb. shall be processed prior to covering with carbon source material. Processing may consist of, but is not limited to:

i) opening the abdominal cavity to facilitate contact of carbon source material and reduce distention of carcass with gases; and

ii) incising the large limb muscles to facilitate contact of carbon source material and thereby hasten composting.

F) Each carcass placed in the primary composter bin shall be immediately covered with a layer of carbon source material to a depth of at least 12” on top and all sides. Carbon source material shall be added to the composter daily or as frequently as needed to sustain a cover of carbon source material over all parts of carcasses in the bin’s uppermost layer.

G) Carcasses and carbon source material may be added to the primary bin until the bin is full.

H) The composting process shall be monitored and managed in such a way that heating and decomposition can proceed to completion (typically three months in the primary bin from the time the last carcass is placed in the bin and another three months in the secondary bin from the time the compost is moved into the secondary bin from the primary bin). Water shall be added as necessary to adjust the moisture content of the compost and promote further composting activity.

I) Finished compost shall be agronomically distributed over land under cultivation or reused in the composting process. Finished compost may be returned to the primary composting bin in a ratio of up to 50% finished compost to fresh carbon source material. For the purpose of this subsection (f)(11)(I), the agronomic rate is the annual application rate of the compost, either alone or in combination with other nutrient supplying materials, which is

necessary to achieve a reasonable crop yield without exceeding crop nutrient requirements.

g) Disposal of sheep and goat offal by composting. Persons disposing of sheep or goat offal by means of composting shall comply with the following requirements:

1) Offal of those animals dying of suspect neurological causes shall not be composted.

2) The composter shall be located entirely over impervious foundation materials. One of two foundations shall be used:

A) Impervious soil (permeability equal to less than 1×10^{-7} cm/sec., as defined in Section 651.0703 (Geotechnical considerations in waste facility siting) of the Agricultural Waste Management Field Handbook, Soil Conservation Service, U.S. Department of Agriculture, 1992). A 4 to 6 inch base of ungraded (varying particle size) field lime over the soil foundation is suggested as a runoff control measure.

B) An impervious, weight-bearing foundation such as concrete or asphalt.

3) Surface water shall be diverted away from the composter.

4) Location shall be in an area where runoff will not contaminate water supplies or allow leachate to discharge into streams, ponds or lakes.

5) The composter shall not be constructed less than 200 feet from a stream, private potable water supply well, or any other potable water supply source, except in accordance with Section 14.2(b) of the Illinois Environmental Protection Act.

6) The composter shall not be constructed within the applicable 200- or 400-foot minimum setback zone of an existing community water supply well as established pursuant to Section 14.2 of the Illinois Environmental Protection Act.

7) A composting site shall be located at least 1/4 mile from the nearest occupied residence (other than a residence located on the same property as the facility).

8) The composter shall consist of at least two bins, allowing operation as primary and secondary composting sequences.

9) The composter shall be constructed of permanent rot-resistant materials, such as preservative-treated wood or concrete.

10) The size of the composter shall be based on the greatest projected offal rate from animals during any three-month period of the year.

11) The composter bin minimum width dimension shall be at least one foot greater than the width of the loader bucket used for turning the compost.

12) A composting thermometer with a minimum probe length of 36” shall be kept available at the facility for monitoring progress of the compost process.

13) Records of offal additions, composter operation and land application of finished compost shall be maintained on the premises.

14) Composting shall comply with the following guidelines:

A) Coarse sawmill sawdust, shredded corn stalks, chopped straw, coarse-ground corn cobs, and other materials possessing like properties and having similar particle size are recommended as the carbon source.

B) A supply of carbon source materials shall be stockpiled and maintained on the premises at all times when the composter is in operation.

C) Finished compost from the offal composting process (secondary bins) may be re-used in an amount appropriate to maintaining proper composting operation (up to 50% volume of re-used finished compost suggested).

D) Offal placed on the floor of a primary bin shall be mixed in a 50/50 ratio to carbon source material and underlain with at least 12” of absorbent carbon source material.

E) Any offal placed in the primary composter bin shall be immediately covered with a layer of carbon source material to a depth of at least 12” on top and all sides. Carbon source material shall be added to the composter daily or as frequently as needed to sustain a cover of carbon source material over all parts of carcasses in the bin’s uppermost layer.

F) Offal and carbon source material may be added to the primary bin until the bin is full.

G) The composting process shall be monitored and managed in such a way that heating and decomposition can proceed to completion (typically three months in the primary bin from the time the last carcass is placed in the bin and another three months in the secondary bin from the time the compost is moved into the secondary bin from the primary bin). Water shall be added as necessary to adjust the moisture content of the compost and promote further composting activity.

H) Finished compost shall be agronomically distributed over land under cultivation or reused in the composting process. Finished compost may be returned to the primary composting bin in a ratio of up to 50% finished compost to fresh carbon source material. For the purpose of this subsection (g)(14)(H), the agronomic rate is the annual application rate of the compost, either alone or in combination with other nutrient supplying materials, which is necessary to achieve a reasonable crop yield without exceeding crop nutrient requirements.

(Source: Amended at 28 Ill. Reg. 13415, effective October 1, 2004)

Section 90.120 Collection Center

A collection center shall comply with the following requirements:

a) The location of a collection center shall be in compliance with local zoning ordinances before the Department will issue a license.

b) The collection center shall be covered by a metal roof or other permanent type structure. The building shall be equipped with louver-type ventilators which are so screened as to prevent rodents and other animals, birds, flies, and insects from entering.

c) Hot water or steam shall be provided to thoroughly clean the collection center premises.

d) The collection center equipment and premises shall be disinfected with a product approved by the United States Department of Agriculture (9 CFR 71.10 (2004)). Incorporation by reference does not include any amendments or editions beyond the date specified and may be viewed and/or copied at the Department's Springfield office.

(Source: Amended at 28 Ill. Reg. 13415, effective October 1, 2004)

Section 90.130 Disposal By Collection Center of Unusable Materials

Paunch manure, quantities of hair, feathers, and other unusable materials shall be routinely disposed of by burning, burying or spreading with manure spreader on cultivated ground not used for pasture of livestock.

(Source: Added at 8 Ill. Reg. 5937, effective April 23, 1984)

SECTION 5
Land Treatment Component
(Fields and Yields, Practices, RUSLE2)

Fields and Yields:

This section of the plan addresses all fields where manure is to be applied and the attainment of resource management goals for soil and water quality. Several on-site investigations of the fields were made to gather data on cropping systems, slopes, slope lengths, etc. Fields where manure nutrients are applied will be managed to meet the soil loss tolerance in accordance with the Conservation Plan for each field.

{*Insert rotations and proven yields for all fields here – page from MSI Nutrient Management Program*}

Land Treatment Practices (Existing/Proposed):

The following pages show the proposed practices.

Any changes to land treatment practices will require this plan to be updated. Call Maurer-Stutz, Inc. at (309)693-7615

Land Treatment Management Practices and Implementation Schedule.

Practice Name	Tract # / Field #	Planned Amount (Acres or Feet)	Year Planned to be Installed
Existing Practices			
Planned/Proposed Practices			
•			
•			
Waste Utilization (633) • Manage the amount, form, placement and timing of plant nutrient application. • See the enclosed "Nutrient Management Plan" (Section 6) for the proper application rates, timing, and methods of application to provide needed crop nutrients and to minimize the transport of nutrients to ground and surface water. • See the enclosed "Nutrient Management Plan" (Section 6) for crop rotation schedules.	All	966 ac	2007-09
•			
Conservation Crop Rotation (328) • Growing crops in a reoccurring sequence on the same field will reduce sheet and rill erosion. o Corn-corn-soybeans rotation	All	966 ac	2006

** Existing conservation practices shall be maintained.

RUSLE2

The following RUSLE2 soil loss calculations for the farm demonstrate that soil loss will be kept below the soil loss tolerances for each field. The planned crop rotation is continuous corn or 1 yr corn -1 yr soybeans as shown on the following pages for each field.

{*Insert rotations RUSLE2 printouts for all fields*}

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T. 10293-8 (Coon)

File: profiles\default
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 302 Ambraw clay loam\Ambraw clay loam 100%
Slope length (horiz): 220 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Corn, grain	bushels	120
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Soybean, mw 7in rows	bu	40

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 5.0 t/ac/yr
Soil loss erod. portion: 1.3 t/ac/yr
Detachment on slope: 1.3 t/ac/yr
Soil loss for cons. plan: 1.3 t/ac/yr
Sediment delivery: 1.3 t/ac/yr
Net C factor: 0.18
Net K factor: 0.27

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
4/1/0	Fert. applic. anhyd knife 30 in		54
4/15/0	Seedbed finisher, sngl dsk, fld cult, coil tine har		15
4/20/0	planter, double disk opnr	Corn, grain	14
10/1/0	Harvest, killing crop 50pct standing stubble		72
10/25/0	Chisel, twisted shovel		38
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		24
5/1/1	Drill or airseeder, double disk	Soybean, mw 7in rows	20
10/5/1	Harvest, killing crop 50pct standing stubble		74
10/25/1	Manure injector, liquid low disturb.30 inch		72

Soil conditioning index (SCI): 0.11
Avg. annual slope STIR: 77
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T. 10590-17,5,28, (Coon)

File: profiles\default
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 302 Ambraw clay loam\Ambraw clay loam 100%
Slope length (horiz): 220 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Corn, grain	bushels	120
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Soybean, mw 7in rows	bu	40

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 5.0 t/ac/yr
Soil loss erod. portion: 1.3 t/ac/yr
Detachment on slope: 1.3 t/ac/yr
Soil loss for cons. plan: 1.3 t/ac/yr
Sediment delivery: 1.3 t/ac/yr
Net C factor: 0.18
Net K factor: 0.27

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
4/1/0	Fert. applic. anhyd knife 30 in		54
4/15/0	Seedbed finisher, sngl dsk, fld cult, coil tine har		15
4/20/0	planter, double disk opnr	Corn, grain	14
10/1/0	Harvest, killing crop 50pct standing stubble		72
10/25/0	Chisel, twisted shovel		38
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		24
5/1/1	Drill or airseeder, double disk	Soybean, mw 7in rows	20
10/5/1	Harvest, killing crop 50pct standing stubble		74
10/25/1	Manure injector, liquid low disturb.30 inch		72

Soil conditioning index (SCI): 0.11
Avg. annual slope STIR: 77
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T10293-7 (Coon)

File: Win Production 238-05038A
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 49 Watseka loamy sand\Watseka loamy sand 100%
Slope length (horiz): 200 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Corn, grain	bushels	110
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Soybean, mw 7in rows	bu	36

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 5.0 t/ac/yr
Soil loss erod. portion: 0.91 t/ac/yr
Detachment on slope: 0.91 t/ac/yr
Soil loss for cons. plan: 0.91 t/ac/yr
Sediment delivery: 0.91 t/ac/yr
Net C factor: 0.19
Net K factor: 0.16

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
4/1/0	Fert. applic. anhyd knife 30 in		52
4/15/0	Seedbed finisher, sngl dsk, fld cult, coil tine har		14
4/20/0	planter, double disk opnr	Corn, grain	13
10/1/0	Harvest, killing crop 50pct standing stubble		69
10/25/0	Chisel, twisted shovel		36
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		22
5/1/1	Drill or airseeder, double disk	Soybean, mw 7in rows	18
10/5/1	Harvest, killing crop 50pct standing stubble		72
10/25/1	Manure injector, liquid low disturb.30 inch		70

Soil conditioning index (SCI): 0.073
Avg. annual slope STIR: 77
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T. 10293-6,9 (Coon)

File: Win Production 238-05038A
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 180 Dupo silt loam\Dupo silt loam 100%
Slope length (horiz): 200 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Corn, grain	bushels	150
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Soybean, mw 7in rows	bu	45

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 5.0 t/ac/yr
Soil loss erod. portion: 1.6 t/ac/yr
Detachment on slope: 1.6 t/ac/yr
Soil loss for cons. plan: 1.6 t/ac/yr
Sediment delivery: 1.6 t/ac/yr
Net C factor: 0.15
Net K factor: 0.36

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
4/1/0	Fert. applic. anhyd knife 30 in		56
4/15/0	Seedbed finisher, sngl dsk, fld cult, coil tine har		16
4/20/0	planter, double disk opnr	Corn, grain	15
10/1/0	Harvest, killing crop 50pct standing stubble		79
10/25/0	Chisel, twisted shovel		45
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		28
5/1/1	Drill or airseeder, double disk	Soybean, mw 7in rows	24
10/5/1	Harvest, killing crop 50pct standing stubble		76
10/25/1	Manure injector, liquid low disturb.30 inch		74

Soil conditioning index (SCI): 0.14
Avg. annual slope STIR: 77
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T. 10590-1,26,3,29,4,2,23,14,9,13 (Coon)

File: Win Production 238-05038A
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 71 Darwin silty clay\Darwin silty clay 100%
Slope length (horiz): 200 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Corn, grain	bushels	120
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Soybean, mw 7in rows	bu	40

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 5.0 t/ac/yr
Soil loss erod. portion: 1.3 t/ac/yr
Detachment on slope: 1.3 t/ac/yr
Soil loss for cons. plan: 1.3 t/ac/yr
Sediment delivery: 1.3 t/ac/yr
Net C factor: 0.17
Net K factor: 0.27

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
4/1/0	Fert. applic. anhyd knife 30 in		54
4/15/0	Seedbed finisher, sngl dsk, fld cult, coil tine har		15
4/20/0	planter, double disk opnr	Corn, grain	14
10/1/0	Harvest, killing crop 50pct standing stubble		72
10/25/0	Chisel, twisted shovel		38
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		24
5/1/1	Drill or airseeder, double disk	Soybean, mw 7in rows	20
10/5/1	Harvest, killing crop 50pct standing stubble		74
10/25/1	Manure injector, liquid low disturb.30 inch		72

Soil conditioning index (SCI): 0.23
Avg. annual slope STIR: 77
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T10590-24,10,18 (Coon)

File: Win Production 238-05038A
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 7070 Beaucoup silty clay loam, rarely flooded\Beaucoup silty clay loam 100%
Slope length (horiz): 200 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Corn, grain	bushels	140
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Soybean, mw 7in rows	bu	47

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 5.0 t/ac/yr
Soil loss erod. portion: 1.3 t/ac/yr
Detachment on slope: 1.3 t/ac/yr
Soil loss for cons. plan: 1.3 t/ac/yr
Sediment delivery: 1.3 t/ac/yr
Net C factor: 0.16
Net K factor: 0.31

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
4/1/0	Fert. applic. anhyd knife 30 in		57
4/15/0	Seedbed finisher, sngl dsk, fld cult, coil tine har		16
4/20/0	planter, double disk opnr	Corn, grain	15
10/1/0	Harvest, killing crop 50pct standing stubble		77
10/25/0	Chisel, twisted shovel		43
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		27
5/1/1	Drill or airseeder, double disk	Soybean, mw 7in rows	22
10/5/1	Harvest, killing crop 50pct standing stubble		76
10/25/1	Manure injector, liquid low disturb.30 inch		75

Soil conditioning index (SCI): 0.24
Avg. annual slope STIR: 77
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T10590-25,6,22,27,7 (Coon)

File: Win Production 238-05038A
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 172A Hoopeston sandy loam, 0 to 3 percent slopes\Hoopeston sandy loam 100%
Slope length (horiz): 200 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Corn, grain	bushels	120
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Soybean, mw 7in rows	bu	38

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 4.0 t/ac/yr
Soil loss erod. portion: 0.98 t/ac/yr
Detachment on slope: 0.98 t/ac/yr
Soil loss for cons. plan: 0.98 t/ac/yr
Sediment delivery: 0.98 t/ac/yr
Net C factor: 0.18
Net K factor: 0.19

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
4/1/0	Fert. applic. anhyd knife 30 in		53
4/15/0	Seedbed finisher, sngl dsk, fld cult, coil tine har		14
4/20/0	planter, double disk opnr	Corn, grain	14
10/1/0	Harvest, killing crop 50pct standing stubble		72
10/25/0	Chisel, twisted shovel		38
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		24
5/1/1	Drill or airseeder, double disk	Soybean, mw 7in rows	20
10/5/1	Harvest, killing crop 50pct standing stubble		73
10/25/1	Manure injector, liquid low disturb.30 inch		71

Soil conditioning index (SCI): 0.13
Avg. annual slope STIR: 77
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T10590-20,15 (Coon)

File: Win Production 238-05038A
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 49 Watseka loamy sand\Watseka loamy sand 100%
Slope length (horiz): 200 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Corn, grain	bushels	110
CMZ 16\c.Other Local Mgt Records\Corn FC Fld Cult- Soybeans Fld Cult,manure NH3	Soybean, mw 7in rows	bu	36

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 5.0 t/ac/yr
Soil loss erod. portion: 0.91 t/ac/yr
Detachment on slope: 0.91 t/ac/yr
Soil loss for cons. plan: 0.91 t/ac/yr
Sediment delivery: 0.91 t/ac/yr
Net C factor: 0.19
Net K factor: 0.16

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
4/1/0	Fert. applic. anhyd knife 30 in		52
4/15/0	Seedbed finisher, sngl dsk, fld cult, coil tine har		14
4/20/0	planter, double disk opnr	Corn, grain	13
10/1/0	Harvest, killing crop 50pct standing stubble		69
10/25/0	Chisel, twisted shovel		36
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		22
5/1/1	Drill or airseeder, double disk	Soybean, mw 7in rows	18
10/5/1	Harvest, killing crop 50pct standing stubble		72
10/25/1	Manure injector, liquid low disturb.30 inch		70

Soil conditioning index (SCI): 0.073
Avg. annual slope STIR: 77
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T. 16198-1 (York)

File: Win Production 238-05038A
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 7070 Beaucoup silty clay loam, rarely flooded\Beaucoup silty clay loam 100%
Slope length (horiz): 200 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	140
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	140

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 5.0 t/ac/yr
Soil loss erod. portion: 1.1 t/ac/yr
Detachment on slope: 1.1 t/ac/yr
Soil loss for cons. plan: 1.1 t/ac/yr
Sediment delivery: 1.1 t/ac/yr
Net C factor: 0.12
Net K factor: 0.31

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
10/20/0	Manure injector, liquid low disturb.30 inch		86
11/1/0	Chisel, twisted shovel		45
4/1/1	Fert. applic. anhyd knife 30 in		43
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		26
4/20/1	Planter, double disk opnr	Corn, grain	25
10/10/1	Harvest, killing crop 50pct standing stubble		78
10/30/1	Manure injector, liquid low disturb.30 inch		85
11/10/1	Chisel, twisted shovel		44
4/1/2	Fert. applic. anhyd knife 30 in		43
4/10/2	Seedbed finisher, sngl dsk, fld cult, coil tine har		26

4/20/2	Planter, double disk opnr	Corn, grain	25
10/10/2	Harvest, killing crop 50pct standing stubble		78

Soil conditioning index (SCI): 0.44
Avg. annual slope STIR: 100
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T. 16198-2 (York)

File: Win Production 238-05038A
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 71 Darwin silty clay\Darwin silty clay 100%
Slope length (horiz): 210 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	120
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	120

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 5.0 t/ac/yr
Soil loss erod. portion: 1.1 t/ac/yr
Detachment on slope: 1.1 t/ac/yr
Soil loss for cons. plan: 1.1 t/ac/yr
Sediment delivery: 1.1 t/ac/yr
Net C factor: 0.15
Net K factor: 0.27

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
10/20/0	Manure injector, liquid low disturb.30 inch		82
11/1/0	Chisel, twisted shovel		40
4/1/1	Fert. applic. anhyd knife 30 in		39
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		23
4/20/1	Planter, double disk opnr	Corn, grain	22
10/10/1	Harvest, killing crop 50pct standing stubble		72
10/30/1	Manure injector, liquid low disturb.30 inch		80
11/10/1	Chisel, twisted shovel		39
4/1/2	Fert. applic. anhyd knife 30 in		38
4/10/2	Seedbed finisher, sngl dsk, fld cult, coil tine har		23

4/20/2	Planter, double disk opnr	Corn, grain	22
10/10/2	Harvest, killing crop 50pct standing stubble		73

Soil conditioning index (SCI): 0.40
Avg. annual slope STIR: 100
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T. 16198-3 (York)

File: Win Production 238-05038A
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 682A Medway loam, 0 to 3 percent slopes\Medway loam 100%
Slope length (horiz): 180 ft
Avg. slope steepness: 2.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	120
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	120

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 5.0 t/ac/yr
Soil loss erod. portion: 1.9 t/ac/yr
Detachment on slope: 1.9 t/ac/yr
Soil loss for cons. plan: 1.9 t/ac/yr
Sediment delivery: 1.9 t/ac/yr
Net C factor: 0.14
Net K factor: 0.27

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
10/20/0	Manure injector, liquid low disturb.30 inch		82
11/1/0	Chisel, twisted shovel		41
4/1/1	Fert. applic. anhyd knife 30 in		39
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		23
4/20/1	Planter, double disk opnr	Corn, grain	22
10/10/1	Harvest, killing crop 50pct standing stubble		78
10/30/1	Manure injector, liquid low disturb.30 inch		85
11/10/1	Chisel, twisted shovel		44
4/1/2	Fert. applic. anhyd knife 30 in		43
4/10/2	Seedbed finisher, sngl dsk, fld cult, coil tine har		26

4/20/2	Planter, double disk opnr	Corn, grain	25
10/10/2	Harvest, killing crop 50pct standing stubble		73

Soil conditioning index (SCI): 0.20
Avg. annual slope STIR: 100
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T. 16198-4 (York)

File: Win Production 238-05038A
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 172A Hoopeston sandy loam, 0 to 3 percent slopes\Hoopeston sandy loam 100%
Slope length (horiz): 180 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	120
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	120

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 4.0 t/ac/yr
Soil loss erod. portion: 0.81 t/ac/yr
Detachment on slope: 0.81 t/ac/yr
Soil loss for cons. plan: 0.81 t/ac/yr
Sediment delivery: 0.81 t/ac/yr
Net C factor: 0.15
Net K factor: 0.19

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
10/20/0	Manure injector, liquid low disturb.30 inch		82
11/1/0	Chisel, twisted shovel		40
4/1/1	Fert. applic. anhyd knife 30 in		39
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		23
4/20/1	Planter, double disk opnr	Corn, grain	22
10/10/1	Harvest, killing crop 50pct standing stubble		73
10/30/1	Manure injector, liquid low disturb.30 inch		81
11/10/1	Chisel, twisted shovel		40
4/1/2	Fert. applic. anhyd knife 30 in		39
4/10/2	Seedbed finisher, sngl dsk, fld cult, coil tine har		23

4/20/2	Planter, double disk opnr	Corn, grain	22
10/10/2	Harvest, killing crop 50pct standing stubble		73

Soil conditioning index (SCI): 0.24
Avg. annual slope STIR: 100
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T. 16198-5 (York)

File: Win Production 238-05038A
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 71 Darwin silty clay\Darwin silty clay 100%
Slope length (horiz): 210 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	120
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	120

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 5.0 t/ac/yr
Soil loss erod. portion: 1.1 t/ac/yr
Detachment on slope: 1.1 t/ac/yr
Soil loss for cons. plan: 1.1 t/ac/yr
Sediment delivery: 1.1 t/ac/yr
Net C factor: 0.15
Net K factor: 0.27

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
10/20/0	Manure injector, liquid low disturb.30 inch		82
11/1/0	Chisel, twisted shovel		40
4/1/1	Fert. applic. anhyd knife 30 in		39
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		23
4/20/1	Planter, double disk opnr	Corn, grain	22
10/10/1	Harvest, killing crop 50pct standing stubble		72
10/30/1	Manure injector, liquid low disturb.30 inch		80
11/10/1	Chisel, twisted shovel		39
4/1/2	Fert. applic. anhyd knife 30 in		38
4/10/2	Seedbed finisher, sngl dsk, fld cult, coil tine har		23

4/20/2	Planter, double disk opnr	Corn, grain	22
10/10/2	Harvest, killing crop 50pct standing stubble		73

Soil conditioning index (SCI): 0.40
Avg. annual slope STIR: 100
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T. 16198-6 (York)

File: Win Production 238-05038A
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 172A Hoopeston sandy loam, 0 to 3 percent slopes\Hoopeston sandy loam 100%
Slope length (horiz): 180 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	120
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	120

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 4.0 t/ac/yr
Soil loss erod. portion: 0.81 t/ac/yr
Detachment on slope: 0.81 t/ac/yr
Soil loss for cons. plan: 0.81 t/ac/yr
Sediment delivery: 0.81 t/ac/yr
Net C factor: 0.15
Net K factor: 0.19

Crit. slope length: –
Surf. cover after planting: –

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
10/20/0	Manure injector, liquid low disturb.30 inch		82
11/1/0	Chisel, twisted shovel		40
4/1/1	Fert. applic. anhyd knife 30 in		39
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		23
4/20/1	Planter, double disk opnr	Corn, grain	22
10/10/1	Harvest, killing crop 50pct standing stubble		73
10/30/1	Manure injector, liquid low disturb.30 inch		81
11/10/1	Chisel, twisted shovel		40
4/1/2	Fert. applic. anhyd knife 30 in		39
4/10/2	Seedbed finisher, sngl dsk, fld cult, coil tine har		23

4/20/2	Planter, double disk opnr	Corn, grain	22
10/10/2	Harvest, killing crop 50pct standing stubble		73

Soil conditioning index (SCI): 0.24
Avg. annual slope STIR: 100
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T. 16198-7 (York)

File: Win Production 238-05038A
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 172A Hoopeston sandy loam, 0 to 3 percent slopes\Hoopeston sandy loam 100%
Slope length (horiz): 180 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	120
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	120

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 4.0 t/ac/yr
Soil loss erod. portion: 0.81 t/ac/yr
Detachment on slope: 0.81 t/ac/yr
Soil loss for cons. plan: 0.81 t/ac/yr
Sediment delivery: 0.81 t/ac/yr
Net C factor: 0.15
Net K factor: 0.19

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
10/20/0	Manure injector, liquid low disturb.30 inch		82
11/1/0	Chisel, twisted shovel		40
4/1/1	Fert. applic. anhyd knife 30 in		39
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		23
4/20/1	Planter, double disk opnr	Corn, grain	22
10/10/1	Harvest, killing crop 50pct standing stubble		73
10/30/1	Manure injector, liquid low disturb.30 inch		81
11/10/1	Chisel, twisted shovel		40
4/1/2	Fert. applic. anhyd knife 30 in		39
4/10/2	Seedbed finisher, sngl dsk, fld cult, coil tine har		23

4/20/2	Planter, double disk opnr	Corn, grain	22
10/10/2	Harvest, killing crop 50pct standing stubble		73

Soil conditioning index (SCI): 0.24
Avg. annual slope STIR: 100
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: T. 16198-8 (York)

File: Win Production 238-05038A
Access Group: R2_NRCS_Fld_Office

Inputs:
Location: Illinois\Scott County
Soil: 71 Darwin silty clay\Darwin silty clay 100%
Slope length (horiz): 210 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	120
CMZ 16\c.Other Local Mgt Records\Corn;chisel;manure;nh3;cultivate;x2	Corn, grain	bushels	120

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: (none)
Adjust res. burial level: Normal res. burial
General yield level: Set by user
Rock cover: 0 %

Outputs:
T value: 5.0 t/ac/yr
Soil loss erod. portion: 1.1 t/ac/yr
Detachment on slope: 1.1 t/ac/yr
Soil loss for cons. plan: 1.1 t/ac/yr
Sediment delivery: 1.1 t/ac/yr
Net C factor: 0.15
Net K factor: 0.27

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
10/20/0	Manure injector, liquid low disturb.30 inch		82
11/1/0	Chisel, twisted shovel		40
4/1/1	Fert. applic. anhyd knife 30 in		39
4/10/1	Seedbed finisher, sngl dsk, fld cult, coil tine har		23
4/20/1	Planter, double disk opnr	Corn, grain	22
10/10/1	Harvest, killing crop 50pct standing stubble		72
10/30/1	Manure injector, liquid low disturb.30 inch		80
11/10/1	Chisel, twisted shovel		39
4/1/2	Fert. applic. anhyd knife 30 in		38
4/10/2	Seedbed finisher, sngl dsk, fld cult, coil tine har		23

4/20/2	Planter, double disk opnr	Corn, grain	22
10/10/2	Harvest, killing crop 50pct standing stubble		73

Soil conditioning index (SCI): 0.40
Avg. annual slope STIR: 100
Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

SECTION 6
Cost and Quantities of New Practices

WIN Production

	NRCS PRACTICE CODE	CONSERVATION PRACTICE	NO OF UNITS	UNIT TYPE	UNIT COST	TOTAL $	NOTES
	606	Subsurface Drain	1550	FT	$2.20	$3,410.00	5" Diameter Perimeter Drainage Tile - Socked (Gestation)
	634	Manure Transfer	1	EA	$20,000.00	$20,000.00	Agitator Pump - Large
	634	Manure Transfer	380	FT	$14.00	$5,320.00	8" diameter SDR-35 for Farrowing building
	634	Manure Transfer	130	TON	$32.00	$4,160.00	bedding and haunching
	634	Manure Transfer	7920	FT	$21.00	$166,320.00	8" diameter PVC forcemain to fields
	342	Critical Area planting	1	AC	$250.00	$250.00	Vegetation establishment around proposed gestation building and composter
	342	Critical Area planting	1	AC	$250.00	$250.00	Mulch
	313	Waste Storage Facility	14110	CY	$2.50	$35,275.00	Excavation (pit under gestation building)
	313	Waste Storage Facility	778	CY	$170.00	$132,260.00	Reinforced Concrete – Flatwork (pit under building) -Proposed gest barn
	313	Waste Storage Facility	370	CY	$275.00	$101,750.00	Reinforced Concrete - Formed (pit under building) -Proposed gest barn
	313	Waste Storage Facility	496	CY	$350.00	$173,600.00	Reinforced Concrete - Precast (pit under building) -Proposed gest barn
	317	Compost Facility	110	CY	$300.00	$33,000.00	Reinforced Concrete – Flat work
	317	Compost Facility	71	CY	$400.00	$28,400.00	Reinforced Concrete - Formed
	317	Compost Facility	6570	sq ft	$10.00	$65,700.00	roof structure
	516	Pipeline	7920	FT	$1.15	$9,108.00	water line from well to site (2.5" PVC pipe)
	516	Pipeline	8480	FT	$1.00	$8,480.00	trenching
	516	Pipeline	560	FT	$0.90	$504.00	1.25" dia. PE pipeline to the composter
	156	Pipeline	2	EA	$125.00	$250.00	Freezeproof hydrant for composter
	561	Heavy Use Area Protection	148	TON	$32.00	$4,736.00	Aggregate for area between composter and new building
	560	Access Road	1270	FT	$18.00	$22,860.00	one-way (to composter and new gestation)
	633	Waste Utilization - Incentive	400	AC	$30.00	$12,000.00	3 years, see tab 7 nutrient management plan for which fields each year

Total:	$827,633.00
10% Contingency:	$82,763.30
Grand Total:	**$910,396.30**

SECTION 7
Nutrient Management Component
(Soil Testing Plan, Manure Testing Plan, Nutrient Management Plan Spreadsheet)

Manure Application Plan
Basis of Nutrient Management
Manure application rates in this plan are based upon crop uptake.

Notes and Assumptions:
- **Avail. N*** is the estimated amount of nitrogen remaining after losses due to application method and timing.
- For liquid manure applications, see attached spreadsheets in this section
- When liquid manure is applied to fields with tile, drainage tile plugs (or similar devices) shall be available on-site to plug tile outlets should manure begin to flow from the tile outlets.

Soil Testing Plan
Soil test will be taken every 4 years on each field. Soil tests will be taken in the spring using University of Illinois Agronomy Handbook recommendations. SEE APPENDIX B (Soil Testing Procedures & Results)

Manure and Wastewater Testing/Analysis Plan
Manure shall be analyzed on an annual basis from each storage structure for: % Solids, Total N, Organic N, NH_4 or NH_3, P_2O_5, K_2O, and pH. SEE APPENDIX C (Manure Analysis/Sampling Procedures & Results)

Estimated Manure Nutrient Analysis
See attached Nutrient Management Plan for manure sources and analysis.

Commercial Fertilizer Application Plan

Commercial Fertilizer applications are planned in accordance with those shown in the attached spreadsheets.

After accounting for setbacks from surface water, wells, and other non-application areas (waterways, filter strips, buffers, etc.), approximately 966 acres are available for manure.

The following tracts T16198, T10293 and T10590 are planned for the Waste Utilization for each year (2007 through 2009). See the attached plan to identify which fields are planned each year.

Any changes to manure analysis, soil tests, yields, cropping rotations or fields where manure is applied will require this plan to be updated.

Call Maurer-Stutz, Inc. at (309)693-7615

Win Production

VERSION 13.3

Manure Nutrient Management Plan

Years
2007 - 2012

Table of Contents

- Available Nutrients Calculations
- Manure Sources and Analysis
- Crop Rotations and Yields
- Manure Applications
- Five Year Manure Management Plan
- Median Soil Test Data
- Commercial Fertilizer Types
- Commercial Fertilizer Applications
- Annual Nutrient Balances
- Projected Soil P and K Levels

MAURER STUTZ, INC.
ENGINEERS SURVEYORS

Available Nutrients Calculations

				START YEAR		2007		
Manure Analysis								
	Source #	**1**	**2**	**3**	**4**	**5**	**6**	**7**
	Source	**SWINE ANAEROBIC LIQUID INJECTED**	**SWINE ANAEROBIC LIQUID INJECTED**					
2004	# NH3 / k Gal or ton	0.44	18					
	# Org. N / k Gal or ton	0.41	7					
	# TOTAL N/ k Gal or ton	0.85	25					
	# 1YR PAN / k Gal or ton	0.55	20					
	# P2O5/ k Gal or ton	1	23					
	# K20/ k Gal or ton	8	21					
2005	# NH3 / k Gal or ton	0.44	18					
	# Org. N / k Gal or ton	0.41	7					
	# TOTAL N/ k Gal or ton	0.85	25					
	# 1YR PAN / k Gal or ton	0.55	20					
	# P2O5/ k Gal or ton	1	23					
	# K20/ k Gal or ton	8	21					
2006	# NH3 / k Gal or ton	0.44	18					
	# Org. N / k Gal or ton	0.41	7					
	# TOTAL N/ k Gal or ton	0.85	25					
	# 1YR PAN / k Gal or ton	0.55	20					
	# P2O5/ k Gal or ton	1	23					
	# K20/ k Gal or ton	8	21					
2007	# NH3 / k Gal or ton	0.44	18					
	# Org. N / k Gal or ton	0.41	7					
	# TOTAL N/ k Gal or ton	0.85	25					
	# 1YR PAN / k Gal or ton	0.55	20					
	# P2O5/ k Gal or ton	1	23					
	# K20/ k Gal or ton	8	21					
2008	# NH3 / k Gal or ton	0.44	18					
	# Org. N / k Gal or ton	0.41	7					
	# TOTAL N/ k Gal or ton	0.85	25					
	# 1YR PAN / k Gal or ton	0.55	20					
	# P2O5/ k Gal or ton	1	23					
	# K20/ k Gal or ton	8	21					
2009	# NH3 / k Gal or ton	0.44	18					
	# Org. N / k Gal or ton	0.41	7					
	# TOTAL N/ k Gal or ton	0.85	25					
	# 1YR PAN / k Gal or ton	0.55	20					
	# P2O5/ k Gal or ton	1	23					
	# K20/ k Gal or ton	8	21					
2010	# NH3 / k Gal or ton	0.44	18					
	# Org. N / k Gal or ton	0.41	7					
	# TOTAL N/ k Gal or ton	0.85	25					
	# 1YR PAN / k Gal or ton	0.55	20					
	# P2O5/ k Gal or ton	1	23					
	# K20/ k Gal or ton	8	21					
2011	# NH3 / k Gal or ton	0.44	18					
	# Org. N / k Gal or ton	0.41	7					
	# TOTAL N/ k Gal or ton	0.85	25					
	# 1YR PAN / k Gal or ton	0.55	20					
	# P2O5/ k Gal or ton	1	23					
	# K20/ k Gal or ton	8	21					
2012	# NH3 / k Gal or ton	0.44	18					
	# Org. N / k Gal or ton	0.41	7					
	# TOTAL N/ k Gal or ton	0.85	25					
	# 1YR PAN / k Gal or ton	0.55	20					
	# P2O5/ k Gal or ton	1	23					
	# K20/ k Gal or ton	8	21					

ORGANIC NITROGEN	MWPS-18 table 10-5	
P2O5	AWMFH PART 651 CH.11 Table 11-9	
K20	AWMFH PART 651 CH.11 Table 11-9	

8	9	10

Manure Nutrient Mineralization

ANIMAL TYPE	MANURE TYPE	ORGANIC NITROGEN	P2O5	K20
SWINE	NH3	50%	90%	93%
SWINE	ORGANIC NITROGEN	35%	90%	93%
SWINE	TOTAL NITROGEN	30%	90%	93%
BEEF	SOLID W/O BED	35%	90%	93%
BEEF	SOLID W /BED	25%	90%	93%
BEEF	ANAEROBIC	30%	90%	93%
BEEF	AEROBIC	25%	90%	93%
DAIRY	SOLID W/O BED	35%	90%	93%
DAIRY	SOLID W/ BED	25%	90%	93%
DAIRY	ANAEROBIC	30%	90%	93%
DAIRY	AEROBIC	25%	90%	93%
SHEEP	SOLIDS	25%	90%	93%
POULTRY	DEEP PIT	60%	90%	93%
POULTRY	SOLID W/ LITTER	60%	90%	93%
POULTRY	SOLID W/O LITTER	60%	90%	93%
HORSE	SOLID W/ BED	20%	90%	93%

		MWPS-18 table 10-2
	MANURE TYPE	Ammonia Loss:
BROADCAST W/O INCORP	SOLID	30%
BROADCAST W/O INCORP	LIQUID	25%
BROADCAST W/ INCORP	SOLID	5%
BROADCAST W/ INCORP	LIQUID	5%
INJECTED	LIQUID	2%
IRRIGATION	LIQUID	40%

Note to users and those reviewing this document:

All values in the shaded areas are inputs based on specific client information. Those values not in the shaded areas were calculated based on data from Mid West Plan Service - 18, Animal Waste Management Field Hand book part 651 Chapter 11, and the 1999 Certified Livestock Managers' Manual.

Manure Sources and Analysis

2004

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
1	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	4206	0.44	0.41	0.85	1.43	8.04
2	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	1351	18	7	25	22.8	21
3											
4											
5											
6											
7											
8											
9											
10											

2005

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
1	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	4206	0.44	0.41	0.85	1.43	8.04
2	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	1351	18	7	25	22.8	21
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0

2006

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
1	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	4206	0.44	0.41	0.85	1.43	8.04
2	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	1351	18	7	25	22.8	21
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0

2007

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
1	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	4206	0.44	0.41	0.85	1.43	8.04
2	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	1351	18	7	25	22.8	21
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0

2008

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
1	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	4206	0.44	0.41	0.85	1.43	8.04
2	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	1351	18	7	25	22.8	21
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0

2009

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
1	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	4206	0.44	0.41	0.85	1.43	8.04
2	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	1351	18	7	25	22.8	21
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0

2010

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
1	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	4206	0.44	0.41	0.85	1.43	8.04
2	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	1351	18	7	25	22.8	21
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0

2011

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
1	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	4206	0.44	0.41	0.85	1.43	8.04
2	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	1351	18	7	25	22.8	21
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0

2012

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
1	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	4206	0.44	0.41	0.85	1.43	8.04
2	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	1351	18	7	25	22.8	21
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0

FIELD INFROMATION

FIELD NAME	TRACT #	TOTAL ACRES	NON-SPREADABLE ACRES	SPREADABLE ACRES
York	T16198-1	153.3	29	124.3
York	T16198-2	74.6	12.7	61.9
York	T16198-3	37	13.2	23.8
York	T16198-4	37.4	5.7	31.7
York	T16198-5	44.8	15.1	29.7
York	T16198-6	75	16.4	58.6
York	T16198-7	31.4		31.4
York	T16198-8	76	10.3	65.7
Coon	T10293-7	41.2	10.5	30.7
Coon	T10293-6	38.8	6.2	32.6
Coon	T10293-8	25	18.6	6.4
Coon	T10293-9	89.5	18.3	71.2
Coon	T10590-1	32.2	10.1	22.1
Coon	T10590-24	3.3	3.3	0
Coon	T10590-25	40	3.4	36.6
Coon	T10590-26	6.4		6.4
Coon	T10590-3	27	10.6	16.4
Coon	T10590-18	2.3		2.3
Coon	T10590-29	1.3		1.3
Coon	T10590-4	1.70	1.7	0
Coon	T10590-17	1.60		1.6
Coon	T10590-5	61.00		61
Coon	T10590-6	59.80	6.4	53.4
Coon	T10590-2	2.90		2.9
Coon	T10590-22	6.30		6.3
Coon	T10590-27	2.30		2.3
Coon	T10590-23	0.70		0.7
Coon	T10590-28	0.70		0.7
Coon	T10590-7	65.20		65.2
Coon	T10590-20	66.30		66.3
Coon	T10590-14	6.50		6.5
Coon	T10590-15	7.10		7.1
Coon	T10590-9	1.40		1.4
Coon	T10590-13	5.50		5.5
Coon	T10590-10	32.60	9	23.6
		1158.10	191.5	966.6
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0

Crop Rotations and Yields

# Fields	60																		
		2005		2006		2007		2008		2009		2010		2011		2012		Corn	Beans
Field #	Acres	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	bu	bu
York (T16198-1)	124.3		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	140	47
York (T16198-1) (A)	29		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	140	47
York (T16198-2)	61.9		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	118	40
York (T16198-2) (A)	12.7		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	118	40
York (T16198-3)	23.8		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	141	45
York (T16198-3) (A)	13.2		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	141	45
York (T16198-4)	31.7		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	117	38
York (T16198-4) (A)	5.7		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	117	38
York (T16198-5)	29.7		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	118	40
York (T16198-5) (A)	15.1		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	118	40
York (T16198-6)	58.6		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	117	40
York (T16198-6) (A)	16.4		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	117	40
York (T16198-7)	31.4		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	117	38
York (T16198-8)	65.7		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	118	40
York (T16198-8) (A)	10.3		Corn		Corn		Corn		Corn		Corn		Corn		Corn		Corn	118	40
Coon (T10293-7)	30.7		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	106	36
Coon (T10293-7) (A)	10.5		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	108	36
Coon (T10293-6)	32.6		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	145	45
Coon (T10293-6) (A)	6.2		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	145	45
Coon (T10293-8)	6.4		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	122	40
Coon (T10293-8) (A)	18.6		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	122	40
Coon (T10293-9)	71.2		Beans		Corn		Beans		Corn		Beans		Corn		Beans		Corn	145	45
Coon (T10293-9) (A)	18.3		Beans		Corn		Beans		Corn		Beans		Corn		Beans		Corn	145	45
Coon (T10590-1)	22.1		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	118	40
Coon (T10590-1) (A)	10.1		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	118	40
Coon (T10590-24)	0		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	140	47
Coon (T10590-24) (A)	3.3		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	140	47
Coon (T10590-25)	36.6		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	132	43
Coon (T10590-25) (A)	3.4		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	132	43
Coon (T10590-26)	6.4		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	118	40
Coon (T10590-3)	16.4		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	118	40
Coon (T10590-3) (A)	10.6		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	118	40
Coon (T10590-18)	2.3		Beans		Corn		Beans		Corn		Beans		Corn		Beans		Corn	159	53
Coon (T10590-29)	1.3		Beans		Corn		Beans		Corn		Beans		Corn		Beans		Corn	118	40
Coon (T10590-4)	0		Beans		Corn		Beans		Corn		Beans		Corn		Beans		Corn	118	40
Coon (T10590-4) (A)	1.7		Beans		Corn		Beans		Corn		Beans		Corn		Beans		Corn	118	40
Coon (T10590-17)	1.6		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	122	40
Coon (T10590-5)	61		Beans		Corn		Beans		Corn		Beans		Corn		Beans		Corn	138	45
Coon (T10590-6)	53.4		Beans		Corn		Beans		Corn		Beans		Corn		Beans		Corn	132	43
Coon (T10590-6) (A)	6.4		Beans		Corn		Beans		Corn		Beans		Corn		Beans		Corn	132	43
Coon (T10590-2)	2.9		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	118	40
Coon (T10590-22)	6.3		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	117	38
Coon (T10590-27)	2.3		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	117	38
Coon (T10590-23)	0.7		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	118	40
Coon (T10590-28)	0.7		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	122	40
Coon (T10590-7)	65.2		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	132	43
Coon (T10590-20)	66.3		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	155	48
Coon (T10590-14)	6.5		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	118	40
Coon (T10590-15)	7.1		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	106	36
Coon (T10590-9)	1.4		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	134	45
Coon (T10590-13)	5.5		Corn		Beans		Corn		Beans		Corn		Beans		Corn		Beans	118	40
Coon (T10590-10)	23.6		Beans		Corn		Beans		Corn		Beans		Corn		Beans		Corn	140	47
Coon (T10590-10) (A)	9		Beans		Corn		Beans		Corn		Beans		Corn		Beans		Corn	140	47

MANURE APPLICATIONS

Crop Year 2007 Field #	Acres	2004 App. Rate per Acre (1,000 gal)	2004 Manure Source	2005 App. Rate per Acre (1,000 gal or tons)	2005 Manure Source	2006 App. Rate per Acre (1,000 gal or tons)	2006 Manure Source	2007 App. Rate per Acre (1,000 gal or tons)	2007 Manure Source	2008 App. Rate per Acre (1,000 gal or tons)	2008 Manure Source	2009 App. Rate per Acre (1,000 gal or tons)	2009 Manure Source	2010 App. Rate per Acre (1,000 gal or tons)	2010 Manure Source	2011 App. Rate per Acre (1,000 gal or tons)	2011 Manure Source	2012 App. Rate per Acre (1,000 gal or tons)	2012 Manure Source
York (T16198-1)	124.3							27	1	5	2	27	1	5	2	27	1	5	2
York (T16198-1) (A)	29.0																		
York (T16198-2)	61.9							5	2			5	2			5	2		
York (T16198-2) (A)	12.7																		
York (T16198-3)	23.8									5	2			5	2			5	2
York (T16198-3) (A)	13.2																		
York (T16198-4)	31.7							27	1			27	1	5		27	1		
York (T16198-4) (A)	5.7																		
York (T16198-5)	29.7									5	2			5	2			5	2
York (T16198-5) (A)	15																		
York (T16198-6)	59									27	1			27	1		2	27	1
York (T16198-6) (A)	16																		
York (T16198-7)	31									27	1			27	1			27	1
York (T16198-8)	66									27	1			27	1			27	1
York (T16198-8) (A)	10																		
Coon (T10293-7)	31							4.1	2			4.1	2			4.1	2		
Coon (T10293-7) (A)	11																		
Coon (T10293-6)	33							4.1	2			4.1	2			4.1	2		
Coon (T10293-6) (A)	6																		
Coon (T10293-8)	6								2										
Coon (T10293-8) (A)	19																		
Coon (T10293-9)	71									4.1	2			4.1	2			4.1	2
Coon (T10293-9) (A)	18																		
Coon (T10590-1)	22							4.1	2			4.1	2			4.1	2		
Coon (T10590-1) (A)	10																		
Coon (T10590-24)	0							4.1	2			4.1	2			4.1	2		
Coon (T10590-24) (A)	3																		
Coon (T10590-25)	37							4.1	2			4.1	2			4.1	2		
Coon (T10590-25) (A)	3																		
Coon (T10590-26)	6								2										
Coon (T10590-3)	16								2										
Coon (T10590-3) (A)	11																		
Coon (T10590-18)	2									4.1	2			4.1	2			4.1	2
Coon (T10590-29)	1									4.1	2			4.1	2			4.1	2
Coon (T10590-4)	0																		
Coon (T10590-4) (A)	2																		
Coon (T10590-17)	2								2										
Coon (T10590-5)	61									4.1	2			4.1	2			4.1	2
Coon (T10590-6)	53										2								
Coon (T10590-6) (A)	6																		
Coon (T10590-2)	3								2										
Coon (T10590-22)	6								2										
Coon (T10590-27)	2								2										
Coon (T10590-23)	1								2										
Coon (T10590-28)	1								2										
Coon (T10590-7)	65							4.1	2			4.1	2			4.1	2		
Coon (T10590-20)	66							4.1	2			4.1	2			4.1	2		

Coon (T10590-14)	7
Coon (T10590-15)	7
Coon (T10590-9)	1
Coon (T10590-13)	6
Coon (T10590-10)	24
Coon (T10590-10) (A)	9

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Five Year Manure Management Plan

CROP YEAR		2006	2007	2007	SPRING	FALL	SPRING	FALL	PAN	PREVIOUS	PREVIOUS MANURE ORGANIC N			2007	2007	2007	2007	1	2
2007		CROP	SPRING	FALL	YIELD	YIELD	NITROGEN	NITROGEN	UPTAKE	CROP	3RD YR	2ND YR	1ST YR	APPL. RATE	MANURE	MANURE	TOTAL	SWINE	SWINE
			CROP	CROP	GOAL	GOAL	UPTAKE	UPTAKE	GOAL	N CREDIT	CREDIT	CREDIT	CREDIT	PER ACRE	SOURCE	PAN	PAN	ANAEROBIC	ANAEROBIC
FIELD #	ACRES				UNITS/ACRE	UNITS/ACRE	lb/UNITS	lb/UNITS	lb/ACRE	lb/ACRE	lb/ACRE	lb/ACRE	lb/ACRE	(1,000 GAL OR TON)	#	lb/ACRE	lb/ACRE	LIQUID	LIQUID
York (T16198-1)	124	Corn		Corn		140		1.20	168.0	0	0.00	0.00	0.00	27.00	1.00	14.96	(153.0)	3356.10	
York (T16198-1) (A)	29	Corn		Corn		140		1.20	168.0	0	0.00	0.00	0.00	0.00		0.00	(168.0)		
York (T16198-2)	62	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	5.00	2.00	98.70	(42.9)		309.50
York (T16198-2) (A)	13	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
York (T16198-3)	24	Corn		Corn		141		1.20	169.2	0	0.00	0.00	0.00	0.00		0.00	(169.2)		
York (T16198-3) (A)	13	Corn		Corn		141		1.20	169.2	0	0.00	0.00	0.00	0.00		0.00	(169.2)		
York (T16198-4)	32	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	27.00	1.00	14.96	(125.4)	856	
York (T16198-4) (A)	6	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	0.00		0.00	(140.4)		
York (T16198-5)	30	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00	2.00	0.00	(141.6)		0
York (T16198-5) (A)	15	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
York (T16198-6)	59	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	0.00		0.00	(140.4)		
York (T16198-6) (A)	16	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	0.00		0.00	(140.4)		
York (T16198-7)	31	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	0.00		0.00	(140.4)		
York (T16198-8)	65.70	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
York (T16198-8) (A)	10.30	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
Coon (T10293-7)	30.70	Beans		Corn		106		1.20	127.2	40	0.00	0.00	0.00	4.10	2.00	80.93	(6.3)		126
Coon (T10293-7) (A)	10.50	Beans		Corn		108		1.20	129.6	40	0.00	0.00	0.00	0.00		0.00	(89.6)		
Coon (T10293-6)	32.60	Beans		Corn		145		1.20	174.0	40	0.00	0.00	0.00	4.10	2.00	80.93	(53.1)		134
Coon (T10293-6) (A)	6	Beans		Corn		145		1.20	174.0	40	0.00	0.00	0.00	0.00		0.00	(134.0)		
Coon (T10293-8)	6	Beans		Corn		122		1.20	146.4	40	0.00	0.00	0.00	0.00	2.00	0.00	(106.4)		0
Coon (T10293-8) (A)	19	Beans		Corn		122		1.20	146.4	40	0.00	0.00	0.00	0.00		0.00	(106.4)		
Coon (T10293-9)	71	Corn		Beans		45		3.80	171.0	0	0.00	0.00	0.00	0.00		0.00	(171.0)		
Coon (T10293-9) (A)	18	Corn		Beans		45		3.80	171.0	0	0.00	0.00	0.00	0.00		0.00	(171.0)		
Coon (T10590-1)	22	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	4.10	2.00	80.93	(20.7)		91
Coon (T10590-1) (A)	10	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-24)	0	Beans		Corn		140		1.20	168.0	40	0.00	0.00	0.00	4.10	2.00	80.93	(47.1)		0
Coon (T10590-24) (A)	3	Beans		Corn		140		1.20	168.0	40	0.00	0.00	0.00	0.00		0.00	(128.0)		
Coon (T10590-25)	37	Beans		Corn		132		1.20	158.4	40	0.00	0.00	0.00	4.10	2.00	80.93	(37.5)		150
Coon (T10590-25) (A)	3	Beans		Corn		132		1.20	158.4	40	0.00	0.00	0.00	0.00		0.00	(118.4)		
Coon (T10590-26)	6	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00	2.00	0.00	(101.6)		0
Coon (T10590-3)	16	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00	2.00	0.00	(101.6)		0
Coon (T10590-3) (A)	11	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-18)	2.30	Corn		Beans		53		3.80	201.4	0	0.00	0.00	0.00	0.00		0.00	(201.4)		
Coon (T10590-29)	1	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-4)	0.00	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-4) (A)	1.70	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-17)	1.60	Beans		Corn		122		1.20	146.4	40	0.00	0.00	0.00	0.00	2.00	0.00	(106.4)		0
Coon (T10590-5)	61	Corn		Beans		45		3.80	171.0	0	0.00	0.00	0.00	0.00		0.00	(171.0)		
Coon (T10590-6)	53	Corn		Beans		43		3.80	163.4	0	0.00	0.00	0.00	0.00		0.00	(163.4)		
Coon (T10590-6) (A)	6	Corn		Beans		43		3.80	163.4	0	0.00	0.00	0.00	0.00		0.00	(163.4)		
Coon (T10590-2)	3	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00	2.00	0.00	(101.6)		0
Coon (T10590-22)	6	Beans		Corn		117		1.20	140.4	40	0.00	0.00	0.00	0.00	2.00	0.00	(100.4)		0
Coon (T10590-27)	2	Beans		Corn		117		1.20	140.4	40	0.00	0.00	0.00	0.00	2.00	0.00	(100.4)		0
Coon (T10590-23)	1	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00	2.00	0.00	(101.6)		0
Coon (T10590-28)	1	Beans		Corn		122		1.20	146.4	40	0.00	0.00	0.00	0.00	2.00	0.00	(106.4)		0
Coon (T10590-7)	65	Beans		Corn		132		1.20	158.4	40	0.00	0.00	0.00	4.10	2.00	80.93	(37.5)		267
Coon (T10590-20)	66	Beans		Corn		155		1.20	186.0	40	0.00	0.00	0.00	4.10	2.00	80.93	(65.1)		271.83
Coon (T10590-14)	7	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-15)	7	Beans		Corn		106		1.20	127.2	40	0.00	0.00	0.00	0.00		0.00	(87.2)		
Coon (T10590-9)	1	Beans		Corn		134		1.20	160.8	40	0.00	0.00	0.00	0.00		0.00	(120.8)		
Coon (T10590-13)	6	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-10)	23.60	Corn		Beans		47		3.80	178.6	0	0.00	0.00	0.00	0.00		0.00	(178.6)		
Coon (T10590-10) (A)	9	Corn		Beans		47		3.80	178.6	0	0.00	0.00	0.00	0.00		0.00	(178.6)		
																	TOTAL	4212	1349
																		(6)	2

CROP YEAR		2007	2008	2008	SPRING	FALL	SPRING	FALL	PAN	PREVIOUS	PREVIOUS MANURE ORGANIC N			2008	2008	2008	2008	1	2
2008		CROP	SPRING	FALL	YIELD	YIELD	NITROGEN	NITROGEN	UPTAKE	CROP	3RD YR	2ND YR	1ST YR	APPL. RATE	MANURE	MANURE	TOTAL	SWINE	SWINE
			CROP	CROP	GOAL	GOAL	UPTAKE	UPTAKE	GOAL	N CREDIT	CREDIT	CREDIT	CREDIT	PER ACRE	SOURCE	PAN	PAN	ANAEROBIC	ANAEROBIC
FIELD #	ACRES				UNITS/ACRE	UNITS/ACRE	lb/UNITS	lb/UNITS	lb/ACRE	lb/ACRE	lb/ACRE	lb/ACRE	lb/ACRE	(1,000 GAL OR TON)	#	lb/ACRE	lb/ACRE	LIQUID	LIQUID
York (T16198-1)	124	Corn		Corn		140		1.20	168.0	0	0.00	0.00	1.66	5.00	2.00	98.70	(67.6)		622
York (T16198-1) (A)	29	Corn		Corn		140		1.20	168.0	0	0.00	0.00	0.00	0.00		0.00	(168.0)		
York (T16198-2)	62	Corn		Corn		118		1.20	141.6	0	0.00	0.00	5.25	0.00		0.00	(136.4)		
York (T16198-2) (A)	13	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
York (T16198-3)	24	Corn		Corn		141		1.20	169.2	0	0.00	0.00	0.00	5.00	2.00	98.70	(70.5)		119
York (T16198-3) (A)	13	Corn		Corn		141		1.20	169.2	0	0.00	0.00	0.00	0.00		0.00	(169.2)		
York (T16198-4)	32	Corn		Corn		117		1.20	140.4	0	0.00	0.00	1.66	0.00		0.00	(138.7)		
York (T16198-4) (A)	6	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	0.00		0.00	(140.4)		
York (T16198-5)	30	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	5.00	2.00	98.70	(42.9)		149
York (T16198-5) (A)	15	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
York (T16198-6)	58.60	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	27.00	1.00	14.96	(125.4)	1582.20	
York (T16198-6) (A)	16	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	0.00		0.00	(140.4)		
York (T16198-7)	31.40	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	27.00	1.00	14.96	(125.4)	848	
York (T16198-8)	65.70	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	27.00	1.00	14.96	(126.6)	1774	
York (T16198-8) (A)	10.30	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
Coon (T10293-7)	31	Corn		Beans		36		3.80	136.8	0	0.00	0.00	4.31	0.00		0.00	(132.5)		
Coon (T10293-7) (A)	11	Corn		Beans		36		3.80	136.8	0	0.00	0.00	0.00	0.00		0.00	(136.8)		
Coon (T10293-6)	33	Corn		Beans		45		3.80	171.0	0	0.00	0.00	4.31	0.00		0.00	(166.7)		
Coon (T10293-6) (A)	6	Corn		Beans		45		3.80	171.0	0	0.00	0.00	0.00	0.00		0.00	(171.0)		
Coon (T10293-8)	6	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10293-8) (A)	19	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10293-9)	71	Beans		Corn		145		1.20	174.0	40	0.00	0.00	0.00	4.10	2.00	80.93	(53.1)		292
Coon (T10293-9) (A)	18	Beans		Corn		145		1.20	174.0	40	0.00	0.00	0.00	0.00		0.00	(134.0)		
Coon (T10590-1)	22	Corn		Beans		40		3.80	152.0	0	0.00	0.00	4.31	0.00		0.00	(147.7)		
Coon (T10590-1) (A)	10	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-24)	0	Corn		Beans		47		3.80	178.6	0	0.00	0.00	4.31	0.00		0.00	(174.3)		
Coon (T10590-24) (A)	3	Corn		Beans		47		3.80	178.6	0	0.00	0.00	0.00	0.00		0.00	(178.6)		
Coon (T10590-25)	37	Corn		Beans		43		3.80	163.4	0	0.00	0.00	4.31	0.00		0.00	(159.1)		
Coon (T10590-25) (A)	3	Corn		Beans		43		3.80	163.4	0	0.00	0.00	0.00	0.00		0.00	(163.4)		
Coon (T10590-26)	6.40	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-3)	16	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-3) (A)	10.60	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-18)	2.30	Beans		Corn		159		1.20	190.8	40	0.00	0.00	0.00	4.10	2.00	80.93	(69.9)		9.43
Coon (T10590-29)	1.30	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	4.10	2.00	80.93	(20.7)		5.33
Coon (T10590-4)	0	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-4) (A)	2	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-17)	2	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-5)	61	Beans		Corn		138		1.20	165.6	40	0.00	0.00	0.00	4.10	2.00	80.93	(44.7)		250
Coon (T10590-6)	53	Beans		Corn		132		1.20	158.4	40	0.00	0.00	0.00	0.00	2.00	0.00	(118.4)		0
Coon (T10590-6) (A)	6	Beans		Corn		132		1.20	158.4	40	0.00	0.00	0.00	0.00		0.00	(118.4)		
Coon (T10590-2)	3	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-22)	6	Corn		Beans		38		3.80	144.4	0	0.00	0.00	0.00	0.00		0.00	(144.4)		
Coon (T10590-27)	2	Corn		Beans		38		3.80	144.4	0	0.00	0.00	0.00	0.00		0.00	(144.4)		
Coon (T10590-23)	1	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-28)	1	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-7)	65	Corn		Beans		43		3.80	163.4	0	0.00	0.00	4.31	0.00		0.00	(159.1)		
Coon (T10590-20)	66	Corn		Beans		48		3.80	182.4	0	0.00	0.00	4.31	0.00		0.00	(178.1)		
Coon (T10590-14)	7	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-15)	7.10	Corn		Beans		36		3.80	136.8	0	0.00	0.00	0.00	0.00		0.00	(136.8)		
Coon (T10590-9)	1.40	Corn		Beans		45		3.80	171.0	0	0.00	0.00	0.00	0.00		0.00	(171.0)		
Coon (T10590-13)	5.50	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-10)	23.60	Beans		Corn		140		1.20	168.0	40	0.00	0.00	0.00	0.00	2.00	0.00	(128.0)		0.00
Coon (T10590-10) (A)	9.00	Beans		Corn		140		1.20	168.0	40	0.00	0.00	0.00	0.00		0.00	(128.0)		
																	TOTAL	4204	1446
																		2	(95)

CROP YEAR		2008	2009	2009	SPRING	FALL	SPRING	FALL	PAN	PREVIOUS	PREVIOUS MANURE ORGANIC N			2009	2009	2009	2009	1	2
2009		CROP	SPRING	FALL	YIELD	YIELD	NITROGEN	NITROGEN	UPTAKE	CROP	3RD YR	2ND YR	1ST YR	APPL. RATE	MANURE	MANURE	TOTAL	SWINE	SWINE
			CROP	CROP	GOAL	GOAL	UPTAKE	UPTAKE	GOAL	N CREDIT	CREDIT	CREDIT	CREDIT	PER ACRE	SOURCE	PAN	PAN	ANAEROBIC	ANAEROBIC
FIELD #	ACRES				UNITS/ACRE	UNITS/ACRE	lb/UNITS	lb/UNITS	lb/ACRE	lb/ACRE	lb/ACRE	lb/ACRE	lb/ACRE	(1,000 GAL OR TON)	#	lb/ACRE	lb/ACRE	LIQUID	LIQUID
York (T16198-1)	124.30	Corn		Corn		140		1.20	168.0	0	0.00	0.83	5.25	27.00	1.00	14.96	(147.0)	3356	
York (T16198-1) (A)	29.00	Corn		Corn		140		1.20	168.0	0	0.00	0.00	0.00	0.00		0.00	(168.0)		
York (T16198-2)	61.90	Corn		Corn		118		1.20	141.6	0	0.00	2.63	0.00	5.00	2.00	98.70	(40.3)		309.50
York (T16198-2) (A)	12.70	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
York (T16198-3)	23.80	Corn		Corn		141		1.20	169.2	0	0.00	0.00	5.25	0.00		0.00	(164.0)		
York (T16198-3) (A)	13.20	Corn		Corn		141		1.20	169.2	0	0.00	0.00	0.00	0.00		0.00	(169.2)		
York (T16198-4)	31.70	Corn		Corn		117		1.20	140.4	0	0.00	0.83	0.00	27.00	1.00	14.96	(124.6)	856	
York (T16198-4) (A)	5.70	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	0.00		0.00	(140.4)		
York (T16198-5)	29.70	Corn		Corn		118		1.20	141.6	0	0.00	0.00	5.25	0.00		0.00	(136.4)		
York (T16198-5) (A)	15.10	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
York (T16198-6)	58.60	Corn		Corn		117		1.20	140.4	0	0.00	0.00	1.66	0.00		0.00	(138.7)		
York (T16198-6) (A)	16.40	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	0.00		0.00	(140.4)		
York (T16198-7)	31.40	Corn		Corn		117		1.20	140.4	0	0.00	0.00	1.66	0.00		0.00	(138.7)		
York (T16198-8)	65.70	Corn		Corn		118		1.20	141.6	0	0.00	0.00	1.66	0.00		0.00	(139.9)		
York (T16198-8) (A)	10.30	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
Coon (T10293-7)	30.70	Beans		Corn		106		1.20	127.2	40	0.00	2.15	0.00	4.10	2.00	80.93	(4.1)		125.87
Coon (T10293-7) (A)	10.50	Beans		Corn		108		1.20	129.6	40	0.00	0.00	0.00	0.00		0.00	(89.6)		
Coon (T10293-6)	32.60	Beans		Corn		145		1.20	174.0	40	0.00	2.15	0.00	4.10	2.00	80.93	(50.9)		133.66
Coon (T10293-6) (A)	6.20	Beans		Corn		145		1.20	174.0	40	0.00	0.00	0.00	0.00		0.00	(134.0)		
Coon (T10293-8)	6.40	Beans		Corn		122		1.20	146.4	40	0.00	0.00	0.00	0.00		0.00	(106.4)		
Coon (T10293-8) (A)	18.60	Beans		Corn		122		1.20	146.4	40	0.00	0.00	0.00	0.00		0.00	(106.4)		
Coon (T10293-9)	71.20	Corn		Beans		45		3.80	171.0	0	0.00	0.00	4.31	0.00		0.00	(166.7)		
Coon (T10293-9) (A)	18.30	Corn		Beans		45		3.80	171.0	0	0.00	0.00	0.00	0.00		0.00	(171.0)		
Coon (T10590-1)	22.10	Beans		Corn		118		1.20	141.6	40	0.00	2.15	0.00	4.10	2.00	80.93	(18.5)		90.61
Coon (T10590-1) (A)	10.10	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-24)	0.00	Beans		Corn		140		1.20	168.0	40	0.00	2.15	0.00	4.10	2.00	80.93	(44.9)		0.00
Coon (T10590-24) (A)	3.30	Beans		Corn		140		1.20	168.0	40	0.00	0.00	0.00	0.00		0.00	(128.0)		
Coon (T10590-25)	36.60	Beans		Corn		132		1.20	158.4	40	0.00	2.15	0.00	4.10	2.00	80.93	(35.3)		150
Coon (T10590-25) (A)	3.40	Beans		Corn		132		1.20	158.4	40	0.00	0.00	0.00	0.00		0.00	(118.4)		
Coon (T10590-26)	6.40	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-3)	16.40	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-3) (A)	10.60	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-18)	2.30	Corn		Beans		53		3.80	201.4	0	0.00	0.00	4.31	0.00		0.00	(197.1)		
Coon (T10590-29)	1.30	Corn		Beans		40		3.80	152.0	0	0.00	0.00	4.31	0.00		0.00	(147.7)		
Coon (T10590-4)	0.00	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-4) (A)	1.70	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-17)	1.60	Beans		Corn		122		1.20	146.4	40	0.00	0.00	0.00	0.00		0.00	(106.4)		
Coon (T10590-5)	61.00	Corn		Beans		45		3.80	171.0	0	0.00	0.00	4.31	0.00		0.00	(166.7)		
Coon (T10590-6)	53.40	Corn		Beans		43		3.80	163.4	0	0.00	0.00	0.00	0.00		0.00	(163.4)		
Coon (T10590-6) (A)	6.40	Corn		Beans		43		3.80	163.4	0	0.00	0.00	0.00	0.00		0.00	(163.4)		
Coon (T10590-2)	2.90	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-22)	6.30	Beans		Corn		117		1.20	140.4	40	0.00	0.00	0.00	0.00		0.00	(100.4)		
Coon (T10590-27)	2.30	Beans		Corn		117		1.20	140.4	40	0.00	0.00	0.00	0.00		0.00	(100.4)		
Coon (T10590-23)	0.70	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-28)	0.70	Beans		Corn		122		1.20	146.4	40	0.00	0.00	0.00	0.00		0.00	(106.4)		
Coon (T10590-7)	65.20	Beans		Corn		132		1.20	158.4	40	0.00	2.15	0.00	4.10	2.00	80.93	(35.3)		267.32
Coon (T10590-20)	66.30	Beans		Corn		155		1.20	186.0	40	0.00	2.15	0.00	4.10	2.00	80.93	(62.9)		271.83
Coon (T10590-14)	6.50	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-15)	7.10	Beans		Corn		106		1.20	127.2	40	0.00	0.00	0.00	0.00		0.00	(87.2)		
Coon (T10590-9)	1.40	Beans		Corn		134		1.20	160.8	40	0.00	0.00	0.00	0.00		0.00	(120.8)		
Coon (T10590-13)	5.50	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-10)	23.60	Corn		Beans		47		3.80	178.6	0	0.00	0.00	0.00	0.00		0.00	(178.6)		
Coon (T10590-10) (A)	9.00	Corn		Beans		47		3.80	178.6	0	0.00	0.00	0.00	0.00		0.00	(178.6)		
																	TOTAL	4212	1349
																		(6)	2

CROP YEAR		2009	2010	2010	SPRING	FALL	SPRING	FALL	PAN	PREVIOUS	PREVIOUS MANURE ORGANIC N			2010	2010	2010	2010	1	2
2010		CROP	SPRING	FALL	YIELD	YIELD	NITROGEN	NITROGEN	UPTAKE	CROP	3RD YR	2ND YR	1ST YR	APPL. RATE	MANURE	MANURE	TOTAL	SWINE	SWINE
			CROP	CROP	GOAL	GOAL	UPTAKE	UPTAKE	GOAL	N CREDIT	CREDIT	CREDIT	CREDIT	PER ACRE	SOURCE	PAN	PAN	ANAEROBIC	ANAEROBIC
FIELD #	ACRES				UNITS/ACRE	UNITS/ACRE	lb/UNITS	lb/UNITS	lb/ACRE	lb/ACRE	lb/ACRE	lb/ACRE	lb/ACRE	(1,000 GAL OR TON)	#	lb/ACRE	lb/ACRE	LIQUID	LIQUID
York (T16198-1)	124.30	Corn		Corn		140		1.20	168.0	0	0.42	2.63	1.66	5.00	2.00	98.70	(64.6)		621.50
York (T16198-1) (A)	29.00	Corn		Corn		140		1.20	168.0	0	0.00	0.00	0.00	0.00		0.00	(168.0)		
York (T16198-2)	61.90	Corn		Corn		118		1.20	141.6	0	1.31	0.00	5.25	0.00		0.00	(135.0)		
York (T16198-2) (A)	12.70	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
York (T16198-3)	23.80	Corn		Corn		141		1.20	169.2	0	0.00	2.63	0.00	5.00	2.00	98.70	(67.9)		119.00
York (T16198-3) (A)	13.20	Corn		Corn		141		1.20	169.2	0	0.00	0.00	0.00	0.00		0.00	(169.2)		
York (T16198-4)	31.70	Corn		Corn		117		1.20	140.4	0	0.42	0.00	1.66	5.00		0.00	(138.3)		
York (T16198-4) (A)	5.70	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	0.00		0.00	(140.4)		
York (T16198-5)	29.70	Corn		Corn		118		1.20	141.6	0	0.00	2.63	0.00	5.00	2.00	98.70	(40.3)		148.50
York (T16198-5) (A)	15.10	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
York (T16198-6)	58.60	Corn		Corn		117		1.20	140.4	0	0.00	0.83	0.00	27.00	1.00	14.96	(124.6)	1582.20	
York (T16198-6) (A)	16.40	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	0.00		0.00	(140.4)		
York (T16198-7)	31.40	Corn		Corn		117		1.20	140.4	0	0.00	0.83	0.00	27.00	1.00	14.96	(124.6)	848	
York (T16198-8)	65.70	Corn		Corn		118		1.20	141.6	0	0.00	0.83	0.00	27.00	1.00	14.96	(125.8)	1773.90	
York (T16198-8) (A)	10.30	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
Coon (T10293-7)	30.70	Corn		Beans		36		3.80	136.8	0	1.08	0.00	4.31	0.00		0.00	(131.4)		
Coon (T10293-7) (A)	10.50	Corn		Beans		36		3.80	136.8	0	0.00	0.00	0.00	0.00		0.00	(136.8)		
Coon (T10293-6)	32.60	Corn		Beans		45		3.80	171.0	0	1.08	0.00	4.31	0.00		0.00	(165.6)		
Coon (T10293-6) (A)	6.20	Corn		Beans		45		3.80	171.0	0	0.00	0.00	0.00	0.00		0.00	(171.0)		
Coon (T10293-8)	6.40	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10293-8) (A)	18.60	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10293-9)	71.20	Beans		Corn		145		1.20	174.0	40	0.00	2.15	0.00	4.10	2.00	80.93	(50.9)		292
Coon (T10293-9) (A)	18.30	Beans		Corn		145		1.20	174.0	40	0.00	0.00	0.00	0.00		0.00	(134.0)		
Coon (T10590-1)	22.10	Corn		Beans		40		3.80	152.0	0	1.08	0.00	4.31	0.00		0.00	(146.6)		
Coon (T10590-1) (A)	10.10	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-24)	0.00	Corn		Beans		47		3.80	178.6	0	1.08	0.00	4.31	0.00		0.00	(173.2)		
Coon (T10590-24) (A)	3.30	Corn		Beans		47		3.80	178.6	0	0.00	0.00	0.00	0.00		0.00	(178.6)		
Coon (T10590-25)	36.60	Corn		Beans		43		3.80	163.4	0	1.08	0.00	4.31	0.00		0.00	(158.0)		
Coon (T10590-25) (A)	3.40	Corn		Beans		43		3.80	163.4	0	0.00	0.00	0.00	0.00		0.00	(163.4)		
Coon (T10590-26)	6.40	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-3)	16.40	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-3) (A)	10.60	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-18)	2.30	Beans		Corn		159		1.20	190.8	40	0.00	2.15	0.00	4.10	2.00	80.93	(67.7)		9.43
Coon (T10590-29)	1.30	Beans		Corn		118		1.20	141.6	40	0.00	2.15	0.00	4.10	2.00	80.93	(18.5)		5.33
Coon (T10590-4)	0.00	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-4) (A)	1.70	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-17)	1.60	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-5)	61.00	Beans		Corn		138		1.20	165.6	40	0.00	2.15	0.00	4.10	2.00	80.93	(42.5)		250.10
Coon (T10590-6)	53.40	Beans		Corn		132		1.20	158.4	40	0.00	0.00	0.00	0.00		0.00	(118.4)		
Coon (T10590-6) (A)	6.40	Beans		Corn		132		1.20	158.4	40	0.00	0.00	0.00	0.00		0.00	(118.4)		
Coon (T10590-2)	2.90	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-22)	6.30	Corn		Beans		38		3.80	144.4	0	0.00	0.00	0.00	0.00		0.00	(144.4)		
Coon (T10590-27)	2.30	Corn		Beans		38		3.80	144.4	0	0.00	0.00	0.00	0.00		0.00	(144.4)		
Coon (T10590-23)	0.70	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-28)	0.70	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-7)	65.20	Corn		Beans		43		3.80	163.4	0	1.08	0.00	4.31	0.00		0.00	(158.0)		
Coon (T10590-20)	66.30	Corn		Beans		48		3.80	182.4	0	1.08	0.00	4.31	0.00		0.00	(177.0)		
Coon (T10590-14)	6.50	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-15)	7.10	Corn		Beans		36		3.80	136.8	0	0.00	0.00	0.00	0.00		0.00	(136.8)		
Coon (T10590-9)	1.40	Corn		Beans		45		3.80	171.0	0	0.00	0.00	0.00	0.00		0.00	(171.0)		
Coon (T10590-13)	5.50	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-10)	23.60	Beans		Corn		140		1.20	168.0	40	0.00	0.00	0.00	0.00		0.00	(128.0)		
Coon (T10590-10) (A)	9.00	Beans		Corn		140		1.20	168.0	40	0.00	0.00	0.00	0.00		0.00	(128.0)		
																	TOTAL	4204	1446
																		2	(95)

CROP YEAR		2010	2011	2011	SPRING	FALL	SPRING	FALL	PAN	PREVIOUS	PREVIOUS MANURE ORGANIC N			2011	2011	2011	2011	1	2
2011		CROP	SPRING	FALL	YIELD	YIELD	NITROGEN	NITROGEN	UPTAKE	CROP	3RD YR	2ND YR	1ST YR	APPL. RATE	MANURE	MANURE	TOTAL	SWINE	SWINE
			CROP	CROP	GOAL	GOAL	UPTAKE	UPTAKE	GOAL	N CREDIT	CREDIT	CREDIT	CREDIT	PER ACRE	SOURCE	PAN	PAN	ANAEROBIC	ANAEROBIC
FIELD #	ACRES				UNITS/ACRE	UNITS/ACRE	lb/UNITS	lb/UNITS	lb/ACRE	lb/ACRE	lb/ACRE	lb/ACRE	lb/ACRE	(1,000 GAL OR TON)	#	lb/ACRE	lb/ACRE	LIQUID	LIQUID
York (T16198-1)	124.30	Corn		Corn		140		1.20	168.0	0	1.31	0.83	5.25	27.00	1.00	14.96	(145.6)	3356.10	
York (T16198-1) (A)	29.00	Corn		Corn		140		1.20	168.0	0	0.00	0.00	0.00	0.00		0.00	(168.0)		
York (T16198-2)	61.90	Corn		Corn		118		1.20	141.6	0	0.00	2.63	0.00	5.00	2.00	98.70	(40.3)		309.50
York (T16198-2) (A)	12.70	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
York (T16198-3)	23.80	Corn		Corn		141		1.20	169.2	0	1.31	0.00	5.25	0.00		0.00	(162.6)		
York (T16198-3) (A)	13.20	Corn		Corn		141		1.20	169.2	0	0.00	0.00	0.00	0.00		0.00	(169.2)		
York (T16198-4)	31.70	Corn		Corn		117		1.20	140.4	0	0.00	0.83	0.00	27.00	1.00	14.96	(124.6)	855.90	
York (T16198-4) (A)	5.70	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	0.00		0.00	(140.4)		
York (T16198-5)	29.70	Corn		Corn		118		1.20	141.6	0	1.31	0.00	5.25	0.00		0.00	(135.0)		
York (T16198-5) (A)	15.10	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
York (T16198-6)	58.60	Corn		Corn		117		1.20	140.4	0	0.42	0.00	1.66	0.00	2.00	0.00	(138.3)		0.00
York (T16198-6) (A)	16.40	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	0.00		0.00	(140.4)		
York (T16198-7)	31.40	Corn		Corn		117		1.20	140.4	0	0.42	0.00	1.66	0.00		0.00	(138.3)		
York (T16198-8)	65.70	Corn		Corn		118		1.20	141.6	0	0.42	0.00	1.66	0.00		0.00	(139.5)		
York (T16198-8) (A)	10.30	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
Coon (T10293-7)	30.70	Beans		Corn		106		1.20	127.2	40	0.00	2.15	0.00	4.10	2.00	80.93	(4.1)		125.87
Coon (T10293-7) (A)	10.50	Beans		Corn		108		1.20	129.6	40	0.00	0.00	0.00	0.00		0.00	(89.6)		
Coon (T10293-6)	32.60	Beans		Corn		145		1.20	174.0	40	0.00	2.15	0.00	4.10	2.00	80.93	(50.9)		133.66
Coon (T10293-6) (A)	6.20	Beans		Corn		145		1.20	174.0	40	0.00	0.00	0.00	0.00		0.00	(134.0)		
Coon (T10293-8)	6.40	Beans		Corn		122		1.20	146.4	40	0.00	0.00	0.00	0.00		0.00	(106.4)		
Coon (T10293-8) (A)	18.60	Beans		Corn		122		1.20	146.4	40	0.00	0.00	0.00	0.00		0.00	(106.4)		
Coon (T10293-9)	71.20	Corn		Beans		45		3.80	171.0	0	1.08	0.00	4.31	0.00		0.00	(165.6)		
Coon (T10293-9) (A)	18.30	Corn		Beans		45		3.80	171.0	0	0.00	0.00	0.00	0.00		0.00	(171.0)		
Coon (T10590-1)	22.10	Beans		Corn		118		1.20	141.6	40	0.00	2.15	0.00	4.10	2.00	80.93	(18.5)		90.61
Coon (T10590-1) (A)	10.10	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-24)	0.00	Beans		Corn		140		1.20	168.0	40	0.00	2.15	0.00	4.10	2.00	80.93	(44.9)		0.00
Coon (T10590-24) (A)	3.30	Beans		Corn		140		1.20	168.0	40	0.00	0.00	0.00	0.00		0.00	(128.0)		
Coon (T10590-25)	36.60	Beans		Corn		132		1.20	158.4	40	0.00	2.15	0.00	4.10	2.00	80.93	(35.3)		150.06
Coon (T10590-25) (A)	3.40	Beans		Corn		132		1.20	158.4	40	0.00	0.00	0.00	0.00		0.00	(118.4)		
Coon (T10590-26)	6.40	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-3)	16.40	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-3) (A)	10.60	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-18)	2.30	Corn		Beans		53		3.80	201.4	0	1.08	0.00	4.31	0.00		0.00	(196.0)		
Coon (T10590-29)	1.30	Corn		Beans		40		3.80	152.0	0	1.08	0.00	4.31	0.00		0.00	(146.6)		
Coon (T10590-4)	0.00	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-4) (A)	1.70	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-17)	1.60	Beans		Corn		122		1.20	146.4	40	0.00	0.00	0.00	0.00		0.00	(106.4)		
Coon (T10590-5)	61.00	Corn		Beans		45		3.80	171.0	0	1.08	0.00	4.31	0.00		0.00	(165.6)		
Coon (T10590-6)	53.40	Corn		Beans		43		3.80	163.4	0	0.00	0.00	0.00	0.00		0.00	(163.4)		
Coon (T10590-6) (A)	6.40	Corn		Beans		43		3.80	163.4	0	0.00	0.00	0.00	0.00		0.00	(163.4)		
Coon (T10590-2)	2.90	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-22)	6.30	Beans		Corn		117		1.20	140.4	40	0.00	0.00	0.00	0.00		0.00	(100.4)		
Coon (T10590-27)	2.30	Beans		Corn		117		1.20	140.4	40	0.00	0.00	0.00	0.00		0.00	(100.4)		
Coon (T10590-23)	0.70	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-28)	0.70	Beans		Corn		122		1.20	146.4	40	0.00	0.00	0.00	0.00		0.00	(106.4)		
Coon (T10590-7)	65.20	Beans		Corn		132		1.20	158.4	40	0.00	2.15	0.00	4.10	2.00	80.93	(35.3)		267.32
Coon (T10590-20)	66.30	Beans		Corn		155		1.20	186.0	40	0.00	2.15	0.00	4.10	2.00	80.93	(62.9)		272
Coon (T10590-14)	6.50	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-15)	7.10	Beans		Corn		106		1.20	127.2	40	0.00	0.00	0.00	0.00		0.00	(87.2)		
Coon (T10590-9)	1.40	Beans		Corn		134		1.20	160.8	40	0.00	0.00	0.00	0.00		0.00	(120.8)		
Coon (T10590-13)	5.50	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-10)	23.60	Corn		Beans		47		3.80	178.6	0	0.00	0.00	0.00	0.00		0.00	(178.6)		
Coon (T10590-10) (A)	9.00	Corn		Beans		47		3.80	178.6	0	0.00	0.00	0.00	0.00		0.00	(178.6)		
																	TOTAL	4212	1349
																		(6)	2

CROP YEAR		2011	2012	2012	SPRING	FALL	SPRING	FALL	PAN	PREVIOUS	PREVIOUS MANURE ORGANIC N			2012	2012	2012	2012	1	2
2012		CROP	SPRING	FALL	YIELD	YIELD	NITROGEN	NITROGEN	UPTAKE	CROP	3RD YR	2ND YR	1ST YR	APPL. RATE	MANURE	MANURE	TOTAL	SWINE	SWINE
			CROP	CROP	GOAL	GOAL	UPTAKE	UPTAKE	GOAL	N CREDIT	CREDIT	CREDIT	CREDIT	PER ACRE	SOURCE	PAN	PAN	ANAEROBIC	ANAEROBIC
FIELD #	ACRES				UNITS/ACRE	UNITS/ACRE	lb/UNITS	lb/UNITS	lb/ACRE	lb/ACRE	lb/ACRE	lb/ACRE	lb/ACRE	(1,000 GAL OR TON)	#	lb/ACRE	lb/ACRE	LIQUID	LIQUID
York (T16198-1)	124.30	Corn		Corn		140		1.20	168.0	0	0.42	2.63	1.66	5.00	2.00	98.70	(64.6)		622
York (T16198-1) (A)	29.00	Corn		Corn		140		1.20	168.0	0	0.00	0.00	0.00	0.00		0.00	(168.0)		
York (T16198-2)	61.90	Corn		Corn		118		1.20	141.6	0	1.31	0.00	5.25	0.00		0.00	(135.0)		
York (T16198-2) (A)	12.70	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
York (T16198-3)	23.80	Corn		Corn		141		1.20	169.2	0	0.00	2.63	0.00	5.00	2.00	98.70	(67.9)		119.00
York (T16198-3) (A)	13.20	Corn		Corn		141		1.20	169.2	0	0.00	0.00	0.00	0.00		0.00	(169.2)		
York (T16198-4)	31.70	Corn		Corn		117		1.20	140.4	0	0.42	0.00	1.66	0.00		0.00	(138.3)		
York (T16198-4) (A)	5.70	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	0.00		0.00	(140.4)		
York (T16198-5)	29.70	Corn		Corn		118		1.20	141.6	0	0.00	2.63	0.00	5.00	2.00	98.70	(40.3)		148.50
York (T16198-5) (A)	15.10	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
York (T16198-6)	58.60	Corn		Corn		117		1.20	140.4	0	0.00	0.83	0.00	27.00	1.00	14.96	(124.6)	1582.20	
York (T16198-6) (A)	16.40	Corn		Corn		117		1.20	140.4	0	0.00	0.00	0.00	0.00		0.00	(140.4)		
York (T16198-7)	31.40	Corn		Corn		117		1.20	140.4	0	0.00	0.83	0.00	27.00	1.00	14.96	(124.6)	847.80	
York (T16198-8)	65.70	Corn		Corn		118		1.20	141.6	0	0.00	0.83	0.00	27.00	1.00	14.96	(125.8)	1773.90	
York (T16198-8) (A)	10.30	Corn		Corn		118		1.20	141.6	0	0.00	0.00	0.00	0.00		0.00	(141.6)		
Coon (T10293-7)	30.70	Corn		Beans		36		3.80	136.8	0	1.08	0.00	4.31	0.00		0.00	(131.4)		
Coon (T10293-7) (A)	10.50	Corn		Beans		36		3.80	136.8	0	0.00	0.00	0.00	0.00		0.00	(136.8)		
Coon (T10293-6)	32.60	Corn		Beans		45		3.80	171.0	0	1.08	0.00	4.31	0.00		0.00	(165.6)		
Coon (T10293-6) (A)	6.20	Corn		Beans		45		3.80	171.0	0	0.00	0.00	0.00	0.00		0.00	(171.0)		
Coon (T10293-8)	6.40	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10293-8) (A)	18.60	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10293-9)	71.20	Beans		Corn		145		1.20	174.0	40	0.00	2.15	0.00	4.10	2.00	80.93	(50.9)		291.92
Coon (T10293-9) (A)	18.30	Beans		Corn		145		1.20	174.0	40	0.00	0.00	0.00	0.00		0.00	(134.0)		
Coon (T10590-1)	22.10	Corn		Beans		40		3.80	152.0	0	1.08	0.00	4.31	0.00		0.00	(146.6)		
Coon (T10590-1) (A)	10.10	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-24)	0.00	Corn		Beans		47		3.80	178.6	0	1.08	0.00	4.31	0.00		0.00	(173.2)		
Coon (T10590-24) (A)	3.30	Corn		Beans		47		3.80	178.6	0	0.00	0.00	0.00	0.00		0.00	(178.6)		
Coon (T10590-25)	36.60	Corn		Beans		43		3.80	163.4	0	1.08	0.00	4.31	0.00		0.00	(158.0)		
Coon (T10590-25) (A)	3.40	Corn		Beans		43		3.80	163.4	0	0.00	0.00	0.00	0.00		0.00	(163.4)		
Coon (T10590-26)	6.40	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-3)	16.40	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-3) (A)	10.60	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-18)	2.30	Beans		Corn		159		1.20	190.8	40	0.00	2.15	0.00	4.10	2.00	80.93	(67.7)		9.43
Coon (T10590-29)	1.30	Beans		Corn		118		1.20	141.6	40	0.00	2.15	0.00	4.10	2.00	80.93	(18.5)		5.33
Coon (T10590-4)	0.00	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-4) (A)	1.70	Beans		Corn		118		1.20	141.6	40	0.00	0.00	0.00	0.00		0.00	(101.6)		
Coon (T10590-17)	1.60	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-5)	61.00	Beans		Corn		138		1.20	165.6	40	0.00	2.15	0.00	4.10	2.00	80.93	(42.5)		250.10
Coon (T10590-6)	53.40	Beans		Corn		132		1.20	158.4	40	0.00	0.00	0.00	0.00		0.00	(118.4)		
Coon (T10590-6) (A)	6.40	Beans		Corn		132		1.20	158.4	40	0.00	0.00	0.00	0.00		0.00	(118.4)		
Coon (T10590-2)	2.90	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-22)	6.30	Corn		Beans		38		3.80	144.4	0	0.00	0.00	0.00	0.00		0.00	(144.4)	0	0
Coon (T10590-27)	2.30	Corn		Beans		38		3.80	144.4	0	0.00	0.00	0.00	0.00		0.00	(144.4)	4206	1351
Coon (T10590-23)	0.70	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-28)	0.70	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-7)	65.20	Corn		Beans		43		3.80	163.4	0	1.08	0.00	4.31	0.00		0.00	(158.0)		
Coon (T10590-20)	66.30	Corn		Beans		48		3.80	182.4	0	1.08	0.00	4.31	0.00		0.00	(177.0)		
Coon (T10590-14)	6.50	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-15)	7.10	Corn		Beans		36		3.80	136.8	0	0.00	0.00	0.00	0.00		0.00	(136.8)		
Coon (T10590-9)	1.40	Corn		Beans		45		3.80	171.0	0	0.00	0.00	0.00	0.00		0.00	(171.0)		
Coon (T10590-13)	5.50	Corn		Beans		40		3.80	152.0	0	0.00	0.00	0.00	0.00		0.00	(152.0)		
Coon (T10590-10)	23.60	Beans		Corn		140		1.20	168.0	40	0.00	0.00	0.00	0.00		0.00	(128.0)		
Coon (T10590-10) (A)	9.00	Beans		Corn		140		1.20	168.0	40	0.00	0.00	0.00	0.00		0.00	(128.0)		
																	TOTAL	4204	1446
																		2	(95)

MEDIAN SOIL TEST DATA

	2001 SOIL TEST				2002 SOIL TEST				2003 SOIL TEST				2004 SOIL TEST				2005 SOIL TEST				2006 SOIL TEST			
Field #	% OM	P	K	PH	% OM	P	K	PH	% OM	P	K	PH	% OM	P	K	PH	% OM	P	K	PH	% OM	P	K	PH
		LB/AC	LB/AC			LB/AC	LB/AC			LB/AC	LB/AC			LB/AC	LB/AC			LB/AC	LB/AC			LB/AC	LB/AC	
York (T16198-1)		70	300																					
York (T16198-1) (A)		70	300																					
York (T16198-2)		70	300																					
York (T16198-2) (A)		70	300																					
York (T16198-3)		70	300																					
York (T16198-3) (A)		70	300																					
York (T16198-4)		70	300																					
York (T16198-4) (A)		70	300																					
York (T16198-5)		70	300																					
York (T16198-5) (A)		70	300																					
York (T16198-6)		70	300																					
York (T16198-6) (A)		70	300																					
York (T16198-7)		70	300																					
York (T16198-8)		70	300																					
York (T16198-8) (A)		122	300																					
Coon (T10293-7)		122	300																					
Coon (T10293-7) (A)		122	300																					
Coon (T10293-6)		122	300																					
Coon (T10293-6) (A)		122	300																					
Coon (T10293-8)		122	300																					
Coon (T10293-8) (A)		122	300																					
Coon (T10293-9)		122	300																					
Coon (T10293-9) (A)		122	300																					
Coon (T10590-1)		122	300																					
Coon (T10590-1) (A)		122	300																					
Coon (T10590-24)		122	300																					
Coon (T10590-24) (A)		122	300																					
Coon (T10590-25)		122	300																					
Coon (T10590-25) (A)		122	300																					
Coon (T10590-26)		122	300																					
Coon (T10590-3)		122	300																					
Coon (T10590-3) (A)		122	300																					
Coon (T10590-18)		122	300																					
Coon (T10590-29)		122	300																					
Coon (T10590-4)		122	300																					
Coon (T10590-4) (A)		122	300																					
Coon (T10590-17)		122	300																					
Coon (T10590-5)		122	300																					
Coon (T10590-6)		122	300																					
Coon (T10590-6) (A)		122	300																					
Coon (T10590-2)		122	300																					
Coon (T10590-22)		122	300																					
Coon (T10590-27)		122	300																					
Coon (T10590-23)		122	300																					
Coon (T10590-28)		122	300																					
Coon (T10590-7)		122	300																					
Coon (T10590-20)		122	300																					
Coon (T10590-14)		122	300																					
Coon (T10590-15)		122	300																					
Coon (T10590-9)		122	300																					
Coon (T10590-13)		122	300																					
Coon (T10590-10)		122	300																					
Coon (T10590-10) (A)		122	300																					

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2007	/ Corn	York (T16198-1)	124.30	AA	186	82%	0%	0%	152.5	0.0	0.0			
2007	/ Corn	York (T16198-1)	124.30			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	York (T16198-1)	124.30			0%	0%	0%	0.0	0.0	0.0	(0.5)	(25.5)	162.7
2007	/ Corn	York (T16198-1) (A)	29.00	DAP	130	18%	46%	0%	23.4	59.8	0.0			
2007	/ Corn	York (T16198-1) (A)	29.00	AA	176	82%	0%	0%	144.3	0.0	0.0			
2007	/ Corn	York (T16198-1) (A)	29.00	PC		0%	0%	60%	0.0	0.0	0.0	(0.3)	(0.4)	(39.2)
2007	/ Corn	York (T16198-2)	61.90			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	York (T16198-2)	61.90			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	York (T16198-2)	61.90	AA	51	82%	0%	0%	41.8	0.0	0.0	(1.1)	51.9	64.6
2007	/ Corn	York (T16198-2) (A)	12.70	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	York (T16198-2) (A)	12.70	AA	148	82%	0%	0%	121.4	0.0	0.0			
2007	/ Corn	York (T16198-2) (A)	12.70	PC		0%	0%	60%	0.0	0.0	0.0	(0.4)	(0.1)	(33.0)
2007	/ Corn	York (T16198-3)	23.80	AA	206	82%	0%	0%	168.9	0.0	0.0			
2007	/ Corn	York (T16198-3)	23.80			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	York (T16198-3)	23.80			0%	0%	0%	0.0	0.0	0.0	(0.3)	(60.6)	(39.5)
2007	/ Corn	York (T16198-3) (A)	13.20	DAP	130	18%	46%	0%	23.4	59.8	0.0			
2007	/ Corn	York (T16198-3) (A)	13.20	AA	176	82%	0%	0%	144.3	0.0	0.0			
2007	/ Corn	York (T16198-3) (A)	13.20	PC		0%	0%	60%	0.0	0.0	0.0	(1.5)	(0.8)	(39.5)
2007	/ Corn	York (T16198-4)	31.70			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	York (T16198-4)	31.70			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	York (T16198-4)	31.70	AA	152	82%	0%	0%	124.6	0.0	0.0	(0.8)	(15.6)	169.1
2007	/ Corn	York (T16198-4) (A)	5.70	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	York (T16198-4) (A)	5.70	AA	148	82%	0%	0%	121.4	0.0	0.0			
2007	/ Corn	York (T16198-4) (A)	5.70	PC		0%	0%	60%	0.0	0.0	0.0	0.8	0.3	(32.8)

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2007	/ Corn	York (T16198-5)	29.70	AA	170	82%	0%	0%	139.4	0.0	0.0			
2007	/ Corn	York (T16198-5)	29.70			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	York (T16198-5)	29.70			0%	0%	0%	0.0	0.0	0.0	(2.2)	(50.7)	(33.0)
2007	/ Corn	York (T16198-5) (A)	15.10	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	York (T16198-5) (A)	15.10	AA	148	82%	0%	0%	121.4	0.0	0.0			
2007	/ Corn	York (T16198-5) (A)	15.10	PC		0%	0%	60%	0.0	0.0	0.0	(0.4)	(0.1)	(33.0)
2007	/ Corn	York (T16198-6)	58.60			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	York (T16198-6)	58.60			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	York (T16198-6)	58.60	AA	170	82%	0%	0%	139.4	0.0	0.0	(1.0)	(50.3)	(32.8)
2007	/ Corn	York (T16198-6) (A)	16.40	AA	148	82%	0%	0%	121.4	0.0	0.0			
2007	/ Corn	York (T16198-6) (A)	16.40	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	York (T16198-6) (A)	16.40	AS		21%	0%	0%	0.0	0.0	0.0	0.8	0.3	(32.8)
2007	/ Corn	York (T16198-7)	31.40			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	York (T16198-7)	31.40			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	York (T16198-7)	31.40	AA	170	82%	0%	0%	139.4	0.0	0.0	(1.0)	(50.3)	(32.8)
2007	/ Corn	York (T16198-8)	65.70			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	York (T16198-8)	65.70			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	York (T16198-8)	65.70	AA	170	82%	0%	0%	139.4	0.0	0.0	(2.2)	(50.7)	(33.0)
2007	/ Corn	York (T16198-8) (A)	10.30	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	York (T16198-8) (A)	10.30	AA	148	82%	0%	0%	121.4	0.0	0.0			
2007	/ Corn	York (T16198-8) (A)	10.30	PC		0%	0%	60%	0.0	0.0	0.0	(0.4)	(0.1)	(33.0)
2007	/ Corn	Coon (T10293-7)	30.70			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	Coon (T10293-7)	30.70			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	Coon (T10293-7)	30.70	AA		82%	0%	0%	0.0	0.0	0.0	(6.3)	38.6	50.4
2007	/ Corn	Coon (T10293-7) (A)	10.50	AA	87	82%	0%	0%	71.3	0.0	0.0			
2007	/ Corn	Coon (T10293-7) (A)	10.50	DAP	100	18%	46%	0%	18.0	46.0	0.0			
2007	/ Corn	Coon (T10293-7) (A)	10.50	PC		0%	0%	60%	0.0	0.0	0.0	(0.3)	(0.4)	(30.2)
2007	/ Corn	Coon (T10293-6)	32.60			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	Coon (T10293-6)	32.60			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	Coon (T10293-6)	32.60	AA	64	82%	0%	0%	52.5	0.0	0.0	(0.6)	21.8	39.5
2007	/ Corn	Coon (T10293-6) (A)	6.20	DAP	134	18%	46%	0%	24.1	61.6	0.0			
2007	/ Corn	Coon (T10293-6) (A)	6.20	AA	135	82%	0%	0%	110.7	0.0	0.0			
2007	/ Corn	Coon (T10293-6) (A)	6.20	PC		0%	0%	60%	0.0	0.0	0.0	0.8	(0.7)	(40.6)

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2007	/ Corn	Coon (T10293-8)	6.40	DAP	114	18%	46%	0%	20.5	52.4	0.0			
2007	/ Corn	Coon (T10293-8)	6.40	AA	104	82%	0%	0%	85.3	0.0	0.0			
2007	/ Corn	Coon (T10293-8)	6.40	PC		0%	0%	60%	0.0	0.0	0.0	(0.6)	(0.0)	(34.2)
2007	/ Corn	Coon (T10293-8) (A)	18.60	DAP	114	18%	46%	0%	20.5	52.4	0.0			
2007	/ Corn	Coon (T10293-8) (A)	18.60	AA	104	82%	0%	0%	85.3	0.0	0.0			
2007	/ Corn	Coon (T10293-8) (A)	18.60	PC		0%	0%	60%	0.0	0.0	0.0	(0.6)	(0.0)	(34.2)
2007	/ Beans	Coon (T10293-9)	71.20			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10293-9)	71.20			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10293-9)	71.20			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2007	/ Beans	Coon (T10293-9) (A)	18.30			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10293-9) (A)	18.30			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10293-9) (A)	18.30			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2007	/ Corn	Coon (T10590-1)	22.10			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	Coon (T10590-1)	22.10			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	Coon (T10590-1)	22.10	AA	25	82%	0%	0%	20.5	0.0	0.0	(0.2)	33.4	47.0
2007	/ Corn	Coon (T10590-1) (A)	10.10	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	Coon (T10590-1) (A)	10.10	AA	100	82%	0%	0%	82.0	0.0	0.0			
2007	/ Corn	Coon (T10590-1) (A)	10.1	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2007	/ Corn	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2007	/ Corn	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	Coon (T10590-24)	0	AA	57	82%	0%	0%	46.7	0.0	0.0	(0.3)	23.9	40.9
2007	/ Corn	Coon (T10590-24) (A)	3.3	DAP	130	18%	46%	0%	23.4	59.8	0.0			
2007	/ Corn	Coon (T10590-24) (A)	3.3	AA	127	82%	0%	0%	104.1	0.0	0.0			
2007	/ Corn	Coon (T10590-24) (A)	3.3	PC		0%	0%	60%	0.0	0.0	0.0	(0.5)	(0.4)	(39.2)
2007	/ Corn	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	Coon (T10590-25)	36.6	AA	45	82%	0%	0%	36.9	0.0	0.0	(0.6)	27.4	43.1
2007	/ Corn	Coon (T10590-25) (A)	3.4	DAP	123	18%	46%	0%	22.1	56.6	0.0			
2007	/ Corn	Coon (T10590-25) (A)	3.4	AA	117	82%	0%	0%	95.9	0.0	0.0			
2007	/ Corn	Coon (T10590-25) (A)	3.4	PC		0%	0%	60%	0.0	0.0	0.0	(0.3)	(0.2)	(37.0)
2007	/ Corn	Coon (T10590-26)	6.4	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	Coon (T10590-26)	6.4	AA	100	82%	0%	0%	82.0	0.0	0.0			
2007	/ Corn	Coon (T10590-26)	6.4	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2007	/ Corn	Coon (T10590-3)	16.4	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	Coon (T10590-3)	16.4	AA	100	82%	0%	0%	82.0	0.0	0.0			
2007	/ Corn	Coon (T10590-3)	16.4	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2007	/ Corn	Coon (T10590-3) (A)	10.6	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	Coon (T10590-3) (A)	10.6	AA	100	82%	0%	0%	82.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2007	/ Corn	Coon (T10590-3) (A)	10.6	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2007	/ Beans	Coon (T10590-18)	2.3			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-18)	2.3			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-18)	2.3	AA		82%	0%	0%	0.0	0.0	0.0	0.0	(45.1)	(68.9)
2007	/ Beans	Coon (T10590-29)	1.3			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-29)	1.3			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-29)	1.3	AA		82%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2007	/ Beans	Coon (T10590-4)	0	DAP		18%	46%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-4)	0	AA		82%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-4)	0	PC		0%	0%	60%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2007	/ Beans	Coon (T10590-4) (A)	1.7	DAP		18%	46%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-4) (A)	1.7	AA		82%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-4) (A)	1.7	PC		0%	0%	60%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2007	/ Corn	Coon (T10590-17)	1.6	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	Coon (T10590-17)	1.6	AA	100	82%	0%	0%	82.0	0.0	0.0			
2007	/ Corn	Coon (T10590-17)	1.6	PC		0%	0%	60%	0.0	0.0	0.0	(4.6)	(1.9)	(34.2)
2007	/ Beans	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2007	/ Beans	Coon (T10590-6)	53.4			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-6)	53.4			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-6)	53.4			0%	0%	0%	0.0	0.0	0.0	0.0	(36.6)	(55.9)
2007	/ Beans	Coon (T10590-6) (A)	6.4			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-6) (A)	6.4			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-6) (A)	6.4			0%	0%	0%	0.0	0.0	0.0	0.0	(36.6)	(55.9)
2007	/ Corn	Coon (T10590-2)	2.9	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	Coon (T10590-2)	2.9	AA	100	82%	0%	0%	82.0	0.0	0.0			
2007	/ Corn	Coon (T10590-2)	2.9	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2007	/ Corn	Coon (T10590-22)	6.3	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	Coon (T10590-22)	6.3	AA	100	82%	0%	0%	82.0	0.0	0.0			
2007	/ Corn	Coon (T10590-22)	6.3	PC		0%	0%	60%	0.0	0.0	0.0	1.4	0.3	(32.8)
2007	/ Corn	Coon (T10590-27)	2.3	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	Coon (T10590-27)	2.3	AA	100	82%	0%	0%	82.0	0.0	0.0			
2007	/ Corn	Coon (T10590-27)	2.3	PC		0%	0%	60%	0.0	0.0	0.0	1.4	0.3	(32.8)
2007	/ Corn	Coon (T10590-23)	0.7	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	Coon (T10590-23)	0.7	AA	100	82%	0%	0%	82.0	0.0	0.0			
2007	/ Corn	Coon (T10590-23)	0.7	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2007	/ Corn	Coon (T10590-28)	0.7	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	Coon (T10590-28)	0.7	AA	100	82%	0%	0%	82.0	0.0	0.0			
2007	/ Corn	Coon (T10590-28)	0.7	PC		0%	0%	60%	0.0	0.0	0.0	(4.6)	(1.9)	(34.2)
2007	/ Corn	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2007	/ Corn	Coon (T10590-7)	65.2	AA	45	82%	0%	0%	36.9	0.0	0.0	(0.6)	27.4	43.1
2007	/ Corn	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0			
2007	/ Corn	Coon (T10590-20)	66.3	AA	79	82%	0%	0%	64.8	0.0	0.0	(0.3)	17.5	36.7
2007	/ Corn	Coon (T10590-14)	6.5	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	Coon (T10590-14)	6.5	AA	100	82%	0%	0%	82.0	0.0	0.0			
2007	/ Corn	Coon (T10590-14)	6.5	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2007	/ Corn	Coon (T10590-15)	7.1	DAP	100	18%	46%	0%	18.0	46.0	0.0			
2007	/ Corn	Coon (T10590-15)	7.1	AA	84	82%	0%	0%	68.9	0.0	0.0			
2007	/ Corn	Coon (T10590-15)	7.1	PC		0%	0%	60%	0.0	0.0	0.0	(0.3)	0.4	(29.7)
2007	/ Corn	Coon (T10590-9)	1.4	DAP	125	18%	46%	0%	22.5	57.5	0.0			
2007	/ Corn	Coon (T10590-9)	1.4	AA	120	82%	0%	0%	98.4	0.0	0.0			
2007	/ Corn	Coon (T10590-9)	1.4	PC		0%	0%	60%	0.0	0.0	0.0	0.1	(0.1)	(37.5)
2007	/ Corn	Coon (T10590-13)	5.5	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2007	/ Corn	Coon (T10590-13)	5.5	AA	100	82%	0%	0%	82.0	0.0	0.0			
2007	/ Corn	Coon (T10590-13)	5.5	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2007	/ Beans	Coon (T10590-10)	23.6			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-10)	23.6			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-10)	23.6			0%	0%	0%	0.0	0.0	0.0	0.0	(40.0)	(61.1)
2007	/ Beans	Coon (T10590-10) (A)	9			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-10) (A)	9			0%	0%	0%	0.0	0.0	0.0			
2007	/ Beans	Coon (T10590-10) (A)	9			0%	0%	0%	0.0	0.0	0.0	0.0	(40.0)	(61.1)
2008	/ Corn	York (T16198-1)	124.3	AA	82	82%	0%	0%	67.2	0.0	0.0			
2008	/ Corn	York (T16198-1)	124.3			0%	0%	0%	0.0	0.0	0.0			
2008	/ Corn	York (T16198-1)	124.3			0%	0%	0%	0.0	0.0	0.0	(0.4)	42.4	58.5
2008	/ Corn	York (T16198-1) (A)	29	DAP	130	18%	46%	0%	23.4	59.8	0.0			
2008	/ Corn	York (T16198-1) (A)	29	AA	176	82%	0%	0%	144.3	0.0	0.0			
2008	/ Corn	York (T16198-1) (A)	29	PC		0%	0%	60%	0.0	0.0	0.0	(0.3)	(0.4)	(39.2)
2008	/ Corn	York (T16198-2)	61.9			0%	0%	0%	0.0	0.0	0.0			
2008	/ Corn	York (T16198-2)	61.9			0%	0%	0%	0.0	0.0	0.0			
2008	/ Corn	York (T16198-2)	61.9	AA	166	82%	0%	0%	136.1	0.0	0.0	(0.2)	(50.7)	(33.0)
2008	/ Corn	York (T16198-2) (A)	12.7	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2008	/ Corn	York (T16198-2) (A)	12.7	AA	148	82%	0%	0%	121.4	0.0	0.0			
2008	/ Corn	York (T16198-2) (A)	12.7	PC		0%	0%	60%	0.0	0.0	0.0	(0.4)	(0.1)	(33.0)
2008	/ Corn	York (T16198-3)	23.8	AA	86	82%	0%	0%	70.5	0.0	0.0			
2008	/ Corn	York (T16198-3)	23.8			0%	0%	0%	0.0	0.0	0.0			
2008	/ Corn	York (T16198-3)	23.8			0%	0%	0%	0.0	0.0	0.0	0.0	42.0	58.2
2008	/ Corn	York (T16198-3) (A)	13.2	DAP	130	18%	46%	0%	23.4	59.8	0.0			
2008	/ Corn	York (T16198-3) (A)	13.2	AA	176	82%	0%	0%	144.3	0.0	0.0			
2008	/ Corn	York (T16198-3) (A)	13.2	PC		0%	0%	60%	0.0	0.0	0.0	(1.5)	(0.8)	(39.5)
2008	/ Corn	York (T16198-4)	31.7			0%	0%	0%	0.0	0.0	0.0			
2008	/ Corn	York (T16198-4)	31.7			0%	0%	0%	0.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

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CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	N CROP YEAR BALANCE PAN (#/ACRE)	P2O5 (#/ACRE)	K2O (#/ACRE)
2008	/ Corn	York (T16198-4)	31.7	AA	169	82%	0%	0%	138.6	0.0	0.0	(0.2)	(50.3)	(32.8)
2008	/ Corn	York (T16198-4) (A)	5.7	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2008	/ Corn	York (T16198-4) (A)	5.7	AA	148	82%	0%	0%	121.4	0.0	0.0			
2008	/ Corn	York (T16198-4) (A)	5.7	PC		0%	0%	60%	0.0	0.0	0.0	0.8	0.3	(32.8)
2008	/ Corn	York (T16198-5)	29.7	AA	54	82%	0%	0%	44.3	0.0	0.0			
2008	/ Corn	York (T16198-5)	29.7			0%	0%	0%	0.0	0.0	0.0			
2008	/ Corn	York (T16198-5)	29.7			0%	0%	0%	0.0	0.0	0.0	1.4	51.9	64.6
2008	/ Corn	York (T16198-5) (A)	15.1	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2008	/ Corn	York (T16198-5) (A)	15.1	AA	148	82%	0%	0%	121.4	0.0	0.0			
2008	/ Corn	York (T16198-5) (A)	15.1	PC		0%	0%	60%	0.0	0.0	0.0	(0.4)	(0.1)	(33.0)
2008	/ Corn	York (T16198-6)	58.6			0%	0%	0%	0.0	0.0	0.0			
2008	/ Corn	York (T16198-6)	58.6			0%	0%	0%	0.0	0.0	0.0			
2008	/ Corn	York (T16198-6)	58.6	AA	152	82%	0%	0%	124.6	0.0	0.0	(0.8)	(15.6)	169.1
2008	/ Corn	York (T16198-6) (A)	16.4	AA	148	82%	0%	0%	121.4	0.0	0.0			
2008	/ Corn	York (T16198-6) (A)	16.4	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2008	/ Corn	York (T16198-6) (A)	16.4	AS		21%	0%	0%	0.0	0.0	0.0	0.8	0.3	(32.8)
2008	/ Corn	York (T16198-7)	31.4			0%	0%	0%	0.0	0.0	0.0			
2008	/ Corn	York (T16198-7)	31.4			0%	0%	0%	0.0	0.0	0.0			
2008	/ Corn	York (T16198-7)	31.4	AA	152	82%	0%	0%	124.6	0.0	0.0	(0.8)	(15.6)	169.1
2008	/ Corn	York (T16198-8)	65.7			0%	0%	0%	0.0	0.0	0.0			
2008	/ Corn	York (T16198-8)	65.7			0%	0%	0%	0.0	0.0	0.0			
2008	/ Corn	York (T16198-8)	65.7	AA	155	82%	0%	0%	127.1	0.0	0.0	0.5	(16.0)	168.8
2008	/ Corn	York (T16198-8) (A)	10.3	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2008	/ Corn	York (T16198-8) (A)	10.3	AA	148	82%	0%	0%	121.4	0.0	0.0			
2008	/ Corn	York (T16198-8) (A)	10.3	PC		0%	0%	60%	0.0	0.0	0.0	(0.4)	(0.1)	(33.0)
2008	/ Beans	Coon (T10293-7)	30.7			0%	0%	0%	0.0	0.0	0.0			
2008	/ Beans	Coon (T10293-7)	30.7			0%	0%	0%	0.0	0.0	0.0			
2008	/ Beans	Coon (T10293-7)	30.7			0%	0%	0%	0.0	0.0	0.0	0.0	(30.6)	(46.8)
2008	/ Beans	Coon (T10293-7) (A)	10.5			0%	0%	0%	0.0	0.0	0.0			
2008	/ Beans	Coon (T10293-7) (A)	10.5			0%	0%	0%	0.0	0.0	0.0			
2008	/ Beans	Coon (T10293-7) (A)	10.5			0%	0%	0%	0.0	0.0	0.0	0.0	(30.6)	(46.8)
2008	/ Beans	Coon (T10293-6)	32.6			0%	0%	0%	0.0	0.0	0.0			
2008	/ Beans	Coon (T10293-6)	32.6			0%	0%	0%	0.0	0.0	0.0			
2008	/ Beans	Coon (T10293-6)	32.6			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2008	/ Beans	Coon (T10293-6) (A)	6.2			0%	0%	0%	0.0	0.0	0.0			
2008	/ Beans	Coon (T10293-6) (A)	6.2			0%	0%	0%	0.0	0.0	0.0			
2008	/ Beans	Coon (T10293-6) (A)	6.2			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2008	/ Beans	Coon (T10293-8)	6.4			0%	0%	0%	0.0	0.0	0.0			
2008	/ Beans	Coon (T10293-8)	6.4			0%	0%	0%	0.0	0.0	0.0			
2008	/ Beans	Coon (T10293-8)	6.4			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2008	/ Beans	Coon (T10293-8) (A)	18.6			0%	0%	0%	0.0	0.0	0.0			
2008	/ Beans	Coon (T10293-8) (A)	18.6			0%	0%	0%	0.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	N	CROP YEAR BALANCE PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2008	/ Beans	Coon (T10293-8) (A)	18.6			0%	0%	0%	0.0	0.0	0.0		0.0	(34.0)	(52.0)
2008	/ Corn	Coon (T10293-9)	71.2			0%	0%	0%	0.0	0.0	0.0				
2008	/ Corn	Coon (T10293-9)	71.2			0%	0%	0%	0.0	0.0	0.0				
2008	/ Corn	Coon (T10293-9)	71.2	AA	64	82%	0%	0%	52.5	0.0	0.0		(0.6)	21.8	39.5
2008	/ Corn	Coon (T10293-9) (A)	18.3	DAP	134	18%	46%	0%	24.1	61.6	0.0				
2008	/ Corn	Coon (T10293-9) (A)	18.3	AA	134	82%	0%	0%	109.9	0.0	0.0				
2008	/ Corn	Coon (T10293-9) (A)	18.3	PC	166	0%	0%	60%	0.0	0.0	99.6		0.0	(0.7)	59.0
2008	/ Beans	Coon (T10590-1)	22.1			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-1)	22.1			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-1)	22.1			0%	0%	0%	0.0	0.0	0.0		0.0	(34.0)	(52.0)
2008	/ Beans	Coon (T10590-1) (A)	10.1			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-1) (A)	10.1			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-1) (A)	10.1			0%	0%	0%	0.0	0.0	0.0		0.0	(34.0)	(52.0)
2008	/ Beans	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0		0.0	(40.0)	(61.1)
2008	/ Beans	Coon (T10590-24) (A)	3.3			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-24) (A)	3.3			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-24) (A)	3.3			0%	0%	0%	0.0	0.0	0.0		0.0	(40.0)	(61.1)
2008	/ Beans	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0		0.0	(36.6)	(55.9)
2008	/ Beans	Coon (T10590-25) (A)	3.4			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-25) (A)	3.4			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-25) (A)	3.4			0%	0%	0%	0.0	0.0	0.0		0.0	(36.6)	(55.9)
2008	/ Beans	Coon (T10590-26)	6.4			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-26)	6.4			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-26)	6.4			0%	0%	0%	0.0	0.0	0.0		0.0	(34.0)	(52.0)
2008	/ Beans	Coon (T10590-3)	16.4			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-3)	16.4			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-3)	16.4			0%	0%	0%	0.0	0.0	0.0		0.0	(34.0)	(52.0)
2008	/ Beans	Coon (T10590-3) (A)	10.6			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-3) (A)	10.6			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-3) (A)	10.6			0%	0%	0%	0.0	0.0	0.0		0.0	(34.0)	(52.0)
2008	/ Corn	Coon (T10590-18)	2.3			0%	0%	0%	0.0	0.0	0.0				
2008	/ Corn	Coon (T10590-18)	2.3			0%	0%	0%	0.0	0.0	0.0				
2008	/ Corn	Coon (T10590-18)	2.3	AA	85	82%	0%	0%	69.7	0.0	0.0		(0.2)	15.8	35.6
2008	/ Corn	Coon (T10590-29)	1.3			0%	0%	0%	0.0	0.0	0.0				
2008	/ Corn	Coon (T10590-29)	1.3			0%	0%	0%	0.0	0.0	0.0				
2008	/ Corn	Coon (T10590-29)	1.3	AA	24	82%	0%	0%	19.7	0.0	0.0		(1.0)	33.4	47.0
2008	/ Corn	Coon (T10590-4)	0	DAP	180	18%	46%	0%	32.4	82.8	0.0				
2008	/ Corn	Coon (T10590-4)	0	AA	84	82%	0%	0%	68.9	0.0	0.0				

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	N	CROP YEAR BALANCE PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2008	/ Corn	Coon (T10590-4)	0	PC	139	0%	0%	60%	0.0	0.0	83.4		(0.3)	32.1	50.4
2008	/ Corn	Coon (T10590-4) (A)	1.7	DAP	180	18%	46%	0%	32.4	82.8	0.0				
2008	/ Corn	Coon (T10590-4) (A)	1.7	AA	84	82%	0%	0%	68.9	0.0	0.0				
2008	/ Corn	Coon (T10590-4) (A)	1.7	PC	139	0%	0%	60%	0.0	0.0	83.4		(0.3)	32.1	50.4
2008	/ Beans	Coon (T10590-17)	1.6			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-17)	1.6			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-17)	1.6			0%	0%	0%	0.0	0.0	0.0		0.0	(34.0)	(52.0)
2008	/ Corn	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0				
2008	/ Corn	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0				
2008	/ Corn	Coon (T10590-5)	61	AA	54	82%	0%	0%	44.3	0.0	0.0		(0.4)	24.8	41.4
2008	/ Corn	Coon (T10590-6)	53.4	DAP	202	18%	46%	0%	36.4	92.9	0.0				
2008	/ Corn	Coon (T10590-6)	53.4	AA	100	82%	0%	0%	82.0	0.0	0.0				
2008	/ Corn	Coon (T10590-6)	53.4	PC	155	0%	0%	60%	0.0	0.0	93.0		(0.0)	36.2	56.0
2008	/ Corn	Coon (T10590-6) (A)	6.4	DAP	202	18%	46%	0%	36.4	92.9	0.0				
2008	/ Corn	Coon (T10590-6) (A)	6.4	AA	100	82%	0%	0%	82.0	0.0	0.0				
2008	/ Corn	Coon (T10590-6) (A)	6.4	PC	155	0%	0%	60%	0.0	0.0	93.0		(0.0)	36.2	56.0
2008	/ Beans	Coon (T10590-2)	2.9			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-2)	2.9			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-2)	2.9			0%	0%	0%	0.0	0.0	0.0		0.0	(34.0)	(52.0)
2008	/ Beans	Coon (T10590-22)	6.3			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-22)	6.3			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-22)	6.3			0%	0%	0%	0.0	0.0	0.0		0.0	(32.3)	(49.4)
2008	/ Beans	Coon (T10590-27)	2.3			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-27)	2.3			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-27)	2.3			0%	0%	0%	0.0	0.0	0.0		0.0	(32.3)	(49.4)
2008	/ Beans	Coon (T10590-23)	0.7			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-23)	0.7			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-23)	0.7			0%	0%	0%	0.0	0.0	0.0		0.0	(34.0)	(52.0)
2008	/ Beans	Coon (T10590-28)	0.7			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-28)	0.7			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-28)	0.7			0%	0%	0%	0.0	0.0	0.0		0.0	(34.0)	(52.0)
2008	/ Beans	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0		0.0	(36.6)	(55.9)
2008	/ Beans	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0		0.0	(40.8)	(62.4)
2008	/ Beans	Coon (T10590-14)	6.5			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-14)	6.5			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-14)	6.5			0%	0%	0%	0.0	0.0	0.0		0.0	(34.0)	(52.0)
2008	/ Beans	Coon (T10590-15)	7.1			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-15)	7.1			0%	0%	0%	0.0	0.0	0.0				

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	N	CROP YEAR BALANCE PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2008	/ Beans	Coon (T10590-15)	7.1			0%	0%	0%	0.0	0.0	0.0		0.0	(30.6)	(46.8)
2008	/ Beans	Coon (T10590-9)	1.4			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-9)	1.4			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-9)	1.4			0%	0%	0%	0.0	0.0	0.0		0.0	(38.3)	(58.5)
2008	/ Beans	Coon (T10590-13)	5.5			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-13)	5.5			0%	0%	0%	0.0	0.0	0.0				
2008	/ Beans	Coon (T10590-13)	5.5			0%	0%	0%	0.0	0.0	0.0		0.0	(34.0)	(52.0)
2008	/ Corn	Coon (T10590-10)	23.6	DAP	215	18%	46%	0%	38.7	98.9	0.0				
2008	/ Corn	Coon (T10590-10)	23.6	AA	108	82%	0%	0%	88.6	0.0	0.0				
2008	/ Corn	Coon (T10590-10)	23.6	PC	165	0%	0%	60%	0.0	0.0	99.0		(0.7)	38.7	59.8
2008	/ Corn	Coon (T10590-10) (A)	9	DAP	215	18%	46%	0%	38.7	98.9	0.0				
2008	/ Corn	Coon (T10590-10) (A)	9	AA	108	82%	0%	0%	88.6	0.0	0.0				
2008	/ Corn	Coon (T10590-10) (A)	9	PC	165	0%	0%	60%	0.0	0.0	99.0		(0.7)	38.7	59.8
2009	/ Corn	York (T16198-1)	124.3	AA	186	82%	0%	0%	152.5	0.0	0.0				
2009	/ Corn	York (T16198-1)	124.3			0%	0%	0%	0.0	0.0	0.0				
2009	/ Corn	York (T16198-1)	124.3			0%	0%	0%	0.0	0.0	0.0		5.6	(25.5)	162.7
2009	/ Corn	York (T16198-1) (A)	29	DAP	130	18%	46%	0%	23.4	59.8	0.0				
2009	/ Corn	York (T16198-1) (A)	29	AA	176	82%	0%	0%	144.3	0.0	0.0				
2009	/ Corn	York (T16198-1) (A)	29	PC	200	0%	0%	60%	0.0	0.0	120.0		(0.3)	(0.4)	80.8
2009	/ Corn	York (T16198-2)	61.9			0%	0%	0%	0.0	0.0	0.0				
2009	/ Corn	York (T16198-2)	61.9			0%	0%	0%	0.0	0.0	0.0				
2009	/ Corn	York (T16198-2)	61.9	AA	51	82%	0%	0%	41.8	0.0	0.0		1.5	51.9	64.6
2009	/ Corn	York (T16198-2) (A)	12.7	DAP	110	18%	46%	0%	19.8	50.6	0.0				
2009	/ Corn	York (T16198-2) (A)	12.7	AA	148	82%	0%	0%	121.4	0.0	0.0				
2009	/ Corn	York (T16198-2) (A)	12.7	PC	200	0%	0%	60%	0.0	0.0	120.0		(0.4)	(0.1)	87.0
2009	/ Corn	York (T16198-3)	23.8	AA	206	82%	0%	0%	168.9	0.0	0.0				
2009	/ Corn	York (T16198-3)	23.8			0%	0%	0%	0.0	0.0	0.0				
2009	/ Corn	York (T16198-3)	23.8			0%	0%	0%	0.0	0.0	0.0		5.0	(60.6)	(39.5)
2009	/ Corn	York (T16198-3) (A)	13.2	DAP	130	18%	46%	0%	23.4	59.8	0.0				
2009	/ Corn	York (T16198-3) (A)	13.2	AA	176	82%	0%	0%	144.3	0.0	0.0				
2009	/ Corn	York (T16198-3) (A)	13.2	PC	130	0%	0%	60%	0.0	0.0	78.0		(1.5)	(0.8)	38.5
2009	/ Corn	York (T16198-4)	31.7			0%	0%	0%	0.0	0.0	0.0				
2009	/ Corn	York (T16198-4)	31.7			0%	0%	0%	0.0	0.0	0.0				
2009	/ Corn	York (T16198-4)	31.7	AA	152	82%	0%	0%	124.6	0.0	0.0		0.0	(15.6)	169.1
2009	/ Corn	York (T16198-4) (A)	5.7	DAP	110	18%	46%	0%	19.8	50.6	0.0				
2009	/ Corn	York (T16198-4) (A)	5.7	AA	148	82%	0%	0%	121.4	0.0	0.0				
2009	/ Corn	York (T16198-4) (A)	5.7	PC	200	0%	0%	60%	0.0	0.0	120.0		0.8	0.3	87.2
2009	/ Corn	York (T16198-5)	29.7	AA	170	82%	0%	0%	139.4	0.0	0.0				
2009	/ Corn	York (T16198-5)	29.7			0%	0%	0%	0.0	0.0	0.0				
2009	/ Corn	York (T16198-5)	29.7			0%	0%	0%	0.0	0.0	0.0		3.1	(50.7)	(33.0)
2009	/ Corn	York (T16198-5) (A)	15.1	DAP	110	18%	46%	0%	19.8	50.6	0.0				
2009	/ Corn	York (T16198-5) (A)	15.1	AA	148	82%	0%	0%	121.4	0.0	0.0				

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2009	/ Corn	York (T16198-5) (A)	15.1	PC	200	0%	0%	60%	0.0	0.0	120.0	(0.4)	(0.1)	87.0
2009	/ Corn	York (T16198-6)	58.6			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	York (T16198-6)	58.6			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	York (T16198-6)	58.6	AA	170	82%	0%	0%	139.4	0.0	0.0	0.7	(50.3)	(32.8)
2009	/ Corn	York (T16198-6) (A)	16.4	AA	148	82%	0%	0%	121.4	0.0	0.0			
2009	/ Corn	York (T16198-6) (A)	16.4	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2009	/ Corn	York (T16198-6) (A)	16.4	PC	200	0%	0%	60%	0.0	0.0	120.0	0.8	0.3	87.2
2009	/ Corn	York (T16198-7)	31.4			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	York (T16198-7)	31.4			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	York (T16198-7)	31.4	AA	170	82%	0%	0%	139.4	0.0	0.0	0.7	(50.3)	(32.8)
2009	/ Corn	York (T16198-8)	65.7			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	York (T16198-8)	65.7			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	York (T16198-8)	65.7	AA	170	82%	0%	0%	139.4	0.0	0.0	(0.5)	(50.7)	(33.0)
2009	/ Corn	York (T16198-8) (A)	10.3	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2009	/ Corn	York (T16198-8) (A)	10.3	AA	148	82%	0%	0%	121.4	0.0	0.0			
2009	/ Corn	York (T16198-8) (A)	10.3	PC	200	0%	0%	60%	0.0	0.0	120.0	(0.4)	(0.1)	87.0
2009	/ Corn	Coon (T10293-7)	30.7			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	Coon (T10293-7)	30.7			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	Coon (T10293-7)	30.7	AA		82%	0%	0%	0.0	0.0	0.0	(4.1)	38.6	50.4
2009	/ Corn	Coon (T10293-7) (A)	10.5	AA	87	82%	0%	0%	71.3	0.0	0.0			
2009	/ Corn	Coon (T10293-7) (A)	10.5	DAP	100	18%	46%	0%	18.0	46.0	0.0			
2009	/ Corn	Coon (T10293-7) (A)	10.5	PC		0%	0%	60%	0.0	0.0	0.0	(0.3)	(0.4)	(30.2)
2009	/ Corn	Coon (T10293-6)	32.6			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	Coon (T10293-6)	32.6			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	Coon (T10293-6)	32.6	AA	64	82%	0%	0%	52.5	0.0	0.0	1.6	21.8	39.5
2009	/ Corn	Coon (T10293-6) (A)	6.2	DAP	134	18%	46%	0%	24.1	61.6	0.0			
2009	/ Corn	Coon (T10293-6) (A)	6.2	AA	135	82%	0%	0%	110.7	0.0	0.0			
2009	/ Corn	Coon (T10293-6) (A)	6.2	PC		0%	0%	60%	0.0	0.0	0.0	0.8	(0.7)	(40.6)
2009	/ Corn	Coon (T10293-8)	6.4	DAP	114	18%	46%	0%	20.5	52.4	0.0			
2009	/ Corn	Coon (T10293-8)	6.4	AA	104	82%	0%	0%	85.3	0.0	0.0			
2009	/ Corn	Coon (T10293-8)	6.4	PC		0%	0%	60%	0.0	0.0	0.0	(0.6)	(0.0)	(34.2)
2009	/ Corn	Coon (T10293-8) (A)	18.6	DAP	114	18%	46%	0%	20.5	52.4	0.0			
2009	/ Corn	Coon (T10293-8) (A)	18.6	AA	104	82%	0%	0%	85.3	0.0	0.0			
2009	/ Corn	Coon (T10293-8) (A)	18.6	PC		0%	0%	60%	0.0	0.0	0.0	(0.6)	(0.0)	(34.2)
2009	/ Beans	Coon (T10293-9)	71.2			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10293-9)	71.2			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10293-9)	71.2			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2009	/ Beans	Coon (T10293-9) (A)	18.3			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10293-9) (A)	18.3			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10293-9) (A)	18.3			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2009	/ Corn	Coon (T10590-1)	22.1			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	Coon (T10590-1)	22.1			0%	0%	0%	0.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2009	/ Corn	Coon (T10590-1)	22.1	AA	25	82%	0%	0%	20.5	0.0	0.0	2.0	33.4	47.0
2009	/ Corn	Coon (T10590-1) (A)	10.1	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2009	/ Corn	Coon (T10590-1) (A)	10.1	AA	100	82%	0%	0%	82.0	0.0	0.0			
2009	/ Corn	Coon (T10590-1) (A)	10.1	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2009	/ Corn	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	Coon (T10590-24)	0	AA	57	82%	0%	0%	46.7	0.0	0.0	1.8	23.9	40.9
2009	/ Corn	Coon (T10590-24) (A)	3.3	DAP	130	18%	46%	0%	23.4	59.8	0.0			
2009	/ Corn	Coon (T10590-24) (A)	3.3	AA	127	82%	0%	0%	104.1	0.0	0.0			
2009	/ Corn	Coon (T10590-24) (A)	3.3	PC		0%	0%	60%	0.0	0.0	0.0	(0.5)	(0.4)	(39.2)
2009	/ Corn	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	Coon (T10590-25)	36.6	AA	45	82%	0%	0%	36.9	0.0	0.0	1.6	27.4	43.1
2009	/ Corn	Coon (T10590-25) (A)	3.4	DAP	123	18%	46%	0%	22.1	56.6	0.0			
2009	/ Corn	Coon (T10590-25) (A)	3.4	AA	117	82%	0%	0%	95.9	0.0	0.0			
2009	/ Corn	Coon (T10590-25) (A)	3.4	PC		0%	0%	60%	0.0	0.0	0.0	(0.3)	(0.2)	(37.0)
2009	/ Corn	Coon (T10590-26)	6.4	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2009	/ Corn	Coon (T10590-26)	6.4	AA	100	82%	0%	0%	82.0	0.0	0.0			
2009	/ Corn	Coon (T10590-26)	6.4	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2009	/ Corn	Coon (T10590-3)	16.4	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2009	/ Corn	Coon (T10590-3)	16.4	AA	100	82%	0%	0%	82.0	0.0	0.0			
2009	/ Corn	Coon (T10590-3)	16.4	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2009	/ Corn	Coon (T10590-3) (A)	10.6	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2009	/ Corn	Coon (T10590-3) (A)	10.6	AA	100	82%	0%	0%	82.0	0.0	0.0			
2009	/ Corn	Coon (T10590-3) (A)	10.6	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2009	/ Beans	Coon (T10590-18)	2.3			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-18)	2.3			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-18)	2.3	AA		82%	0%	0%	0.0	0.0	0.0	0.0	(45.1)	(68.9)
2009	/ Beans	Coon (T10590-29)	1.3			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-29)	1.3			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-29)	1.3	AA		82%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2009	/ Beans	Coon (T10590-4)	0	DAP		18%	46%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-4)	0	AA		82%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-4)	0	PC		0%	0%	60%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2009	/ Beans	Coon (T10590-4) (A)	1.7	DAP		18%	46%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-4) (A)	1.7	AA		82%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-4) (A)	1.7	PC		0%	0%	60%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2009	/ Corn	Coon (T10590-17)	1.6	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2009	/ Corn	Coon (T10590-17)	1.6	AA	100	82%	0%	0%	82.0	0.0	0.0			
2009	/ Corn	Coon (T10590-17)	1.6	PC		0%	0%	60%	0.0	0.0	0.0	(4.6)	(1.9)	(34.2)
2009	/ Beans	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2009	/ Beans	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2009	/ Beans	Coon (T10590-6)	53.4			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-6)	53.4			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-6)	53.4			0%	0%	0%	0.0	0.0	0.0	0.0	(36.6)	(55.9)
2009	/ Beans	Coon (T10590-6) (A)	6.4			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-6) (A)	6.4			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-6) (A)	6.4			0%	0%	0%	0.0	0.0	0.0	0.0	(36.6)	(55.9)
2009	/ Corn	Coon (T10590-2)	2.9	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2009	/ Corn	Coon (T10590-2)	2.9	AA	100	82%	0%	0%	82.0	0.0	0.0			
2009	/ Corn	Coon (T10590-2)	2.9	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2009	/ Corn	Coon (T10590-22)	6.3	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2009	/ Corn	Coon (T10590-22)	6.3	AA	100	82%	0%	0%	82.0	0.0	0.0			
2009	/ Corn	Coon (T10590-22)	6.3	PC		0%	0%	60%	0.0	0.0	0.0	1.4	0.3	(32.8)
2009	/ Corn	Coon (T10590-27)	2.3	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2009	/ Corn	Coon (T10590-27)	2.3	AA	100	82%	0%	0%	82.0	0.0	0.0			
2009	/ Corn	Coon (T10590-27)	2.3	PC		0%	0%	60%	0.0	0.0	0.0	1.4	0.3	(32.8)
2009	/ Corn	Coon (T10590-23)	0.7	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2009	/ Corn	Coon (T10590-23)	0.7	AA	100	82%	0%	0%	82.0	0.0	0.0			
2009	/ Corn	Coon (T10590-23)	0.7	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2009	/ Corn	Coon (T10590-28)	0.7	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2009	/ Corn	Coon (T10590-28)	0.7	AA	100	82%	0%	0%	82.0	0.0	0.0			
2009	/ Corn	Coon (T10590-28)	0.7	PC		0%	0%	60%	0.0	0.0	0.0	(4.6)	(1.9)	(34.2)
2009	/ Corn	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	Coon (T10590-7)	65.2	AA	45	82%	0%	0%	36.9	0.0	0.0	1.6	27.4	43.1
2009	/ Corn	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0			
2009	/ Corn	Coon (T10590-20)	66.3	AA	79	82%	0%	0%	64.8	0.0	0.0	1.9	17.5	36.7
2009	/ Corn	Coon (T10590-14)	6.5	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2009	/ Corn	Coon (T10590-14)	6.5	AA	100	82%	0%	0%	82.0	0.0	0.0			
2009	/ Corn	Coon (T10590-14)	6.5	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2009	/ Corn	Coon (T10590-15)	7.1	DAP	100	18%	46%	0%	18.0	46.0	0.0			
2009	/ Corn	Coon (T10590-15)	7.1	AA	84	82%	0%	0%	68.9	0.0	0.0			
2009	/ Corn	Coon (T10590-15)	7.1	PC		0%	0%	60%	0.0	0.0	0.0	(0.3)	0.4	(29.7)
2009	/ Corn	Coon (T10590-9)	1.4	DAP	125	18%	46%	0%	22.5	57.5	0.0			
2009	/ Corn	Coon (T10590-9)	1.4	AA	120	82%	0%	0%	98.4	0.0	0.0			
2009	/ Corn	Coon (T10590-9)	1.4	PC		0%	0%	60%	0.0	0.0	0.0	0.1	(0.1)	(37.5)
2009	/ Corn	Coon (T10590-13)	5.5	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2009	/ Corn	Coon (T10590-13)	5.5	AA	100	82%	0%	0%	82.0	0.0	0.0			
2009	/ Corn	Coon (T10590-13)	5.5	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2009	/ Beans	Coon (T10590-10)	23.6			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-10)	23.6			0%	0%	0%	0.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2009	/ Beans	Coon (T10590-10)	23.6			0%	0%	0%	0.0	0.0	0.0	0.0	(40.0)	(61.1)
2009	/ Beans	Coon (T10590-10) (A)	9			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-10) (A)	9			0%	0%	0%	0.0	0.0	0.0			
2009	/ Beans	Coon (T10590-10) (A)	9			0%	0%	0%	0.0	0.0	0.0	0.0	(40.0)	(61.1)
2010	/ Corn	York (T16198-1)	124.3	AA	82	82%	0%	0%	67.2	0.0	0.0			
2010	/ Corn	York (T16198-1)	124.3			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	York (T16198-1)	124.3			0%	0%	0%	0.0	0.0	0.0	2.6	42.4	58.5
2010	/ Corn	York (T16198-1) (A)	29	DAP	130	18%	46%	0%	23.4	59.8	0.0			
2010	/ Corn	York (T16198-1) (A)	29	AA	176	82%	0%	0%	144.3	0.0	0.0			
2010	/ Corn	York (T16198-1) (A)	29	PC		0%	0%	60%	0.0	0.0	0.0	(0.3)	(0.4)	(39.2)
2010	/ Corn	York (T16198-2)	61.9			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	York (T16198-2)	61.9			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	York (T16198-2)	61.9	AA	166	82%	0%	0%	136.1	0.0	0.0	1.1	(50.7)	(33.0)
2010	/ Corn	York (T16198-2) (A)	12.7	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2010	/ Corn	York (T16198-2) (A)	12.7	AA	148	82%	0%	0%	121.4	0.0	0.0			
2010	/ Corn	York (T16198-2) (A)	12.7	PC		0%	0%	60%	0.0	0.0	0.0	(0.4)	(0.1)	(33.0)
2010	/ Corn	York (T16198-3)	23.8	AA	86	82%	0%	0%	70.5	0.0	0.0			
2010	/ Corn	York (T16198-3)	23.8			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	York (T16198-3)	23.8			0%	0%	0%	0.0	0.0	0.0	2.6	42.0	58.2
2010	/ Corn	York (T16198-3) (A)	13.2	DAP	130	18%	46%	0%	23.4	59.8	0.0			
2010	/ Corn	York (T16198-3) (A)	13.2	AA	176	82%	0%	0%	144.3	0.0	0.0			
2010	/ Corn	York (T16198-3) (A)	13.2	PC		0%	0%	60%	0.0	0.0	0.0	(1.5)	(0.8)	(39.5)
2010	/ Corn	York (T16198-4)	31.7			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	York (T16198-4)	31.7			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	York (T16198-4)	31.7	AA	169	82%	0%	0%	138.6	0.0	0.0	0.3	(50.3)	(32.8)
2010	/ Corn	York (T16198-4) (A)	5.7	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2010	/ Corn	York (T16198-4) (A)	5.7	AA	148	82%	0%	0%	121.4	0.0	0.0			
2010	/ Corn	York (T16198-4) (A)	5.7	PC		0%	0%	60%	0.0	0.0	0.0	0.8	0.3	(32.8)
2010	/ Corn	York (T16198-5)	29.7	AA	54	82%	0%	0%	44.3	0.0	0.0			
2010	/ Corn	York (T16198-5)	29.7			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	York (T16198-5)	29.7			0%	0%	0%	0.0	0.0	0.0	4.0	51.9	64.6
2010	/ Corn	York (T16198-5) (A)	15.1	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2010	/ Corn	York (T16198-5) (A)	15.1	AA	148	82%	0%	0%	121.4	0.0	0.0			
2010	/ Corn	York (T16198-5) (A)	15.1	PC		0%	0%	60%	0.0	0.0	0.0	(0.4)	(0.1)	(33.0)
2010	/ Corn	York (T16198-6)	58.6			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	York (T16198-6)	58.6			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	York (T16198-6)	58.6	AA	152	82%	0%	0%	124.6	0.0	0.0	0.0	(15.6)	169.1
2010	/ Corn	York (T16198-6) (A)	16.4	AA	148	82%	0%	0%	121.4	0.0	0.0			
2010	/ Corn	York (T16198-6) (A)	16.4	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2010	/ Corn	York (T16198-6) (A)	16.4	AS		21%	0%	0%	0.0	0.0	0.0	0.8	0.3	(32.8)
2010	/ Corn	York (T16198-7)	31.4			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	York (T16198-7)	31.4			0%	0%	0%	0.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2010	/ Corn	York (T16198-7)	31.4	AA	152	82%	0%	0%	124.6	0.0	0.0	0.0	(15.6)	169.1
2010	/ Corn	York (T16198-8)	65.7			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	York (T16198-8)	65.7			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	York (T16198-8)	65.7	AA	155	82%	0%	0%	127.1	0.0	0.0	1.3	(16.0)	168.8
2010	/ Corn	York (T16198-8) (A)	10.3	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2010	/ Corn	York (T16198-8) (A)	10.3	AA	148	82%	0%	0%	121.4	0.0	0.0			
2010	/ Corn	York (T16198-8) (A)	10.3	PC		0%	0%	60%	0.0	0.0	0.0	(0.4)	(0.1)	(33.0)
2010	/ Beans	Coon (T10293-7)	30.7			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10293-7)	30.7			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10293-7)	30.7			0%	0%	0%	0.0	0.0	0.0	0.0	(30.6)	(46.8)
2010	/ Beans	Coon (T10293-7) (A)	10.5			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10293-7) (A)	10.5			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10293-7) (A)	10.5			0%	0%	0%	0.0	0.0	0.0	0.0	(30.6)	(46.8)
2010	/ Beans	Coon (T10293-6)	32.6			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10293-6)	32.6			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10293-6)	32.6			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2010	/ Beans	Coon (T10293-6) (A)	6.2			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10293-6) (A)	6.2			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10293-6) (A)	6.2			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2010	/ Beans	Coon (T10293-8)	6.4			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10293-8)	6.4			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10293-8)	6.4			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2010	/ Beans	Coon (T10293-8) (A)	18.6			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10293-8) (A)	18.6			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10293-8) (A)	18.6			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2010	/ Corn	Coon (T10293-9)	71.2			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	Coon (T10293-9)	71.2			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	Coon (T10293-9)	71.2	AA	64	82%	0%	0%	52.5	0.0	0.0	1.6	21.8	39.5
2010	/ Corn	Coon (T10293-9) (A)	18.3	DAP	134	18%	46%	0%	24.1	61.6	0.0			
2010	/ Corn	Coon (T10293-9) (A)	18.3	AA	134	82%	0%	0%	109.9	0.0	0.0			
2010	/ Corn	Coon (T10293-9) (A)	18.3	PC	166	0%	0%	60%	0.0	0.0	99.6	0.0	(0.7)	59.0
2010	/ Beans	Coon (T10590-1)	22.1			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-1)	22.1			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-1)	22.1			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2010	/ Beans	Coon (T10590-1) (A)	10.1			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-1) (A)	10.1			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-1) (A)	10.1			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2010	/ Beans	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0	0.0	(40.0)	(61.1)
2010	/ Beans	Coon (T10590-24) (A)	3.3			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-24) (A)	3.3			0%	0%	0%	0.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2010	/ Beans	Coon (T10590-24) (A)	3.3			0%	0%	0%	0.0	0.0	0.0	0.0	(40.0)	(61.1)
2010	/ Beans	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0	0.0	(36.6)	(55.9)
2010	/ Beans	Coon (T10590-25) (A)	3.4			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-25) (A)	3.4			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-25) (A)	3.4			0%	0%	0%	0.0	0.0	0.0	0.0	(36.6)	(55.9)
2010	/ Beans	Coon (T10590-26)	6.4			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-26)	6.4			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-26)	6.4			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2010	/ Beans	Coon (T10590-3)	16.4			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-3)	16.4			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-3)	16.4			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2010	/ Beans	Coon (T10590-3) (A)	10.6			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-3) (A)	10.6			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-3) (A)	10.6			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2010	/ Corn	Coon (T10590-18)	2.3			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	Coon (T10590-18)	2.3			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	Coon (T10590-18)	2.3	AA	85	82%	0%	0%	69.7	0.0	0.0	2.0	15.8	35.6
2010	/ Corn	Coon (T10590-29)	1.3			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	Coon (T10590-29)	1.3			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	Coon (T10590-29)	1.3	AA	24	82%	0%	0%	19.7	0.0	0.0	1.2	33.4	47.0
2010	/ Corn	Coon (T10590-4)	0	DAP	180	18%	46%	0%	32.4	82.8	0.0			
2010	/ Corn	Coon (T10590-4)	0	AA	84	82%	0%	0%	68.9	0.0	0.0			
2010	/ Corn	Coon (T10590-4)	0	PC	139	0%	0%	60%	0.0	0.0	83.4	(0.3)	32.1	50.4
2010	/ Corn	Coon (T10590-4) (A)	1.7	DAP	180	18%	46%	0%	32.4	82.8	0.0			
2010	/ Corn	Coon (T10590-4) (A)	1.7	AA	84	82%	0%	0%	68.9	0.0	0.0			
2010	/ Corn	Coon (T10590-4) (A)	1.7	PC	139	0%	0%	60%	0.0	0.0	83.4	(0.3)	32.1	50.4
2010	/ Beans	Coon (T10590-17)	1.6			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-17)	1.6			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-17)	1.6			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2010	/ Corn	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0			
2010	/ Corn	Coon (T10590-5)	61	AA	54	82%	0%	0%	44.3	0.0	0.0	1.8	24.8	41.4
2010	/ Corn	Coon (T10590-6)	53.4	DAP	202	18%	46%	0%	36.4	92.9	0.0			
2010	/ Corn	Coon (T10590-6)	53.4	AA	100	82%	0%	0%	82.0	0.0	0.0			
2010	/ Corn	Coon (T10590-6)	53.4	PC	155	0%	0%	60%	0.0	0.0	93.0	(0.0)	36.2	56.0
2010	/ Corn	Coon (T10590-6) (A)	6.4	DAP	202	18%	46%	0%	36.4	92.9	0.0			
2010	/ Corn	Coon (T10590-6) (A)	6.4	AA	100	82%	0%	0%	82.0	0.0	0.0			
2010	/ Corn	Coon (T10590-6) (A)	6.4	PC	155	0%	0%	60%	0.0	0.0	93.0	(0.0)	36.2	56.0
2010	/ Beans	Coon (T10590-2)	2.9			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-2)	2.9			0%	0%	0%	0.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2010	/ Beans	Coon (T10590-2)	2.9			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2010	/ Beans	Coon (T10590-22)	6.3			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-22)	6.3			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-22)	6.3			0%	0%	0%	0.0	0.0	0.0	0.0	(32.3)	(49.4)
2010	/ Beans	Coon (T10590-27)	2.3			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-27)	2.3			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-27)	2.3			0%	0%	0%	0.0	0.0	0.0	0.0	(32.3)	(49.4)
2010	/ Beans	Coon (T10590-23)	0.7			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-23)	0.7			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-23)	0.7			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2010	/ Beans	Coon (T10590-28)	0.7			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-28)	0.7			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-28)	0.7			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2010	/ Beans	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0	0.0	(36.6)	(55.9)
2010	/ Beans	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0	0.0	(40.8)	(62.4)
2010	/ Beans	Coon (T10590-14)	6.5			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-14)	6.5			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-14)	6.5			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2010	/ Beans	Coon (T10590-15)	7.1			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-15)	7.1			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-15)	7.1			0%	0%	0%	0.0	0.0	0.0	0.0	(30.6)	(46.8)
2010	/ Beans	Coon (T10590-9)	1.4			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-9)	1.4			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-9)	1.4			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2010	/ Beans	Coon (T10590-13)	5.5			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-13)	5.5			0%	0%	0%	0.0	0.0	0.0			
2010	/ Beans	Coon (T10590-13)	5.5			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2010	/ Corn	Coon (T10590-10)	23.6	DAP	215	18%	46%	0%	38.7	98.9	0.0			
2010	/ Corn	Coon (T10590-10)	23.6	AA	108	82%	0%	0%	88.6	0.0	0.0			
2010	/ Corn	Coon (T10590-10)	23.6	PC	165	0%	0%	60%	0.0	0.0	99.0	(0.7)	38.7	59.8
2010	/ Corn	Coon (T10590-10) (A)	9	DAP	215	18%	46%	0%	38.7	98.9	0.0			
2010	/ Corn	Coon (T10590-10) (A)	9	AA	108	82%	0%	0%	88.6	0.0	0.0			
2010	/ Corn	Coon (T10590-10) (A)	9	PC	165	0%	0%	60%	0.0	0.0	99.0	(0.7)	38.7	59.8
2011	/ Corn	York (T16198-1)	124.3	AA	186	82%	0%	0%	152.5	0.0	0.0			
2011	/ Corn	York (T16198-1)	124.3			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	York (T16198-1)	124.3			0%	0%	0%	0.0	0.0	0.0	6.9	(25.5)	162.7
2011	/ Corn	York (T16198-1) (A)	29	DAP	130	18%	46%	0%	23.4	59.8	0.0			
2011	/ Corn	York (T16198-1) (A)	29	AA	176	82%	0%	0%	144.3	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	N CROP YEAR BALANCE PAN (#/ACRE)	P2O5 (#/ACRE)	K2O (#/ACRE)
2011	/ Corn	York (T16198-1) (A)	29	PC		0%	0%	60%	0.0	0.0	0.0	(0.3)	(0.4)	(39.2)
2011	/ Corn	York (T16198-2)	61.9			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	York (T16198-2)	61.9			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	York (T16198-2)	61.9	AA	51	82%	0%	0%	41.8	0.0	0.0	1.5	51.9	64.6
2011	/ Corn	York (T16198-2) (A)	12.7	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2011	/ Corn	York (T16198-2) (A)	12.7	AA	148	82%	0%	0%	121.4	0.0	0.0			
2011	/ Corn	York (T16198-2) (A)	12.7	PC		0%	0%	60%	0.0	0.0	0.0	(0.4)	(0.1)	(33.0)
2011	/ Corn	York (T16198-3)	23.8	AA	206	82%	0%	0%	168.9	0.0	0.0			
2011	/ Corn	York (T16198-3)	23.8			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	York (T16198-3)	23.8			0%	0%	0%	0.0	0.0	0.0	6.3	(60.6)	(39.5)
2011	/ Corn	York (T16198-3) (A)	13.2	DAP	130	18%	46%	0%	23.4	59.8	0.0			
2011	/ Corn	York (T16198-3) (A)	13.2	AA	176	82%	0%	0%	144.3	0.0	0.0			
2011	/ Corn	York (T16198-3) (A)	13.2	PC		0%	0%	60%	0.0	0.0	0.0	(1.5)	(0.8)	(39.5)
2011	/ Corn	York (T16198-4)	31.7			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	York (T16198-4)	31.7			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	York (T16198-4)	31.7	AA	152	82%	0%	0%	124.6	0.0	0.0	0.0	(15.6)	169.1
2011	/ Corn	York (T16198-4) (A)	5.7	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2011	/ Corn	York (T16198-4) (A)	5.7	AA	148	82%	0%	0%	121.4	0.0	0.0			
2011	/ Corn	York (T16198-4) (A)	5.7	PC		0%	0%	60%	0.0	0.0	0.0	0.8	0.3	(32.8)
2011	/ Corn	York (T16198-5)	29.7	AA	170	82%	0%	0%	139.4	0.0	0.0			
2011	/ Corn	York (T16198-5)	29.7			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	York (T16198-5)	29.7			0%	0%	0%	0.0	0.0	0.0	4.4	(50.7)	(33.0)
2011	/ Corn	York (T16198-5) (A)	15.1	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2011	/ Corn	York (T16198-5) (A)	15.1	AA	148	82%	0%	0%	121.4	0.0	0.0			
2011	/ Corn	York (T16198-5) (A)	15.1	PC		0%	0%	60%	0.0	0.0	0.0	(0.4)	(0.1)	(33.0)
2011	/ Corn	York (T16198-6)	58.6			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	York (T16198-6)	58.6			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	York (T16198-6)	58.6	AA	170	82%	0%	0%	139.4	0.0	0.0	1.1	(50.3)	(32.8)
2011	/ Corn	York (T16198-6) (A)	16.4	AA	148	82%	0%	0%	121.4	0.0	0.0			
2011	/ Corn	York (T16198-6) (A)	16.4	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2011	/ Corn	York (T16198-6) (A)	16.4	AS		21%	0%	0%	0.0	0.0	0.0	0.8	0.3	(32.8)
2011	/ Corn	York (T16198-7)	31.4			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	York (T16198-7)	31.4			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	York (T16198-7)	31.4	AA	170	82%	0%	0%	139.4	0.0	0.0	1.1	(50.3)	(32.8)
2011	/ Corn	York (T16198-8)	65.7			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	York (T16198-8)	65.7			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	York (T16198-8)	65.7	AA	170	82%	0%	0%	139.4	0.0	0.0	(0.1)	(50.7)	(33.0)
2011	/ Corn	York (T16198-8) (A)	10.3	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2011	/ Corn	York (T16198-8) (A)	10.3	AA	148	82%	0%	0%	121.4	0.0	0.0			
2011	/ Corn	York (T16198-8) (A)	10.3	PC		0%	0%	60%	0.0	0.0	0.0	(0.4)	(0.1)	(33.0)
2011	/ Corn	Coon (T10293-7)	30.7			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	Coon (T10293-7)	30.7			0%	0%	0%	0.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	N CROP YEAR BALANCE PAN (#/ACRE)	P2O5 (#/ACRE)	K2O (#/ACRE)
2011	/ Corn	Coon (T10293-7)	30.7	AA		82%	0%	0%	0.0	0.0	0.0	(4.1)	38.6	50.4
2011	/ Corn	Coon (T10293-7) (A)	10.5	AA	87	82%	0%	0%	71.3	0.0	0.0			
2011	/ Corn	Coon (T10293-7) (A)	10.5	DAP	100	18%	46%	0%	18.0	46.0	0.0			
2011	/ Corn	Coon (T10293-7) (A)	10.5	PC		0%	0%	60%	0.0	0.0	0.0	(0.3)	(0.4)	(30.2)
2011	/ Corn	Coon (T10293-6)	32.6			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	Coon (T10293-6)	32.6			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	Coon (T10293-6)	32.6	AA	64	82%	0%	0%	52.5	0.0	0.0	1.6	21.8	39.5
2011	/ Corn	Coon (T10293-6) (A)	6.2	DAP	134	18%	46%	0%	24.1	61.6	0.0			
2011	/ Corn	Coon (T10293-6) (A)	6.2	AA	135	82%	0%	0%	110.7	0.0	0.0			
2011	/ Corn	Coon (T10293-6) (A)	6.2	PC		0%	0%	60%	0.0	0.0	0.0	0.8	(0.7)	(40.6)
2011	/ Corn	Coon (T10293-8)	6.4	DAP	114	18%	46%	0%	20.5	52.4	0.0			
2011	/ Corn	Coon (T10293-8)	6.4	AA	104	82%	0%	0%	85.3	0.0	0.0			
2011	/ Corn	Coon (T10293-8)	6.4	PC		0%	0%	60%	0.0	0.0	0.0	(0.6)	(0.0)	(34.2)
2011	/ Corn	Coon (T10293-8) (A)	18.6	DAP	114	18%	46%	0%	20.5	52.4	0.0			
2011	/ Corn	Coon (T10293-8) (A)	18.6	AA	104	82%	0%	0%	85.3	0.0	0.0			
2011	/ Corn	Coon (T10293-8) (A)	18.6	PC		0%	0%	60%	0.0	0.0	0.0	(0.6)	(0.0)	(34.2)
2011	/ Beans	Coon (T10293-9)	71.2			0%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10293-9)	71.2			0%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10293-9)	71.2			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2011	/ Beans	Coon (T10293-9) (A)	18.3			0%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10293-9) (A)	18.3			0%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10293-9) (A)	18.3			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2011	/ Corn	Coon (T10590-1)	22.1			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	Coon (T10590-1)	22.1			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	Coon (T10590-1)	22.1	AA	25	82%	0%	0%	20.5	0.0	0.0	2.0	33.4	47.0
2011	/ Corn	Coon (T10590-1) (A)	10.1	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2011	/ Corn	Coon (T10590-1) (A)	10.1	AA	100	82%	0%	0%	82.0	0.0	0.0			
2011	/ Corn	Coon (T10590-1) (A)	10.1	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2011	/ Corn	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	Coon (T10590-24)	0	AA	57	82%	0%	0%	46.7	0.0	0.0	1.8	23.9	40.9
2011	/ Corn	Coon (T10590-24) (A)	3.3	DAP	130	18%	46%	0%	23.4	59.8	0.0			
2011	/ Corn	Coon (T10590-24) (A)	3.3	AA	127	82%	0%	0%	104.1	0.0	0.0			
2011	/ Corn	Coon (T10590-24) (A)	3.3	PC		0%	0%	60%	0.0	0.0	0.0	(0.5)	(0.4)	(39.2)
2011	/ Corn	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0			
2011	/ Corn	Coon (T10590-25)	36.6	AA	45	82%	0%	0%	36.9	0.0	0.0	1.6	27.4	43.1
2011	/ Corn	Coon (T10590-25) (A)	3.4	DAP	123	18%	46%	0%	22.1	56.6	0.0			
2011	/ Corn	Coon (T10590-25) (A)	3.4	AA	117	82%	0%	0%	95.9	0.0	0.0			
2011	/ Corn	Coon (T10590-25) (A)	3.4	PC		0%	0%	60%	0.0	0.0	0.0	(0.3)	(0.2)	(37.0)
2011	/ Corn	Coon (T10590-26)	6.4	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2011	/ Corn	Coon (T10590-26)	6.4	AA	100	82%	0%	0%	82.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2011	/ Corn	Coon (T10590-26)	6.4	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2011	/ Corn	Coon (T10590-3)	16.4	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2011	/ Corn	Coon (T10590-3)	16.4	AA	100	82%	0%	0%	82.0	0.0	0.0			
2011	/ Corn	Coon (T10590-3)	16.4	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2011	/ Corn	Coon (T10590-3) (A)	10.6	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2011	/ Corn	Coon (T10590-3) (A)	10.6	AA	100	82%	0%	0%	82.0	0.0	0.0			
2011	/ Corn	Coon (T10590-3) (A)	10.6	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2011	/ Beans	Coon (T10590-18)	2.3			0%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10590-18)	2.3			0%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10590-18)	2.3	AA		82%	0%	0%	0.0	0.0	0.0	0.0	(45.1)	(68.9)
2011	/ Beans	Coon (T10590-29)	1.3			0%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10590-29)	1.3			0%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10590-29)	1.3	AA		82%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2011	/ Beans	Coon (T10590-4)	0	DAP		18%	46%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10590-4)	0	AA		82%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10590-4)	0	PC		0%	0%	60%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2011	/ Beans	Coon (T10590-4) (A)	1.7	DAP		18%	46%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10590-4) (A)	1.7	AA		82%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10590-4) (A)	1.7	PC		0%	0%	60%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2011	/ Corn	Coon (T10590-17)	1.6	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2011	/ Corn	Coon (T10590-17)	1.6	AA	100	82%	0%	0%	82.0	0.0	0.0			
2011	/ Corn	Coon (T10590-17)	1.6	PC		0%	0%	60%	0.0	0.0	0.0	(4.6)	(1.9)	(34.2)
2011	/ Beans	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2011	/ Beans	Coon (T10590-6)	53.4			0%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10590-6)	53.4			0%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10590-6)	53.4			0%	0%	0%	0.0	0.0	0.0	0.0	(36.6)	(55.9)
2011	/ Beans	Coon (T10590-6) (A)	6.4			0%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10590-6) (A)	6.4			0%	0%	0%	0.0	0.0	0.0			
2011	/ Beans	Coon (T10590-6) (A)	6.4			0%	0%	0%	0.0	0.0	0.0	0.0	(36.6)	(55.9)
2011	/ Corn	Coon (T10590-2)	2.9	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2011	/ Corn	Coon (T10590-2)	2.9	AA	100	82%	0%	0%	82.0	0.0	0.0			
2011	/ Corn	Coon (T10590-2)	2.9	PC		0%	0%	60%	0.0	0.0	0.0	0.2	(0.1)	(33.0)
2011	/ Corn	Coon (T10590-22)	6.3	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2011	/ Corn	Coon (T10590-22)	6.3	AA	100	82%	0%	0%	82.0	0.0	0.0			
2011	/ Corn	Coon (T10590-22)	6.3	PC		0%	0%	60%	0.0	0.0	0.0	1.4	0.3	(32.8)
2011	/ Corn	Coon (T10590-27)	2.3	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2011	/ Corn	Coon (T10590-27)	2.3	AA	100	82%	0%	0%	82.0	0.0	0.0			
2011	/ Corn	Coon (T10590-27)	2.3	PC		0%	0%	60%	0.0	0.0	0.0	1.4	0.3	(32.8)
2011	/ Corn	Coon (T10590-23)	0.7	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2011	/ Corn	Coon (T10590-23)	0.7	AA	100	82%	0%	0%	82.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	N	CROP YEAR BALANCE PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2011	/ Corn	Coon (T10590-23)	0.7	PC		0%	0%	60%	0.0	0.0	0.0		0.2	(0.1)	(33.0)
2011	/ Corn	Coon (T10590-28)	0.7	DAP	110	18%	46%	0%	19.8	50.6	0.0				
2011	/ Corn	Coon (T10590-28)	0.7	AA	100	82%	0%	0%	82.0	0.0	0.0				
2011	/ Corn	Coon (T10590-28)	0.7	PC		0%	0%	60%	0.0	0.0	0.0		(4.6)	(1.9)	(34.2)
2011	/ Corn	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0				
2011	/ Corn	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0				
2011	/ Corn	Coon (T10590-7)	65.2	AA	45	82%	0%	0%	36.9	0.0	0.0		1.6	27.4	43.1
2011	/ Corn	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0				
2011	/ Corn	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0				
2011	/ Corn	Coon (T10590-20)	66.3	AA	79	82%	0%	0%	64.8	0.0	0.0		1.9	17.5	36.7
2011	/ Corn	Coon (T10590-14)	6.5	DAP	110	18%	46%	0%	19.8	50.6	0.0				
2011	/ Corn	Coon (T10590-14)	6.5	AA	100	82%	0%	0%	82.0	0.0	0.0				
2011	/ Corn	Coon (T10590-14)	6.5	PC		0%	0%	60%	0.0	0.0	0.0		0.2	(0.1)	(33.0)
2011	/ Corn	Coon (T10590-15)	7.1	DAP	100	18%	46%	0%	18.0	46.0	0.0				
2011	/ Corn	Coon (T10590-15)	7.1	AA	84	82%	0%	0%	68.9	0.0	0.0				
2011	/ Corn	Coon (T10590-15)	7.1	PC		0%	0%	60%	0.0	0.0	0.0		(0.3)	0.4	(29.7)
2011	/ Corn	Coon (T10590-9)	1.4	DAP	125	18%	46%	0%	22.5	57.5	0.0				
2011	/ Corn	Coon (T10590-9)	1.4	AA	120	82%	0%	0%	98.4	0.0	0.0				
2011	/ Corn	Coon (T10590-9)	1.4	PC		0%	0%	60%	0.0	0.0	0.0		0.1	(0.1)	(37.5)
2011	/ Corn	Coon (T10590-13)	5.5	DAP	110	18%	46%	0%	19.8	50.6	0.0				
2011	/ Corn	Coon (T10590-13)	5.5	AA	100	82%	0%	0%	82.0	0.0	0.0				
2011	/ Corn	Coon (T10590-13)	5.5	PC		0%	0%	60%	0.0	0.0	0.0		0.2	(0.1)	(33.0)
2011	/ Beans	Coon (T10590-10)	23.6			0%	0%	0%	0.0	0.0	0.0				
2011	/ Beans	Coon (T10590-10)	23.6			0%	0%	0%	0.0	0.0	0.0				
2011	/ Beans	Coon (T10590-10)	23.6			0%	0%	0%	0.0	0.0	0.0		0.0	(40.0)	(61.1)
2011	/ Beans	Coon (T10590-10) (A)	9			0%	0%	0%	0.0	0.0	0.0				
2011	/ Beans	Coon (T10590-10) (A)	9			0%	0%	0%	0.0	0.0	0.0				
2011	/ Beans	Coon (T10590-10) (A)	9			0%	0%	0%	0.0	0.0	0.0		0.0	(40.0)	(61.1)
2012	/ Corn	York (T16198-1)	124.3	AA	82	82%	0%	0%	67.2	0.0	0.0				
2012	/ Corn	York (T16198-1)	124.3			0%	0%	0%	0.0	0.0	0.0				
2012	/ Corn	York (T16198-1)	124.3			0%	0%	0%	0.0	0.0	0.0		2.6	42.4	58.5
2012	/ Corn	York (T16198-1) (A)	29	DAP	130	18%	46%	0%	23.4	59.8	0.0				
2012	/ Corn	York (T16198-1) (A)	29	AA	176	82%	0%	0%	144.3	0.0	0.0				
2012	/ Corn	York (T16198-1) (A)	29	PC	200	0%	0%	60%	0.0	0.0	120.0		(0.3)	(0.4)	80.8
2012	/ Corn	York (T16198-2)	61.9			0%	0%	0%	0.0	0.0	0.0				
2012	/ Corn	York (T16198-2)	61.9			0%	0%	0%	0.0	0.0	0.0				
2012	/ Corn	York (T16198-2)	61.9	AA	166	82%	0%	0%	136.1	0.0	0.0		1.1	(50.7)	(33.0)
2012	/ Corn	York (T16198-2) (A)	12.7	DAP	110	18%	46%	0%	19.8	50.6	0.0				
2012	/ Corn	York (T16198-2) (A)	12.7	AA	148	82%	0%	0%	121.4	0.0	0.0				
2012	/ Corn	York (T16198-2) (A)	12.7	PC	200	0%	0%	60%	0.0	0.0	120.0		(0.4)	(0.1)	87.0
2012	/ Corn	York (T16198-3)	23.8	AA	86	82%	0%	0%	70.5	0.0	0.0				
2012	/ Corn	York (T16198-3)	23.8			0%	0%	0%	0.0	0.0	0.0				

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2012	/ Corn	York (T16198-3)	23.8			0%	0%	0%	0.0	0.0	0.0	2.6	42.0	58.2
2012	/ Corn	York (T16198-3) (A)	13.2	DAP	130	18%	46%	0%	23.4	59.8	0.0			
2012	/ Corn	York (T16198-3) (A)	13.2	AA	176	82%	0%	0%	144.3	0.0	0.0			
2012	/ Corn	York (T16198-3) (A)	13.2	PC	200	0%	0%	60%	0.0	0.0	120.0	(1.5)	(0.8)	80.5
2012	/ Corn	York (T16198-4)	31.7			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	York (T16198-4)	31.7			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	York (T16198-4)	31.7	AA	169	82%	0%	0%	138.6	0.0	0.0	0.3	(50.3)	(32.8)
2012	/ Corn	York (T16198-4) (A)	5.7	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2012	/ Corn	York (T16198-4) (A)	5.7	AA	148	82%	0%	0%	121.4	0.0	0.0			
2012	/ Corn	York (T16198-4) (A)	5.7	PC	200	0%	0%	60%	0.0	0.0	120.0	0.8	0.3	87.2
2012	/ Corn	York (T16198-5)	29.7	AA	54	82%	0%	0%	44.3	0.0	0.0			
2012	/ Corn	York (T16198-5)	29.7			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	York (T16198-5)	29.7			0%	0%	0%	0.0	0.0	0.0	4.0	51.9	64.6
2012	/ Corn	York (T16198-5) (A)	15.1	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2012	/ Corn	York (T16198-5) (A)	15.1	AA	148	82%	0%	0%	121.4	0.0	0.0			
2012	/ Corn	York (T16198-5) (A)	15.1	PC	200	0%	0%	60%	0.0	0.0	120.0	(0.4)	(0.1)	87.0
2012	/ Corn	York (T16198-6)	58.6			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	York (T16198-6)	58.6			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	York (T16198-6)	58.6	AA	152	82%	0%	0%	124.6	0.0	0.0	0.0	(15.6)	169.1
2012	/ Corn	York (T16198-6) (A)	16.4	AA	148	82%	0%	0%	121.4	0.0	0.0			
2012	/ Corn	York (T16198-6) (A)	16.4	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2012	/ Corn	York (T16198-6) (A)	16.4	PC	200	0%	0%	60%	0.0	0.0	120.0	0.8	0.3	87.2
2012	/ Corn	York (T16198-7)	31.4			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	York (T16198-7)	31.4			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	York (T16198-7)	31.4	AA	152	82%	0%	0%	124.6	0.0	0.0	0.0	(15.6)	169.1
2012	/ Corn	York (T16198-8)	65.7			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	York (T16198-8)	65.7			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	York (T16198-8)	65.7	AA	155	82%	0%	0%	127.1	0.0	0.0	1.3	(16.0)	168.8
2012	/ Corn	York (T16198-8) (A)	10.3	DAP	110	18%	46%	0%	19.8	50.6	0.0			
2012	/ Corn	York (T16198-8) (A)	10.3	AA	148	82%	0%	0%	121.4	0.0	0.0			
2012	/ Corn	York (T16198-8) (A)	10.3	PC	200	0%	0%	60%	0.0	0.0	120.0	(0.4)	(0.1)	87.0
2012	/ Beans	Coon (T10293-7)	30.7			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10293-7)	30.7			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10293-7)	30.7			0%	0%	0%	0.0	0.0	0.0	0.0	(30.6)	(46.8)
2012	/ Beans	Coon (T10293-7) (A)	10.5			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10293-7) (A)	10.5			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10293-7) (A)	10.5			0%	0%	0%	0.0	0.0	0.0	0.0	(30.6)	(46.8)
2012	/ Beans	Coon (T10293-6)	32.6			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10293-6)	32.6			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10293-6)	32.6			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2012	/ Beans	Coon (T10293-6) (A)	6.2			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10293-6) (A)	6.2			0%	0%	0%	0.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2012	/ Beans	Coon (T10293-6) (A)	6.2			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2012	/ Beans	Coon (T10293-8)	6.4			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10293-8)	6.4			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10293-8)	6.4			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2012	/ Beans	Coon (T10293-8) (A)	18.6			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10293-8) (A)	18.6			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10293-8) (A)	18.6			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2012	/ Corn	Coon (T10293-9)	71.2			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	Coon (T10293-9)	71.2			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	Coon (T10293-9)	71.2	AA	64	82%	0%	0%	52.5	0.0	0.0	1.6	21.8	39.5
2012	/ Corn	Coon (T10293-9) (A)	18.3	DAP	134	18%	46%	0%	24.1	61.6	0.0			
2012	/ Corn	Coon (T10293-9) (A)	18.3	AA	134	82%	0%	0%	109.9	0.0	0.0			
2012	/ Corn	Coon (T10293-9) (A)	18.3	PC	166	0%	0%	60%	0.0	0.0	99.6	0.0	(0.7)	59.0
2012	/ Beans	Coon (T10590-1)	22.1			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-1)	22.1			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-1)	22.1			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2012	/ Beans	Coon (T10590-1) (A)	10.1			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-1) (A)	10.1			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-1) (A)	10.1			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2012	/ Beans	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-24)	0			0%	0%	0%	0.0	0.0	0.0	0.0	(40.0)	(61.1)
2012	/ Beans	Coon (T10590-24) (A)	3.3			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-24) (A)	3.3			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-24) (A)	3.3			0%	0%	0%	0.0	0.0	0.0	0.0	(40.0)	(61.1)
2012	/ Beans	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-25)	36.6			0%	0%	0%	0.0	0.0	0.0	0.0	(36.6)	(55.9)
2012	/ Beans	Coon (T10590-25) (A)	3.4			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-25) (A)	3.4			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-25) (A)	3.4			0%	0%	0%	0.0	0.0	0.0	0.0	(36.6)	(55.9)
2012	/ Beans	Coon (T10590-26)	6.4			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-26)	6.4			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-26)	6.4			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2012	/ Beans	Coon (T10590-3)	16.4			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-3)	16.4			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-3)	16.4			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2012	/ Beans	Coon (T10590-3) (A)	10.6			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-3) (A)	10.6			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-3) (A)	10.6			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2012	/ Corn	Coon (T10590-18)	2.3			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	Coon (T10590-18)	2.3			0%	0%	0%	0.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE K2O (#/ACRE)	CROP YEAR BALANCE N PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2012	/ Corn	Coon (T10590-18)	2.3	AA	85	82%	0%	0%	69.7	0.0	0.0	2.0	15.8	35.6
2012	/ Corn	Coon (T10590-29)	1.3			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	Coon (T10590-29)	1.3			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	Coon (T10590-29)	1.3	AA	24	82%	0%	0%	19.7	0.0	0.0	1.2	33.4	47.0
2012	/ Corn	Coon (T10590-4)	0	DAP	180	18%	46%	0%	32.4	82.8	0.0			
2012	/ Corn	Coon (T10590-4)	0	AA	84	82%	0%	0%	68.9	0.0	0.0			
2012	/ Corn	Coon (T10590-4)	0	PC	139	0%	0%	60%	0.0	0.0	83.4	(0.3)	32.1	50.4
2012	/ Corn	Coon (T10590-4) (A)	1.7	DAP	180	18%	46%	0%	32.4	82.8	0.0			
2012	/ Corn	Coon (T10590-4) (A)	1.7	AA	84	82%	0%	0%	68.9	0.0	0.0			
2012	/ Corn	Coon (T10590-4) (A)	1.7	PC	139	0%	0%	60%	0.0	0.0	83.4	(0.3)	32.1	50.4
2012	/ Beans	Coon (T10590-17)	1.6			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-17)	1.6			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-17)	1.6			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2012	/ Corn	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	Coon (T10590-5)	61			0%	0%	0%	0.0	0.0	0.0			
2012	/ Corn	Coon (T10590-5)	61	AA	54	82%	0%	0%	44.3	0.0	0.0	1.8	24.8	41.4
2012	/ Corn	Coon (T10590-6)	53.4	DAP	202	18%	46%	0%	36.4	92.9	0.0			
2012	/ Corn	Coon (T10590-6)	53.4	AA	100	82%	0%	0%	82.0	0.0	0.0			
2012	/ Corn	Coon (T10590-6)	53.4	PC	155	0%	0%	60%	0.0	0.0	93.0	(0.0)	36.2	56.0
2012	/ Corn	Coon (T10590-6) (A)	6.4	DAP	202	18%	46%	0%	36.4	92.9	0.0			
2012	/ Corn	Coon (T10590-6) (A)	6.4	AA	100	82%	0%	0%	82.0	0.0	0.0			
2012	/ Corn	Coon (T10590-6) (A)	6.4	PC	155	0%	0%	60%	0.0	0.0	93.0	(0.0)	36.2	56.0
2012	/ Beans	Coon (T10590-2)	2.9			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-2)	2.9			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-2)	2.9			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2012	/ Beans	Coon (T10590-22)	6.3			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-22)	6.3			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-22)	6.3			0%	0%	0%	0.0	0.0	0.0	0.0	(32.3)	(49.4)
2012	/ Beans	Coon (T10590-27)	2.3			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-27)	2.3			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-27)	2.3			0%	0%	0%	0.0	0.0	0.0	0.0	(32.3)	(49.4)
2012	/ Beans	Coon (T10590-23)	0.7			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-23)	0.7			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-23)	0.7			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2012	/ Beans	Coon (T10590-28)	0.7			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-28)	0.7			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-28)	0.7			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2012	/ Beans	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-7)	65.2			0%	0%	0%	0.0	0.0	0.0	0.0	(36.6)	(55.9)
2012	/ Beans	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0			

COMMERCIAL FERTILIZER APPLICATIONS

Number of Fertilizers Used: 3

CROP YEAR	Crop	FIELD #	ACRES	FERTILIZER TYPE	APPL. RATE (#/ACRE)	% N	% P2O5	% K2O	AUTO BALANCE N (#/ACRE)	AUTO BALANCE P2O5 (#/ACRE)	AUTO BALANCE N K2O (#/ACRE)	CROP YEAR BALANCE PAN (#/ACRE)	CROP YEAR BALANCE P2O5 (#/ACRE)	CROP YEAR BALANCE K2O (#/ACRE)
2012	/ Beans	Coon (T10590-20)	66.3			0%	0%	0%	0.0	0.0	0.0	0.0	(40.8)	(62.4)
2012	/ Beans	Coon (T10590-14)	6.5			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-14)	6.5			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-14)	6.5			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2012	/ Beans	Coon (T10590-15)	7.1			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-15)	7.1			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-15)	7.1			0%	0%	0%	0.0	0.0	0.0	0.0	(30.6)	(46.8)
2012	/ Beans	Coon (T10590-9)	1.4			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-9)	1.4			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-9)	1.4			0%	0%	0%	0.0	0.0	0.0	0.0	(38.3)	(58.5)
2012	/ Beans	Coon (T10590-13)	5.5			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-13)	5.5			0%	0%	0%	0.0	0.0	0.0			
2012	/ Beans	Coon (T10590-13)	5.5			0%	0%	0%	0.0	0.0	0.0	0.0	(34.0)	(52.0)
2012	/ Corn	Coon (T10590-10)	23.6	DAP	215	18%	46%	0%	38.7	98.9	0.0			
2012	/ Corn	Coon (T10590-10)	23.6	AA	108	82%	0%	0%	88.6	0.0	0.0			
2012	/ Corn	Coon (T10590-10)	23.6	PC	165	0%	0%	60%	0.0	0.0	99.0	(0.7)	38.7	59.8
2012	/ Corn	Coon (T10590-10) (A)	9	DAP	215	18%	46%	0%	38.7	98.9	0.0			
2012	/ Corn	Coon (T10590-10) (A)	9	AA	108	82%	0%	0%	88.6	0.0	0.0			
2012	/ Corn	Coon (T10590-10) (A)	9	PC	165	0%	0%	60%	0.0	0.0	99.0	(0.7)	38.7	59.8

ANNUAL NUTRIENT BALANCE

		CROP YEAR 2007			SOIL TEST RESULTS			AVAILABLE FROM MANURE (INCLUDES MANURE CREDITS)			NEEDED BY CROP (INCLUDES CROP CREDITS)			COMMERCIAL			SOIL BALANCE		
YEAR	CROP	FIELD #	ACRES	% OM	P	K	PH	PAN	P205	K20	PAN	P205	K20	N	P2O5	K2O	ORG N	P	K
2007	/ Corn	York (T16198-1)	124		70.0	300.0		15.0	34.7	201.9	168.0	60.2	39.2	152.5	0.0	0.0	1.7	67.2	340.7
2007	/ Corn	York (T16198-1) (A)	29		70.0	300.0		0.0	0.0	0.0	168.0	60.2	39.2	167.7	59.8	0.0	0.0	70.0	290.2
2007	/ Corn	York (T16198-2)	62		70.0	300.0		98.7	102.6	97.7	141.6	50.7	33.0	41.8	0.0	0.0	5.3	75.8	316.2
2007	/ Corn	York (T16198-2) (A)	13		70.0	300.0		0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	0.0	0.0	70.0	291.7
2007	/ Corn	York (T16198-3)	24		70.0	300.0		0.0	0.0	0.0	169.2	60.6	39.5	168.9	0.0	0.0	0.0	63.3	290.1
2007	/ Corn	York (T16198-3) (A)	13		70.0	300.0		0.0	0.0	0.0	169.2	60.6	39.5	167.7	59.8	0.0	0.0	69.9	290.1
2007	/ Corn	York (T16198-4)	32		70.0	300.0		15.0	34.7	201.9	140.4	50.3	32.8	124.6	0.0	0.0	1.7	68.3	342.3
2007	/ Corn	York (T16198-4) (A)	6		70.0	300.0		0.0	0.0	0.0	140.4	50.3	32.8	141.2	50.6	0.0	0.0	70.0	291.8
2007	/ Corn	York (T16198-5)	30		70.0	300.0		0.0	0.0	0.0	141.6	50.7	33.0	139.4	0.0	0.0	0.0	64.4	291.7
2007	/ Corn	York (T16198-5) (A)	15		70.0	300.0		0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	0.0	0.0	70.0	291.7
2007	/ Corn	York (T16198-6)	59		70.0	300.0		0.0	0.0	0.0	140.4	50.3	32.8	139.4	0.0	0.0	0.0	64.4	291.8
2007	/ Corn	York (T16198-6) (A)	16		70.0	300.0		0.0	0.0	0.0	140.4	50.3	32.8	141.2	50.6	0.0	0.0	70.0	291.8
2007	/ Corn	York (T16198-7)	31.40		70.0	300.0		0.0	0.0	0.0	140.4	50.3	32.8	139.4	0.0	0.0	0.0	64.4	291.8
2007	/ Corn	York (T16198-8)	65.7		70.0	300.0		0.0	0.0	0.0	141.6	50.7	33.0	139.4	0.0	0.0	0.0	64.4	291.7
2007	/ Corn	York (T16198-8) (A)	10.3		122.0	300.0		0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	0.0	0.0	122.0	291.7
2007	/ Corn	Coon (T10293-7)	30.7		122.0	300.0		80.9	84.1	80.1	87.2	45.6	29.7	0.0	0.0	0.0	4.3	126.3	312.6
2007	/ Corn	Coon (T10293-7) (A)	10.5		122.0	300.0		0.0	0.0	0.0	89.6	46.4	30.2	89.3	46.0	0.0	0.0	122.0	292.4
2007	/ Corn	Coon (T10293-6)	32.6		122.0	300.0		80.9	84.1	80.1	134.0	62.4	40.6	52.5	0.0	0.0	4.3	124.4	309.9
2007	/ Corn	Coon (T10293-6) (A)	6.2		122.0	300.0		0.0	0.0	0.0	134.0	62.4	40.6	134.8	61.6	0.0	0.0	121.9	289.9
2007	/ Corn	Coon (T10293-8)	6.4		122.0	300.0		0.0	0.0	0.0	106.4	52.5	34.2	105.8	52.4	0.0	0.0	122.0	291.5
2007	/ Corn	Coon (T10293-8) (A)	18.6		122.0	300.0		0.0	0.0	0.0	106.4	52.5	34.2	105.8	52.4	0.0	0.0	122.0	291.5
2007	/ Beans	Coon (T10293-9)	71.2		122.0	300.0		0.0	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	0.0	117.8	285.4
2007	/ Beans	Coon (T10293-9) (A)	18.3		122.0	300.0		0.0	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	0.0	117.8	285.4
2007	/ Corn	Coon (T10590-1)	22.1		122.0	300.0		80.9	84.1	80.1	101.6	50.7	33.0	20.5	0.0	0.0	4.3	125.7	311.8
2007	/ Corn	Coon (T10590-1) (A)	10.1		122.0	300.0		0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	122.0	291.7
2007	/ Corn	Coon (T10590-24)	0		122.0	300.0		80.9	84.1	80.1	128.0	60.2	39.2	46.7	0.0	0.0	4.3	124.7	310.2
2007	/ Corn	Coon (T10590-24) (A)	3.3		122.0	300.0		0.0	0.0	0.0	128.0	60.2	39.2	127.5	59.8	0.0	0.0	122.0	290.2
2007	/ Corn	Coon (T10590-25)	36.6		122.0	300.0		80.9	84.1	80.1	118.4	56.8	37.0	36.9	0.0	0.0	4.3	125.0	310.8
2007	/ Corn	Coon (T10590-25) (A)	3.4		122.0	300.0		0.0	0.0	0.0	118.4	56.8	37.0	118.1	56.6	0.0	0.0	122.0	290.8
2007	/ Corn	Coon (T10590-26)	6.4		122.0	300.0		0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	122.0	291.7
2007	/ Corn	Coon (T10590-3)	16.4		122.0	300.0		0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	122.0	291.7
2007	/ Corn	Coon (T10590-3) (A)	10.6		122.0	300.0		0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	122.0	291.7
2007	/ Beans	Coon (T10590-18)	2.3		122.0	300.0		0.0	0.0	0.0	201.4	45.1	68.9	0.0	0.0	0.0	0.0	117.0	282.8
2007	/ Beans	Coon (T10590-29)	1.3		122.0	300.0		0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.2	287.0
2007	/ Beans	Coon (T10590-4)	0		122.0	300.0		0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.2	287.0
2007	/ Beans	Coon (T10590-4) (A)	1.7		122.0	300.0		0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.2	287.0
2007	/ Corn	Coon (T10590-17)	1.6		122.0	300.0		0.0	0.0	0.0	106.4	52.5	34.2	101.8	50.6	0.0	0.0	121.8	291.5
2007	/ Beans	Coon (T10590-5)	61		122.0	300.0		0.0	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	0.0	117.8	285.4
2007	/ Beans	Coon (T10590-6)	53.4		122.0	300.0		0.0	0.0	0.0	163.4	36.6	55.9	0.0	0.0	0.0	0.0	117.9	286.0
2007	/ Beans	Coon (T10590-6) (A)	6.4		122.0	300.0		0.0	0.0	0.0	163.4	36.6	55.9	0.0	0.0	0.0	0.0	117.9	286.0
2007	/ Corn	Coon (T10590-2)	2.9		122.0	300.0		0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	122.0	291.7
2007	/ Corn	Coon (T10590-22)	6.3		122.0	300.0		0.0	0.0	0.0	100.4	50.3	32.8	101.8	50.6	0.0	0.0	122.0	291.8
2007	/ Corn	Coon (T10590-27)	2.3		122.0	300.0		0.0	0.0	0.0	100.4	50.3	32.8	101.8	50.6	0.0	0.0	122.0	291.8
2007	/ Corn	Coon (T10590-23)	0.7		122.0	300.0		0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	122.0	291.7
2007	/ Corn	Coon (T10590-28)	0.7		122.0	300.0		0.0	0.0	0.0	106.4	52.5	34.2	101.8	50.6	0.0	0.0	121.8	291.5
2007	/ Corn	Coon (T10590-7)	65.2		122.0	300.0		80.9	84.1	80.1	118.4	56.8	37.0	36.9	0.0	0.0	4.3	125.0	310.8
2007	/ Corn	Coon (T10590-20)	66.3		122.0	300.0		80.9	84.1	80.1	146.0	66.7	43.4	64.8	0.0	0.0	4.3	123.9	309.2
2007	/ Corn	Coon (T10590-14)	6.5		122.0	300.0		0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	122.0	291.7
2007	/ Corn	Coon (T10590-15)	7.1		122.0	300.0		0.0	0.0	0.0	87.2	45.6	29.7	86.9	46.0	0.0	0.0	122.0	292.6
2007	/ Corn	Coon (T10590-9)	1.4		122.0	300.0		0.0	0.0	0.0	120.8	57.6	37.5	120.9	57.5	0.0	0.0	122.0	290.6
2007	/ Corn	Coon (T10590-13)	5.5		122.0	300.0		0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	122.0	291.7
2007	/ Beans	Coon (T10590-10)	23.6		122.0	300.0		0.0	0.0	0.0	178.6	40.0	61.1	0.0	0.0	0.0	0.0	117.6	284.7
2007	/ Beans	Coon (T10590-10) (A)	9		122.0	300.0		0.0	0.0	0.0	178.6	40.0	61.1	0.0	0.0	0.0	0.0	117.6	284.7

Soil Balance Calculation based on App C of the NRCS Std (633)

		CROP YEAR 2008						AVAILABLE FROM MANURE			NEEDED BY CROP								
				SOIL TEST RESULTS				(INCLUDES MANURE CREDITS)			(INCLUDES CROP CREDITS)			COMMERCIAL			SOIL BALANCE		
YEAR	CROP	FIELD #	ACRES	% OM	P	K	PH	PAN	P205	K20	PAN	P205	K20	N	P2O5	K2O	ORG N	P	K
2008	/ Corn	York (T16198-1)	124.3					100.4	102.6	97.7	168.0	60.2	39.2	67.2	0.0	0.0	6.1	71.9	355.3
2008	/ Corn	York (T16198-1) (A)	29					0.0	0.0	0.0	168.0	60.2	39.2	167.7	59.8	0.0	0.0	69.9	280.4
2008	/ Corn	York (T16198-2)	61.9					5.3	0.0	0.0	141.6	50.7	33.0	136.1	0.0	0.0	2.6	70.1	307.9
2008	/ Corn	York (T16198-2) (A)	12.7					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	0.0	0.0	70.0	283.5
2008	/ Corn	York (T16198-3)	23.8					98.7	102.6	97.7	169.2	60.6	39.5	70.5	0.0	0.0	5.3	67.9	304.7
2008	/ Corn	York (T16198-3) (A)	13.2					0.0	0.0	0.0	169.2	60.6	39.5	167.7	59.8	0.0	0.0	69.8	280.3
2008	/ Corn	York (T16198-4)	31.7					1.7	0.0	0.0	140.4	50.3	32.8	138.6	0.0	0.0	0.8	62.7	334.1
2008	/ Corn	York (T16198-4) (A)	5.7					0.0	0.0	0.0	140.4	50.3	32.8	141.2	50.6	0.0	0.0	70.1	283.6
2008	/ Corn	York (T16198-5)	29.7					98.7	102.6	97.7	141.6	50.7	33.0	44.3	0.0	0.0	5.3	70.1	307.9
2008	/ Corn	York (T16198-5) (A)	15.1					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	0.0	0.0	70.0	283.5
2008	/ Corn	York (T16198-6)	58.6					15.0	34.7	201.9	140.4	50.3	32.8	124.6	0.0	0.0	1.7	62.7	334.1
2008	/ Corn	York (T16198-6) (A)	16.4					0.0	0.0	0.0	140.4	50.3	32.8	141.2	50.6	0.0	0.0	70.1	283.6
2008	/ Corn	York (T16198-7)	31.4					15.0	34.7	201.9	140.4	50.3	32.8	124.6	0.0	0.0	1.7	62.7	334.1
2008	/ Corn	York (T16198-8)	65.7					15.0	34.7	201.9	141.6	50.7	33.0	127.1	0.0	0.0	1.7	62.6	334.0
2008	/ Corn	York (T16198-8) (A)	10.3					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	0.0	0.0	122.0	283.5
2008	/ Beans	Coon (T10293-7)	30.7					4.3	0.0	0.0	136.8	30.6	46.8	0.0	0.0	0.0	2.2	122.9	300.9
2008	/ Beans	Coon (T10293-7) (A)	10.5					0.0	0.0	0.0	136.8	30.6	46.8	0.0	0.0	0.0	0.0	118.6	280.7
2008	/ Beans	Coon (T10293-6)	32.6					4.3	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	2.2	120.2	295.2
2008	/ Beans	Coon (T10293-6) (A)	6.2					0.0	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	0.0	117.7	275.2
2008	/ Beans	Coon (T10293-8)	6.4					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.2	278.5
2008	/ Beans	Coon (T10293-8) (A)	18.6					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.2	278.5
2008	/ Corn	Coon (T10293-9)	71.2					80.9	84.1	80.1	134.0	62.4	40.6	52.5	0.0	0.0	4.3	120.2	295.2
2008	/ Corn	Coon (T10293-9) (A)	18.3					0.0	0.0	0.0	134.0	62.4	40.6	134.0	61.6	99.6	0.0	117.7	300.1
2008	/ Beans	Coon (T10590-1)	22.1					4.3	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	2.2	121.9	298.8
2008	/ Beans	Coon (T10590-1) (A)	10.1					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.2	278.7
2008	/ Beans	Coon (T10590-24)	0					4.3	0.0	0.0	178.6	40.0	61.1	0.0	0.0	0.0	2.2	120.2	294.9
2008	/ Beans	Coon (T10590-24) (A)	3.3					0.0	0.0	0.0	178.6	40.0	61.1	0.0	0.0	0.0	0.0	117.5	274.9
2008	/ Beans	Coon (T10590-25)	36.6					4.3	0.0	0.0	163.4	36.6	55.9	0.0	0.0	0.0	2.2	121.0	296.8
2008	/ Beans	Coon (T10590-25) (A)	3.4					0.0	0.0	0.0	163.4	36.6	55.9	0.0	0.0	0.0	0.0	117.9	276.8
2008	/ Beans	Coon (T10590-26)	6.4					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.2	278.7
2008	/ Beans	Coon (T10590-3)	16.4					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.2	278.7
2008	/ Beans	Coon (T10590-3) (A)	10.6					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.2	278.7
2008	/ Corn	Coon (T10590-18)	2.3					80.9	84.1	80.1	150.8	68.4	44.5	69.7	0.0	0.0	4.3	118.7	291.7
2008	/ Corn	Coon (T10590-29)	1.3					80.9	84.1	80.1	101.6	50.7	33.0	19.7	0.0	0.0	4.3	121.9	298.8
2008	/ Corn	Coon (T10590-4)	0					0.0	0.0	0.0	101.6	50.7	33.0	101.3	82.8	83.4	0.0	121.8	299.6
2008	/ Corn	Coon (T10590-4) (A)	1.7					0.0	0.0	0.0	101.6	50.7	33.0	101.3	82.8	83.4	0.0	121.8	299.6
2008	/ Beans	Coon (T10590-17)	1.6					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.0	278.5
2008	/ Corn	Coon (T10590-5)	61					80.9	84.1	80.1	125.6	59.3	38.6	44.3	0.0	0.0	4.3	120.5	295.7
2008	/ Corn	Coon (T10590-6)	53.4					0.0	0.0	0.0	118.4	56.8	37.0	118.4	92.9	93.0	0.0	122.0	300.0
2008	/ Corn	Coon (T10590-6) (A)	6.4					0.0	0.0	0.0	118.4	56.8	37.0	118.4	92.9	93.0	0.0	122.0	300.0
2008	/ Beans	Coon (T10590-2)	2.9					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.2	278.7
2008	/ Beans	Coon (T10590-22)	6.3					0.0	0.0	0.0	144.4	32.3	49.4	0.0	0.0	0.0	0.0	118.4	279.5
2008	/ Beans	Coon (T10590-27)	2.3					0.0	0.0	0.0	144.4	32.3	49.4	0.0	0.0	0.0	0.0	118.4	279.5
2008	/ Beans	Coon (T10590-23)	0.7					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.2	278.7
2008	/ Beans	Coon (T10590-28)	0.7					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.0	278.5
2008	/ Beans	Coon (T10590-7)	65.2					4.3	0.0	0.0	163.4	36.6	55.9	0.0	0.0	0.0	2.2	121.0	296.8
2008	/ Beans	Coon (T10590-20)	66.3					4.3	0.0	0.0	182.4	40.8	62.4	0.0	0.0	0.0	2.2	119.4	293.6
2008	/ Beans	Coon (T10590-14)	6.5					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.2	278.7
2008	/ Beans	Coon (T10590-15)	7.1					0.0	0.0	0.0	136.8	30.6	46.8	0.0	0.0	0.0	0.0	118.6	280.9
2008	/ Beans	Coon (T10590-9)	1.4					0.0	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	0.0	117.7	276.0
2008	/ Beans	Coon (T10590-13)	5.5					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.2	278.7
2008	/ Corn	Coon (T10590-10)	23.6					0.0	0.0	0.0	128.0	60.2	39.2	127.3	98.9	99.0	0.0	121.9	299.7
2008	/ Corn	Coon (T10590-10) (A)	9					0.0	0.0	0.0	128.0	60.2	39.2	127.3	98.9	99.0	0.0	121.9	299.7

		CROP YEAR 2009		SOIL TEST RESULTS				AVAILABLE FROM MANURE (INCLUDES MANURE CREDITS)			NEEDED BY CROP (INCLUDES CROP CREDITS)			COMMERCIAL			SOIL BALANCE		
YEAR	CROP	FIELD #	ACRES	% OM	P	K	PH	PAN	P205	K20	PAN	P205	K20	N	P2O5	K2O	ORG N	P	K
2009	/ Corn	York (T16198-1)	124.3					21.0	34.7	201.9	168.0	60.2	39.2	152.5	0.0	0.0	4.7	69.1	396.0
2009	/ Corn	York (T16198-1) (A)	29					0.0	0.0	0.0	168.0	60.2	39.2	167.7	59.8	120.0	0.0	69.9	300.6
2009	/ Corn	York (T16198-2)	61.9					101.3	102.6	97.7	141.6	50.7	33.0	41.8	0.0	0.0	6.6	75.9	324.0
2009	/ Corn	York (T16198-2) (A)	12.7					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	120.0	0.0	70.0	305.2
2009	/ Corn	York (T16198-3)	23.8					5.3	0.0	0.0	169.2	60.6	39.5	168.9	0.0	0.0	2.6	61.2	294.8
2009	/ Corn	York (T16198-3) (A)	13.2					0.0	0.0	0.0	169.2	60.6	39.5	167.7	59.8	78.0	0.0	69.7	289.9
2009	/ Corn	York (T16198-4)	31.7					15.8	34.7	201.9	140.4	50.3	32.8	124.6	0.0	0.0	2.1	61.0	376.4
2009	/ Corn	York (T16198-4) (A)	5.7					0.0	0.0	0.0	140.4	50.3	32.8	141.2	50.6	120.0	0.0	70.1	305.4
2009	/ Corn	York (T16198-5)	29.7					5.3	0.0	0.0	141.6	50.7	33.0	139.4	0.0	0.0	2.6	64.5	299.6
2009	/ Corn	York (T16198-5) (A)	15.1					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	120.0	0.0	70.0	305.2
2009	/ Corn	York (T16198-6)	58.6					1.7	0.0	0.0	140.4	50.3	32.8	139.4	0.0	0.0	0.8	57.1	325.9
2009	/ Corn	York (T16198-6) (A)	16.4					0.0	0.0	0.0	140.4	50.3	32.8	141.2	50.6	120.0	0.0	70.1	305.4
2009	/ Corn	York (T16198-7)	31.4					1.7	0.0	0.0	140.4	50.3	32.8	139.4	0.0	0.0	0.8	57.1	325.9
2009	/ Corn	York (T16198-8)	65.7					1.7	0.0	0.0	141.6	50.7	33.0	139.4	0.0	0.0	0.8	56.9	325.7
2009	/ Corn	York (T16198-8) (A)	10.3					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	120.0	0.0	122.0	305.2
2009	/ Corn	Coon (T10293-7)	30.7					83.1	84.1	80.1	87.2	45.6	29.7	0.0	0.0	0.0	5.4	127.2	313.5
2009	/ Corn	Coon (T10293-7) (A)	10.5					0.0	0.0	0.0	89.6	46.4	30.2	89.3	46.0	0.0	0.0	118.5	273.2
2009	/ Corn	Coon (T10293-6)	32.6					83.1	84.1	80.1	134.0	62.4	40.6	52.5	0.0	0.0	5.4	122.6	305.1
2009	/ Corn	Coon (T10293-6) (A)	6.2					0.0	0.0	0.0	134.0	62.4	40.6	134.8	61.6	0.0	0.0	117.6	265.1
2009	/ Corn	Coon (T10293-8)	6.4					0.0	0.0	0.0	106.4	52.5	34.2	105.8	52.4	0.0	0.0	118.2	269.9
2009	/ Corn	Coon (T10293-8) (A)	18.6					0.0	0.0	0.0	106.4	52.5	34.2	105.8	52.4	0.0	0.0	118.2	269.9
2009	/ Beans	Coon (T10293-9)	71.2					4.3	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	2.2	115.9	280.6
2009	/ Beans	Coon (T10293-9) (A)	18.3					0.0	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	0.0	113.4	285.5
2009	/ Corn	Coon (T10590-1)	22.1					83.1	84.1	80.1	101.6	50.7	33.0	20.5	0.0	0.0	5.4	125.6	310.5
2009	/ Corn	Coon (T10590-1) (A)	10.1					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	118.2	270.5
2009	/ Corn	Coon (T10590-24)	0					83.1	84.1	80.1	128.0	60.2	39.2	46.7	0.0	0.0	5.4	122.9	305.2
2009	/ Corn	Coon (T10590-24) (A)	3.3					0.0	0.0	0.0	128.0	60.2	39.2	127.5	59.8	0.0	0.0	117.5	265.1
2009	/ Corn	Coon (T10590-25)	36.6					83.1	84.1	80.1	118.4	56.8	37.0	36.9	0.0	0.0	5.4	124.0	307.6
2009	/ Corn	Coon (T10590-25) (A)	3.4					0.0	0.0	0.0	118.4	56.8	37.0	118.1	56.6	0.0	0.0	117.9	267.5
2009	/ Corn	Coon (T10590-26)	6.4					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	118.2	270.5
2009	/ Corn	Coon (T10590-3)	16.4					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	118.2	270.5
2009	/ Corn	Coon (T10590-3) (A)	10.6					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	118.2	270.5
2009	/ Beans	Coon (T10590-18)	2.3					4.3	0.0	0.0	201.4	45.1	68.9	0.0	0.0	0.0	2.2	113.7	274.4
2009	/ Beans	Coon (T10590-29)	1.3					4.3	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	2.2	118.2	285.8
2009	/ Beans	Coon (T10590-4)	0					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.0	286.6
2009	/ Beans	Coon (T10590-4) (A)	1.7					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	118.0	286.6
2009	/ Corn	Coon (T10590-17)	1.6					0.0	0.0	0.0	106.4	52.5	34.2	101.8	50.6	0.0	0.0	117.8	269.9
2009	/ Beans	Coon (T10590-5)	61					4.3	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	2.2	116.3	281.1
2009	/ Beans	Coon (T10590-6)	53.4					0.0	0.0	0.0	163.4	36.6	55.9	0.0	0.0	0.0	0.0	117.9	286.1
2009	/ Beans	Coon (T10590-6) (A)	6.4					0.0	0.0	0.0	163.4	36.6	55.9	0.0	0.0	0.0	0.0	117.9	286.1
2009	/ Corn	Coon (T10590-2)	2.9					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	118.2	270.5
2009	/ Corn	Coon (T10590-22)	6.3					0.0	0.0	0.0	100.4	50.3	32.8	101.8	50.6	0.0	0.0	118.5	271.3
2009	/ Corn	Coon (T10590-27)	2.3					0.0	0.0	0.0	100.4	50.3	32.8	101.8	50.6	0.0	0.0	118.5	271.3
2009	/ Corn	Coon (T10590-23)	0.7					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	118.2	270.5
2009	/ Corn	Coon (T10590-28)	0.7					0.0	0.0	0.0	106.4	52.5	34.2	101.8	50.6	0.0	0.0	117.8	269.9
2009	/ Corn	Coon (T10590-7)	65.2					83.1	84.1	80.1	118.4	56.8	37.0	36.9	0.0	0.0	5.4	124.0	307.6
2009	/ Corn	Coon (T10590-20)	66.3					83.1	84.1	80.1	146.0	66.7	43.4	64.8	0.0	0.0	5.4	121.4	302.7
2009	/ Corn	Coon (T10590-14)	6.5					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	118.2	270.5
2009	/ Corn	Coon (T10590-15)	7.1					0.0	0.0	0.0	87.2	45.6	29.7	86.9	46.0	0.0	0.0	118.7	273.5
2009	/ Corn	Coon (T10590-9)	1.4					0.0	0.0	0.0	120.8	57.6	37.5	120.9	57.5	0.0	0.0	117.7	266.6
2009	/ Corn	Coon (T10590-13)	5.5					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	118.2	270.5
2009	/ Beans	Coon (T10590-10)	23.6					0.0	0.0	0.0	178.6	40.0	61.1	0.0	0.0	0.0	0.0	117.4	284.4
2009	/ Beans	Coon (T10590-10) (A)	9					0.0	0.0	0.0	178.6	40.0	61.1	0.0	0.0	0.0	0.0	117.4	284.4

Soil Balance Calculation based on App C of the NRCS Std (633)

		CROP YEAR 2010		SOIL TEST RESULTS				AVAILABLE FROM MANURE (INCLUDES MANURE CREDITS)			NEEDED BY CROP (INCLUDES CROP CREDITS)			COMMERCIAL			SOIL BALANCE		
YEAR	CROP	FIELD #	ACRES	% OM	P	K	PH	PAN	P205	K20	PAN	P205	K20	N	P2O5	K2O	ORG N	P	K
2010	/ Corn	York (T16198-1)	124.3					103.4	102.6	97.7	168.0	60.2	39.2	67.2	0.0	0.0	7.4	73.8	410.6
2010	/ Corn	York (T16198-1) (A)	29					0.0	0.0	0.0	168.0	60.2	39.2	167.7	59.8	0.0	0.0	69.8	290.8
2010	/ Corn	York (T16198-2)	61.9					6.6	0.0	0.0	141.6	50.7	33.0	136.1	0.0	0.0	2.6	70.2	315.8
2010	/ Corn	York (T16198-2) (A)	12.7					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	0.0	0.0	69.9	297.0
2010	/ Corn	York (T16198-3)	23.8					101.3	102.6	97.7	169.2	60.6	39.5	70.5	0.0	0.0	6.6	65.9	309.3
2010	/ Corn	York (T16198-3) (A)	13.2					0.0	0.0	0.0	169.2	60.6	39.5	167.7	59.8	0.0	0.0	69.6	280.0
2010	/ Corn	York (T16198-4)	31.7					2.1	0.0	0.0	140.4	50.3	32.8	138.6	0.0	0.0	0.8	55.4	368.2
2010	/ Corn	York (T16198-4) (A)	5.7					0.0	0.0	0.0	140.4	50.3	32.8	141.2	50.6	0.0	0.0	70.1	297.2
2010	/ Corn	York (T16198-5)	29.7					101.3	102.6	97.7	141.6	50.7	33.0	44.3	0.0	0.0	6.6	70.2	315.8
2010	/ Corn	York (T16198-5) (A)	15.1					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	0.0	0.0	69.9	297.0
2010	/ Corn	York (T16198-6)	58.6					15.8	34.7	201.9	140.4	50.3	32.8	124.6	0.0	0.0	2.1	55.4	368.2
2010	/ Corn	York (T16198-6) (A)	16.4					0.0	0.0	0.0	140.4	50.3	32.8	141.2	50.6	0.0	0.0	70.1	297.2
2010	/ Corn	York (T16198-7)	31.4					15.8	34.7	201.9	140.4	50.3	32.8	124.6	0.0	0.0	2.1	55.4	368.2
2010	/ Corn	York (T16198-8)	65.7					15.8	34.7	201.9	141.6	50.7	33.0	127.1	0.0	0.0	2.1	55.2	367.9
2010	/ Corn	York (T16198-8) (A)	10.3					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	0.0	0.0	121.9	297.0
2010	/ Beans	Coon (T10293-7)	30.7					5.4	0.0	0.0	136.8	30.6	46.8	0.0	0.0	0.0	2.2	123.8	301.8
2010	/ Beans	Coon (T10293-7) (A)	10.5					0.0	0.0	0.0	136.8	30.6	46.8	0.0	0.0	0.0	0.0	115.1	261.5
2010	/ Beans	Coon (T10293-6)	32.6					5.4	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	2.2	118.3	290.5
2010	/ Beans	Coon (T10293-6) (A)	6.2					0.0	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	0.0	113.3	250.5
2010	/ Beans	Coon (T10293-8)	6.4					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	114.4	256.9
2010	/ Beans	Coon (T10293-8) (A)	18.6					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	114.4	256.9
2010	/ Corn	Coon (T10293-9)	71.2					83.1	84.1	80.1	134.0	62.4	40.6	52.5	0.0	0.0	5.4	118.3	290.5
2010	/ Corn	Coon (T10293-9) (A)	18.3					0.0	0.0	0.0	134.0	62.4	40.6	134.0	61.6	99.6	0.0	113.3	300.3
2010	/ Beans	Coon (T10590-1)	22.1					5.4	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	2.2	121.9	297.5
2010	/ Beans	Coon (T10590-1) (A)	10.1					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	114.4	257.5
2010	/ Beans	Coon (T10590-24)	0					5.4	0.0	0.0	178.6	40.0	61.1	0.0	0.0	0.0	2.2	118.4	289.9
2010	/ Beans	Coon (T10590-24) (A)	3.3					0.0	0.0	0.0	178.6	40.0	61.1	0.0	0.0	0.0	0.0	113.0	249.9
2010	/ Beans	Coon (T10590-25)	36.6					5.4	0.0	0.0	163.4	36.6	55.9	0.0	0.0	0.0	2.2	120.0	293.6
2010	/ Beans	Coon (T10590-25) (A)	3.4					0.0	0.0	0.0	163.4	36.6	55.9	0.0	0.0	0.0	0.0	113.8	253.6
2010	/ Beans	Coon (T10590-26)	6.4					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	114.4	257.5
2010	/ Beans	Coon (T10590-3)	16.4					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	114.4	257.5
2010	/ Beans	Coon (T10590-3) (A)	10.6					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	114.4	257.5
2010	/ Corn	Coon (T10590-18)	2.3					83.1	84.1	80.1	150.8	68.4	44.5	69.7	0.0	0.0	5.4	115.5	283.3
2010	/ Corn	Coon (T10590-29)	1.3					83.1	84.1	80.1	101.6	50.7	33.0	19.7	0.0	0.0	5.4	121.9	297.5
2010	/ Corn	Coon (T10590-4)	0					0.0	0.0	0.0	101.6	50.7	33.0	101.3	82.8	83.4	0.0	121.6	299.2
2010	/ Corn	Coon (T10590-4) (A)	1.7					0.0	0.0	0.0	101.6	50.7	33.0	101.3	82.8	83.4	0.0	121.6	299.2
2010	/ Beans	Coon (T10590-17)	1.6					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	114.0	256.9
2010	/ Corn	Coon (T10590-5)	61					83.1	84.1	80.1	125.6	59.3	38.6	44.3	0.0	0.0	5.4	119.0	291.5
2010	/ Corn	Coon (T10590-6)	53.4					0.0	0.0	0.0	118.4	56.8	37.0	118.4	92.9	93.0	0.0	121.9	300.1
2010	/ Corn	Coon (T10590-6) (A)	6.4					0.0	0.0	0.0	118.4	56.8	37.0	118.4	92.9	93.0	0.0	121.9	300.1
2010	/ Beans	Coon (T10590-2)	2.9					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	114.4	257.5
2010	/ Beans	Coon (T10590-22)	6.3					0.0	0.0	0.0	144.4	32.3	49.4	0.0	0.0	0.0	0.0	114.9	258.9
2010	/ Beans	Coon (T10590-27)	2.3					0.0	0.0	0.0	144.4	32.3	49.4	0.0	0.0	0.0	0.0	114.9	258.9
2010	/ Beans	Coon (T10590-23)	0.7					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	114.4	257.5
2010	/ Beans	Coon (T10590-28)	0.7					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	114.0	256.9
2010	/ Beans	Coon (T10590-7)	65.2					5.4	0.0	0.0	163.4	36.6	55.9	0.0	0.0	0.0	2.2	120.0	293.6
2010	/ Beans	Coon (T10590-20)	66.3					5.4	0.0	0.0	182.4	40.8	62.4	0.0	0.0	0.0	2.2	116.8	287.1
2010	/ Beans	Coon (T10590-14)	6.5					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	114.4	257.5
2010	/ Beans	Coon (T10590-15)	7.1					0.0	0.0	0.0	136.8	30.6	46.8	0.0	0.0	0.0	0.0	115.3	261.8
2010	/ Beans	Coon (T10590-9)	1.4					0.0	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	0.0	113.5	252.0
2010	/ Beans	Coon (T10590-13)	5.5					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	114.4	257.5
2010	/ Corn	Coon (T10590-10)	23.6					0.0	0.0	0.0	128.0	60.2	39.2	127.3	98.9	99.0	0.0	121.7	299.4
2010	/ Corn	Coon (T10590-10) (A)	9					0.0	0.0	0.0	128.0	60.2	39.2	127.3	98.9	99.0	0.0	121.7	299.4

Soil Balance Calculation based on App C of the NRCS Std (633)

		CROP YEAR 2011						AVAILABLE FROM MANURE (INCLUDES MANURE CREDITS)			NEEDED BY CROP (INCLUDES CROP CREDITS)			COMMERCIAL			SOIL BALANCE		
				SOIL TEST RESULTS															
YEAR	CROP	FIELD #	ACRES	% OM	P	K	PH	PAN	P205	K20	PAN	P205	K20	N	P2O5	K2O	ORG N	P	K
2011	/ Corn	York (T16198-1)	124.3					22.4	34.7	201.9	168.0	60.2	39.2	152.5	0.0	0.0	4.7	70.9	451.2
2011	/ Corn	York (T16198-1) (A)	29					0.0	0.0	0.0	168.0	60.2	39.2	167.7	59.8	0.0	0.0	69.8	281.0
2011	/ Corn	York (T16198-2)	61.9					101.3	102.6	97.7	141.6	50.7	33.0	41.8	0.0	0.0	6.6	76.0	331.9
2011	/ Corn	York (T16198-2) (A)	12.7					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	0.0	0.0	69.9	288.7
2011	/ Corn	York (T16198-3)	23.8					6.6	0.0	0.0	169.2	60.6	39.5	168.9	0.0	0.0	2.6	59.1	299.5
2011	/ Corn	York (T16198-3) (A)	13.2					0.0	0.0	0.0	169.2	60.6	39.5	167.7	59.8	0.0	0.0	69.5	270.2
2011	/ Corn	York (T16198-4)	31.7					15.8	34.7	201.9	140.4	50.3	32.8	124.6	0.0	0.0	2.1	53.6	410.5
2011	/ Corn	York (T16198-4) (A)	5.7					0.0	0.0	0.0	140.4	50.3	32.8	141.2	50.6	0.0	0.0	70.2	289.1
2011	/ Corn	York (T16198-5)	29.7					6.6	0.0	0.0	141.6	50.7	33.0	139.4	0.0	0.0	2.6	64.6	307.5
2011	/ Corn	York (T16198-5) (A)	15.1					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	0.0	0.0	69.9	288.7
2011	/ Corn	York (T16198-6)	58.6					2.1	0.0	0.0	140.4	50.3	32.8	139.4	0.0	0.0	0.8	49.8	360.0
2011	/ Corn	York (T16198-6) (A)	16.4					0.0	0.0	0.0	140.4	50.3	32.8	141.2	50.6	0.0	0.0	70.2	289.1
2011	/ Corn	York (T16198-7)	31.4					2.1	0.0	0.0	140.4	50.3	32.8	139.4	0.0	0.0	0.8	49.8	360.0
2011	/ Corn	York (T16198-8)	65.7					2.1	0.0	0.0	141.6	50.7	33.0	139.4	0.0	0.0	0.8	49.5	359.6
2011	/ Corn	York (T16198-8) (A)	10.3					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	0.0	0.0	121.9	288.7
2011	/ Corn	Coon (T10293-7)	30.7					83.1	84.1	80.1	87.2	45.6	29.7	0.0	0.0	0.0	5.4	128.1	314.4
2011	/ Corn	Coon (T10293-7) (A)	10.5					0.0	0.0	0.0	89.6	46.4	30.2	89.3	46.0	0.0	0.0	115.1	253.9
2011	/ Corn	Coon (T10293-6)	32.6					83.1	84.1	80.1	134.0	62.4	40.6	52.5	0.0	0.0	5.4	120.8	300.4
2011	/ Corn	Coon (T10293-6) (A)	6.2					0.0	0.0	0.0	134.0	62.4	40.6	134.8	61.6	0.0	0.0	113.3	240.3
2011	/ Corn	Coon (T10293-8)	6.4					0.0	0.0	0.0	106.4	52.5	34.2	105.8	52.4	0.0	0.0	114.4	248.4
2011	/ Corn	Coon (T10293-8) (A)	18.6					0.0	0.0	0.0	106.4	52.5	34.2	105.8	52.4	0.0	0.0	114.4	248.4
2011	/ Beans	Coon (T10293-9)	71.2					5.4	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	2.2	114.1	275.9
2011	/ Beans	Coon (T10293-9) (A)	18.3					0.0	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	0.0	109.1	285.6
2011	/ Corn	Coon (T10590-1)	22.1					83.1	84.1	80.1	101.6	50.7	33.0	20.5	0.0	0.0	5.4	125.6	309.3
2011	/ Corn	Coon (T10590-1) (A)	10.1					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	114.4	249.2
2011	/ Corn	Coon (T10590-24)	0					83.1	84.1	80.1	128.0	60.2	39.2	46.7	0.0	0.0	5.4	121.1	300.1
2011	/ Corn	Coon (T10590-24) (A)	3.3					0.0	0.0	0.0	128.0	60.2	39.2	127.5	59.8	0.0	0.0	113.0	240.1
2011	/ Corn	Coon (T10590-25)	36.6					83.1	84.1	80.1	118.4	56.8	37.0	36.9	0.0	0.0	5.4	123.0	304.4
2011	/ Corn	Coon (T10590-25) (A)	3.4					0.0	0.0	0.0	118.4	56.8	37.0	118.1	56.6	0.0	0.0	113.8	244.3
2011	/ Corn	Coon (T10590-26)	6.4					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	114.4	249.2
2011	/ Corn	Coon (T10590-3)	16.4					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	114.4	249.2
2011	/ Corn	Coon (T10590-3) (A)	10.6					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	114.4	249.2
2011	/ Beans	Coon (T10590-18)	2.3					5.4	0.0	0.0	201.4	45.1	68.9	0.0	0.0	0.0	2.2	110.5	266.1
2011	/ Beans	Coon (T10590-29)	1.3					5.4	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	2.2	118.1	284.5
2011	/ Beans	Coon (T10590-4)	0					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	117.8	286.2
2011	/ Beans	Coon (T10590-4) (A)	1.7					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	117.8	286.2
2011	/ Corn	Coon (T10590-17)	1.6					0.0	0.0	0.0	106.4	52.5	34.2	101.8	50.6	0.0	0.0	113.8	248.4
2011	/ Beans	Coon (T10590-5)	61					5.4	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	2.2	114.8	276.8
2011	/ Beans	Coon (T10590-6)	53.4					0.0	0.0	0.0	163.4	36.6	55.9	0.0	0.0	0.0	0.0	117.9	286.1
2011	/ Beans	Coon (T10590-6) (A)	6.4					0.0	0.0	0.0	163.4	36.6	55.9	0.0	0.0	0.0	0.0	117.9	286.1
2011	/ Corn	Coon (T10590-2)	2.9					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	114.4	249.2
2011	/ Corn	Coon (T10590-22)	6.3					0.0	0.0	0.0	100.4	50.3	32.8	101.8	50.6	0.0	0.0	114.9	250.7
2011	/ Corn	Coon (T10590-27)	2.3					0.0	0.0	0.0	100.4	50.3	32.8	101.8	50.6	0.0	0.0	114.9	250.7
2011	/ Corn	Coon (T10590-23)	0.7					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	114.4	249.2
2011	/ Corn	Coon (T10590-28)	0.7					0.0	0.0	0.0	106.4	52.5	34.2	101.8	50.6	0.0	0.0	113.8	248.4
2011	/ Corn	Coon (T10590-7)	65.2					83.1	84.1	80.1	118.4	56.8	37.0	36.9	0.0	0.0	5.4	123.0	304.4
2011	/ Corn	Coon (T10590-20)	66.3					83.1	84.1	80.1	146.0	66.7	43.4	64.8	0.0	0.0	5.4	118.8	296.3
2011	/ Corn	Coon (T10590-14)	6.5					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	114.4	249.2
2011	/ Corn	Coon (T10590-15)	7.1					0.0	0.0	0.0	87.2	45.6	29.7	86.9	46.0	0.0	0.0	115.3	254.3
2011	/ Corn	Coon (T10590-9)	1.4					0.0	0.0	0.0	120.8	57.6	37.5	120.9	57.5	0.0	0.0	113.5	242.6
2011	/ Corn	Coon (T10590-13)	5.5					0.0	0.0	0.0	101.6	50.7	33.0	101.8	50.6	0.0	0.0	114.4	249.2
2011	/ Beans	Coon (T10590-10)	23.6					0.0	0.0	0.0	178.6	40.0	61.1	0.0	0.0	0.0	0.0	117.3	284.1
2011	/ Beans	Coon (T10590-10) (A)	9					0.0	0.0	0.0	178.6	40.0	61.1	0.0	0.0	0.0	0.0	117.3	284.1

Soil Balance Calculation based on App C of the NRCS Std (633)

		CROP YEAR 2012		SOIL TEST RESULTS				AVAILABLE FROM MANURE (INCLUDES MANURE CREDITS)			NEEDED BY CROP (INCLUDES CROP CREDITS)			COMMERCIAL			SOIL BALANCE		
YEAR	CROP	FIELD #	ACRES	% OM	P	K	PH	PAN	P205	K20	PAN	P205	K20	N	P2O5	K2O	ORG N	P	K
2012	/ Corn	York (T16198-1)	124.3					103.4	102.6	97.7	168.0	60.2	39.2	67.2	0.0	0.0	7.4	75.6	465.9
2012	/ Corn	York (T16198-1) (A)	29					0.0	0.0	0.0	168.0	60.2	39.2	167.7	59.8	120.0	0.0	69.7	301.2
2012	/ Corn	York (T16198-2)	61.9					6.6	0.0	0.0	141.6	50.7	33.0	136.1	0.0	0.0	2.6	70.4	323.7
2012	/ Corn	York (T16198-2) (A)	12.7					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	120.0	0.0	69.9	310.4
2012	/ Corn	York (T16198-3)	23.8					101.3	102.6	97.7	169.2	60.6	39.5	70.5	0.0	0.0	6.6	63.8	314.0
2012	/ Corn	York (T16198-3) (A)	13.2					0.0	0.0	0.0	169.2	60.6	39.5	167.7	59.8	120.0	0.0	69.4	290.3
2012	/ Corn	York (T16198-4)	31.7					2.1	0.0	0.0	140.4	50.3	32.8	138.6	0.0	0.0	0.8	48.0	402.3
2012	/ Corn	York (T16198-4) (A)	5.7					0.0	0.0	0.0	140.4	50.3	32.8	141.2	50.6	120.0	0.0	70.2	310.9
2012	/ Corn	York (T16198-5)	29.7					101.3	102.6	97.7	141.6	50.7	33.0	44.3	0.0	0.0	6.6	70.4	323.7
2012	/ Corn	York (T16198-5) (A)	15.1					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	120.0	0.0	69.9	310.4
2012	/ Corn	York (T16198-6)	58.6					15.8	34.7	201.9	140.4	50.3	32.8	124.6	0.0	0.0	2.1	48.0	402.3
2012	/ Corn	York (T16198-6) (A)	16.4					0.0	0.0	0.0	140.4	50.3	32.8	141.2	50.6	120.0	0.0	70.2	310.9
2012	/ Corn	York (T16198-7)	31.4					15.8	34.7	201.9	140.4	50.3	32.8	124.6	0.0	0.0	2.1	48.0	402.3
2012	/ Corn	York (T16198-8)	65.7					15.8	34.7	201.9	141.6	50.7	33.0	127.1	0.0	0.0	2.1	47.8	401.9
2012	/ Corn	York (T16198-8) (A)	10.3					0.0	0.0	0.0	141.6	50.7	33.0	141.2	50.6	120.0	0.0	121.9	310.4
2012	/ Beans	Coon (T10293-7)	30.7					5.4	0.0	0.0	136.8	30.6	46.8	0.0	0.0	0.0	2.2	124.7	302.7
2012	/ Beans	Coon (T10293-7) (A)	10.5					0.0	0.0	0.0	136.8	30.6	46.8	0.0	0.0	0.0	0.0	111.7	242.2
2012	/ Beans	Coon (T10293-6)	32.6					5.4	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	2.2	116.5	285.7
2012	/ Beans	Coon (T10293-6) (A)	6.2					0.0	0.0	0.0	171.0	38.3	58.5	0.0	0.0	0.0	0.0	109.0	225.7
2012	/ Beans	Coon (T10293-8)	6.4					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	110.7	235.4
2012	/ Beans	Coon (T10293-8) (A)	18.6					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	110.7	235.4
2012	/ Corn	Coon (T10293-9)	71.2					83.1	84.1	80.1	134.0	62.4	40.6	52.5	0.0	0.0	5.4	116.5	285.7
2012	/ Corn	Coon (T10293-9) (A)	18.3					0.0	0.0	0.0	134.0	62.4	40.6	134.0	61.6	99.6	0.0	109.0	300.4
2012	/ Beans	Coon (T10590-1)	22.1					5.4	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	2.2	121.8	296.3
2012	/ Beans	Coon (T10590-1) (A)	10.1					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	110.6	236.2
2012	/ Beans	Coon (T10590-24)	0					5.4	0.0	0.0	178.6	40.0	61.1	0.0	0.0	0.0	2.2	116.7	284.8
2012	/ Beans	Coon (T10590-24) (A)	3.3					0.0	0.0	0.0	178.6	40.0	61.1	0.0	0.0	0.0	0.0	108.6	224.8
2012	/ Beans	Coon (T10590-25)	36.6					5.4	0.0	0.0	163.4	36.6	55.9	0.0	0.0	0.0	2.2	118.9	290.4
2012	/ Beans	Coon (T10590-25) (A)	3.4					0.0	0.0	0.0	163.4	36.6	55.9	0.0	0.0	0.0	0.0	109.8	230.4
2012	/ Beans	Coon (T10590-26)	6.4					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	110.6	236.2
2012	/ Beans	Coon (T10590-3)	16.4					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	110.6	236.2
2012	/ Beans	Coon (T10590-3) (A)	10.6					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	110.6	236.2
2012	/ Corn	Coon (T10590-18)	2.3					83.1	84.1	80.1	150.8	68.4	44.5	69.7	0.0	0.0	5.4	112.2	275.0
2012	/ Corn	Coon (T10590-29)	1.3					83.1	84.1	80.1	101.6	50.7	33.0	19.7	0.0	0.0	5.4	121.8	296.3
2012	/ Corn	Coon (T10590-4)	0					0.0	0.0	0.0	101.6	50.7	33.0	101.3	82.8	83.4	0.0	121.4	298.8
2012	/ Corn	Coon (T10590-4) (A)	1.7					0.0	0.0	0.0	101.6	50.7	33.0	101.3	82.8	83.4	0.0	121.4	298.8
2012	/ Beans	Coon (T10590-17)	1.6					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	110.0	235.4
2012	/ Corn	Coon (T10590-5)	61					83.1	84.1	80.1	125.6	59.3	38.6	44.3	0.0	0.0	5.4	117.5	287.2
2012	/ Corn	Coon (T10590-6)	53.4					0.0	0.0	0.0	118.4	56.8	37.0	118.4	92.9	93.0	0.0	121.9	300.1
2012	/ Corn	Coon (T10590-6) (A)	6.4					0.0	0.0	0.0	118.4	56.8	37.0	118.4	92.9	93.0	0.0	121.9	300.1
2012	/ Beans	Coon (T10590-2)	2.9					0.0	0.0	0.0	152.0	34.0	52.0	0.0	0.0	0.0	0.0	110.6	236.2
2012	/ Beans	Coon (T10590-22)	6.3					0	0	0	144.4	32.3	49.4	0.0	0.0	0.0	0.0	111.3	238.4
2012	/ Beans	Coon (T10590-27)	2.3					0	0	0	144.4	32.3	49.4	0.0	0.0	0.0	0.0	111.3	238.4
2012	/ Beans	Coon (T10590-23)	0.7					0	0	0	152	34	52	0.0	0.0	0.0	0.0	110.6	236.2
2012	/ Beans	Coon (T10590-28)	0.7					0	0	0	152	34	52	0.0	0.0	0.0	0.0	110.0	235.4
2012	/ Beans	Coon (T10590-7)	65.2					5.38125	0	0	163.4	36.55	55.9	0.0	0.0	0.0	2.2	118.9	290.4
2012	/ Beans	Coon (T10590-20)	66.3					5.38125	0	0	182.4	40.8	62.4	0.0	0.0	0.0	2.2	114.2	280.7
2012	/ Beans	Coon (T10590-14)	6.5					0	0	0	152	34	52	0.0	0.0	0.0	0.0	110.6	236.2
2012	/ Beans	Coon (T10590-15)	7.1					0	0	0	136.8	30.6	46.8	0.0	0.0	0.0	0.0	111.9	242.6
2012	/ Beans	Coon (T10590-9)	1.4					0	0	0	171	38.25	58.5	0.0	0.0	0.0	0.0	109.2	228.0
2012	/ Beans	Coon (T10590-13)	5.5					0	0	0	152	34	52	0.0	0.0	0.0	0.0	110.6	236.2
2012	/ Corn	Coon (T10590-10)	23.6					0	0	0	128	60.2	39.2	127.3	98.9	99.0	0.0	121.6	299.0
2012	/ Corn	Coon (T10590-10) (A)	9					0	0	0	128	60.2	39.2	127.3	98.9	99.0	0.0	121.6	299.0

Soil Balance Calculation based on App C of the NRCS Std (633)

Projected Soil P And K Levels
Number of Years at Planned Nutrient Management to Reach 300 lb/acre (150 ppm) Bray P1

For Existing Facilities:

Fields are gradually building in soil P levels, but are not near exceeding 300 #/acre

Rotation Start Year 2007 ***Rotation End Year*** 2012 ***Years in Rotation*** 6

Note: After soils reach 150 ppm (300 lbs/acre), nutrient management plan will need to be revised.

Field	P_1 At Start lb/Acre	K At Start lb/Acre	P Balance @ End of Rotation	Average P1 soil change for Rotation	K Balance @ End of Rotation	Average K soil change for Rotation	Years To Reach 300 lbs/Ac P1	Average Annual change in P1
York (T16198-1)	70.0	300.0	75.6	5.6	465.9	165.9	INF	0.9
York (T16198-1) (A)	70.0	300.0	69.7	-0.3	301.2	1.2	#	0.0
York (T16198-2)	70.0	300.0	70.4	0.4	323.7	23.7	INF	0.1
York (T16198-2) (A)	70.0	300.0	69.9	-0.1	310.4	10.4	#	0.0
York (T16198-3)	70.0	300.0	63.8	-6.2	314.0	14.0	#	-1.0
York (T16198-3) (A)	70.0	300.0	69.4	-0.6	290.3	-9.7	#	-0.1
York (T16198-4)	70.0	300.0	48.0	-22.0	402.3	102.3	#	-3.7
York (T16198-4) (A)	70.0	300.0	70.2	0.2	310.9	10.9	INF	0.0
York (T16198-5)	70.0	300.0	70.4	0.4	323.7	23.7	INF	0.1
York (T16198-5) (A)	70.0	300.0	69.9	-0.1	310.4	10.4	#	0.0
York (T16198-6)	70.0	300.0	48.0	-22.0	402.3	102.3	#	-3.7
York (T16198-6) (A)	70.0	300.0	70.2	0.2	310.9	10.9	INF	0.0
York (T16198-7)	70.0	300.0	48.0	-22.0	402.3	102.3	#	-3.7
York (T16198-8)	70.0	300.0	47.8	-22.2	401.9	101.9	#	-3.7
York (T16198-8) (A)	122.0	300.0	121.9	-0.1	310.4	10.4	#	0.0
Coon (T10293-7)	122.0	300.0	124.7	2.7	302.7	2.7	INF	0.4
Coon (T10293-7) (A)	122.0	300.0	111.7	-10.3	242.2	-57.8	#	-1.7
Coon (T10293-6)	122.0	300.0	116.5	-5.5	285.7	-14.3	#	-0.9
Coon (T10293-6) (A)	122.0	300.0	109.0	-13.0	225.7	-74.3	#	-2.2
Coon (T10293-8)	122.0	300.0	110.7	-11.3	235.4	-64.6	#	-1.9
Coon (T10293-8) (A)	122.0	300.0	110.7	-11.3	235.4	-64.6	#	-1.9
Coon (T10293-9)	122.0	300.0	116.5	-5.5	285.7	-14.3	#	-0.9
Coon (T10293-9) (A)	122.0	300.0	109.0	-13.0	300.4	0.4	#	-2.2
Coon (T10590-1)	122.0	300.0	121.8	-0.2	296.3	-3.7	#	0.0
Coon (T10590-1) (A)	122.0	300.0	110.6	-11.4	236.2	-63.8	#	-1.9
Coon (T10590-24)	122.0	300.0	116.7	-5.3	284.8	-15.2	#	-0.9
Coon (T10590-24) (A)	122.0	300.0	108.6	-13.5	224.8	-75.2	#	-2.2
Coon (T10590-25)	122.0	300.0	118.9	-3.1	290.4	-9.6	#	-0.5
Coon (T10590-25) (A)	122.0	300.0	109.8	-12.2	230.4	-69.6	#	-2.0
Coon (T10590-26)	122.0	300.0	110.6	-11.4	236.2	-63.8	#	-1.9
Coon (T10590-3)	122.0	300.0	110.6	-11.4	236.2	-63.8	#	-1.9
Coon (T10590-3) (A)	122.0	300.0	110.6	-11.4	236.2	-63.8	#	-1.9
Coon (T10590-18)	122.0	300.0	112.2	-9.8	275.0	-25.0	#	-1.6
Coon (T10590-29)	122.0	300.0	121.8	-0.2	296.3	-3.7	#	0.0
Coon (T10590-4)	122.0	300.0	121.4	-0.6	298.8	-1.2	#	-0.1
Coon (T10590-4) (A)	122.0	300.0	121.4	-0.6	298.8	-1.2	#	-0.1
Coon (T10590-17)	122.0	300.0	110.0	-12.0	235.4	-64.6	#	-2.0
Coon (T10590-5)	122.0	300.0	117.5	-4.5	287.2	-12.8	#	-0.7
Coon (T10590-6)	122.0	300.0	121.9	-0.1	300.1	0.1	#	0.0
Coon (T10590-6) (A)	122.0	300.0	121.9	-0.1	300.1	0.1	#	0.0
Coon (T10590-2)	122.0	300.0	110.6	-11.4	236.2	-63.8	#	-1.9
Coon (T10590-22)	122.0	300.0	111.3	-10.7	238.4	-61.6	#	-1.8
Coon (T10590-27)	122.0	300.0	111.3	-10.7	238.4	-61.6	#	-1.8
Coon (T10590-23)	122.0	300.0	110.6	-11.4	236.2	-63.8	#	-1.9
Coon (T10590-28)	122.0	300.0	110.0	-12.0	235.4	-64.6	#	-2.0
Coon (T10590-7)	122.0	300.0	118.9	-3.1	290.4	-9.6	#	-0.5
Coon (T10590-20)	122.0	300.0	114.2	-7.8	280.7	-19.3	#	-1.3
Coon (T10590-14)	122.0	300.0	110.6	-11.4	236.2	-63.8	#	-1.9
Coon (T10590-15)	122.0	300.0	111.9	-10.1	242.6	-57.4	#	-1.7
Coon (T10590-9)	122.0	300.0	109.2	-12.8	228.0	-72.0	#	-2.1
Coon (T10590-13)	122.0	300.0	110.6	-11.4	236.2	-63.8	#	-1.9
Coon (T10590-10)	122.0	300.0	110.9	-11.1	274.9	-25.1	#	15.6
Coon (T10590-10) (A)	122.0	300.0	110.9	-11.1	274.9	-25.1	#	-5.6

Calculation based on App C of the NRCS Std (633)
: Field with negative P1 trend that will need maintenance levels of P fertilizers to maintain soil P levels.
INF : Field with Postive P1 trend that will take more than 300 yrs to exceed 150 ppm.

	COMMERCIAL FERTILIZERS					
	FERTILIZER SOURCE	ABBR	% N	% P2O5	% K2O	PHYSICAL STATE
1	ANHYDOUS AMMONIA	AA	82%	0%	0%	GAS
2	AMMONIUM NITRATE	AN	34%	0%	0%	SOLID (PELLETS)
3	UREA-AMMONIUM NITRATE	UAN	28%	0%	0%	LIQUID (GALLONS)
4	MONOAMMONIUM PHOSOHATE	MAP	11%	48%	0%	SOLID
5	DIAMMONIUM PHOSPHATE	DAP	18%	46%	0%	SOLID (GRANULES)
6	AMMONIUM PHOSPHATE-SULFATE	APS	13%	20%	0%	SOLID
7	AMMONIUM SULFATE	AS	21%	0%	0%	SOLID (GRANULES)
8	POTASSIUM CHLORIDE	PC	0%	0%	60%	SOLID
9	POTASSIUM SULFATE	PS	0%	0%	52%	SOLID
10	UREA	UREA	46%	0%	0%	SOLID (PELLETS)
11	TRIPLE SUPER-PHOSPHATE	TSP	0%	44%	0%	SOLID
12						
13						
14						
15						
16						
17						
18						

NUTRIENT UPTAKE LEVELS			
	N	P	K
Corn	1.20	0.43	0.28
Corn Silage	7.50	3.10	9.40
Beans	3.80	0.85	1.30
Oats Grain	0.75	0.34	0.20
Oats Straw	12.00	5.00	33.00
Wheat Grain	1.30	0.60	0.30
Wheat Straw	13.00	4.00	25.00
Alfalfa	45.00	12.00	20.00
Clover	45.00	15.00	60.00
Pasture HH	40.00	12.00	50.00
Pasture HM	40.00	12.00	50.00
Pasture HL	40.00	12.00	50.00
Pasture MH	40.00	12.00	50.00
Pasture MM	40.00	12.00	50.00
Pasture ML	40.00	12.00	50.00
Pasture LH	40.00	12.00	50.00
Pasture LM	40.00	12.00	50.00
Pasture LL	40.00	12.00	50.00

Yield Summary
for
Year 2002-2005

Farm, Crop, Field, Variety	Year	Area (acres)	Moisture (%)	Wet Weight (lb)	Dry Volume (bu)	Average Yield (bpa)
Kllein Farms						
Corn						
Klein 28						
PI 31N27	2005	29.75	13.59	188,922.47	3,434.95	115.44
Sample Variety 1	2004	29.33	13.73	272,802.03	4,871.46	166.09
Klein 28 (Subtotal)	2004	29.33	13.73	272,802.03	4,871.46	166.09
Klein 28 (Subtotal)	2005	29.75	13.59	188,922.47	3,373.62	113.40
Klein 48						
PI 31N27	2005	47.95	13.80	472,976.08	8,599.57	179.33
Klein 48 (Subtotal)	2005	47.95	13.80	472,976.08	8,599.57	179.33
Klein far N. feild						
PI 31N27	2005	31.54	13.90	298,763.64	5,432.07	172.20
Klein far N. feild (Subtotal)	2005	31.54	13.90	298,763.64	5,432.07	172.20
Klein N.E. feild						
Sample Variety 1	2004	64.40	13.53	531,922.14	9,498.61	147.51
Klein N.E. feild (Subtotal)	2004	64.40	13.53	531,922.14	9,498.61	147.51
Klein N.W. feild						
Sample Variety 1	2004	100.54	13.66	936,923.01	16,730.77	166.41
Klein N.W. feild (Subtotal)	2004	100.54	13.66	936,923.01	16,730.77	166.41
Klein S.E. Feild						
PI 31N27	2005	76.01	13.42	633,675.61	11,521.37	151.57
Klein S.E. Feild (Subtotal)	2005	76.01	13.42	633,675.61	11,521.37	151.57
Klein S.W. feild						
PI 31N27	2005	76.94	13.94	823,449.09	14,971.80	194.58
Klein S.W. feild (Subtotal)	2005	76.94	13.94	823,449.09	14,971.80	194.58
Corn (Subtotal)		456.46	13.76	4,159,434.05	75,626.07	165.66
Soybeans						
Klein 48						
PI93B68	2004	51.71	8.93	142,905.40	2,381.76	46.05
Klein 48 (Subtotal)	2004	51.71	8.93	142,905.40	2,381.76	46.05
Klein far N. feild						
PI93B68	2004	33.42	9.71	93,179.68	1,552.99	46.46
Klein far N. feild (Subtotal)	2004	33.42	9.71	93,179.68	1,552.99	46.46
Klein N.E. feild						
1	2005	69.95	13.75	121,754.36	2,045.95	29.25
Klein N.E. feild (Subtotal)	2005	69.95	13.75	121,754.36	2,045.95	29.25
Klein N.W. feild						
1	2005	103.51	14.24	252,603.08	4,220.22	40.77
PI93B68	2004	1.49	8.74	3,797.90	63.30	42.39
Klein N.W. feild (Subtotal)	2004	1.49	8.74	3,797.90	63.30	42.39
Klein N.W. feild (Subtotal)	2005	103.51	14.24	252,603.08	4,149.88	40.08
Klein S.E. Feild						
PI93B68	2004	79.22	9.75	218,599.13	3,643.32	45.98
Klein S.E. Feild (Subtotal)	2004	79.22	9.75	218,599.13	3,643.32	45.98
Klein S.W. feild						
PI93B68	2004	80.20	10.38	220,723.24	3,678.72	45.86
Klein S.W. feild (Subtotal)	2004	80.20	10.38	220,723.24	3,678.72	45.86
Soybeans (Subtotal)		419.51	11.37	1,053,562.80	17,481.82	41.67

Yield Summary
for
Year 2002-2005

Farm, Crop, Field, Variety	Year	Area (acres)	Moisture (%)	Wet Weight (lb)	Dry Volume (bu)	Average Yield (bpa)
All Farms						
Corn						
PI 31N27	2005	262.19	13.73	2,417,786.87	43,959.76	167.65
Sample Variety 1	2004	194.27	13.63	1,741,647.18	31,100.84	160.10
Corn (Total)		456.46	13.76	4,159,434.05	75,626.07	165.66
Soybeans						
1	2005	173.46	14.05	374,357.44	6,266.17	36.13
PI93B68	2004	246.04	9.77	679,205.36	11,320.09	46.00
Soybeans (Total)		419.51	11.37	1,053,562.80	17,481.82	41.67

***Adjusted Area Value**

Yield Summary
for
Year 2000, 2005

Farm, Crop, Field, Variety	Year	Area (acres)	Moisture (%)	Wet Weight (lb)	Dry Volume (bu)	Average Yield (bpa)
Kllein Farms						
Corn						
Klein 28						
PI 31N27	2005	29.75	13.59	188,922.47	3,434.95	115.44
Klein 28 (Subtotal)	2005	29.75	13.59	188,922.47	3,434.95	115.44
Klein 48						
PI 31N27	2005	47.95	13.80	472,976.08	8,599.57	179.33
Klein 48 (Subtotal)	2005	47.95	13.80	472,976.08	8,599.57	179.33
Klein far N. feild						
PI 31N27	2005	31.54	13.90	298,763.64	5,432.07	172.20
Klein far N. feild (Subtotal)	2005	31.54	13.90	298,763.64	5,432.07	172.20
Klein S.E. Feild						
PI 31N27	2005	76.01	13.42	633,675.61	11,521.37	151.57
Klein S.E. Feild (Subtotal)	2005	76.01	13.42	633,675.61	11,521.37	151.57
Klein S.W. feild						
PI 31N27	2005	76.94	13.94	823,449.09	14,971.80	194.58
Klein S.W. feild (Subtotal)	2005	76.94	13.94	823,449.09	14,971.80	194.58
Corn (Subtotal)		262.19	13.75	2,417,786.87	43,959.76	167.65
Soybeans						
Klein N.E. feild						
1	2005	69.95	13.75	121,754.36	2,045.95	29.25
Klein N.E. feild (Subtotal)	2005	69.95	13.75	121,754.36	2,045.95	29.25
Klein N.W. feild						
1	2005	103.51	14.24	252,603.08	4,220.22	40.77
Klein N.W. feild (Subtotal)	2005	103.51	14.24	252,603.08	4,220.22	40.77
Soybeans (Subtotal)		173.46	14.05	374,357.44	6,266.17	36.13
All Farms						
Corn						
PI 31N27	2005	262.19	13.73	2,417,786.87	43,959.76	167.65
Corn (Total)		262.19	13.75	2,417,786.87	43,959.76	167.65
Soybeans						
1	2005	173.46	14.05	374,357.44	6,266.17	36.13
Soybeans (Total)		173.46	14.05	374,357.44	6,266.17	36.13

***Adjusted Area Value**

SECTION 8

Amendments/Changes/RECORDS

As records are collected each year. They should be placed in this section. All records are considered potential changes to this plan. Changes to this plan will require it to be updated. Call Maurer-Stutz, Inc. at (309)693-7615

CONSTRUCTION PLANS FOR

WIN PRODUCTION PIPELINE

SCOTT COUNTY, ILLINOIS

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
	COVER SHEET
C1	WASTE TRANSFER PIPELINE PLANVIEW
C2	WASTE TRANSFER PIPELINE TOPO
C3	WASTE TRANSFER PIPELINE PROFILE
C4	PIPELINE GENERAL NOTES & DETAILS
C5	FORCEMAIN DETAILS & THRUST BLOCKS
C6	FORCEMAIN RISER AND AIR VALVE DETAILS
C7	BORE/JACKING PLANVIEW AND CROSS SECTION

SCOTT COUNTY

PROJECT SITE

PROJECT LOCATION

Call Before You Dig

JULIE ILLINOIS ONE-CALL SYSTEM

800.892.0123

SW $\frac{1}{4}$ OF SW $\frac{1}{4}$ SEC 3
T. 14 N., R. 13 W., 3rd P.M.
SCOTT COUNTY, ILLINOIS

SW $\frac{1}{4}$ OF SW $\frac{1}{4}$ SEC 34
T. 14 N., R. 13 W., 3rd P.M.
SCOTT COUNTY, ILLINOIS

N

Draft

"TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, JUDGMENT, AND BELIEF, THE DESIGN, CONSTRUCTION DRAWINGS AND SPECIFICATIONS MEET APPLICABLE NRCS STANDARDS."

Jas[illegible] PE
No. 06[illegible]
EXP. DATE 11/30/2013

PLANS PREPARED BY:

MAURER-STUTZ
ENGINEERS SURVEYORS

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1670 EAST ASH STREET | CANTON, ILLINOIS 61520
PH. (309) 647-7831 | FAX (309) 647-6155

ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-005754

"WORKING with YOU by DESIGN"

MSI PROJECT NO. 23805038.02

S:\238\2005 project numbers\23805038.02 (Win Production - Waste Transfer System)\Drawings\Details\C0 COVER_CIVIL.dwg 6/11/2012

N

0 300' 600'

THE CONTRACTOR/BUILDER SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE DESIGNER IMMEDIATELY.

SCALE VALID ONLY ON 22"x34" SIZE PLANS

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ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-000754
"WORKING with YOU by DESIGN"

Sheet Title: **WASTE TRANSFER PIPELINE PLAN VIEW**

Project: SWINE FACILITY WASTE TRANSFER PIPELINE

Client: **WIN PRODUCTION, LLC**

Designed By: JEO
Drawn By: JEO/NDP
Reviewed By: TLF
Date: FEBRUARY 20, 2012
Project No.: 23805038.02
Drawing: C1
OF X

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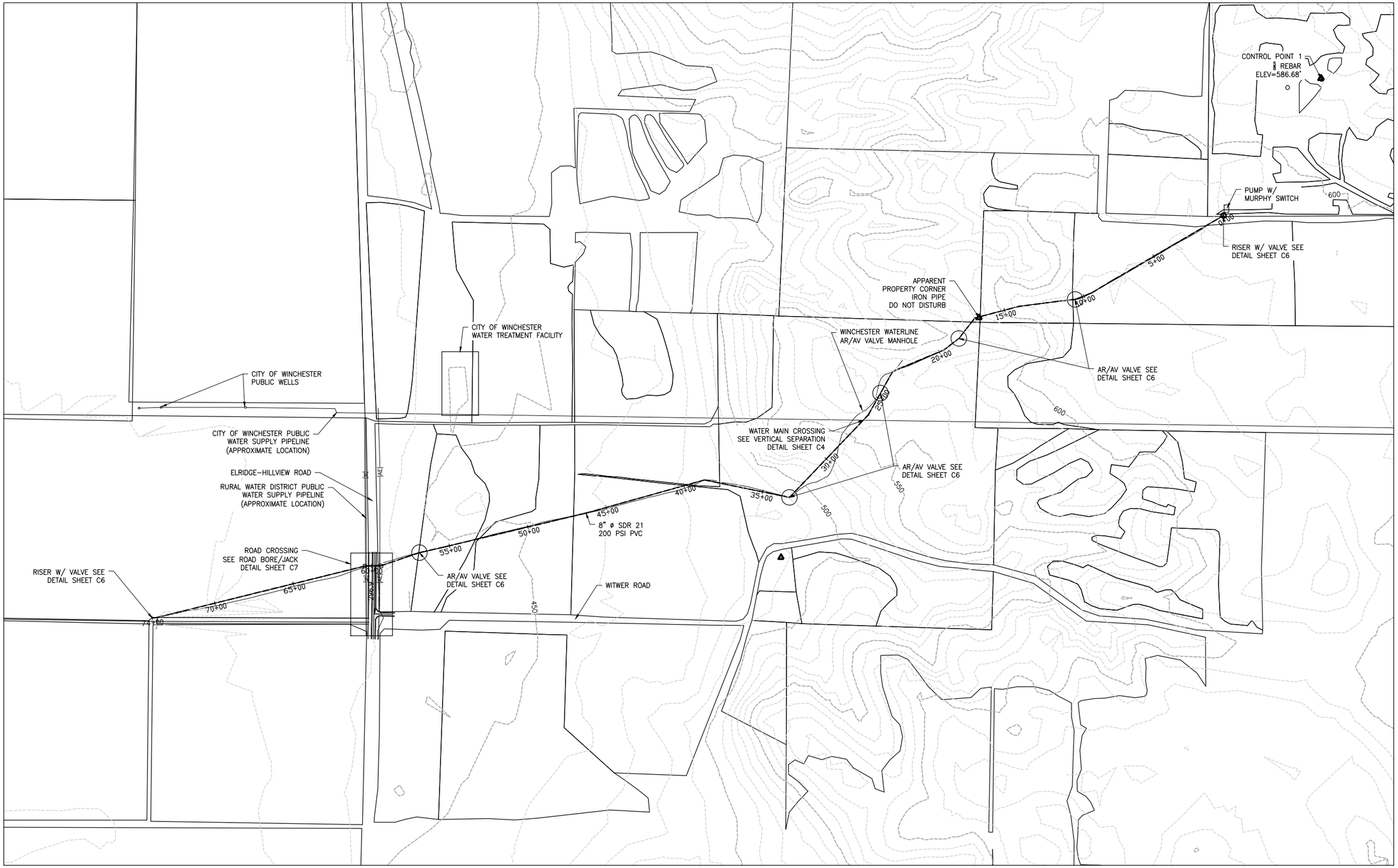

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0 300' 600'

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ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-005754
"WORKING with YOU by DESIGN"

Sheet Title: **WASTE TRANSFER PIPELINE TOPO**

Project: **SWINE FACILITY WASTE TRANSFER PIPELINE**

Client: **WIN PRODUCTION, LLC**

Designed By: JEO
Drawn By: JEO/NDP
Reviewed By: TLF
Date: FEBRUARY 20, 2012
Project No.: 23805038.02
Drawing: C2
OF X

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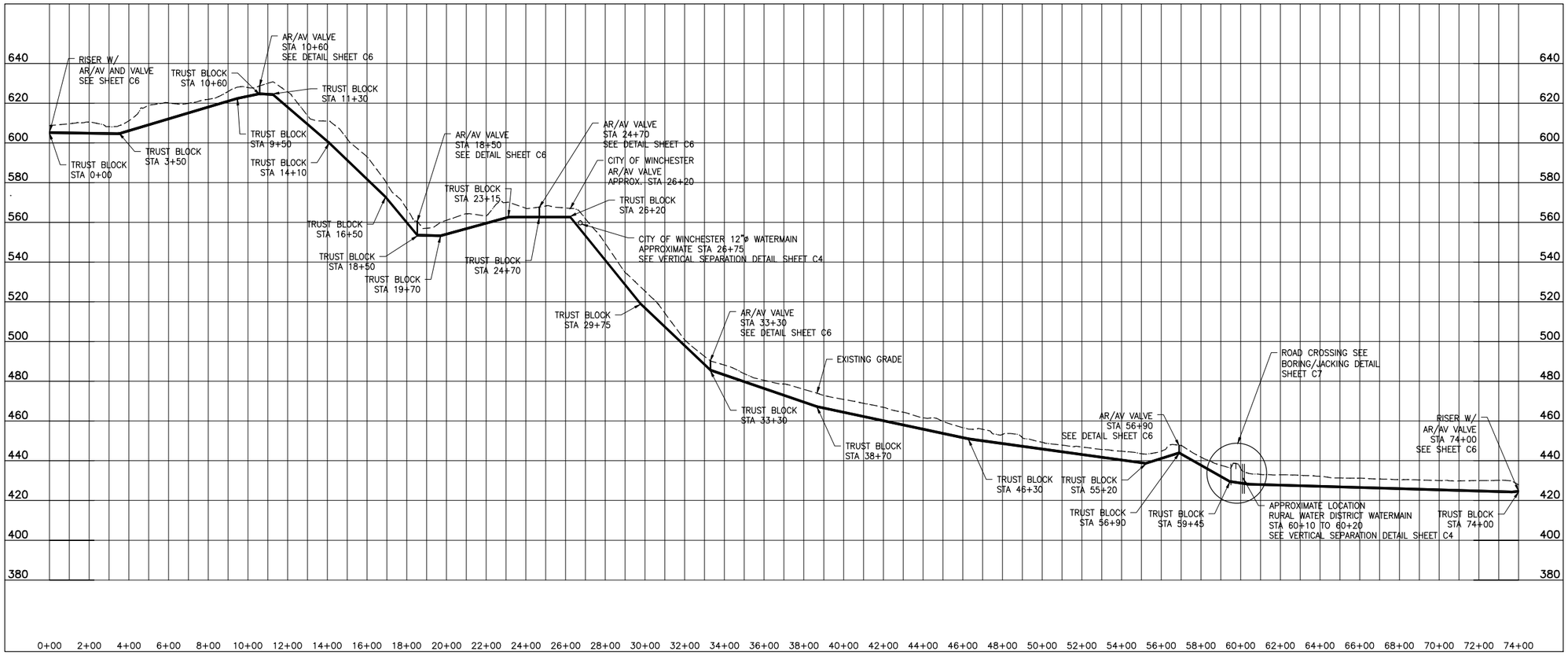

PIPELINE CL PROFILE
1"=300' HOR.
1"=30' VERT.

THRUST BLOCK LOCATIONS & DIMENSIONS

Station	TYPE/DIA, OF PIPE	TYPE OF BLOCK	TYPE OF APPURTENANCE	DESIGN PRESSURE	TOTAL THRUST	ASSUMED SOIL CAPACITY	AREA OR VOLUME OF BLOCK
0+00	PVC/8"	THRUST	45° VERT. BEND	255 LB/IN²	12,600 LBF	2000 LB/FT²	6.3 FT²
3+50	PVC/8"	THRUST	11.25° VERT. BEND	255 LB/IN²	3,220 LBF	2000 LB/FT²	1.6 FT²
9+50	PVC/8"	THRUST	11.25° VERT. BEND	255 LB/IN²	3,220 LBF	2000 LB/FT²	1.6 FT²
10+60	PVC/8"	THRUST	TEE	255 LB/IN²	16,400 LBF	2000 LB/FT²	8.2 FT²
10+60	PVC/8"	THRUST	22.5° HORZ. BEND	255 LB/IN²	6400 LBF	2000 LB/FT²	3.2 FT²
11+30	PVC/8"	THRUST	11.25° VERT. BEND	255 LB/IN²	3,220 LBF	2000 LB/FT²	1.6 FT²
14+10	PVC/8"	THRUST	11.25° HORZ. BEND	255 LB/IN²	3,220 LBF	2000 LB/FT²	1.6 FT²
16+50	PVC/8"	THRUST	45° HORZ. BEND	255 LB/IN²	12,600 LBF	2000 LB/FT²	6.3 FT²
18+50	PVC/8"	THRUST	TEE	255 LB/IN²	16,400 LBF	2000 LB/FT²	8.2 FT²
18+55	PVC/8"	THRUST	22.5° VERT. BEND	255 LB/IN²	6400 LBF	2000 LB/FT²	3.2 FT²
18+55	PVC/8"	THRUST	22.5° HORZ. BEND	255 LB/IN²	6400 LBF	2000 LB/FT²	3.2 FT²
19+70	PVC/8"	THRUST	11.25° VERT. BEND	255 LB/IN²	3,220 LBF	2000 LB/FT²	1.6 FT²
19+70	PVC/8"	THRUST	22.5° HORZ. BEND	255 LB/IN²	6400 LBF	2000 LB/FT²	3.2 FT²
23+15	PVC/8"	THRUST	11.25° VERT. BEND	255 LB/IN²	3,220 LBF	2000 LB/FT²	1.6 FT²
23+15	PVC/8"	THRUST	45° HORZ. BEND	255 LB/IN²	12,600 LBF	2000 LB/FT²	6.3 FT²

THRUST BLOCK LOCATIONS & DIMENSIONS

Station	TYPE/DIA, OF PIPE	TYPE OF BLOCK	TYPE OF APPURTENANCE	DESIGN PRESSURE	TOTAL THRUST	ASSUMED SOIL CAPACITY	AREA OR VOLUME OF BLOCK
24+70	PVC/8"	THRUST	TEE	255 LB/IN²	16,400 LBF	2000 LB/FT²	8.2 FT²
26+20	PVC/8"	THRUST	22.5° HORZ. BEND	255 LB/IN²	6400 LBF	2000 LB/FT²	3.2 FT²
26+20	PVC/8"	THRUST	22.5° VERT. BEND	255 LB/IN²	6400 LBF	2000 LB/FT²	3.2 FT²
29+75	PVC/8"	THRUST	11.25° VERT. BEND	255 LB/IN²	3,220 LBF	2000 LB/FT²	1.6 FT²
33+30	PVC/8"	THRUST	TEE	255 LB/IN²	16,400 LBF	2000 LB/FT²	8.2 FT²
33+30	PVC/8"	THRUST	45° HORZ. BEND	255 LB/IN²	12,600 LBF	2000 LB/FT²	6.3 FT²
33+30	PVC/8"	THRUST	22.5° VERT. BEND	255 LB/IN²	6400 LBF	2000 LB/FT²	3.2 FT²
38+70	PVC/8"	THRUST	11.25° VERT. BEND	255 LB/IN²	3,220 LBF	2000 LB/FT²	1.6 FT²
46+30	PVC/8"	THRUST	11.25° VERT. BEND	255 LB/IN²	3,220 LBF	2000 LB/FT²	1.6 FT²
55+20	PVC/8"	THRUST	22.5° VERT. BEND	255 LB/IN²	6400 LBF	2000 LB/FT²	3.2 FT²
56+90	PVC/8"	THRUST	TEE	255 LB/IN²	16,400 LBF	2000 LB/FT²	8.2 FT²
56+90	PVC/8"	THRUST	22.5° VERT. BEND	255 LB/IN²	6400 LBF	2000 LB/FT²	3.2 FT²
59+45	PVC/8"	THRUST	22.5° VERT. BEND	255 LB/IN²	6400 LBF	2000 LB/FT²	3.2 FT²
59+45	PVC/8"	THRUST	22.5° HORZ. BEND	255 LB/IN²	6400 LBF	2000 LB/FT²	3.2 FT²
74+00	PVC/8"	THRUST	45° VERT. BEND	255 LB/IN²	12,600 LBF	2000 LB/FT²	6.3 FT²

THRUST BLOCKING NOTES:

1. THE STATIONING FOR THE THRUST BLOCKING SHOWN IN THE CONSTRUCTION PLANS IS THE GENERAL LOCATION AND MAY DIFFER DEPENDING ON THE INSTALLED ALIGNMENT OF THE PIPELINE.
2. INSTALLATION CONTRACTOR SHALL FOLLOW PIPE MANUFACTURER SPECIFICATIONS FOR MAXIMUM BEND ANGLE AND CONTACT ENGINEER BEFORE INSTALL ADDITIONAL BENDS OR FITTINGS NOT SHOWN ON THE PLANS.
3. INSTALLATION CONTRACTOR SHALL REFER TO THE THRUST BLOCK DETAIL SHEET C5 FOR DETAILS AND SPECIFICATIONS ON THE THRUST BLOCKING SPECIFIC TO THE FITTING OR APPARATUS BEING INSTALLED ALONG THE PIPELINE.
4. THE VALUES IN THIS TABLE WERE OBTAINED ASSUMING AN ALLOWABLE SOIL BEARING CAPACITY OF 2000 LB/FT2 AND PIPE PRESSURE OF 255 LB/IN2. CONTACT ENGINEER IF DIFFERING SOIL CONDITIONS MAY APPLY.
5. THRUST BLOCK SHALL BE CENTERED ON THE FITTINGS SO THAT THE BEARING AREA IS EXACTLY OPPOSITE THE RESULTANT DIRECTION OF THE THRUST.
6. ALL THRUST BLOCKS SHALL BE POURED AGAINST WETTED UNDISTURBED SOIL.
7. FOR MINIMUM CONCRETE CURING TIME REFER TO SECTION 03300 OF THE SPECIFICATIONS.
8. CONCRETE SHALL BE PLACED SO THAT FITTINGS AND VALVES WILL BE ACCESSIBLE FOR REPAIRS OR REPLACEMENT.

AR/AV VALVE LOCATIONS

Station	Type	PRESSURE SETTING
0+00	TAV 100	144
10+60	TAV 100	144
18+50	TAV 100	144
24+70	TAV 100	144
33+30	TAV 100	144
59+60	TAV 100	144
74+00	TAV 100	144

TAV 100 – HYDRO ENGINEERING TRI–ACTION IRRIGATION VALVE

AR/AV VALVE NOTES:

1. THE STATIONING FOR THE AR/AV VALVES SHOWN IN THE CONSTRUCTION PLANS IS THE GENERAL LOCATION AND MAY DIFFER DEPENDING ON THE INSTALLED ALIGNMENT OF THE PIPELINE.
2. INSTALLATION CONTRACTOR SHALL FOLLOW VALVE MANUFACTURER SPECIFICATIONS AND CONTACT ENGINEER BEFORE INSTALL ADDITIONAL VALVES NOT SHOWN ON THE PLANS.
3. INSTALLATION CONTRACTOR SHALL REFER TO THE FORCEMAIN DETAIL SHEET C6 FOR DETAILS AND SPECIFICATIONS ON THE VALVES BEING INSTALLED ALONG THE PIPELINE

SCALE VALID ONLY ON 22"x34" SIZE PLANS

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ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-005754
"WORKING with YOU by DESIGN"

Sheet Title: WASTE TRANSFER PIPELINE PROFILE

Project: SWINE FACILITY WASTE TRANSFER PIPELINE

Client: WIN PRODUCTION, LLC

Designed By: JEO
Drawn By: JEO/NDP
Reviewed By: TLF
Date: FEBRUARY 20, 2012
Project No.: 23805038.02
Drawing: C3
OF X

S:\23805\2005 project numbers\23805038.02 (Win Production - Waste Transfer System)\Drawings\Brockton_FM 2011.dwg

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS IN A MANNER APPROVED BY THE UTILITY OWNER.

2. CONTRACTOR SHALL COORDINATE CONNECTIONS, RELOCATIONS AND ADJUSTMENTS OF ALL UTILITIES LOCATED IN THE PUBLIC RIGHT OF WAY WITH THE RESPECTIVE UTILITY OWNER(S).

3. WHEN EXCAVATING UNDER EXISTING UTILITIES, CONTRACTOR SHALL SUPPORT THE EXISTING UTILITY UNTIL BACKFILL AND COMPACTION ARE COMPLETE. BACKFILL AT THESE CROSSINGS SHALL CONSIST OF MECHANICALLY COMPACTED SELECTED GRANULAR MATERIALS TO FINISHED GRADE. CONTRACTOR MAY USE FLOWABLE FILL IN LIEU OF SELECT GRANULAR FILL, BUT NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

4. UNLESS OTHERWISE INDICATED, EXISTING SURFACE TOPOGRAPHY AND DRAINAGE SHALL NOT BE ALTERED BY CONSTRUCTION. CONTRACTOR SHALL RESTORE TO ORIGINAL CONDITION ANY DRAINAGE FEATURE DISTURBED BY CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.

5. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE AGENCIES PRIOR TO BORING AND/OR JACKING UNDER RAILROADS, STREETS, COUNTY AND TOWNSHIP ROADS, OR STATE HIGHWAYS AND COMPLY WITH ALL REQUIREMENTS OF THE CONTROLLING AGENCY INCLUDING ANY PROVISIONS IN APPLICABLE PERMITS, ETC. COSTS FOR COORDINATION SHALL BE INCIDENTAL TO THE CONTRACT.

6. PRIVATE DRIVEWAYS SHALL NOT BE COMPLETELY CLOSED WITHOUT 24 HOUR PRIOR NOTIFICATION OF DRIVEWAY OWNER.

7. IN GENERAL, THE LIMITS OF SELECT GRANULAR BACKFILL AND GRANULAR CRADLE MATERIAL INSTALLATION HAVE NOT BEEN SHOWN. REFER TO THE SPECIFICATIONS AND STANDARD DETAILS ON THE DRAWINGS FOR BACKFILL AND CRADLE MATERIAL SPECIFICATIONS, INSTALLATION PROCEDURES AND COMPACTION REQUIREMENTS.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND SUBMITTING ALL AS-BUILT DRAWINGS TO THE OWNER AND ENGINEER WITHIN 30 DAYS OF SUBSTANTIAL COMPLETION. THE CONTRACTOR SHALL KEEP ONE SET OF PLANS UPON WHICH ALL "REVISIONS" OR "VARIATIONS" ARE NOTED IN RED PENCIL. THIS SET SHALL BE TURNED OVER TO THE ENGINEER AT THE END OF THE PROJECT, AS A CONDITION PRECEDENT TO ISSUANCE OF FINAL CERTIFICATE FOR PAYMENT.

9. ALL REMOVAL ITEMS SHALL BE FULL-DEPTH SAW CUT, UNLESS OTHERWISE NOTED.

10. ANY DAMAGE TO STREETS DUE TO THE CONTRACTOR'S OPERATIONS (I.E., INCREASED TRUCK TRAFFIC, HEAVY EQUIPMENT TRAFFIC, ETC.) SHALL BE REPAIRED TO THE SATISFACTION OF, AND AT NO EXPENSE TO, THE OWNER OF THE DAMAGED PAVEMENT STRUCTURE. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED UNDER THIS CONTRACT FOR SUCH REPAIRS.

11. IN ACCORDANCE WITH PUBLIC ACT 96-1416, WHICH AMENDS THE ENVIRONMENTAL PROTECTION ACT CONCERNING GENERAL CONSTRUCTION OR DEMOLITION DEBRIS, THE CONTRACTOR SHALL NOT CONDUCT ANY GENERATION, TRANSPORTATION OR RECYCLING OF CONSTRUCTION OR DEMOLITION DEBRIS, CLEAN OF GENERAL OR UNCONTAMINATED SOIL GENERATED DURING CONSTRUCTION, REMODELING, REPAIR, AND DEMOLITION OF UTILITIES, STRUCTURES AND ROADS THAT IS NOT COMMINGLED WITH ANY WASTE, WITHOUT THE MAINTENANCE OF DOCUMENTATION IDENTIFYING THE HAULER, GENERATOR, PLACE OF ORIGIN OF THE DEBRIS OR SOIL, THE WEIGHT OR VOLUME OF THE DEBRIS OR SOIL, AND THE LOCATION, OWNER AND OPERATOR OF THE FACILITY WHERE THE DEBRIS OR SOIL WAS TRANSFERRED, DISPOSED, RECYCLED OR TREATED. THIS DOCUMENTATION MUST BE MAINTAINED BY THE CONTRACTOR FOR THREE (3) YEARS. NEW CERTIFICATIONS ARE ADDED INCLUDING OWNER AND PROFESSIONAL ENGINEER.

PERMITS

1. PERMITS AND/OR PROJECT APPROVALS HAVE BEEN OBTAINED FOR THIS PROJECT BY THE OWNER. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE APPLICABLE PROVISIONS OF ALL APPROVALS OBTAINED FOR THE PROJECT.

PIPELINE CONSTRUCTION NOTES

1. THE SPECIFICATIONS/SECTION 2990 SHALL GOVERN THE CONSTRUCTION OF THE PROPOSED WORK.

2. SANITARY SEWER PRESSURE PIPELINE MATERIAL SHALL BE POLYVINYL CHLORIDE (PVC) MEETING THE MATERIAL REQUIREMENTS AS SPECIFIED IN SECTION 2990 OF THE SPECIFICATIONS. SEWER FORCEMAIN PIPELINE SHALL HAVE A MINIMUM STANDARD DIMENSION RATIO (SDR) OF 21 AND SHALL BE PRESSURE RATED (PR) AT 200 PSI. JOINTS SHALL BE RUBBER GASKETED, PUSH-ON JOINTS MEETING THE REQUIREMENTS OF SECTION 2990 OF THE SPECS.

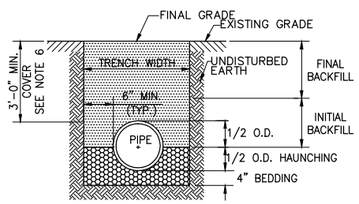
3. SANITARY SEWER GRAVITY PIPELINE MATERIAL SHALL MEET THE MATERIAL REQUIREMENTS AS SPECIFIED IN SECTION 2990 OF THE CONSTRUCTION SPECIFICATIONS.

4. PROVIDE APPROPRIATE THRUST BLOCKING AND/OR JOINT RESTRAINT FOR ALL PRESSURE SEWER PIPELINE AND FITTINGS IN ACCORDANCE WITH SECTION 2900 OF THE SPECIFICATIONS. SEE DETAIL SHEET C5.

5. PRESSURE AND LEAKAGE TESTING FOR PRESSURE SEWER PIPELINE BEFORE BEING PLACED INTO SERVICE, THE NEW PRESSURE SEWER PIPELINE SHALL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 2990 OF THE SPECS.

6. MAINTAIN MINIMUM 3'-0" GROUND COVER OVER PRESSURE PIPELINE OR AS NEEDED FOR FROST PROTECTION.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND SUBMITTING ALL AS-BUILT DRAWINGS TO THE OWNER AND ENGINEER WITHIN 30 DAYS OF SUBSTANTIAL COMPLETION. THE CONTRACTOR SHALL KEEP ONE SET OF PLANS UPON WHICH ALL "REVISIONS" OR "VARIATIONS" ARE NOTED IN RED PENCIL. THIS SET SHALL BE TURNED OVER TO THE ENGINEER OR OWNER AT END OF PROJECT.



OPEN TRENCH PIPE INSTALLATION DETAIL
NOT TO SCALE

NOTES:
1. INSTALLATION METHODOLOGIES (INCLUDING EXCAVATION, BEDDING, HAUNCHING, BACKFILL, COMPACTION, DISPOSAL OF SURPLUS MATERIAL, RESTORATION OF ALL DISTURBED SURFACES, ETC.) SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE PROJECT SPECS. SECTION 2990.

2. WHEN THE NEAREST INNER EDGE OF THE SIDEWALL OF THE TRENCH IS DIRECTLY UNDER, OR WITHIN 2' OF AN EXISTING (OR PROPOSED) DRIVEWAY, SLAB ON GRADE OR PERMANENT PAVEMENT STRUCTURE, SELECT GRANULAR BACKFILL, COMPACTED IN PLACE (FINAL BACKFILL) SHALL BE REQUIRED. WHEN THE NEAREST INNER EDGE OF THE SIDEWALL OF THE TRENCH IS NOT DIRECTLY UNDER OR WITHIN 2' OF AN EXISTING (OR PROPOSED) PERMANENT PAVEMENT OR STRUCTURE, NO SELECT GRANULAR BACKFILL WILL BE REQUIRED (i.e., SOIL MAY BE USED). INITIAL FILL MUST BE CRUMBLES IF EARTH WITH NO CLODS LARGER THAN 1.5".

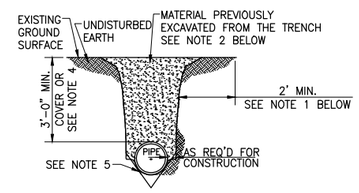
3. SELECT GRANULAR BACKFILL, WHERE REQUIRED, SHALL BE COMPACTED IN PLACE IN ACCORDANCE WITH THE PROVISIONS OF THE PROJECT SPECS. SECTION 2990

4. MATERIAL REQUIREMENTS FOR SELECT GRANULAR BACKFILL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECS. SECTION 2990

5. PIPE SHALL BE CRADLED WITH HAUNCHING AND BEDDING AT ALL LOCATIONS WITH GRANULAR MATERIAL MEETING THE REQUIREMENTS OF THE SPECS. SECTION 2990. COMPACTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE PROJECT SPECS. SECTION 2990.

6. MINIMUM COVER SHALL BE 3'-0" OR DEEPER AS NEEDED TO PROTECT AGAINST FREEZING.

7. TRENCH WIDTH AT THE PIPE DEPTH SHALL NOT EXCEED THE PIPE DIAMETER PLUS 2 FEET. MINIMUM TRENCH WIDTH IS PIPE DIAMETER PLUS 1 FOOT.



NARROW TRENCH PIPE INSTALLATION DETAIL
NOT TO SCALE

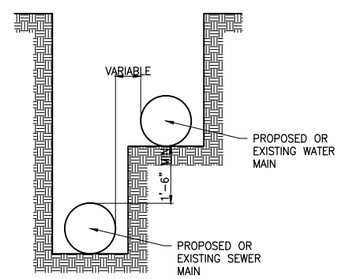
NOTES:
1. THIS DETAIL SHALL APPLY TO THE INSTALLATION OF PROPOSED PIPE 12" DIA. AND SMALLER. LARGER DIAMETER PIPES SHALL USE OPEN TRENCH METHODS IN AREAS THAT ARE LOCATED SUCH THAT THE NEAREST INNER EDGE OF THE SIDEWALL OF THE TRENCH IS NOT DIRECTLY UNDER, OR WITHIN 2' OF AN EXISTING (OR PROPOSED) PERMANENT STRUCTURE. PIPES UNDER OR WITHIN 2' OF STRUCTURES SHALL USE OPEN TRENCH METHOD.

2. MATERIAL WHICH HAS PREVIOUSLY BEEN EXCAVATED FROM THE TRENCH MAY BE USED FOR BACKFILLING TRENCHES MEETING THE INSTALLATION REQUIREMENTS OF THIS STANDARD DETAIL. HOWEVER, ONLY EARTH CRUMBLES WITH A PARTICLE SIZE OF 1.5" OR LESS SHALL BE USED.

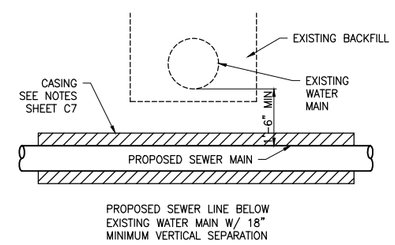
3. INSTALLATION OF THE THERMOPLASTIC PIPE BY A TRENCHING MACHINE WITH PIPE GROVING SHOE SHALL BE CONSIDERED AN ACCEPTABLE CONSTRUCTION METHODOLOGY FOR PIPE WHOSE HORIZONTAL ALIGNMENTS MEET THE CONDITIONS OF THIS DETAIL.

4. MINIMUM COVER SHALL BE 3'-0" OR DEEPER AS NEEDED TO PROTECT AGAINST FREEZING.

5. TRENCH BOTTOM SHALL BE SEMI-CIRCULAR OR "V" SHAPED TO CLOSELY FIT THE PIPE. TRENCH WIDTH @ THE PIPE MIDLINE SHALL NOT EXCEED THE PIPE DIAMETER BY MORE THAN 10%.

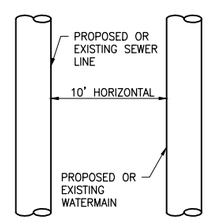


HORIZONTAL SEPARATION < 10'
NOT TO SCALE

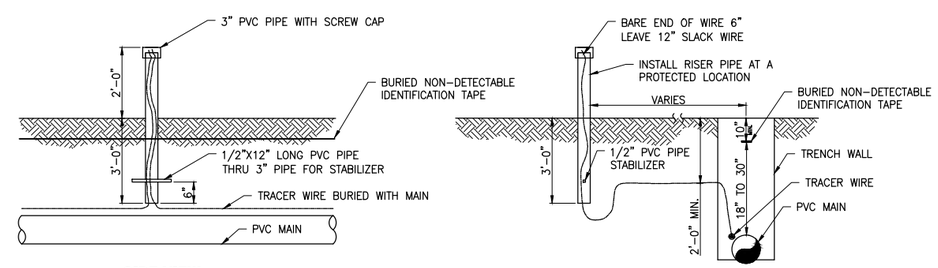


VERTICAL SEPARATION
NOT TO SCALE

GUIDELINES:
1. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT ON SEWER TRENCH



HORIZONTAL SEPARATION > 10'
NOT TO SCALE



SIDE VIEW

END VIEW

TRACER WIRE AND NON-DETECTABLE IDENTIFICATION TAPE DETAILS
NOT TO SCALE

NOTES:

1. TRACER WIRE SHALL BE PROVIDED FROM APPROX. STA. 26+00 TO APPROX. STA. 27+00 AND FROM APPROX. STA. 59+00 TO APPROX. STA. 61+00.

2. TRACER WIRE IS RECOMMENCED ALONG THE ENTIRE LENGTH BUT NOT REQUIRED EXCEPT AS NOTED IN 1.

3. NON-DETECTABLE IDENTIFICATION TAPE SHALL BE PROVIDED FOR THE ENTIRE LENGTH OF THE WATER MAIN EXCEPT BORE AND JACK LOCATIONS.

4. RISER SHALL BE MAXIMUM 500 FEET APART.

THE CONTRACTOR/BUILDER SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE DESIGNER IMMEDIATELY.

SCALE VALID ONLY ON 22"x34" SIZE PLANS

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1670 EAST ASH STREET | CANTON, ILLINOIS 61520 PH. (309) 647-7831 | FAX (309) 647-6155
ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-005754
"WORKING with YOU by DESIGN"

Sheet Title: PIPELINE GENERAL NOTES & DETAILS

Project: SWINE FACILITY WASTE TRANSFER PIPELINE

Client: WIN PRODUCTION, LLC

Designed By: JEO
Drawn By: JEO/NDP
Reviewed By: TLF
Date: FEBRUARY 20, 2012
Project No.: 23805038.02
Drawing: C4

X OF X

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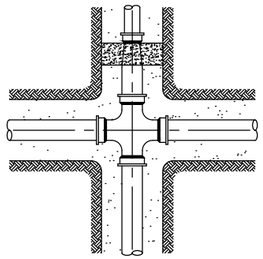
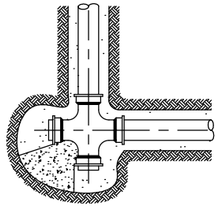
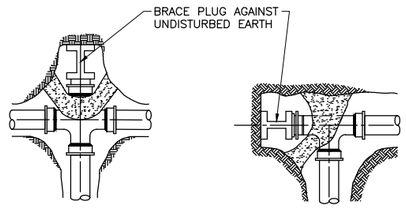


LINE SIZE CHANGE, REDUCER
NOT TO SCALE

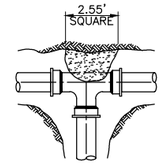


DIRECTION CHANGE, CROSS USED AS ELBOW
NOT TO SCALE
SOIL BEARING AREA = 6.5 FT² @ 2000 PSF

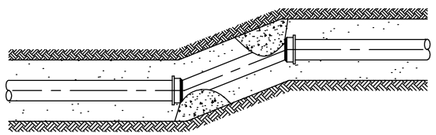


PLUGGED CROSS
NOT TO SCALE

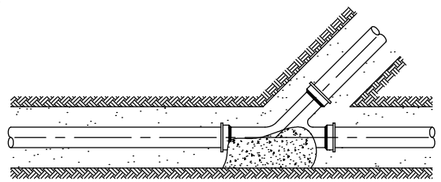
PLUGGED TEE
NOT TO SCALE



TEE
NOT TO SCALE
SOIL BEARING AREA = 6.5 FT² @ 2000 psf

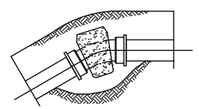


DIRECTION CHANGE
NOT TO SCALE

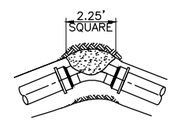


THRU LINE CONNECTION, WYE
NOT TO SCALE

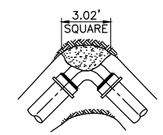
CAPPED OR PLUGGED DEAD END LINE
NOT TO SCALE



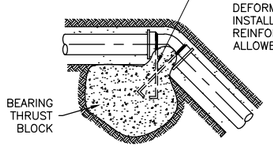
VERTICAL BEND
NOT TO SCALE



45° ELBOW
NOT TO SCALE
SOIL BEARING AREA = 5.0 FT² @ 2000 PSF

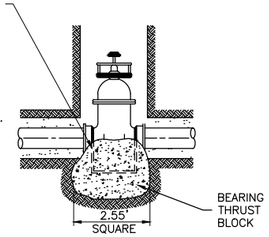


90° ELBOW
NOT TO SCALE
SOIL BEARING AREA = 9.1 FT² @ 2000 PSF



DIRECTION CHANGE, VERTICAL BEND BEARING THRUST BLOCK
NOT TO SCALE

AT VERTICAL BENDS, ANCHOR TO RESIST OUTWARD THRUSTS.



VALVE BEARING THRUST BLOCK
NOT TO SCALE

ANCHOR VALVES AS SHOWN ABOVE WHERE THRUSTS DUE TO HIGH PRESSURE ARE EXPECTED.

SOIL BEARING AREA = 6.5 FT² @ 2000 PSF

RESULTANT THRUST* AT FITTINGS AT 100 PSI WATER PRESSURE

(*TOTAL POUNDS)

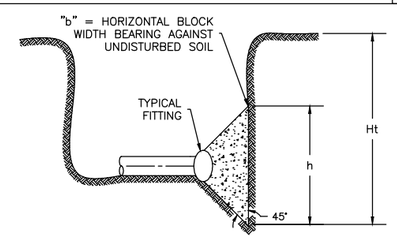
NOM. PIPE DIA.(IN.)	VALVES, TEES AND DEAD ENDS	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
3	1,232	1,742	943	481	241
4	1,810	2,559	1,385	706	355
6	3,739	5,288	2,862	1,459	733
8	6,433	9,097	4,923	2,510	1,261
10	9,677	13,685	7,406	3,776	1,897
12	13,685	19,353	10,474	5,340	2,683
14	18,385	26,001	14,072	7,174	3,604
16	23,779	33,628	18,199	9,278	4,661
18	29,865	42,235	22,858	11,653	5,855
20	36,644	51,822	28,046	14,298	7,183
24	52,279	73,934	40,013	20,398	10,249
30	80,425	113,738	61,554	31,380	15,766
36	115,209	162,931	88,177	44,952	22,585
42	155,528	219,950	119,036	60,684	30,489
48	202,683	286,637	155,127	79,083	39,733
54	260,214	367,999	199,160	101,531	51,011
60	298,121	421,606	228,172	116,321	58,442
64	338,707	479,004	259,235	132,157	66,398

NOTE: TO DETERMINE THRUST AT PRESSURES OTHER THAN 100 PSI, MULTIPLY THE THRUST OBTAINED IN THE TABLE BY THE RATIO OF THE PRESSURE TO 100.

FOR EXAMPLE, THE THRUST ON A 12-INCH, 90° BEND AT 125 PSI IS

$19{,}353 \times \frac{125}{100} = 24{,}191$ POUNDS.

*THE ABOVE DATA IS ADOPTED FROM THE "INSTALLATION GUIDE FOR DUCTILE IRON PIPE" PUBLISHED BY DIPRA, 1994.



TYPICAL BEARING THRUST BLOCK SIDE VIEW
NOT TO SCALE

BLOCK HEIGHT, "h", SHOULD BE EQUAL TO OR LESS THAN ONE-HALF THE TOTAL DEPTH TO THE BOTTOM OF THE BLOCK, "Ht", BUT NOT LESS THAN THE PIPE OUTSIDE DIAMETER.

BLOCK HEIGHT, "h", SHOULD BE CHOSEN SUCH THAT THE CALCULATED BLOCK WIDTH, "b", VARIES BETWEEN ONE AND TWO TIMES THE HEIGHT.

TYPICAL SOIL BEARING CAPACITIES **

SOIL TYPE	TYPICAL BEARING STRENGTH (lbs/ft²)
MUCK	0
SOFT CLAY	1,000
SILT	1,500
SANDY SILT	3,000
SAND	4,000
SANDY CLAY	6,000
HARD CLAY	9,000

* THE ABOVE DATA IS ADOPTED FROM THE "INSTALLATION GUIDE FOR DUCTILE IRON PIPE" PUBLISHED BY DIPRA, 1994.

** ON-SITE SOIL BEARING DATA MAY BE USED INSTEAD OF THE ABOVE BEARING CAPACITIES FOR THRUST BLOCK BEARING AREA CALCULATION REQUIREMENTS.

NOTES:

1. ALL THRUST BLOCKS SHALL BE CONSTRUCTED OF CAST IN PLACE CONCRETE AND SHALL BEAR AGAINST UNDISTURBED EARTH. WHERE THIS IS NOT POSSIBLE, FILL MATERIAL BETWEEN THE BEARING SURFACE AND UNDISTURBED MAXIMUM DRY SOIL MUST BE COMPACTED TO AT LEAST 90% STANDARD PROCTOR MAXIMUM DRY DENSITY.
2. ALL THRUST BLOCKS SHALL BE 3000 PSI MINIMUM CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS; MINIMUM POURED CONCRETE THRUST BLOCK CURING TIME SHALL BE 5 DAYS.
3. COVER ALL FITTINGS WITH PLASTIC SHEETING (5 MIL MIN. THICKNESS) PRIOR TO POURING CONCRETE. CARE SHALL BE TAKEN TO ASSURE THAT THE JOINT, INCLUDING BOLTS, WILL BE ACCESSIBLE IN THE FUTURE.
4. NON-CONCRETE BLOCKING WILL NOT BE ALLOWED.
5. CONCRETE THRUST BLOCKS SHALL BE INSTALLED IN addition TO ANY OTHER REQUIRED JOINT RESTRAINTS THAT MAY BE CALLED FOR IN PROJECT SPECIFICATIONS AND/OR DRAWINGS.
6. THE DENSITY OF PLAIN CONCRETE MAY BE TAKEN AS 145 LBS/FT³ FOR GRAVITY THRUST BLOCKS.

THRUST BLOCK SIZING FORMULAS

FOR BEARING THRUST BLOCKS:

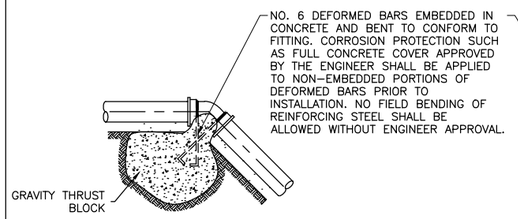
$$\text{SOIL BEARING AREA (FT}^2\text{)} = \frac{\text{THRUST FORCE (LBS)}}{\text{BEARING CAPACITY (LBS/FT}^2\text{)}}$$

FOR GRAVITY THRUST BLOCKS:

$$\text{GRAVITY BLOCK SIZE (FT}^3\text{)} = \frac{\text{THRUST FORCE (LBS)}}{\text{DENSITY OF BLOCK MATERIAL (LBS/FT}^3\text{)}}$$

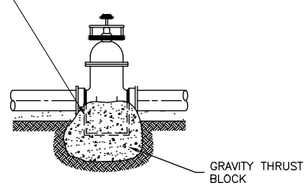
*THE ABOVE DATA IS ADOPTED FROM THE "INSTALLATION GUIDE FOR DUCTILE IRON PIPE" PUBLISHED BY DIPRA, 1994.

GRAVITY THRUST BLOCKS



DIRECTION CHANGE, VERTICAL BEND GRAVITY THRUST BLOCK
NOT TO SCALE

AT VERTICAL BENDS, ANCHOR TO RESIST OUTWARD THRUSTS.



VALVE GRAVITY THRUST BLOCK
NOT TO SCALE

ANCHOR VALVES AS SHOWN ABOVE WHERE THRUSTS DUE TO HIGH PRESSURE ARE EXPECTED.

THRUST BLOCK SIZE = 89 FT³
(20FT² X 4.46' DEEP)

SCALE VALID ONLY ON 22"x34" SIZE PLANS

THE CONTRACTOR/BUILDER SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE DESIGNER IMMEDIATELY.

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1070 EAST ASH STREET | CANTON, ILLINOIS 61520 PH. (309) 647-7831 | FAX (309) 647-6155
ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-000754
"WORKING with YOU by DESIGN"

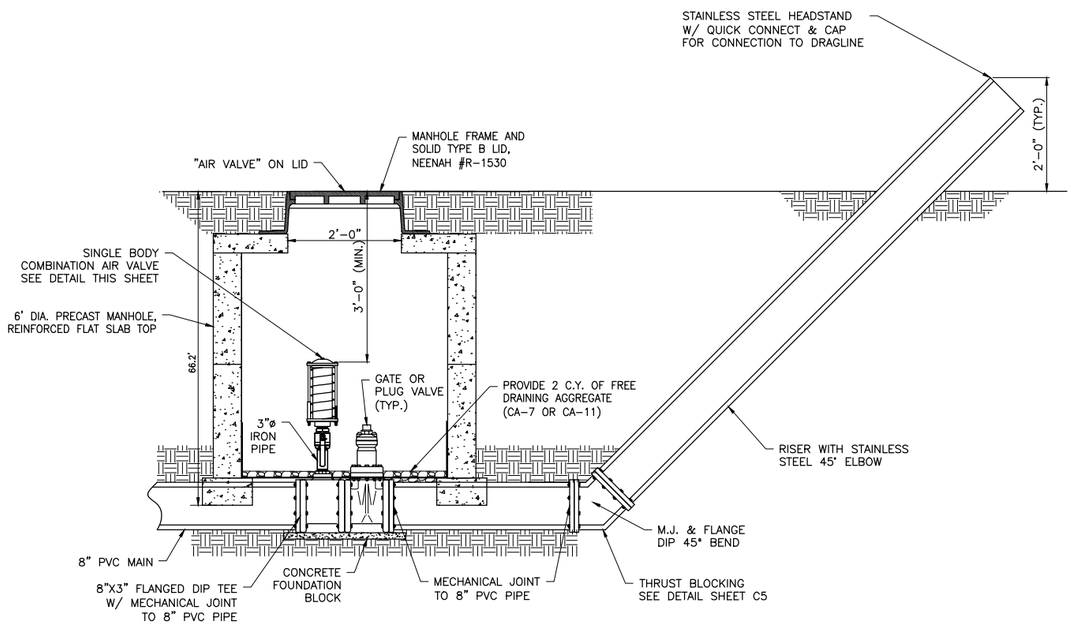
Sheet Title: FORCEMAIN DETAILS THRUST BLOCKS

Project: SWINE FACILITY WASTE TRANSFER PIPELINE

Client: WIN PRODUCTION, LLC

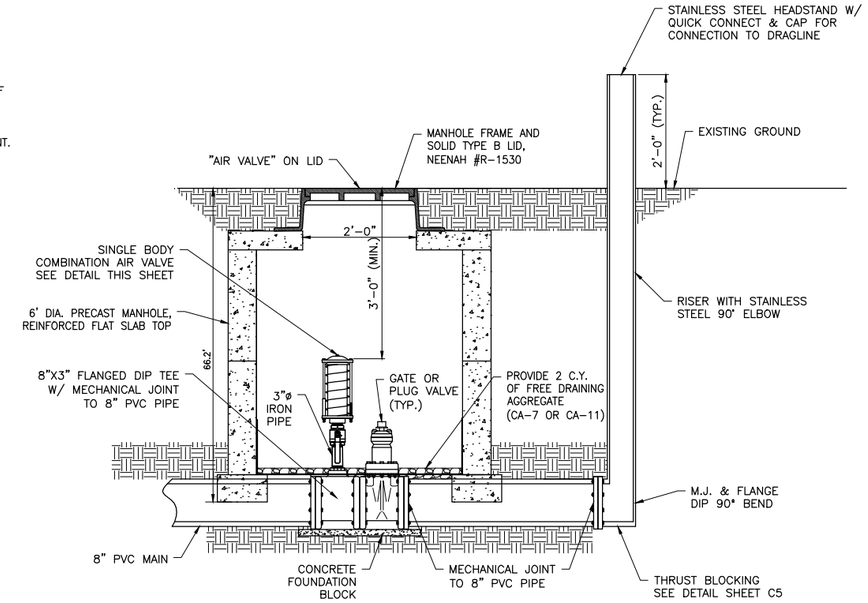
Designed By: JEO
Drawn By: JEO/NDP
Reviewed By: TLF
Date: FEBRUARY 20, 2012
Project No.: 23805038.02
Drawing: C5

S:\23805.0003 project numbers\23805038.02 (Win Production - Waste Transfer System)\Drawings\Details\C5 Forcemain DETAILS.dwg

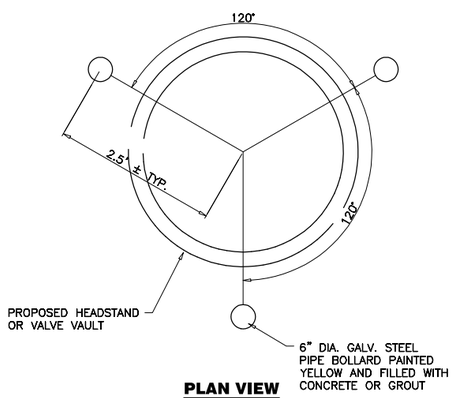


NOTE:
1. EACH PIPE RESTRAINT SHALL BE CAPABLE OF RESISTING 1000 LBS TENSILE FORCE.
2. MECHANICAL JOINTS (M.J.) WITH RESTRAINT SHALL BE MEGA LUG 2000 PV OR EQUIVILANT.

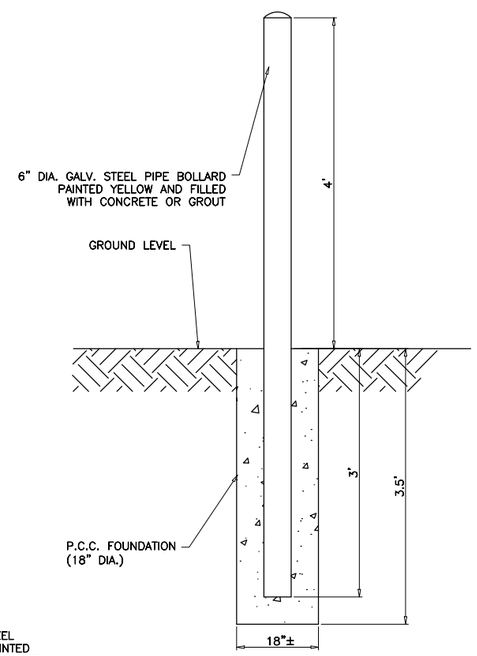
45° RISER DETAIL w/ GATE & AIR VALVE
NO SCALE



90° RISER DETAIL W/ GATE & AIR VALVE
NO SCALE



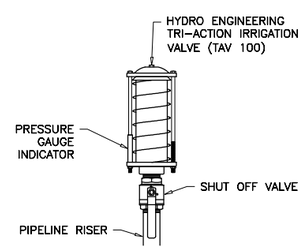
PLAN VIEW



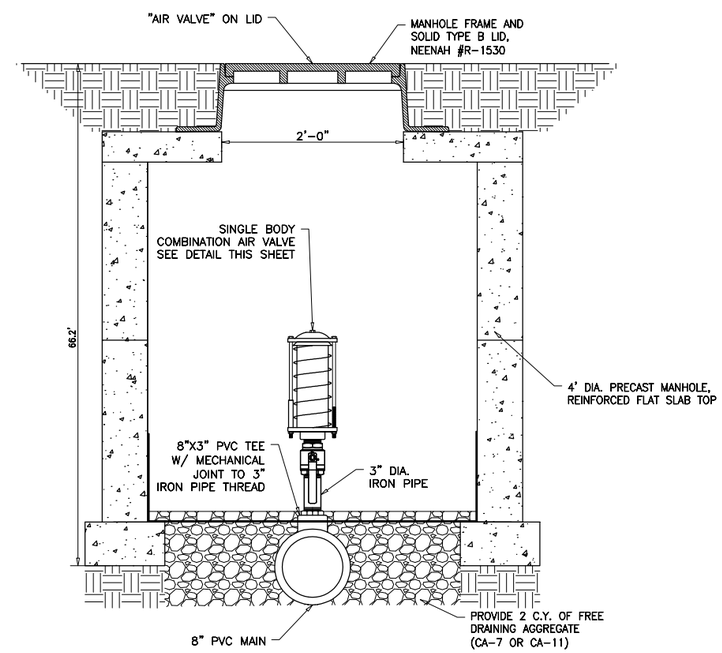
SECTION VIEW

PIPE BOLLARD DETAIL
NO SCALE

NOTE:
1. THE RISER AND PVC VALVE ACCESS ARE TO BE PLACES INSIDE OF THE AREA PROTECTED BY THE BOLLARDS.



SINGLE BODY COMBINATION TRI-ACTION AIR VALVE FOR WASTEWATER SERVICE
NO SCALE



AIR VALVE AND VAULT
NO SCALE

THE CONTRACTOR/BUILDER SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE DESIGNER IMMEDIATELY.

SCALE VALID ONLY ON 22"x34" SIZE PLANS

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REVISIONS

No.	Date	Description

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1670 EAST ASH STREET | CANTON, ILLINOIS 61520 PH. (309) 647-7831 | FAX (309) 647-6155
ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-005754
"WORKING with YOU by DESIGN"

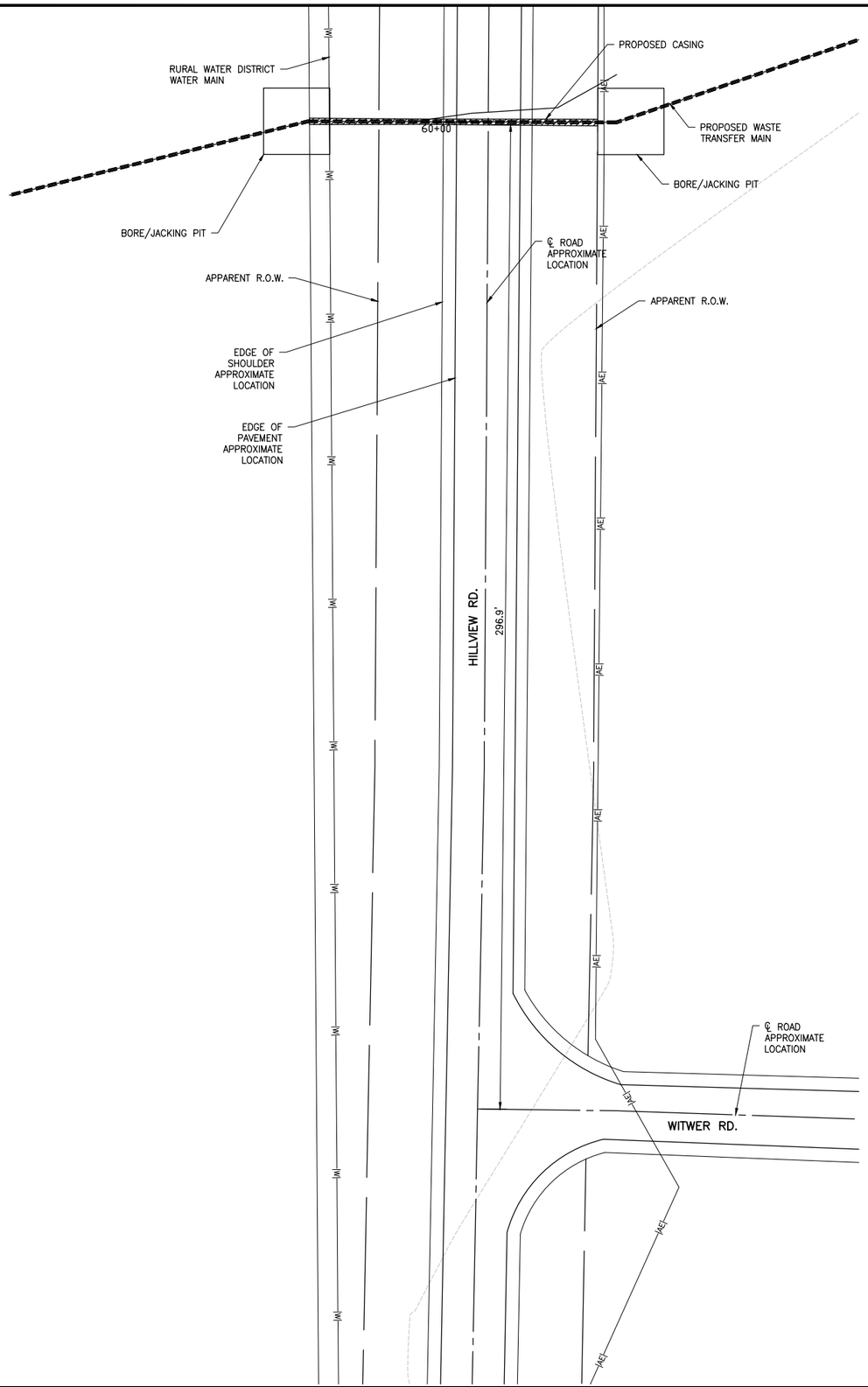
Sheet Title: **FORCEMAIN DETAILS**

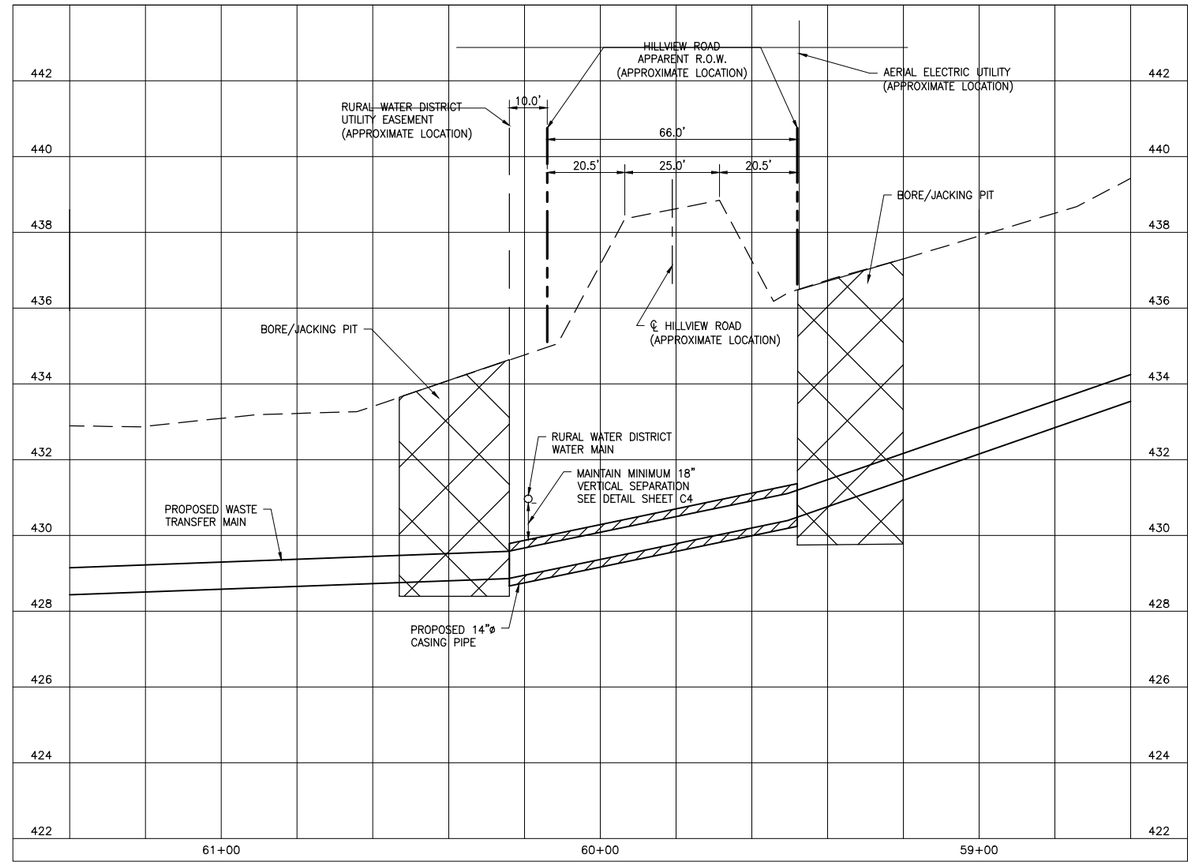
Project: **SWINE FACILITY WASTE TRANSFER PIPELINE**

Client: **WIN PRODUCTION, LLC**

Designed By: JEO
Drawn By: JEO/NDP
Reviewed By: TLF
Date: FEBRUARY 20, 2012
Project No.: 23805038.02
Drawing: C6

S:\23805.2005 project numbers\23805038.02 (Win Production -Waste Transfer System)\Drawings\Details\C6 RISER DETAILS.dwg





ROAD CROSSING
1"=20' HOR.
1"=2' VERT.

1. UNMARKED STATE ROUTE

ONE PIPE ENCASEMENT SHALL BE INSTALLED BY BORING AND JACKING. THE BORING AND JACKING SHALL BE OPERATED TOGETHER SO THAT NO CAVE–IN OR LOSS OF UNEXCAVATED MATERIAL OCCURS.

PIPE ENCASEMENT SHALL BE INSTALLED AT A DEPTH TO MEET ALL APPLICABLE SPECIFICATIONS AND DRAWINGS AND ALSO TO AVOID CONFLICTS WITH EXISTING UTILITIES.

PIPE ENCASEMENT SHALL BE ELECTRIC FUSION WELDED STEEL PIPE ASTM DESIGNATION A 139 GRADE B, OR ASTM A53 GRADE B, WITH WELDED JOINTS. SEE PLANS FOR SIZE.

THE CARRIER PIPE SHALL NOT REST ON BELLS. PROVIDE CASING SPACERS TO SUPPORT THE CARRIER PIPE EVERY 8 FT. MAXIMUM, CASCADE #CCS–1740, POWERSEAL PIPELINE PRODUCTS CORPORATION (800–433–0932) OR PIPELINE SEAL AND INSULATOR, INC. 713–747–6948) STANDARD SPACER, OR EQUAL. INSTALL PIPE IN CASING IN ACCORDANCE WITH SPACER AND PIPE MANUFACTURER'S RECOMMENDATIONS.

THE WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS AND PERMITS OBTAINED BY THE OWNER FROM THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

2. NOT ALL OF THE EXISTING UTILITIES, SUCH AS SEWERS, STORM SEWERS. CULVERTS, GAS MAINS, TELEPHONE CABLES, WATERMAINS, FIELD TILE, POWER LINES, ETC. AND STRUCTURES, OBJECTS, ETC., WHETHER ABOVE OR BELOW GROUND, HAVE BEEN SHOWN ON THE PLANS. THE LOCATION OF EXISTING UTILITIES AND OBJECTS ARE SHOWN FROM AVAILABLE INFORMATION AND THE LOCATION AS SHOWN SHALL NOT BE CONSTRUED AS ACCURATE. THE CONTRACTOR SHALL ASSUME SOLE AND FULL RESPONSIBILITY FOR ALL UTILITIES OR OBJECTS WHETHER OR NOT SHOWN ON THE PLANS AND SHALL REALIZE THAT THE ACTUAL LOCATIONS OF THE UTILITIES OR OBJECTS MAY BE DIFFERENT FROM THAT SHOWN. CONTACT J.U.L.I.E. BEFORE DIGGING.

N

0 20' 40'

SCALE VALID ONLY ON 22"x34" SIZE PLANS

THE CONTRACTOR/BUILDER SHALL VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE DESIGNER IMMEDIATELY.

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REVISIONS

No.	Date	Description

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1670 EAST ASH STREET | CANTON, ILLINOIS 61520 PH. (309) 647-7831 | FAX (309) 647-6155
ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-000754
"WORKING with YOU by DESIGN"

Sheet Title: WASTE TRANSFER BORING/JACKING DETAIL

Project: SWINE FACILITY WASTE TRANSFER PIPELINE

Client: WIN PRODUCTION, LLC

Designed By: JEO
Drawn By: JEO/NDP
Reviewed By: TLF
Date: FEBRUARY 20, 2012
Project No.: 23805038.02
Drawing: C7
OF X

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OPERATION AND MAINTENANCE PLAN

MANURE TRANSFER (634)
ADDITIONAL COMPONENTS

A properly operated and maintained manure transfer system is an asset to your farm. This system was designed and installed to transfer manure and wastewater. The estimated life span of this installation is at least 10 years. The life of this installation can be assured and usually increased by developing and carrying out a good operation and maintenance program. This practice will require you to perform periodic maintenance and may require operational items to maintain satisfactory performance. Here are some recommendations to help you develop an effective operation and maintenance program.

GENERAL RECOMMENDATIONS

- Waste storages facilities shall be regularly checked for concrete deterioration. Each time in ground facilities are emptied, a check of the inside walls shall be made. All cracks and holes shall be immediately filled with a non-shrink grout material. All joints shall be examined and re-sealed as necessary.

- Manure Transfer Systems - For a liquid transfer system, manure is considered “too dry” or “frozen” when the material can be stacked or will not visibly flow as a slurry or liquid.

- To prevent plugging in pipe transfer systems:

  - Dry, dense “clumps” of manure or frozen manure shall not be placed in waste transfer pipes.

  - Care shall be given to avoid foreign objects such as wood, concrete or metal entering the system.

- Each time the system is emptied, the following shall be checked:

  - Condition of the transfer pipe. Look for low areas or blowholes over the pipe for signs of pipe joint problems.

- Safety barriers/guards/grates shall be maintained around reception/pumping boxes. Components showing wear shall be immediately replaced.

GENERAL RECOMMENDATIONS – PUMP

- Perform all periodic maintenance as required and recommended by pump manufacturer.

- NRCS Pump minimum flow rate: 440 gpm @ velocity of 3 fps.

- NRCS Pump maximum flow rates
    - ¼ mile Dragline - 880 gpm @ velocity of 6.0 fps.
    - ½ mile Dragline - 710 gpm @ velocity of 4.8 fps.
    - 1¾ mile Dragline - 490 gpm @ velocity of 3.3 fps.

CONTACT **MAURER-STUTZ, INC** FOR ANY ADDITIONAL TECHNICAL ASSISTANCE YOU MIGHT NEED FOR IMPLEMENTATION OF THIS OPERATION AND MAINTENANCE PLAN FOR YOUR STRUCTURE.

NATURAL RESOURCES CONSERVATION SERVICE

ILLINOIS OPERATION AND MAINTENANCE

WASTE TRANSFER – PIPELINE

Follow the operation and maintenance plan below to keep your waste transfer system functioning as intended:

- Pipeline shall be operated at a flow rate between 440 – 880 gallons per minute. Monitor delivery rate using flow meter on application device or as described below.
- The maximum operating pressure for the waste transfer system is 144 psi. Maintain all pressure relief valves installed as a part of the system at the design pressure setting.
- Murphy switch at pump, Pressure Setting 144 psi
- System relief valve: Located at pump, Pressure setting 144 psi
- System Combination Pressure relief, air release, air vacuum valves: Located along the pipeline, Pressure setting 144 psi
- The minimum operating pressure (just after the pump) shall be ____40____psi to prevent solids settling.
- Frequent operation of the pressure relief valve indicates potential system problems. If the relief valves show sign of frequent use, inspect mechanical components of pipeline, clean out the pipeline, and/or reduce the operating flow delivery rate.
- Perform routine maintenance of all mechanical components in accordance with manufacturer's recommendations. Inspect and test valves, pressure regulators, pumps, agitators, switches, and other appurtenances.
- Inspect after significant storm events and at least annually to identify repair and maintenance needs.
- Check for leaks and improper operation. Check for debris, minerals, algae, and other materials that may restrict system flow. Repair any damage as soon as possible after being noted.
- Slowly start pump and open/close valves to prevent excessive water hammer/surge.
- When quick connects are used, ensure proper operation and adequate designed delivery rate.
- Drain and/or provide for cold weather operation of the system.
- Pipelines used for transferring waste material should be flushed with clean water after use to reduce the risk of gas build up and pipeline explosion.
- Protect pipeline from damage by farm equipment, vehicles, and livestock. Mark pipeline locations in areas where potential damage could occur.
- Repair any eroded areas that are hazardous to the pipeline. Reestablish vegetative cover immediately where erosion has occurred.
- Record on a map the location of the pipeline and approximate depth.
- Follow your Comprehensive Nutrient Management Plan (CNMP) for method, scheduling, and amount of land application of waste material.
- Minimize flies and other insects and odors during the transfer of material.

Additional Details:

NATURAL RESOURCES CONSERVATION SERVICE

ILLINOIS OPERATION AND MAINTENANCE

WASTE TRANSFER – AGITATOR / PUMP

Follow the operation and maintenance plan below to keep your waste transfer system Functioning as intended:

- Follow all operation and maintenance instructions provided by the manufacturer.
- Operate the agitator/pump at or below the specified maximum power rating for the system.
- Liquid or slurry material shall be adequately agitated prior to transfer for the purpose of land application both on and off the farm. For agitation in a lined holding pond, ensure that the agitator does not damage the liner.
- Manure agitation can produce toxic gases in buildings built above the pit. Toxic gases can also emanate in buildings situated by the pit and/or connected to the pit by an evacuation line. For agitation in an enclosed storage pit, turn off all potential sources of ignition, provide adequate ventilation, and ensure all people are out of the building.
- Do not enter into a manure pit at any time.
- Make sure that no person is in close proximity to any moving parts before engaging the drive.
- Drain and/or provide for cold weather operation of the system.
- Follow your Comprehensive Nutrient Management Plan (CNMP) for scheduling and amount of land application of waste material.
- Minimize flies and other insects and odors during the transfer of material.

Additional Details:

Cornell 4NHTB – ¼ mi Dragline - PTO speed 1000-1720 rpm for 440 - 880 gpm

Cornell 4NHTB – ½ mi Dragline - PTO speed 1000-1720 rpm for 440 - 710 gpm

Cornell 4NHTB - 1 ¾ mi Dragline - PTO speed 1000-1720 rpm for 440 - 490 gpm

MAURER-STUTZ

Manure Nutrient Management Plan

PROJECT: 23805007

PROJECT NO.: *Win Production*

COMPUTATION BY: JEO *DATE:* *6/11/12*

CHECKED BY: Updated *DATE:*

Plan Start Year: 2013

Plan End Year: 2018

REGION OF ILLINOIS

Central

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Crop Yields

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P & K Levels

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Whole Farm Nutrient Balance

Note to users and those reviewing this document:

All values in the shaded areas are inputs based on specific client information. Those values not in the shaded areas were calculated based on data from Mid West Plan Service - 18, NRCS Animal Waste Management Field Hand book part 651 Chapter 11, Illinois Agronomy Handbook, and/or Title 35 Subtitle E Chapter II Part 560 Appendix A.

v.15

MAURER-STUTZ

Available Nutrients Calculations

Manure Analysis

START YEAR

2013

PROJECT: 23805007

PROJECT NO.: *Win Production*

COMPUTATION BY: JEO *DATE:* *6/11/12*

CHECKED BY: *DATE:*

	Source #	**Spring**	**Fall**								
	Source	SWINE ANAEROBIC LIQUID INJECTED	SWINE ANAEROBIC LIQUID INJECTED								
2010	# NH3 / k Gal or ton	1.27	3.87								
	# Org. N / k Gal or ton	1.53	3.22								
	# TOTAL N/ k Gal or ton	2.75	7.23								
	# 1YR PAN / k Gal or ton	1.78	4.92								
	# P2O5/ k Gal or ton	4.15	4.22								
	# K20/ k Gal or ton	10.7	12.8								
2011	# NH3 / k Gal or ton	1.27	4.29								
	# Org. N / k Gal or ton	1.53	3.95								
	# TOTAL N/ k Gal or ton	2.75	8.23								
	# 1YR PAN / k Gal or ton	1.78	5.59								
	# P2O5/ k Gal or ton	4.15	5.51								
	# K20/ k Gal or ton	10.7	10.7								
2012	# NH3 / k Gal or ton	1.25	4.23								
	# Org. N / k Gal or ton	1.51	3.74								
	# TOTAL N/ k Gal or ton	2.71	7.99								
	# 1YR PAN / k Gal or ton	1.75	5.45								
	# P2O5/ k Gal or ton	4.12	5.50								
	# K20/ k Gal or ton	10.6	12.8								
2013	# NH3 / k Gal or ton	1.25	4.23								
	# Org. N / k Gal or ton	1.51	3.74								
	# TOTAL N/ k Gal or ton	2.71	7.99								
	# 1YR PAN / k Gal or ton	1.75	5.45								
	# P2O5/ k Gal or ton	4.12	5.50								
	# K20/ k Gal or ton	10.6	12.8								
2014	# NH3 / k Gal or ton	1.25	4.23								
	# Org. N / k Gal or ton	1.51	3.74								
	# TOTAL N/ k Gal or ton	2.71	7.99								
	# 1YR PAN / k Gal or ton	1.75	5.45								
	# P2O5/ k Gal or ton	4.12	5.50								
	# K20/ k Gal or ton	10.6	12.8								
2015	# NH3 / k Gal or ton	1.25	4.23								
	# Org. N / k Gal or ton	1.51	3.74								
	# TOTAL N/ k Gal or ton	2.71	7.99								
	# 1YR PAN / k Gal or ton	1.75	5.45								
	# P2O5/ k Gal or ton	4.12	5.50								
	# K20/ k Gal or ton	10.6	12.8								
2016	# NH3 / k Gal or ton	1.25	4.23								
	# Org. N / k Gal or ton	1.51	3.74								
	# TOTAL N/ k Gal or ton	2.71	7.99								
	# 1YR PAN / k Gal or ton	1.75	5.45								
	# P2O5/ k Gal or ton	4.12	5.50								
	# K20/ k Gal or ton	10.6	12.8								
2017	# NH3 / k Gal or ton	1.25	4.23								
	# Org. N / k Gal or ton	1.51	3.74								
	# TOTAL N/ k Gal or ton	2.71	7.99								
	# 1YR PAN / k Gal or ton	1.75	5.45								
	# P2O5/ k Gal or ton	4.12	5.50								
	# K20/ k Gal or ton	10.6	12.8								
2018	# NH3 / k Gal or ton	1.25	4.23								
	# Org. N / k Gal or ton	1.51	3.74								
	# TOTAL N/ k Gal or ton	2.71	7.99								
	# 1YR PAN / k Gal or ton	1.75	5.45								
	# P2O5/ k Gal or ton	4.12	5.50								
	# K20/ k Gal or ton	10.6	12.8								

MAURER-STUTZ
ENGINEERS SURVEYORS

Manure Sources

Available Nutrients Calculations

Manure Analysis

START YEAR
2013

PROJECT: 23805007
PROJECT NO.: *Win Production*
COMPUTATION BY: JEO *DATE:* *6/11/12*
CHECKED BY: *DATE:*

2010

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
Spring	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	1.27	1.53	2.75	4.15	10.7
Fall	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	3.87	3.22	7.23	4.22	12.8

2011

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
Spring	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	1.27	1.53	2.75	4.15	10.7
Fall	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	4.29	3.95	8.23	5.51	10.7

2012

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
Spring	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	1.25	1.51	2.71	4.12	10.6
Fall	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	4.23	3.74	7.99	5.5	12.8

MAURER-STUTZ
ENGINEERS SURVEYORS

Manure Sources

Available Nutrients Calculations

Manure Analysis

START YEAR
2013

PROJECT: 23805007
PROJECT NO.: *Win Production*
COMPUTATION BY: JEO *DATE:* *6/11/12*
CHECKED BY: *DATE:*

2013

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
Spring	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	1.25	1.51	2.71	4.12	10.6
Fall	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	4.23	3.74	7.99	5.5	12.8

2014

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
Spring	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	1.25	1.51	2.71	4.12	10.6
Fall	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	4.23	3.74	7.99	5.5	12.8

2015

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
Spring	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	1.25	1.51	2.71	4.12	10.6
Fall	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	4.23	3.74	7.99	5.5	12.8

MAURER-STUTZ
ENGINEERS SURVEYORS

Manure Sources

Available Nutrients Calculations

Manure Analysis

START YEAR
2013

PROJECT: 23805007
PROJECT NO.: *Win Production*
COMPUTATION BY: JEO *DATE:* *6/11/12*
CHECKED BY: *DATE:*

2016

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
Spring	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	1.25	1.51	2.71	4.12	10.6
Fall	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	4.23	3.74	7.99	5.5	12.8

2017

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
Spring	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	1.25	1.51	2.71	4.12	10.6
Fall	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	4.23	3.74	7.99	5.5	12.8

2018

MANURE SOURCE	ANIMAL TYPE	TYPE OF MANURE	STATE	APPLICATION METHOD	1000 GAL / TON	AMOUNT 1,000 GAL / TON	NH3	ORGANIC NITROGEN	TOTAL NITROGEN	P2O5	K2O
Spring	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	1.25	1.51	2.71	4.12	10.6
Fall	SWINE	ANAEROBIC	LIQUID	INJECTED	1000 GAL	2800	4.23	3.74	7.99	5.5	12.8

MAURER-STUTZ

	Fields	Acres
Spread	39.0	1,044.6
Setback	18.0	200.3
Total	57.0	1,244.9

Field Infromation

START YEAR
2013

PROJECT: 23805007
PROJECT NO.: *Win Production*
COMPUTATION BY: JEO *DATE:* *6/11/12*
CHECKED BY: *DATE:*

FIELD NAME	TOTAL ACRES	SETBACK ACRES	SPREADABLE ACRES
York (T16198-1)	153.3	29	124.3
York (T16198-2)	74.6	12.7	61.9
York (T16198-3)	37.0	13.2	23.8
York (T16198-4)	37.4	5.7	31.7
York (T16198-5)	44.8	15.1	29.7
York (T16198-6)	75.0	16.4	58.6
York (T16198-7)	31.4	0	31.4
York (T16198-8)	76.0	10.3	65.7
2 a-e (F1107-T9992-4-5)	38.1	0	38.1
5 a-c (F1970-T9961-8)	23.5	0	23.5
9 a-b (F1107-T992-2-3)	14.8	0	14.8
9c (F1970-T9961-6A)	10.3	0	10.3
Coon (T10293-7)	41.2	10.5	30.7
Coon (T10293-6)	38.8	6.2	32.6
Coon (T10293-8)	25.0	18.6	6.4
Coon (T10293-9)	89.5	18.3	71.2
Coon (T10590-1)	32.2	10.1	22.1
Coon (T10590-24)	3.3	3.2	0.1
Coon (T10590-25)	40.0	3.4	36.6
Coon (T10590-26)	6.4	0	6.4
Coon (T10590-3)	27.0	10.6	16.4
Coon (T10590-18)	2.3	0	2.3
Coon (T10590-29)	1.3	0	1.3
Coon (T10590-4)	1.7	1.6	0.1
Coon (T10590-17)	1.6	0	1.6
Coon (T10590-5)	61.0	0	61.0
Coon (T10590-6)	59.8	6.4	53.4
Coon (T10590-2)	2.9	0	2.9
Coon (T10590-22)	6.3	0	6.3
Coon (T10590-27)	2.3	0	2.3
Coon (T10590-23)	0.7	0	0.7
Coon (T10590-28)	0.7	0	0.7
Coon (T10590-7)	65.2	0	65.2
Coon (T10590-20)	66.3	0	66.3
Coon (T10590-14)	6.5	0	6.5
Coon (T10590-15)	7.1	0	7.1
Coon (T10590-9)	1.4	0	1.4
Coon (T10590-13)	5.5	0	5.5
Coon (T10590-10)	32.6	9	23.6

MAURER-STUTZ

Field Crop Rotations

START YEAR
2013

PROJECT: 23805007
PROJECT NO.: Win Production
COMPUTATION BY: JEO *DATE:* 6/11/12
CHECKED BY: *DATE:*

Crop Rotations and Yields

		2011		2012		2013		2014		2015		2016		2017		2018	
FIELD NAME	ACRES	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL
York (T16198-1)	124.3		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
York (T16198-1)(A)	29		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
York (T16198-2)	61.9		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
York (T16198-2)(A)	12.7		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
York (T16198-3)	23.8		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
York (T16198-3)(A)	13.2		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
York (T16198-4)	31.7		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
York (T16198-4)(A)	5.7		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
York (T16198-5)	29.7		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
York (T16198-5)(A)	15.1		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
York (T16198-6)	58.6		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
York (T16198-6)(A)	16.4		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
York (T16198-7)	31.4		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
York (T16198-8)	65.7		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
York (T16198-8)(A)	10.3		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain		Corn Grain
2 a-e (F1107-T9992-4-5)	38.11		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
5 a-c (F1970-T9961-8)	23.49		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
9 a-b (F1107-T992-2-3)	14.84	Alfalfa Hay		Alfalfa Hay		Alfalfa Hay		Alfalfa Hay		Alfalfa Hay		Alfalfa Hay		Alfalfa Hay		Alfalfa Hay	
9c (F1970-T9961-6A)	10.34	Alfalfa Hay		Alfalfa Hay		Alfalfa Hay		Alfalfa Hay		Alfalfa Hay		Alfalfa Hay		Alfalfa Hay		Alfalfa Hay	
Coon (T10293-7)	30.7		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10293-7)(A)	10.5		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10293-6)	32.6		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10293-6)(A)	6.2		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10293-8)	6.4		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10293-8)(A)	18.6		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10293-9)	71.2		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain
Coon (T10293-9)(A)	18.3		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain
Coon (T10590-1)	22.1		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-1)(A)	10.1		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-24)	1.00E-01		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-24)(A)	3.2		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-25)	36.6		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-25)(A)	3.4		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-26)	6.4		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-3)	16.4		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-3)(A)	10.6		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-18)	2.3		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain
Coon (T10590-29)	1.3		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain
Coon (T10590-4)	1.00E-01		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain
Coon (T10590-4)(A)	1.6		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain
Coon (T10590-17)	1.6		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-5)	61		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain
Coon (T10590-6)	53.4		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain
Coon (T10590-6)(A)	6.4		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain
Coon (T10590-2)	2.9		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-22)	6.3		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-27)	2.3		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-23)	0.7		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-28)	0.7		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-7)	65.2		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-20)	66.3		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-14)	6.5		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-15)	7.1		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-9)	1.4		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-13)	5.5		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain
Coon (T10590-10)	23.6		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain
Coon (T10590-10)(A)	9		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain		Soybeans Grain		Corn Grain
Crop Acres Pre Year																	
Corn Grain			971.50		777.7		971.50		777.7		971.50		777.7		971.50		777.7
Corn Silage																	
Corn Stover																	
Soybeans Grain			248.20		442		248.20		442		248.20		442		248.20		442
DC Soybeans Grain																	
Oats Grain-Straw																	
Oats Straw																	
Wheat Grain-Straw																	
Wheat Straw																	
Wheat Silage																	
Sorghum Grain																	
Sorghum Silage																	
Sorghum Sudan																	
Sudex																	
Alfalfa Hay		25.18		25.18		25.18		25.18		25.18		25.18		25.18		25.18	
Alfalfa Grass																	
Clover Hay																	
Brumuda Grass																	
CRP Grass																	
Prasture Grass																	
Small Grain Hay																	
Rye																	
Rye Cover																	
OTHER																	
Popcorn																	
TOTAL		25.18	1219.70	25.18	1219.7	25.18	1219.70	25.18	1219.7	25.18	1219.70	25.18	1219.7	25.18	1219.70	25.18	1219.7

MAURER-STUTZ

Field Yield Information

PROJECT: 23805007
PROJECT NO.: *Win Production*
COMPUTATION BY: JEO *DATE:* *6/11/12*
CHECKED BY: *DATE:*

FIELD NAME	Corn Grain bu	Corn Silage Ton	Corn Stover Ton	Soybeans Grain bu	DC Soybeans Grain bu	Oats Grain-Straw Ton	Oats Straw Ton	Wheat Grain-Straw bu	Wheat Straw Ton	Wheat Silage Ton	Sorghum Grain bu	Sorghum Silage Ton	Sorghum Sudan Ton	Sudex Ton	Alfalfa Hay Ton	Alfalfa Grass Ton	Clover Hay Ton	Brumuda Grass Ton	CRP Grass Ton	Pasture Grass Ton	Small Grain Hay Ton	Rye Ton	Rye Cover Ton	Other	Popcorn (Shelled)
York (T16198-1)	200			50																					
York (T16198-1)(A)	200			50																					
York (T16198-2)	118			40																					
York (T16198-2)(A)	118			40																					
York (T16198-3)	141			45																					
York (T16198-3)(A)	141			45																					
York (T16198-4)	117			38																					
York (T16198-4)(A)	117			38																					
York (T16198-5)	118			40																					
York (T16198-5)(A)	118			40																					
York (T16198-6)	200			40																					
York (T16198-6)(A)	200			40																					
York (T16198-7)	117			38																					
York (T16198-8)	118			40																					
York (T16198-8)(A)	118			40																					
2 a-e (F1107-T9992-4-5)	170			50																					
5 a-c (F1970-T9961-8)	175			50																					
9 a-b (F1107-T992-2-3)															4										
9c (F1970-T9961-6A)															4										
Coon (T10293-7)	106			36																					
Coon (T10293-7)(A)	106			36																					
Coon (T10293-6)	145			45																					
Coon (T10293-6)(A)	145			45																					
Coon (T10293-8)	122			40																					
Coon (T10293-8)(A)	122			40																					
Coon (T10293-9)	145			45																					
Coon (T10293-9)(A)	145			45																					
Coon (T10590-1)	118			40																					
Coon (T10590-1)(A)	118			40																					
Coon (T10590-24)	140			47																					
Coon (T10590-24)(A)	140			47																					
Coon (T10590-25)	132			43																					
Coon (T10590-25)(A)	132			43																					
Coon (T10590-26)	118			40																					
Coon (T10590-3)	118			40																					
Coon (T10590-3)(A)	118			40																					
Coon (T10590-18)	159			53																					
Coon (T10590-29)	118			40																					
Coon (T10590-4)	118			40																					
Coon (T10590-4)(A)	118			40																					
Coon (T10590-17)	122			40																					
Coon (T10590-5)	138			45																					
Coon (T10590-6)	132			43																					
Coon (T10590-6)(A)	132			43																					
Coon (T10590-2)	118			40																					
Coon (T10590-22)	117			38																					
Coon (T10590-27)	117			38																					
Coon (T10590-23)	118			40																					
Coon (T10590-28)	122			40																					
Coon (T10590-7)	132			43																					
Coon (T10590-20)	155			48																				1	
Coon (T10590-14)	118			40																				1	
Coon (T10590-15)	106			36																					
Coon (T10590-9)	134			45																					
Coon (T10590-13)	118			40																				1	
Coon (T10590-10)	140			47																				1	
Coon (T10590-10)(A)	140			47																					

MAURER-STUTZ

MEDIAN SOIL TEST DATA

	2010 SOIL TEST					2011 SOIL TEST					2012 SOIL TEST					2013 SOIL TEST					2014 SOIL TEST					2015 SOIL TEST					2016 SOIL TEST					2017 SOIL TEST					2018 SOIL TEST				
	% OM	P	K	PH	BM/AM	% OM	P	K	PH	BM/AM	% OM	P	K	PH	BM/AM	% OM	P	K	PH	BM/AM	% OM	P	K	PH	BM/AM	% OM	P	K	PH	BM/AM	% OM	P	K	PH	BM/AM	% OM	P	K	PH	BM/AM	% OM	P	K	PH	BM/AM
FIELD NAME	%	LB/AC	LB/AC			%	LB/AC	LB/AC			%	LB/AC	LB/AC			%	LB/AC	LB/AC			%	LB/AC	LB/AC			%	LB/AC	LB/AC			%	LB/AC	LB/AC			%	LB/AC	LB/AC			%	LB/AC	LB/AC		
York (T16198-1)		70	300			2.2	164	380	6.7																																				
York (T16198-1)(A)		70	300			2.2	164	380	6.7																																				
York (T16198-2)		70	300																																										
York (T16198-2)(A)		70	300																																										
York (T16198-3)		70	300			2.0	136	304	6.5																																				
York (T16198-3)(A)		70	300			2.0	136	304	6.5																																				
York (T16198-4)		70	300			1.3	358	344	6.6																																				
York (T16198-4)(A)		70	300			1.3	358	344	6.6																																				
York (T16198-5)		70	300																																										
York (T16198-5)(A)		70	300																																										
York (T16198-6)		70	300			2.3	69	315	6.6	AM																																			
York (T16198-6)(A)		70	300			2.3	69	315	6.6	AM																																			
York (T16198-7)		70	300																																										
York (T16198-8)		70	300			4.2	62	306	7.1	AM																																			
York (T16198-8)(A)		70	300			4.2	62	306	7.1	AM																																			
2 a-e (F1107-T9992-4-5)		70	300			0.8	232	194	7.1	AM																																			
5 a-c (F1970-T9961-8)		70	300			1.1	184	258	5.7	AM																																			
9 a-b (F1107-T992-2-3)		70	300			1.0	100	144	6.0	AM																																			
9c (F1970-T9961-6A)		70	300			1.19	252	180	6	AM																																			
Coon (T10293-7)		122	300																																										
Coon (T10293-7)(A)		122	300																																										
Coon (T10293-6)		122	300																																										
Coon (T10293-6)(A)		122	300																																										
Coon (T10293-8)		122	300																																										
Coon (T10293-8)(A)		122	300																																										
Coon (T10293-9)		122	300																																										
Coon (T10293-9)(A)		122	300																																										
Coon (T10590-1)		122	300																																										
Coon (T10590-1)(A)		122	300																																										
Coon (T10590-24)		122	300																																										
Coon (T10590-24)(A)		122	300																																										
Coon (T10590-25)		122	300																																										
Coon (T10590-25)(A)		122	300																																										
Coon (T10590-26)		122	300																																										
Coon (T10590-3)		122	300																																										
Coon (T10590-3)(A)		122	300																																										
Coon (T10590-18)		122	300																																										
Coon (T10590-29)		122	300																																										
Coon (T10590-4)		122	300																																										
Coon (T10590-4)(A)		122	300																																										
Coon (T10590-17)		122	300																																										
Coon (T10590-5)		122	300																																										
Coon (T10590-6)		122	300																																										
Coon (T10590-6)(A)		122	300																																										
Coon (T10590-2)		122	300																																										
Coon (T10590-22)		122	300																																										
Coon (T10590-27)		122	300																																										
Coon (T10590-23)		122	300																																										
Coon (T10590-28)		122	300																																										
Coon (T10590-7)		122	300																																										
Coon (T10590-20)		122	300																																										
Coon (T10590-14)		122	300																																										
Coon (T10590-15)		122	300																																										
Coon (T10590-9)		122	300																																										
Coon (T10590-13)		122	300																																										
Coon (T10590-10)		122	300																																										
Coon (T10590-10)(A)		122	300																																										

MAURER-STUTZ

Manure Application Rates
History & Planned
START YEAR
2013

PROJECT:	23805007
PROJECT NO.:	Win Production
COMPUTATION BY:	JEO
DATE:	6/11/12
CHECKED BY:	Updated
DATE:	

Crop Year	2010				2011				2012				2013				2014				2015				2016				2017				2018			
	Fall		Spring		Fall		Spring		Fall		Spring		Fall		Spring		Fall		Spring		Fall		Spring		Fall		Spring		Fall		Spring		Fall		Spring	
	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure
	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source
FIELD NAME	1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON	
York (T16198-1)(Appl 1)	15.00	Fall							12.00	Fall							12.00	Fall							12.00	Fall							12.00	Fall		
York (T16198-1)(Appl 2)																																				
York (T16198-1)(Appl 3)																																				
York (T16198-2)(Appl 1)																	12.00	Fall							12.00	Fall							12.00	Fall		
York (T16198-2)(Appl 2)																																				
York (T16198-2)(Appl 3)																																				
York (T16198-3)(Appl 1)	15	Fall							12.00	Fall							12.00	Fall							12.00	Fall							12.00	Fall		
York (T16198-3)(Appl 2)																																				
York (T16198-3)(Appl 3)																																				
York (T16198-4)(Appl 1)	15	Fall							12.00	Fall							12.00	Fall							12.00	Fall							12.00	Fall		
York (T16198-4)(Appl 2)																																				
York (T16198-4)(Appl 3)																																				
York (T16198-5)(Appl 1)															15	Spring							15	Spring							15	Spring				
York (T16198-5)(Appl 2)																																				
York (T16198-5)(Appl 3)																																				
York (T16198-6)(Appl 1)					15	Fall									15	Spring							15	Spring							15	Spring				
York (T16198-6)(Appl 2)																																				
York (T16198-6)(Appl 3)																																				
York (T16198-7)(Appl 1)															15	Spring							15	Spring							15	Spring				
York (T16198-7)(Appl 2)																																				
York (T16198-7)(Appl 3)																																				
York (T16198-8)(Appl 1)							15	Spring							15	Spring							15	Spring							15	Spring				
York (T16198-8)(Appl 2)																																				
York (T16198-8)(Appl 3)																																				
2 a-e (F1107-T9992-4-5)(Appl 1)					15	Fall					16	Spring	15	Fall					16	Spring	15	Fall					16	Spring	15	Fall					16	Spring
2 a-e (F1107-T9992-4-5)(Appl 2)																																				
2 a-e (F1107-T9992-4-5)(Appl 3)																																				
5 a-c (F1970-T9961-8)(Appl 1)					15	Fall			12	Fall			15	Fall							15	Fall							15	Fall						
5 a-c (F1970-T9961-8)(Appl 2)																																				
5 a-c (F1970-T9961-8)(Appl 3)																																				
9 a-b (F1107-T992-2-3)(Appl 1)					15	Fall					16	Spring	15	Fall					16	Spring	12	Fall					15	Spring	12	Fall					15	Spring
9 a-b (F1107-T992-2-3)(Appl 2)																																				
9 a-b (F1107-T992-2-3)(Appl 3)																																				
9c (F1970-T9961-6A)(Appl 1)					15	Fall					16	Spring	15	Fall					16	Spring	12	Fall					15	Spring	12	Fall					15	Spring
9c (F1970-T9961-6A)(Appl 2)																																				
9c (F1970-T9961-6A)(Appl 3)																																				
Coon (T10293-7)(Appl 1)																																				
Coon (T10293-7)(Appl 2)																																				
Coon (T10293-7)(Appl 3)																																				
Coon (T10293-6)(Appl 1)																																				
Coon (T10293-6)(Appl 2)																																				
Coon (T10293-6)(Appl 3)																																				
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Coon (T10293-9)(Appl 3)																																				
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Coon (T10590-1)(Appl 3)																																				
Coon (T10590-24)(Appl 1)																																				
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Coon (T10590-3)(Appl 1)																																				
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Coon (T10590-18)(Appl 3)																																				
Coon (T10590-29)(Appl 1)																																				
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Coon (T10590-29)(Appl 3)																																				
Coon (T10590-4)(Appl 1)																																				
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Coon (T10590-4)(Appl 3)																																				
Coon (T10590-17)(Appl 1)																																				
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Coon (T10590-6)(Appl 1)																																				
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Coon (T10590-6)(Appl 3)																																				
Coon (T10590-2)(Appl 1)																																				
Coon (T10590-2)(Appl 2)																																				
Coon (T10590-2)(Appl 3)																																				
Coon (T10590-22)(Appl 1)																																				
Coon (T10590-22)(Appl 2)																																				
Coon (T10590-22)(Appl 3)																																				
Coon (T10590-27)(Appl 1)																																				
Coon (T10590-27)(Appl 2)																																				
Coon (T10590-27)(Appl 3)																																				
Coon (T10590-23)(Appl 1)																																				
Coon (T10590-23)(Appl 2)																																				
Coon (T10590-23)(Appl 3)																																				
Coon (T10590-28)(Appl 1)																																				
Coon (T10590-28)(Appl 2)																																				
Coon (T10590-28)(Appl 3)																																				
Coon (T10590-7)(Appl 1)																																				
Coon (T10590-7)(Appl 2)																																				
Coon (T10590-7)(Appl 3)																																				
Coon (T10590-20)(Appl 1)																																				

MAURER-STUTZ

Manure Application Rates
History & Planned
START YEAR
2013

PROJECT:	23805007
PROJECT NO.:	Win Production
COMPUTATION BY:	JEO
DATE:	*6/11/12*
CHECKED BY:	Updated
DATE:	

Crop Year	2010				2011				2012				2013				2014				2015				2016				2017				2018			
	Fall		Spring		Fall		Spring		Fall		Spring		Fall		Spring		Fall		Spring		Fall		Spring		Fall		Spring		Fall		Spring		Fall		Spring	
	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure	App. Rate	Manure
	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source	per Acre	Source
FIELD NAME	1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON		1000GAL / TON	
Coon (T10590-20)(Appl 2)																																				
Coon (T10590-20)(Appl 3)																																				
Coon (T10590-14)(Appl 1)																																				
Coon (T10590-14)(Appl 2)																																				
Coon (T10590-14)(Appl 3)																																				
Coon (T10590-15)(Appl 1)																																				
Coon (T10590-15)(Appl 2)																																				
Coon (T10590-15)(Appl 3)																																				
Coon (T10590-9)(Appl 1)																																				
Coon (T10590-9)(Appl 2)																																				
Coon (T10590-9)(Appl 3)																																				
Coon (T10590-13)(Appl 1)																																				
Coon (T10590-13)(Appl 2)																																				
Coon (T10590-13)(Appl 3)																																				
Coon (T10590-10)(Appl 1)																																				
Coon (T10590-10)(Appl 2)																																				
Coon (T10590-10)(Appl 3)																																				
TOTAL ACRES APPLIED TO	180				145		66		203		63		87		185		242		63		87		185		242		63		87		185		242		63	
SOURCE Spring APPLIED	0				0		986		0		1013		0		2781		0		1013		0		2781		0		987		0		2781		0		987	
SOURCE Fall APPLIED	2697				2181		0		2439		0		1302		0		2900		0		1226		0		2900		0		1226		0		2900		0	

MAURER-STUTZ

Five Year Manure Management Plan - Applied & Planned

CROP YEAR 2013 FIELD #	ACRES	2010 ORGANIC N APPLIED #/ACRE	2011 ORGANIC N APPLIED #/ACRE	2012 ORGANIC N APPLIED #/ACRE	2012 CROP	2013 SPRING CROP	2013 FALL CROP	SPRING YIELD GOAL UNITS/ACRE	FALL YIELD GOAL UNITS/ACRE	SPRING NITROGEN UPTAKE lb/UNITS	FALL NITROGEN UPTAKE lb/UNITS	PAN UPTAKE GOAL lb/ACRE	PREVIOUS CROP N CREDIT lb/ACRE	PREVIOUS MANURE ORGANIC N 3RD YR CREDIT lb/ACRE	2ND YR CREDIT lb/ACRE	1ST YR CREDIT lb/ACRE	2013 MANURE PAN lb/ACRE	2013 TOTAL PAN lb/ACRE	Spring SWINE ANAEROBIC LIQUID	Fall SWINE ANAEROBIC LIQUID
York (T16198-1)	124	17		16	Corn Grain		Corn Grain		200		1.2	240		2		8		(230)		
York (T16198-1)(A)	29				Corn Grain		Corn Grain		200		1.2	240						(240)		
York (T16198-2)	62				Corn Grain		Corn Grain		118		1.2	142						(142)		
York (T16198-2)(A)	13				Corn Grain		Corn Grain		118		1.2	142						(142)		
York (T16198-3)	24	17		16	Corn Grain		Corn Grain		141		1.2	169		2		8		(159)		
York (T16198-3)(A)	13				Corn Grain		Corn Grain		141		1.2	169						(169)		
York (T16198-4)	32	17		16	Corn Grain		Corn Grain		117		1.2	140		2		8		(130)		
York (T16198-4)(A)	6				Corn Grain		Corn Grain		117		1.2	140						(140)		
York (T16198-5)	30				Corn Grain		Corn Grain		118		1.2	142					27	(115)	446	
York (T16198-5)(A)	15				Corn Grain		Corn Grain		118		1.2	142						(142)		
York (T16198-6)	59		21		Corn Grain		Corn Grain		200		1.2	240			5		27	(208)	879	
York (T16198-6)(A)	16				Corn Grain		Corn Grain		200		1.2	240						(240)		
York (T16198-7)	31				Corn Grain		Corn Grain		117		1.2	140					27	(113)	471	
York (T16198-8)	65.70		9		Corn Grain		Corn Grain		118		1.2	142			2		27	(112)	986	
York (T16198-8)(A)	10.30				Corn Grain		Corn Grain		118		1.2	142						(142)		
2 a-e (F1107-T9992-4-5)	38.11		21	9	Soybeans Grain		Corn Grain		170		1.2	204	10		5	5	82	(102)		572
5 a-c (F1970-T9961-8)	23.49		21	16	Soybeans Grain		Corn Grain		175		1.2	210	10		5	8	82	(105)		352
9 a-b (F1107-T992-2-3)	14.84		21	9	Alfalfa Hay	Alfalfa Hay		4	0	45.0	0.0	180	50		5	5	82	(38)		223
9c (F1970-T9961-6A)	10		21	9	Alfalfa Hay	Alfalfa Hay		4	0	45.0	0.0	180	50		5	5	82	(38)		155
Coon (T10293-7)	31				Soybeans Grain		Corn Grain		106		1.2	127	10					(117)		
Coon (T10293-7)(A)	11				Soybeans Grain		Corn Grain		106		1.2	127	10					(117)		
Coon (T10293-6)	33				Soybeans Grain		Corn Grain		145		1.2	174	10					(164)		
Coon (T10293-6)(A)	6				Soybeans Grain		Corn Grain		145		1.2	174	10					(164)		
Coon (T10293-8)	6				Soybeans Grain		Corn Grain		122		1.2	146	10					(136)		
Coon (T10293-8)(A)	19				Soybeans Grain		Corn Grain		122		1.2	146	10					(136)		
Coon (T10293-9)	71				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10293-9)(A)	18				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10590-1)	22				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-1)(A)	10				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-24)	0				Soybeans Grain		Corn Grain		140		1.2	168	10					(158)		
Coon (T10590-24)(A)	3				Soybeans Grain		Corn Grain		140		1.2	168	10					(158)		
Coon (T10590-25)	37				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-25)(A)	3.40				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-26)	6				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-3)	16.40				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-3)(A)	10.60				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-18)	2.30				Corn Grain		Soybeans Grain		53		3.0	159						(159)		
Coon (T10590-29)	1.30				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-4)	0.10				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-4)(A)	1.60				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-17)	1.60				Soybeans Grain		Corn Grain		122		1.2	146	10					(136)		
Coon (T10590-5)	61.00				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10590-6)	53.40				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-6)(A)	6.40				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-2)	2.90				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-22)	6.30				Soybeans Grain		Corn Grain		117		1.2	140	10					(130)		
Coon (T10590-27)	2.30				Soybeans Grain		Corn Grain		117		1.2	140	10					(130)		
Coon (T10590-23)	0.70				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-28)	0.70				Soybeans Grain		Corn Grain		122		1.2	146	10					(136)		
Coon (T10590-7)	65.20				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-20)	66.30				Soybeans Grain		Corn Grain		155		1.2	186	10					(176)		
Coon (T10590-14)	6.50				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-15)	7.10				Soybeans Grain		Corn Grain		106		1.2	127	10					(117)		
Coon (T10590-9)	1.40				Soybeans Grain		Corn Grain		134		1.2	161	10					(151)		
Coon (T10590-13)	5.50				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-10)	23.60				Corn Grain		Soybeans Grain		47		3.0	141						(141)		
Coon (T10590-10)(A)	9.00				Corn Grain		Soybeans Grain		47		3.0	141						(141)		
																	TOTAL AMOUNT ALLOCATED		2781	1302
																	TOTAL AMOUNT REMAINING		19	1498

MAURER-STUTZ

Five Year Manure Management Plan - Applied & Planned

CROP YEAR 2014 FIELD #	ACRES	2011 ORGANIC N APPLIED #/ACRE	2012 ORGANIC N APPLIED #/ACRE	2013 ORGANIC N APPLIED #/ACRE	2013 CROP	2014 SPRING CROP	2014 FALL CROP	SPRING YIELD GOAL UNITS/ACRE	FALL YIELD GOAL UNITS/ACRE	SPRING NITROGEN UPTAKE lb/UNITS	FALL NITROGEN UPTAKE lb/UNITS	PAN UPTAKE GOAL lb/ACRE	PREVIOUS CROP N CREDIT lb/ACRE	PREVIOUS MANURE ORGANIC N 3RD YR CREDIT lb/ACRE	2ND YR CREDIT lb/ACRE	1ST YR CREDIT lb/ACRE	2014 MANURE PAN lb/ACRE	2014 TOTAL PAN lb/ACRE	Spring SWINE ANAEROBIC LIQUID	Fall SWINE ANAEROBIC LIQUID
York (T16198-1)	124.30		16		Corn Grain		Corn Grain		200		1.2	240			4		66	(170)		1492
York (T16198-1)(A)	29.00				Corn Grain		Corn Grain		200		1.2	240						(240)		
York (T16198-2)	61.90				Corn Grain		Corn Grain		118		1.2	142					66	(76)		743
York (T16198-2)(A)	12.70				Corn Grain		Corn Grain		118		1.2	142						(142)		
York (T16198-3)	23.80		16		Corn Grain		Corn Grain		141		1.2	169			4		66	(99)		286
York (T16198-3)(A)	13.20				Corn Grain		Corn Grain		141		1.2	169						(169)		
York (T16198-4)	31.70		16		Corn Grain		Corn Grain		117		1.2	140			4		66	(70)		380
York (T16198-4)(A)	5.70				Corn Grain		Corn Grain		117		1.2	140						(140)		
York (T16198-5)	29.70			8	Corn Grain		Corn Grain		118		1.2	142				4		(138)		
York (T16198-5)(A)	15.10				Corn Grain		Corn Grain		118		1.2	142						(142)		
York (T16198-6)	58.60	21		8	Corn Grain		Corn Grain		200		1.2	240		3		4		(233)		
York (T16198-6)(A)	16.40				Corn Grain		Corn Grain		200		1.2	240						(240)		
York (T16198-7)	31.40			8	Corn Grain		Corn Grain		117		1.2	140				4		(136)		
York (T16198-8)	65.70	9		8	Corn Grain		Corn Grain		118		1.2	142		1		4		(136)		
York (T16198-8)(A)	10.30				Corn Grain		Corn Grain		118		1.2	142						(142)		
2 a-e (F1107-T9992-4-5)	38.11	21	9	20	Corn Grain		Soybeans Grain		50		3.0	150		3	2	10	29	(106)	610	
5 a-c (F1970-T9961-8)	23.49	21	16	20	Corn Grain		Soybeans Grain		50		3.0	150		3	4	10		(133)		
9 a-b (F1107-T992-2-3)	14.84	21	9	20	Alfalfa Hay	Alfalfa Hay		4	0	45.0	0.0	180	50	3	2	10	29	(86)	237	
9c (F1970-T9961-6A)	10.34	21	9	20	Alfalfa Hay	Alfalfa Hay		4	0	45.0	0.0	180	50	3	2	10	29	(86)	165	
Coon (T10293-7)	30.70				Corn Grain		Soybeans Grain		36		3.0	108						(108)		
Coon (T10293-7)(A)	10.50				Corn Grain		Soybeans Grain		36		3.0	108						(108)		
Coon (T10293-6)	32.60				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10293-6)(A)	6.20				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10293-8)	6.40				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10293-8)(A)	18.60				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10293-9)	71.20				Soybeans Grain		Corn Grain		145		1.2	174	10					(164)		
Coon (T10293-9)(A)	18.30				Soybeans Grain		Corn Grain		145		1.2	174	10					(164)		
Coon (T10590-1)	22.10				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-1)(A)	10.10				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-24)	0.10				Corn Grain		Soybeans Grain		47		3.0	141						(141)		
Coon (T10590-24)(A)	3.20				Corn Grain		Soybeans Grain		47		3.0	141						(141)		
Coon (T10590-25)	36.60				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-25)(A)	3.40				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-26)	6.40				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-3)	16.40				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-3)(A)	10.60				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-18)	2.30				Soybeans Grain		Corn Grain		159		1.2	191	10					(181)		
Coon (T10590-29)	1.30				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-4)	0.10				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-4)(A)	1.60				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-17)	1.60				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-5)	61.00				Soybeans Grain		Corn Grain		138		1.2	166	10					(156)		
Coon (T10590-6)	53.40				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-6)(A)	6.40				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-2)	2.90				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-22)	6.30				Corn Grain		Soybeans Grain		38		3.0	114						(114)		
Coon (T10590-27)	2.30				Corn Grain		Soybeans Grain		38		3.0	114						(114)		
Coon (T10590-23)	0.70				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-28)	0.70				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-7)	65.20				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-20)	66.30				Corn Grain		Soybeans Grain		48		3.0	144						(144)		
Coon (T10590-14)	6.50				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-15)	7.10				Corn Grain		Soybeans Grain		36		3.0	108						(108)		
Coon (T10590-9)	1.40				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10590-13)	5.50				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-10)	23.60				Soybeans Grain		Corn Grain		140		1.2	168	10					(158)		
Coon (T10590-10)(A)	9.00				Soybeans Grain		Corn Grain		140		1.2	168	10					(158)		
																	TOTAL AMOUNT ALLOCATED		1013	2900
																	TOTAL AMOUNT REMAINING		1787	(100)

MAURER-STUTZ

Five Year Manure Management Plan - Applied & Planned

CROP YEAR 2015 FIELD #	ACRES	2012 ORGANIC N APPLIED #/ACRE	2013 ORGANIC N APPLIED #/ACRE	2014 ORGANIC N APPLIED #/ACRE	2014 CROP	2015 SPRING CROP	2015 FALL CROP	SPRING YIELD GOAL UNITS/ACRE	FALL YIELD GOAL UNITS/ACRE	SPRING NITROGEN UPTAKE lb/UNITS	FALL NITROGEN UPTAKE lb/UNITS	PAN UPTAKE GOAL lb/ACRE	PREVIOUS CROP N CREDIT lb/ACRE	PREVIOUS MANURE ORGANIC N 3RD YR CREDIT lb/ACRE	2ND YR CREDIT lb/ACRE	1ST YR CREDIT lb/ACRE	2015 MANURE PAN lb/ACRE	2015 TOTAL PAN lb/ACRE	Spring SWINE ANAEROBIC LIQUID	Fall SWINE ANAEROBIC LIQUID
York (T16198-1)	124.30	16		16	Corn Grain		Corn Grain		200		1.2	240		2		8		(230)		
York (T16198-1)(A)	29.00				Corn Grain		Corn Grain		200		1.2	240						(240)		
York (T16198-2)	61.90			16	Corn Grain		Corn Grain		118		1.2	142				8		(134)		
York (T16198-2)(A)	12.70				Corn Grain		Corn Grain		118		1.2	142						(142)		
York (T16198-3)	23.80	16		16	Corn Grain		Corn Grain		141		1.2	169		2		8		(159)		
York (T16198-3)(A)	13.20				Corn Grain		Corn Grain		141		1.2	169						(169)		
York (T16198-4)	31.70	16		16	Corn Grain		Corn Grain		117		1.2	140		2		8		(130)		
York (T16198-4)(A)	5.70				Corn Grain		Corn Grain		117		1.2	140						(140)		
York (T16198-5)	29.70		8		Corn Grain		Corn Grain		118		1.2	142			2		27	(113)	446	
York (T16198-5)(A)	15.10				Corn Grain		Corn Grain		118		1.2	142						(142)		
York (T16198-6)	58.60		8		Corn Grain		Corn Grain		200		1.2	240			2		27	(211)	879	
York (T16198-6)(A)	16.40				Corn Grain		Corn Grain		200		1.2	240						(240)		
York (T16198-7)	31.40		8		Corn Grain		Corn Grain		117		1.2	140			2		27	(111)	471	
York (T16198-8)	65.70		8		Corn Grain		Corn Grain		118		1.2	142			2		27	(113)	986	
York (T16198-8)(A)	10.30				Corn Grain		Corn Grain		118		1.2	142						(142)		
2 a-e (F1107-T9992-4-5)	38.11	9	20	9	Soybeans Grain		Corn Grain		170		1.2	204	10	1	5	5	82	(101)		572
5 a-c (F1970-T9961-8)	23.49	16	20		Soybeans Grain		Corn Grain		175		1.2	210	10	2	5		82	(111)		352
9 a-b (F1107-T992-2-3)	14.84	9	20	9	Alfalfa Hay	Alfalfa Hay		4	0	45.0	0.0	180	50	1	5	5	66	(53)		178
9c (F1970-T9961-6A)	10.34	9	20	9	Alfalfa Hay	Alfalfa Hay		4	0	45.0	0.0	180	50	1	5	5	66	(53)		124
Coon (T10293-7)	30.70				Soybeans Grain		Corn Grain		106		1.2	127	10					(117)		
Coon (T10293-7)(A)	10.50				Soybeans Grain		Corn Grain		106		1.2	127	10					(117)		
Coon (T10293-6)	32.60				Soybeans Grain		Corn Grain		145		1.2	174	10					(164)		
Coon (T10293-6)(A)	6.20				Soybeans Grain		Corn Grain		145		1.2	174	10					(164)		
Coon (T10293-8)	6.40				Soybeans Grain		Corn Grain		122		1.2	146	10					(136)		
Coon (T10293-8)(A)	18.60				Soybeans Grain		Corn Grain		122		1.2	146	10					(136)		
Coon (T10293-9)	71.20				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10293-9)(A)	18.30				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10590-1)	22.10				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-1)(A)	10.10				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-24)	0.10				Soybeans Grain		Corn Grain		140		1.2	168	10					(158)		
Coon (T10590-24)(A)	3.20				Soybeans Grain		Corn Grain		140		1.2	168	10					(158)		
Coon (T10590-25)	36.60				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-25)(A)	3.40				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-26)	6.40				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-3)	16.40				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-3)(A)	10.60				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-18)	2.30				Corn Grain		Soybeans Grain		53		3.0	159						(159)		
Coon (T10590-29)	1.30				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-4)	0.10				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-4)(A)	1.60				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-17)	1.60				Soybeans Grain		Corn Grain		122		1.2	146	10					(136)		
Coon (T10590-5)	61.00				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10590-6)	53.40				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-6)(A)	6.40				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-2)	2.90				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-22)	6.30				Soybeans Grain		Corn Grain		117		1.2	140	10					(130)		
Coon (T10590-27)	2.30				Soybeans Grain		Corn Grain		117		1.2	140	10					(130)		
Coon (T10590-23)	0.70				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-28)	0.70				Soybeans Grain		Corn Grain		122		1.2	146	10					(136)		
Coon (T10590-7)	65.20				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-20)	66.30				Soybeans Grain		Corn Grain		155		1.2	186	10					(176)		
Coon (T10590-14)	6.50				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-15)	7.10				Soybeans Grain		Corn Grain		106		1.2	127	10					(117)		
Coon (T10590-9)	1.40				Soybeans Grain		Corn Grain		134		1.2	161	10					(151)		
Coon (T10590-13)	5.50				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-10)	23.60				Corn Grain		Soybeans Grain		47		3.0	141						(141)		
Coon (T10590-10)(A)	9.00				Corn Grain		Soybeans Grain		47		3.0	141						(141)		
																	TOTAL AMOUNT ALLOCATED		2781	1226
																	TOTAL AMOUNT REMAINING		19	1574

MAURER-STUTZ

Five Year Manure Management Plan - Applied & Planned

CROP YEAR 2016 FIELD #	ACRES	2013 ORGANIC N APPLIED #/ACRE	2014 ORGANIC N APPLIED #/ACRE	2015 ORGANIC N APPLIED #/ACRE	2015 CROP	2016 SPRING CROP	2016 FALL CROP	SPRING YIELD GOAL UNITS/ACRE	FALL YIELD GOAL UNITS/ACRE	SPRING NITROGEN UPTAKE lb/UNITS	FALL NITROGEN UPTAKE lb/UNITS	PAN UPTAKE GOAL lb/ACRE	PREVIOUS CROP N CREDIT lb/ACRE	PREVIOUS MANURE ORGANIC N 3RD YR CREDIT lb/ACRE	2ND YR CREDIT lb/ACRE	1ST YR CREDIT lb/ACRE	2016 MANURE PAN lb/ACRE	2016 TOTAL PAN lb/ACRE	Spring SWINE ANAEROBIC LIQUID	Fall SWINE ANAEROBIC LIQUID
York (T16198-1)	124.30		16		Corn Grain		Corn Grain		200		1.2	240			4		66	(170)		1492
York (T16198-1)(A)	29.00				Corn Grain		Corn Grain		200		1.2	240						(240)		
York (T16198-2)	61.90		16		Corn Grain		Corn Grain		118		1.2	142			4		66	(72)		743
York (T16198-2)(A)	12.70				Corn Grain		Corn Grain		118		1.2	142						(142)		
York (T16198-3)	23.80		16		Corn Grain		Corn Grain		141		1.2	169			4		66	(99)		286
York (T16198-3)(A)	13.20				Corn Grain		Corn Grain		141		1.2	169						(169)		
York (T16198-4)	31.70		16		Corn Grain		Corn Grain		117		1.2	140			4		66	(70)		380
York (T16198-4)(A)	5.70				Corn Grain		Corn Grain		117		1.2	140						(140)		
York (T16198-5)	29.70	8		8	Corn Grain		Corn Grain		118		1.2	142		1		4		(137)		
York (T16198-5)(A)	15.10				Corn Grain		Corn Grain		118		1.2	142						(142)		
York (T16198-6)	58.60	8		8	Corn Grain		Corn Grain		200		1.2	240		1		4		(235)		
York (T16198-6)(A)	16.40				Corn Grain		Corn Grain		200		1.2	240						(240)		
York (T16198-7)	31.40	8		8	Corn Grain		Corn Grain		117		1.2	140		1		4		(135)		
York (T16198-8)	65.70	8		8	Corn Grain		Corn Grain		118		1.2	142		1		4		(137)		
York (T16198-8)(A)	10.30				Corn Grain		Corn Grain		118		1.2	142						(142)		
2 a-e (F1107-T9992-4-5)	38.11	20	9	20	Corn Grain		Soybeans Grain		50		3.0	150		3	2	10	29	(106)	610	
5 a-c (F1970-T9961-8)	23.49	20		20	Corn Grain		Soybeans Grain		50		3.0	150		3		10		(138)		
9 a-b (F1107-T992-2-3)	14.84	20	9	16	Alfalfa Hay	Alfalfa Hay		4	0	45.0	0.0	180	50	3	2	8	27	(90)	223	
9c (F1970-T9961-6A)	10.34	20	9	16	Alfalfa Hay	Alfalfa Hay		4	0	45.0	0.0	180	50	3	2	8	27	(90)	155	
Coon (T10293-7)	30.70				Corn Grain		Soybeans Grain		36		3.0	108						(108)		
Coon (T10293-7)(A)	10.50				Corn Grain		Soybeans Grain		36		3.0	108						(108)		
Coon (T10293-6)	32.60				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10293-6)(A)	6.20				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10293-8)	6.40				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10293-8)(A)	18.60				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10293-9)	71.20				Soybeans Grain		Corn Grain		145		1.2	174	10					(164)		
Coon (T10293-9)(A)	18.30				Soybeans Grain		Corn Grain		145		1.2	174	10					(164)		
Coon (T10590-1)	22.10				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-1)(A)	10.10				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-24)	0.10				Corn Grain		Soybeans Grain		47		3.0	141						(141)		
Coon (T10590-24)(A)	3.20				Corn Grain		Soybeans Grain		47		3.0	141						(141)		
Coon (T10590-25)	36.60				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-25)(A)	3.40				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-26)	6.40				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-3)	16.40				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-3)(A)	10.60				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-18)	2.30				Soybeans Grain		Corn Grain		159		1.2	191	10					(181)		
Coon (T10590-29)	1.30				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-4)	0.10				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-4)(A)	1.60				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-17)	1.60				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-5)	61.00				Soybeans Grain		Corn Grain		138		1.2	166	10					(156)		
Coon (T10590-6)	53.40				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-6)(A)	6.40				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-2)	2.90				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-22)	6.30				Corn Grain		Soybeans Grain		38		3.0	114						(114)		
Coon (T10590-27)	2.30				Corn Grain		Soybeans Grain		38		3.0	114						(114)		
Coon (T10590-23)	0.70				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-28)	0.70				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-7)	65.20				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-20)	66.30				Corn Grain		Soybeans Grain		48		3.0	144						(144)		
Coon (T10590-14)	6.50				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-15)	7.10				Corn Grain		Soybeans Grain		36		3.0	108						(108)		
Coon (T10590-9)	1.40				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10590-13)	5.50				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-10)	23.60				Soybeans Grain		Corn Grain		140		1.2	168	10					(158)		
Coon (T10590-10)(A)	9.00				Soybeans Grain		Corn Grain		140		1.2	168	10					(158)		
																	TOTAL AMOUNT ALLOCATED		987	2900
																	TOTAL AMOUNT REMAINING		1813	(100)

MAURER-STUTZ

Five Year Manure Management Plan - Applied & Planned

CROP YEAR 2017 FIELD #	ACRES	2014 ORGANIC N APPLIED #/ACRE	2015 ORGANIC N APPLIED #/ACRE	2016 ORGANIC N APPLIED #/ACRE	2016 CROP	2017 SPRING CROP	2017 FALL CROP	SPRING YIELD GOAL UNITS/ACRE	FALL YIELD GOAL UNITS/ACRE	SPRING NITROGEN UPTAKE lb/UNITS	FALL NITROGEN UPTAKE lb/UNITS	PAN UPTAKE GOAL lb/ACRE	PREVIOUS CROP N CREDIT lb/ACRE	PREVIOUS MANURE ORGANIC N 3RD YR CREDIT lb/ACRE	2ND YR CREDIT lb/ACRE	1ST YR CREDIT lb/ACRE	2017 MANURE PAN lb/ACRE	2017 TOTAL PAN lb/ACRE	Spring SWINE ANAEROBIC LIQUID	Fall SWINE ANAEROBIC LIQUID
York (T16198-1)	124.30	16		16	Corn Grain		Corn Grain		200		1.2	240		2		8		(230)		
York (T16198-1)(A)	29.00				Corn Grain		Corn Grain		200		1.2	240						(240)		
York (T16198-2)	61.90	16		16	Corn Grain		Corn Grain		118		1.2	142		2		8		(132)		
York (T16198-2)(A)	12.70				Corn Grain		Corn Grain		118		1.2	142						(142)		
York (T16198-3)	23.80	16		16	Corn Grain		Corn Grain		141		1.2	169		2		8		(159)		
York (T16198-3)(A)	13.20				Corn Grain		Corn Grain		141		1.2	169						(169)		
York (T16198-4)	31.70	16		16	Corn Grain		Corn Grain		117		1.2	140		2		8		(130)		
York (T16198-4)(A)	5.70				Corn Grain		Corn Grain		117		1.2	140						(140)		
York (T16198-5)	29.70		8		Corn Grain		Corn Grain		118		1.2	142			2		27	(113)	446	
York (T16198-5)(A)	15.10				Corn Grain		Corn Grain		118		1.2	142						(142)		
York (T16198-6)	58.60		8		Corn Grain		Corn Grain		200		1.2	240			2		27	(211)	879	
York (T16198-6)(A)	16.40				Corn Grain		Corn Grain		200		1.2	240						(240)		
York (T16198-7)	31.40		8		Corn Grain		Corn Grain		117		1.2	140			2		27	(111)	471	
York (T16198-8)	65.70		8		Corn Grain		Corn Grain		118		1.2	142			2		27	(113)	986	
York (T16198-8)(A)	10.30				Corn Grain		Corn Grain		118		1.2	142						(142)		
2 a-e (F1107-T9992-4-5)	38.11	9	20	9	Soybeans Grain		Corn Grain		170		1.2	204	10	1	5	5	82	(101)		572
5 a-c (F1970-T9961-8)	23.49		20		Soybeans Grain		Corn Grain		175		1.2	210	10		5		82	(113)		352
9 a-b (F1107-T992-2-3)	14.84	9	16	8	Alfalfa Hay	Alfalfa Hay		4	0	45.0	0.0	180	50	1	4	4	66	(55)		178
9c (F1970-T9961-6A)	10.34	9	16	8	Alfalfa Hay	Alfalfa Hay		4	0	45.0	0.0	180	50	1	4	4	66	(55)		124
Coon (T10293-7)	30.70				Soybeans Grain		Corn Grain		106		1.2	127	10					(117)		
Coon (T10293-7)(A)	10.50				Soybeans Grain		Corn Grain		106		1.2	127	10					(117)		
Coon (T10293-6)	32.60				Soybeans Grain		Corn Grain		145		1.2	174	10					(164)		
Coon (T10293-6)(A)	6.20				Soybeans Grain		Corn Grain		145		1.2	174	10					(164)		
Coon (T10293-8)	6.40				Soybeans Grain		Corn Grain		122		1.2	146	10					(136)		
Coon (T10293-8)(A)	18.60				Soybeans Grain		Corn Grain		122		1.2	146	10					(136)		
Coon (T10293-9)	71.20				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10293-9)(A)	18.30				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10590-1)	22.10				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-1)(A)	10.10				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-24)	0.10				Soybeans Grain		Corn Grain		140		1.2	168	10					(158)		
Coon (T10590-24)(A)	3.20				Soybeans Grain		Corn Grain		140		1.2	168	10					(158)		
Coon (T10590-25)	36.60				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-25)(A)	3.40				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-26)	6.40				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-3)	16.40				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-3)(A)	10.60				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-18)	2.30				Corn Grain		Soybeans Grain		53		3.0	159						(159)		
Coon (T10590-29)	1.30				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-4)	0.10				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-4)(A)	1.60				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-17)	1.60				Soybeans Grain		Corn Grain		122		1.2	146	10					(136)		
Coon (T10590-5)	61.00				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10590-6)	53.40				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-6)(A)	6.40				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-2)	2.90				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-22)	6.30				Soybeans Grain		Corn Grain		117		1.2	140	10					(130)		
Coon (T10590-27)	2.30				Soybeans Grain		Corn Grain		117		1.2	140	10					(130)		
Coon (T10590-23)	0.70				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-28)	0.70				Soybeans Grain		Corn Grain		122		1.2	146	10					(136)		
Coon (T10590-7)	65.20				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-20)	66.30				Soybeans Grain		Corn Grain		155		1.2	186	10					(176)		
Coon (T10590-14)	6.50				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-15)	7.10				Soybeans Grain		Corn Grain		106		1.2	127	10					(117)		
Coon (T10590-9)	1.40				Soybeans Grain		Corn Grain		134		1.2	161	10					(151)		
Coon (T10590-13)	5.50				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-10)	23.60				Corn Grain		Soybeans Grain		47		3.0	141						(141)		
Coon (T10590-10)(A)	9.00				Corn Grain		Soybeans Grain		47		3.0	141						(141)		
																	TOTAL AMOUNT ALLOCATED		2781	1226
																	TOTAL AMOUNT REMAINING		19	1574

MAURER-STUTZ

Five Year Manure Management Plan - Applied & Planned

CROP YEAR 2018 FIELD #	ACRES	2015 ORGANIC N APPLIED #/ACRE	2016 ORGANIC N APPLIED #/ACRE	2017 ORGANIC N APPLIED #/ACRE	2017 CROP	2018 SPRING CROP	2018 FALL CROP	SPRING YIELD GOAL UNITS/ACRE	FALL YIELD GOAL UNITS/ACRE	SPRING NITROGEN UPTAKE lb/UNITS	FALL NITROGEN UPTAKE lb/UNITS	PAN UPTAKE GOAL lb/ACRE	PREVIOUS CROP N CREDIT lb/ACRE	PREVIOUS MANURE ORGANIC N 3RD YR CREDIT lb/ACRE	2ND YR CREDIT lb/ACRE	1ST YR CREDIT lb/ACRE	2018 MANURE PAN lb/ACRE	2018 TOTAL PAN lb/ACRE	Spring SWINE ANAEROBIC LIQUID	Fall SWINE ANAEROBIC LIQUID
York (T16198-1)	124.30		16		Corn Grain		Corn Grain		200		1.2	240			4		66	(170)		1492
York (T16198-1)(A)	29.00				Corn Grain		Corn Grain		200		1.2	240						(240)		
York (T16198-2)	61.90		16		Corn Grain		Corn Grain		118		1.2	142			4		66	(72)		743
York (T16198-2)(A)	12.70				Corn Grain		Corn Grain		118		1.2	142						(142)		
York (T16198-3)	23.80		16		Corn Grain		Corn Grain		141		1.2	169			4		66	(99)		286
York (T16198-3)(A)	13.20				Corn Grain		Corn Grain		141		1.2	169						(169)		
York (T16198-4)	31.70		16		Corn Grain		Corn Grain		117		1.2	140			4		66	(70)		380
York (T16198-4)(A)	5.70				Corn Grain		Corn Grain		117		1.2	140						(140)		
York (T16198-5)	29.70	8		8	Corn Grain		Corn Grain		118		1.2	142		1		4		(137)		
York (T16198-5)(A)	15.10				Corn Grain		Corn Grain		118		1.2	142						(142)		
York (T16198-6)	58.60	8		8	Corn Grain		Corn Grain		200		1.2	240		1		4		(235)		
York (T16198-6)(A)	16.40				Corn Grain		Corn Grain		200		1.2	240						(240)		
York (T16198-7)	31.40	8		8	Corn Grain		Corn Grain		117		1.2	140		1		4		(135)		
York (T16198-8)	65.70	8		8	Corn Grain		Corn Grain		118		1.2	142		1		4		(137)		
York (T16198-8)(A)	10.30				Corn Grain		Corn Grain		118		1.2	142						(142)		
2 a-e (F1107-T9992-4-5)	38.11	20	9	20	Corn Grain		Soybeans Grain		50		3.0	150		3	2	10	29	(106)	610	
5 a-c (F1970-T9961-8)	23.49	20		20	Corn Grain		Soybeans Grain		50		3.0	150		3		10		(138)		
9 a-b (F1107-T992-2-3)	14.84	16	8	16	Alfalfa Hay	Alfalfa Hay		4	0	45.0	0.0	180	50	2	2	8	27	(91)	223	
9c (F1970-T9961-6A)	10.34	16	8	16	Alfalfa Hay	Alfalfa Hay		4	0	45.0	0.0	180	50	2	2	8	27	(91)	155	
Coon (T10293-7)	30.70				Corn Grain		Soybeans Grain		36		3.0	108						(108)		
Coon (T10293-7)(A)	10.50				Corn Grain		Soybeans Grain		36		3.0	108						(108)		
Coon (T10293-6)	32.60				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10293-6)(A)	6.20				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10293-8)	6.40				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10293-8)(A)	18.60				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10293-9)	71.20				Soybeans Grain		Corn Grain		145		1.2	174	10					(164)		
Coon (T10293-9)(A)	18.30				Soybeans Grain		Corn Grain		145		1.2	174	10					(164)		
Coon (T10590-1)	22.10				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-1)(A)	10.10				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-24)	0.10				Corn Grain		Soybeans Grain		47		3.0	141						(141)		
Coon (T10590-24)(A)	3.20				Corn Grain		Soybeans Grain		47		3.0	141						(141)		
Coon (T10590-25)	36.60				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-25)(A)	3.40				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-26)	6.40				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-3)	16.40				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-3)(A)	10.60				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-18)	2.30				Soybeans Grain		Corn Grain		159		1.2	191	10					(181)		
Coon (T10590-29)	1.30				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-4)	0.10				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-4)(A)	1.60				Soybeans Grain		Corn Grain		118		1.2	142	10					(132)		
Coon (T10590-17)	1.60				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-5)	61.00				Soybeans Grain		Corn Grain		138		1.2	166	10					(156)		
Coon (T10590-6)	53.40				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-6)(A)	6.40				Soybeans Grain		Corn Grain		132		1.2	158	10					(148)		
Coon (T10590-2)	2.90				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-22)	6.30				Corn Grain		Soybeans Grain		38		3.0	114						(114)		
Coon (T10590-27)	2.30				Corn Grain		Soybeans Grain		38		3.0	114						(114)		
Coon (T10590-23)	0.70				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-28)	0.70				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-7)	65.20				Corn Grain		Soybeans Grain		43		3.0	129						(129)		
Coon (T10590-20)	66.30				Corn Grain		Soybeans Grain		48		3.0	144						(144)		
Coon (T10590-14)	6.50				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-15)	7.10				Corn Grain		Soybeans Grain		36		3.0	108						(108)		
Coon (T10590-9)	1.40				Corn Grain		Soybeans Grain		45		3.0	135						(135)		
Coon (T10590-13)	5.50				Corn Grain		Soybeans Grain		40		3.0	120						(120)		
Coon (T10590-10)	23.60				Soybeans Grain		Corn Grain		140		1.2	168	10					(158)		
Coon (T10590-10)(A)	9.00				Soybeans Grain		Corn Grain		140		1.2	168	10					(158)		
																	TOTAL AMOUNT ALLOCATED		987	2900
																	TOTAL AMOUNT REMAINING		1813	(100)

MAURER-STUTZ

COM FERT Application Rates
History & Planned
START YEAR
2013

PROJECT: 23805007
PROJECT NO.: Win Production
COMPUTATION BY: JEO *DATE:* 6/11/12
CHECKED BY: Updated *DATE:*

Crop Year	2011				2012				2013				2014				2015				2016				2017				2018			
2013	SPREADABLE		NON-SPREADABLE		SPREADABLE		NON-SPREADABLE		SPREADABLE		NON-SPREADABLE		SPREADABLE		NON-SPREADABLE		SPREADABLE		NON-SPREADABLE		SPREADABLE		NON-SPREADABLE		SPREADABLE		NON-SPREADABLE		SPREADABLE		NON-SPREADABLE	
	App. Rate	FERT	App. Rate	FERT	App. Rate	FERT	App. Rate	FERT	App. Rate	FERT	App. Rate	FERT	App. Rate	FERT	App. Rate	FERT	App. Rate	FERT	App. Rate	FERT	App. Rate	FERT	App. Rate	FERT	App. Rate	FERT	App. Rate	FERT	App. Rate	FERT	App. Rate	FERT
FIELD NAME	LB/AC	SOURCE	LB/AC	SOURCE	LB/AC	SOURCE	LB/AC	SOURCE	LB/AC	SOURCE	LB/AC	SOURCE	LB/AC	SOURCE	LB/AC	SOURCE	LB/AC	SOURCE	LB/AC	SOURCE	LB/AC	SOURCE	LB/AC	SOURCE	LB/AC	SOURCE	LB/AC	SOURCE	LB/AC	SOURCE	LB/AC	SOURCE
York (T16198-1)(Appl 1)	290	AA	290	AA	210	AA	290	AA	290	AA	290	AA	210	AA	290	AA	290	AA	290	AA	210	AA	290	AA	290	AA	290	AA	210	AA	290	AA
York (T16198-1)(Appl 2)																																
York (T16198-1)(Appl 3)			200	PC							200	PC							200	PC							200	PC				
York (T16198-2)(Appl 1)	170	AA	170	AA	170	AA	170	AA	170	AA	170	AA	170	AA	170	AA	170	AA	170	AA	170	AA	170	AA	170	AA	170	AA	170	AA	170	AA
York (T16198-2)(Appl 2)			110	TSP			110	TSP			110	TSP			110	TSP			110	TSP			110	TSP			110	TSP			110	TSP
York (T16198-2)(Appl 3)			200	PC	200	PC	200	PC			200	PC	200	PC	200	PC			200	PC	200	PC	200	PC			200	PC	200	PC	200	PC
York (T16198-3)(Appl 1)	206	AA	206	AA	126	AA	206	AA	206	AA	206	AA	126	AA	206	AA	206	AA	206	AA	126	AA	206	AA	206	AA	206	AA	126	AA	206	AA
York (T16198-3)(Appl 2)																																
York (T16198-3)(Appl 3)			200	PC			200	PC			200	PC			200	PC																
York (T16198-4)(Appl 1)	171	AA	171	AA	90	AA	171	AA	171	AA	171	AA	90	AA	171	AA	171	AA	171	AA	90	AA	171	AA	171	AA	171	AA	90	AA	171	AA
York (T16198-4)(Appl 2)																																
York (T16198-4)(Appl 3)																																
York (T16198-5)(Appl 1)	140	AA	173	AA	173	AA	173	AA	140	AA	173	AA	173	AA	173	AA	140	AA	173	AA	173	AA	173	AA	140	AA	173	AA	173	AA	173	AA
York (T16198-5)(Appl 2)																											252	TSP				
York (T16198-5)(Appl 3)							200	PC							200	PC							200	PC							200	PC
York (T16198-6)(Appl 1)	138	AA	171	AA	171	AA	171	AA	260	AA	293	AA	260	AA	293	AA	260	AA	293	AA	293	AA	293	AA	260	AA	293	AA	293	AA	293	AA
York (T16198-6)(Appl 2)																	252	TSP	252	TSP					252	TSP	252	TSP			252	TSP
York (T16198-6)(Appl 3)							200	PC					200	PC	200	PC							200	PC							200	PC
York (T16198-7)(Appl 1)	138	AA			171	AA			138	AA			171	AA			138	AA			171	AA			138	AA			171	AA		
York (T16198-7)(Appl 2)																																
York (T16198-7)(Appl 3)																																
York (T16198-8)(Appl 1)	140	AA	173	AA	173	AA	173	AA	140	AA	173	AA	173	AA	173	AA	140	AA	173	AA	173	AA	173	AA	140	AA	173	AA	173	AA	173	AA
York (T16198-8)(Appl 2)																					100	TSP	200	TSP							252	TSP
York (T16198-8)(Appl 3)					200	PC	200	PC					200	PC	200	PC					200	PC	200	PC					200	PC	200	PC
2 a-e (F1107-T9992-4-5)(Appl 1)	137	AA			148	AA			137	AA			148	AA			137	AA			148	AA			137	AA			148	AA		
2 a-e (F1107-T9992-4-5)(Appl 2)																																
2 a-e (F1107-T9992-4-5)(Appl 3)	200	PC			200	PC			200	PC			200	PC			200	PC			200	PC			200	PC			200	PC		
5 a-c (F1970-T9961-8)(Appl 1)	144	AA			183	AA			144	AA			183	AA			144	AA			183	AA			144	AA			183	AA		
5 a-c (F1970-T9961-8)(Appl 2)																																
5 a-c (F1970-T9961-8)(Appl 3)					200	PC							200	PC							200	PC							200	PC		
9 a-b (F1107-T992-2-3)(Appl 1)																																
9 a-b (F1107-T992-2-3)(Appl 2)																																
9 a-b (F1107-T992-2-3)(Appl 3)	202	PC			250	PC			202	PC			250	PC			202	PC			250	PC			202	PC			250	PC		
9c (F1970-T9961-6A)(Appl 1)																																
9c (F1970-T9961-6A)(Appl 2)																																
9c (F1970-T9961-6A)(Appl 3)	202	PC			250	PC			202	PC			250	PC			202	PC			250	PC			202	PC			250	PC		
Coon (T10293-7)(Appl 1)																																
Coon (T10293-7)(Appl 2)																																
Coon (T10293-7)(Appl 3)																																
Coon (T10293-6)(Appl 1)																																
Coon (T10293-6)(Appl 2)																																
Coon (T10293-6)(Appl 3)																																
Coon (T10293-8)(Appl 1)																																
Coon (T10293-8)(Appl 2)																																
Coon (T10293-8)(Appl 3)																																
Coon (T10293-9)(Appl 1)																																
Coon (T10293-9)(Appl 2)																																
Coon (T10293-9)(Appl 3)																																
Coon (T10590-1)(Appl 1)																																
Coon (T10590-1)(Appl 2)																																
Coon (T10590-1)(Appl 3)																																
Coon (T10590-24)(Appl 1)																																
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Coon (T10590-26)(Appl 3)																																
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Coon (T10590-3)(Appl 2)																																
Coon (T10590-3)(Appl 3)																																
Coon (T10590-18)(Appl 1)																																
Coon (T10590-18)(Appl 2)																																
Coon (T10590-18)(Appl 3)																																
Coon (T10590-29)(Appl 1)																																
Coon (T10590-29)(Appl 2)																																
Coon (T10590-29)(Appl 3)																																
Coon (T10590-4)(Appl 1)																																
Coon (T10590-4)(Appl 2)																																
Coon (T10590-4)(Appl 3)																																
Coon (T10590-17)(Appl 1)																																
Coon (T10590-17)(Appl 2)																																
Coon (T10590-17)(Appl 3)																																
Coon (T10590-5)(Appl 1)																																
Coon (T10590-5)(Appl 2)																																
Coon (T10590-5)(Appl 3)																																
Coon (T10590-6)(Appl 1)																																
Coon (T10590-6)(Appl 2)																																
Coon (T10590-6)(Appl 3)																																
Coon (T10590-2)(Appl 1)																																
Coon (T10590-2)(Appl 2)																																
Coon (T10590-2)(Appl 3)																																
Coon (T10590-22)(Appl 1)																																
Coon (T10590-22)(Appl 2)																																
Coon (T10590-22)(Appl 3)																																

MAURER-STUTZ

COM FERT Application Rates
History & Planned
START YEAR
2013

PROJECT: 23805007
PROJECT NO.: Win Production
COMPUTATION BY: JEO *DATE:* 6/11/12
CHECKED BY: Updated *DATE:*

Coon (T10590-27)(Appl 1)																																
Coon (T10590-27)(Appl 2)																																
Coon (T10590-27)(Appl 3)																																
Coon (T10590-23)(Appl 1)																																
Coon (T10590-23)(Appl 2)																																
Coon (T10590-23)(Appl 3)																																
Coon (T10590-28)(Appl 1)																																
Coon (T10590-28)(Appl 2)																																
Coon (T10590-28)(Appl 3)																																
Coon (T10590-7)(Appl 1)																																
Coon (T10590-7)(Appl 2)																																
Coon (T10590-7)(Appl 3)																																
Coon (T10590-20)(Appl 1)																																
Coon (T10590-20)(Appl 2)																																
Coon (T10590-20)(Appl 3)																																
Coon (T10590-14)(Appl 1)																																
Coon (T10590-14)(Appl 2)																																
Coon (T10590-14)(Appl 3)																																
Coon (T10590-15)(Appl 1)																																
Coon (T10590-15)(Appl 2)																																
Coon (T10590-15)(Appl 3)																																
Coon (T10590-9)(Appl 1)																																
Coon (T10590-9)(Appl 2)																																
Coon (T10590-9)(Appl 3)																																
Coon (T10590-13)(Appl 1)																																
Coon (T10590-13)(Appl 2)																																
Coon (T10590-13)(Appl 3)																																
Coon (T10590-10)(Appl 1)																																
Coon (T10590-10)(Appl 2)																																
Coon (T10590-10)(Appl 3)																																

MAURER-STUTZ

ANNUAL NUTRIENT BALANCE

CROP YEAR 2013							AVAILABLE FROM MANURE			NEEDED BY CROP								
			SOIL TEST RESULTS				INCLUDES MANURE CREDITS)			(INCLUDES CROP CREDITS)			COMMERCIAL			SOIL BALANCE		
FIELD #	CROP	ACRES	% OM	P	K	PH	PAN	P205	K20	PAN	P205	K20	N	P2O5	K2O	ORG N	P	K
York (T16198-1)	/ Corn Grain	124.3	2.2	164	380	6.7				240	86	56	238			4	154	366
York (T16198-1)(A)	/ Corn Grain	29	2.2	164	380	6.7				240	86	56	238		120	0	154	396
York (T16198-2)	/ Corn Grain	61.9		70	300					142	51	33	140			0	64	292
York (T16198-2)(A)	/ Corn Grain	12.7		70	300					142	51	33	140	51	120	0	70	322
York (T16198-3)	/ Corn Grain	23.8	2.0	136	304	6.5				169	61	39	169			4	129	294
York (T16198-3)(A)	/ Corn Grain	13.2	2.0	136	304	6.5				169	61	39	169		120	0	129	324
York (T16198-4)	/ Corn Grain	31.7	1.3	358	344	6.6				140	50	33	141			4	352	336
York (T16198-4)(A)	/ Corn Grain	5.7	1.3	358	344	6.6				140	50	33	141			0	352	336
York (T16198-5)	/ Corn Grain	29.7		70	300		27	56	149	142	51	33	115			4	71	329
York (T16198-5)(A)	/ Corn Grain	15.1		70	300					142	51	33	142			0	64	292
York (T16198-6)	/ Corn Grain	58.6	2.3	69	315	6.6	27	56	149	240	86	56	214			7	59	301
York (T16198-6)(A)	/ Corn Grain	16.4	2.3	69	315	6.6				240	86	56	241			0	59	301
York (T16198-7)	/ Corn Grain	31.4		70	300		27	56	149	140	50	33	114			4	71	329
York (T16198-8)	/ Corn Grain	65.7	4.2	62	306	7.1	27	56	149	142	51	33	115			5	56	298
York (T16198-8)(A)	/ Corn Grain	10.3	4.2	62	306	7.1				142	51	33	142			0	56	298
2 a-e (F1107-T9992-4-5)	/ Corn Grain	38.11	0.8	232	194	7.1	82	75	178	194	73	48	113		120	15	224	212
5 a-c (F1970-T9961-8)	/ Corn Grain	23.49	1.1	184	258	5.7	82	75	178	200	75	49	119			17	176	246
9 a-b (F1107-T992-2-3)	Alfalfa Hay /	14.84	1.0	100	144	6.0	82	75	178	130	48	200			122	15	95	124
9c (F1970-T9961-6A)	Alfalfa Hay /	10.34	1.2	252	180	6.0	82	75	178	130	48	200			122	15	247	160
Coon (T10293-7)	/ Corn Grain	30.7		122	300					117	46	30				0	117	293
Coon (T10293-7)(A)	/ Corn Grain	10.5		122	300					117	46	30				0	117	293
Coon (T10293-6)	/ Corn Grain	32.6		122	300					164	62	41				0	115	290
Coon (T10293-6)(A)	/ Corn Grain	6.2		122	300					164	62	41				0	115	290
Coon (T10293-8)	/ Corn Grain	6.4		122	300					136	52	34				0	116	291
Coon (T10293-8)(A)	/ Corn Grain	18.6		122	300					136	52	34				0	116	291
Coon (T10293-9)	/ Soybeans Grain	71.2		122	300					135	38	58				0	118	285
Coon (T10293-9)(A)	/ Soybeans Grain	18.3		122	300					135	38	58				0	118	285
Coon (T10590-1)	/ Corn Grain	22.1		122	300					132	51	33				0	116	292
Coon (T10590-1)(A)	/ Corn Grain	10.1		122	300					132	51	33				0	116	292
Coon (T10590-24)	/ Corn Grain	0.1		122	300					158	60	39				0	115	290
Coon (T10590-24)(A)	/ Corn Grain	3.2		122	300					158	60	39				0	115	290
Coon (T10590-25)	/ Corn Grain	36.6		122	300					148	57	37				0	116	291
Coon (T10590-25)(A)	/ Corn Grain	3.4		122	300					148	57	37				0	116	291
Coon (T10590-26)	/ Corn Grain	6.4		122	300					132	51	33				0	116	292
Coon (T10590-3)	/ Corn Grain	16.4		122	300					132	51	33				0	116	292
Coon (T10590-3)(A)	/ Corn Grain	10.6		122	300					132	51	33				0	116	292
Coon (T10590-18)	/ Soybeans Grain	2.3		122	300					159	45	69				0	117	283
Coon (T10590-29)	/ Soybeans Grain	1.3		122	300					120	34	52				0	118	287
Coon (T10590-4)	/ Soybeans Grain	0.1		122	300					120	34	52				0	118	287
Coon (T10590-4)(A)	/ Soybeans Grain	1.6		122	300					120	34	52				0	118	287
Coon (T10590-17)	/ Corn Grain	1.6		122	300					136	52	34				0	116	291
Coon (T10590-5)	/ Soybeans Grain	61		122	300					135	38	58				0	118	285
Coon (T10590-6)	/ Soybeans Grain	53.4		122	300					129	37	56				0	118	286

Soil Balance Calculation based on App C of the NRCS Std (633)

MAURER-STUTZ

ANNUAL NUTRIENT BALANCE

Coon (T10590-6)(A)	/ Soybeans Grain	6.4	122	300	129	37	56	0	118	286
Coon (T10590-2)	/ Corn Grain	2.9	122	300	132	51	33	0	116	292
Coon (T10590-22)	/ Corn Grain	6.3	122	300	130	50	33	0	116	292
Coon (T10590-27)	/ Corn Grain	2.3	122	300	130	50	33	0	116	292
Coon (T10590-23)	/ Corn Grain	0.7	122	300	132	51	33	0	116	292
Coon (T10590-28)	/ Corn Grain	0.7	122	300	136	52	34	0	116	291
Coon (T10590-7)	/ Corn Grain	65.2	122	300	148	57	37	0	116	291
Coon (T10590-20)	/ Corn Grain	66.3	122	300	176	67	43	0	115	289
Coon (T10590-14)	/ Corn Grain	6.5	122	300	132	51	33	0	116	292
Coon (T10590-15)	/ Corn Grain	7.1	122	300	117	46	30	0	117	293
Coon (T10590-9)	/ Corn Grain	1.4	122	300	151	58	38	0	116	291
Coon (T10590-13)	/ Corn Grain	5.5	122	300	132	51	33	0	116	292
Coon (T10590-10)	/ Soybeans Grain	23.6	122	300	141	40	61	0	118	285
Coon (T10590-10)(A)	/ Soybeans Grain	9	122	300	141	40	61	0	118	285

MAURER-STUTZ

ANNUAL NUTRIENT BALANCE

CROP YEAR 2014

FIELD #	CROP	ACRES	SOIL TEST RESULTS % OM	P	K	PH	AVAILABLE FROM MANURE INCLUDES MANURE CREDITS) PAN	P205	K20	NEEDED BY CROP (INCLUDES CROP CREDITS) PAN	P205	K20	COMMERCIAL N	P2O5	K2O	SOIL BALANCE ORG N	P	K
York (T16198-1)	/ Corn Grain	124.3					66	60	143	240	86	56	173			10	151	388
York (T16198-1)(A)	/ Corn Grain	29								240	86	56	238			0	144	382
York (T16198-2)	/ Corn Grain	61.9					66	60	143	142	51	33	140		120	8	65	349
York (T16198-2)(A)	/ Corn Grain	12.7								142	51	33	140	51	120	0	70	344
York (T16198-3)	/ Corn Grain	23.8					66	60	143	169	61	39	104			10	129	320
York (T16198-3)(A)	/ Corn Grain	13.2								169	61	39	169		120	0	122	344
York (T16198-4)	/ Corn Grain	31.7					66	60	143	140	50	33	74			10	353	364
York (T16198-4)(A)	/ Corn Grain	5.7								140	50	33	141			0	346	328
York (T16198-5)	/ Corn Grain	29.7								142	51	33	142			2	65	321
York (T16198-5)(A)	/ Corn Grain	15.1								142	51	33	142		120	0	58	314
York (T16198-6)	/ Corn Grain	58.6								240	86	56	214		120	2	49	317
York (T16198-6)(A)	/ Corn Grain	16.4								240	86	56	241		120	0	49	317
York (T16198-7)	/ Corn Grain	31.4								140	50	33	141			2	65	321
York (T16198-8)	/ Corn Grain	65.7								142	51	33	142		120	2	50	320
York (T16198-8)(A)	/ Corn Grain	10.3								142	51	33	142		120	0	50	320
2 a-e (F1107-T9992-4-5)	/ Soybeans Grain	38.11					29	60	158	150	42	65	122		120	11	226	265
5 a-c (F1970-T9961-8)	/ Soybeans Grain	23.49								150	42	65	151		120	7	171	260
9 a-b (F1107-T992-2-3)	Alfalfa Hay /	14.84					29	60	158	130	48	200			150	11	96	151
9c (F1970-T9961-6A)	Alfalfa Hay /	10.34					29	60	158	130	48	200			150	11	248	187
Coon (T10293-7)	/ Soybeans Grain	30.7								108	31	47				0	114	281
Coon (T10293-7)(A)	/ Soybeans Grain	10.5								108	31	47				0	114	281
Coon (T10293-6)	/ Soybeans Grain	32.6								135	38	58				0	111	275
Coon (T10293-6)(A)	/ Soybeans Grain	6.2								135	38	58				0	111	275
Coon (T10293-8)	/ Soybeans Grain	6.4								120	34	52				0	112	278
Coon (T10293-8)(A)	/ Soybeans Grain	18.6								120	34	52				0	112	278
Coon (T10293-9)	/ Corn Grain	71.2								164	62	41				0	111	275
Coon (T10293-9)(A)	/ Corn Grain	18.3								164	62	41				0	111	275
Coon (T10590-1)	/ Soybeans Grain	22.1								120	34	52				0	112	279
Coon (T10590-1)(A)	/ Soybeans Grain	10.1								120	34	52				0	112	279
Coon (T10590-24)	/ Soybeans Grain	0.1								141	40	61				0	111	275
Coon (T10590-24)(A)	/ Soybeans Grain	3.2								141	40	61				0	111	275
Coon (T10590-25)	/ Soybeans Grain	36.6								129	37	56				0	112	277
Coon (T10590-25)(A)	/ Soybeans Grain	3.4								129	37	56				0	112	277
Coon (T10590-26)	/ Soybeans Grain	6.4								120	34	52				0	112	279
Coon (T10590-3)	/ Soybeans Grain	16.4								120	34	52				0	112	279
Coon (T10590-3)(A)	/ Soybeans Grain	10.6								120	34	52				0	112	279
Coon (T10590-18)	/ Corn Grain	2.3								181	68	45				0	109	272
Coon (T10590-29)	/ Corn Grain	1.3								132	51	33				0	112	279
Coon (T10590-4)	/ Corn Grain	0.1								132	51	33				0	112	279
Coon (T10590-4)(A)	/ Corn Grain	1.6								132	51	33				0	112	279
Coon (T10590-17)	/ Soybeans Grain	1.6								120	34	52				0	112	278
Coon (T10590-5)	/ Corn Grain	61								156	59	39				0	111	275

Soil Balance Calculation based on App C of the NRCS Std (633)

MAURER-STUTZ

ANNUAL NUTRIENT BALANCE

Coon (T10590-6)	/ Corn Grain	53.4	148	57	37	0	112	277
Coon (T10590-6)(A)	/ Corn Grain	6.4	148	57	37	0	112	277
Coon (T10590-2)	/ Soybeans Grain	2.9	120	34	52	0	112	279
Coon (T10590-22)	/ Soybeans Grain	6.3	114	32	49	0	112	280
Coon (T10590-27)	/ Soybeans Grain	2.3	114	32	49	0	112	280
Coon (T10590-23)	/ Soybeans Grain	0.7	120	34	52	0	112	279
Coon (T10590-28)	/ Soybeans Grain	0.7	120	34	52	0	112	278
Coon (T10590-7)	/ Soybeans Grain	65.2	129	37	56	0	112	277
Coon (T10590-20)	/ Soybeans Grain	66.3	144	41	62	0	110	273
Coon (T10590-14)	/ Soybeans Grain	6.5	120	34	52	0	112	279
Coon (T10590-15)	/ Soybeans Grain	7.1	108	31	47	0	114	281
Coon (T10590-9)	/ Soybeans Grain	1.4	135	38	58	0	112	276
Coon (T10590-13)	/ Soybeans Grain	5.5	120	34	52	0	112	279
Coon (T10590-10)	/ Corn Grain	23.6	158	60	39	0	111	275
Coon (T10590-10)(A)	/ Corn Grain	9	158	60	39	0	111	275

MAURER-STUTZ

ANNUAL NUTRIENT BALANCE

CROP YEAR 2015

FIELD #	CROP	ACRES	SOIL TEST RESULTS % OM	P	K	PH	AVAILABLE FROM MANURE INCLUDES MANURE CREDITS) PAN	P205	K20	NEEDED BY CROP (INCLUDES CROP CREDITS) PAN	P205	K20	COMMERCIAL N	P2O5	K2O	SOIL BALANCE ORG N	P	K
York (T16198-1)	/ Corn Grain	124.3								240	86	56	238			4	141	374
York (T16198-1)(A)	/ Corn Grain	29								240	86	56	238		120	0	134	398
York (T16198-2)	/ Corn Grain	61.9								142	51	33	140			4	59	341
York (T16198-2)(A)	/ Corn Grain	12.7								142	51	33	140	51	120	0	70	366
York (T16198-3)	/ Corn Grain	23.8								169	61	39	169			4	122	310
York (T16198-3)(A)	/ Corn Grain	13.2								169	61	39	169			0	115	334
York (T16198-4)	/ Corn Grain	31.7								140	50	33	141			4	347	356
York (T16198-4)(A)	/ Corn Grain	5.7								140	50	33	141			0	340	320
York (T16198-5)	/ Corn Grain	29.7					27	56	149	142	51	33	115			5	66	350
York (T16198-5)(A)	/ Corn Grain	15.1								142	51	33	142			0	52	306
York (T16198-6)	/ Corn Grain	58.6					27	56	149	240	86	56	214	116		5	59	340
York (T16198-6)(A)	/ Corn Grain	16.4								240	86	56	241	116		0	52	303
York (T16198-7)	/ Corn Grain	31.4					27	56	149	140	50	33	114			5	66	350
York (T16198-8)	/ Corn Grain	65.7					27	56	149	142	51	33	115			5	51	349
York (T16198-8)(A)	/ Corn Grain	10.3								142	51	33	142			0	44	312
2 a-e (F1107-T9992-4-5)	/ Corn Grain	38.11					82	75	178	194	73	48	113		120	15	226	328
5 a-c (F1970-T9961-8)	/ Corn Grain	23.49					82	75	178	200	75	49	119			12	171	292
9 a-b (F1107-T992-2-3)	Alfalfa Hay /	14.84					66	60	143	130	48	200			122	13	97	167
9c (F1970-T9961-6A)	Alfalfa Hay /	10.34					66	60	143	130	48	200			122	13	249	203
Coon (T10293-7)	/ Corn Grain	30.7								117	46	30				0	109	274
Coon (T10293-7)(A)	/ Corn Grain	10.5								117	46	30				0	109	274
Coon (T10293-6)	/ Corn Grain	32.6								164	62	41				0	104	265
Coon (T10293-6)(A)	/ Corn Grain	6.2								164	62	41				0	104	265
Coon (T10293-8)	/ Corn Grain	6.4								136	52	34				0	106	269
Coon (T10293-8)(A)	/ Corn Grain	18.6								136	52	34				0	106	269
Coon (T10293-9)	/ Soybeans Grain	71.2								135	38	58				0	107	260
Coon (T10293-9)(A)	/ Soybeans Grain	18.3								135	38	58				0	107	260
Coon (T10590-1)	/ Corn Grain	22.1								132	51	33				0	106	271
Coon (T10590-1)(A)	/ Corn Grain	10.1								132	51	33				0	106	271
Coon (T10590-24)	/ Corn Grain	0.1								158	60	39				0	104	265
Coon (T10590-24)(A)	/ Corn Grain	3.2								158	60	39				0	104	265
Coon (T10590-25)	/ Corn Grain	36.6								148	57	37				0	106	268
Coon (T10590-25)(A)	/ Corn Grain	3.4								148	57	37				0	106	268
Coon (T10590-26)	/ Corn Grain	6.4								132	51	33				0	106	271
Coon (T10590-3)	/ Corn Grain	16.4								132	51	33				0	106	271
Coon (T10590-3)(A)	/ Corn Grain	10.6								132	51	33				0	106	271
Coon (T10590-18)	/ Soybeans Grain	2.3								159	45	69				0	104	255
Coon (T10590-29)	/ Soybeans Grain	1.3								120	34	52				0	108	266
Coon (T10590-4)	/ Soybeans Grain	0.1								120	34	52				0	108	266
Coon (T10590-4)(A)	/ Soybeans Grain	1.6								120	34	52				0	108	266
Coon (T10590-17)	/ Corn Grain	1.6								136	52	34				0	106	269
Coon (T10590-5)	/ Soybeans Grain	61								135	38	58				0	107	260

Soil Balance Calculation based on App C of the NRCS Std (633)

MAURER-STUTZ

ANNUAL NUTRIENT BALANCE

Coon (T10590-6)	/ Soybeans Grain	53.4	129	37	56	0	108	263
Coon (T10590-6)(A)	/ Soybeans Grain	6.4	129	37	56	0	108	263
Coon (T10590-2)	/ Corn Grain	2.9	132	51	33	0	106	271
Coon (T10590-22)	/ Corn Grain	6.3	130	50	33	0	106	272
Coon (T10590-27)	/ Corn Grain	2.3	130	50	33	0	106	272
Coon (T10590-23)	/ Corn Grain	0.7	132	51	33	0	106	271
Coon (T10590-28)	/ Corn Grain	0.7	136	52	34	0	106	269
Coon (T10590-7)	/ Corn Grain	65.2	148	57	37	0	106	268
Coon (T10590-20)	/ Corn Grain	66.3	176	67	43	0	103	262
Coon (T10590-14)	/ Corn Grain	6.5	132	51	33	0	106	271
Coon (T10590-15)	/ Corn Grain	7.1	117	46	30	0	109	274
Coon (T10590-9)	/ Corn Grain	1.4	151	58	38	0	106	267
Coon (T10590-13)	/ Corn Grain	5.5	132	51	33	0	106	271
Coon (T10590-10)	/ Soybeans Grain	23.6	141	40	61	0	107	260
Coon (T10590-10)(A)	/ Soybeans Grain	9	141	40	61	0	107	260

MAURER-STUTZ

ANNUAL NUTRIENT BALANCE

CROP YEAR 2016

FIELD #	CROP	ACRES	SOIL TEST RESULTS % OM	P	K	PH	AVAILABLE FROM MANURE INCLUDES MANURE CREDITS) PAN	P205	K20	NEEDED BY CROP (INCLUDES CROP CREDITS) PAN	P205	K20	COMMERCIAL N	P2O5	K2O	SOIL BALANCE ORG N	P	K
York (T16198-1)	/ Corn Grain	124.3					66	60	143	240	86	56	173			10	138	396
York (T16198-1)(A)	/ Corn Grain	29								240	86	56	238			0	124	384
York (T16198-2)	/ Corn Grain	61.9					66	60	143	142	51	33	140		120	10	60	398
York (T16198-2)(A)	/ Corn Grain	12.7								142	51	33	140	51	120	0	70	388
York (T16198-3)	/ Corn Grain	23.8					66	60	143	169	61	39	104			10	122	336
York (T16198-3)(A)	/ Corn Grain	13.2								169	61	39	169			0	108	324
York (T16198-4)	/ Corn Grain	31.7					66	60	143	140	50	33	74			10	348	384
York (T16198-4)(A)	/ Corn Grain	5.7								140	50	33	141			0	334	312
York (T16198-5)	/ Corn Grain	29.7								142	51	33	142			2	60	342
York (T16198-5)(A)	/ Corn Grain	15.1								142	51	33	142		120	0	46	328
York (T16198-6)	/ Corn Grain	58.6								240	86	56	241			2	49	326
York (T16198-6)(A)	/ Corn Grain	16.4								240	86	56	241		120	0	42	319
York (T16198-7)	/ Corn Grain	31.4								140	50	33	141			2	60	342
York (T16198-8)	/ Corn Grain	65.7								142	51	33	142	46	120	2	50	371
York (T16198-8)(A)	/ Corn Grain	10.3								142	51	33	142	92	120	0	49	334
2 a-e (F1107-T9992-4-5)	/ Soybeans Grain	38.11					29	60	158	150	42	65	122		120	11	228	381
5 a-c (F1970-T9961-8)	/ Soybeans Grain	23.49								150	42	65	151		120	5	166	306
9 a-b (F1107-T992-2-3)	Alfalfa Hay /	14.84					27	56	149	130	48	200			150	9	98	192
9c (F1970-T9961-6A)	Alfalfa Hay /	10.34					27	56	149	130	48	200			150	9	250	228
Coon (T10293-7)	/ Soybeans Grain	30.7								108	31	47				0	106	262
Coon (T10293-7)(A)	/ Soybeans Grain	10.5								108	31	47				0	106	262
Coon (T10293-6)	/ Soybeans Grain	32.6								135	38	58				0	100	250
Coon (T10293-6)(A)	/ Soybeans Grain	6.2								135	38	58				0	100	250
Coon (T10293-8)	/ Soybeans Grain	6.4								120	34	52				0	102	256
Coon (T10293-8)(A)	/ Soybeans Grain	18.6								120	34	52				0	102	256
Coon (T10293-9)	/ Corn Grain	71.2								164	62	41				0	100	250
Coon (T10293-9)(A)	/ Corn Grain	18.3								164	62	41				0	100	250
Coon (T10590-1)	/ Soybeans Grain	22.1								120	34	52				0	102	258
Coon (T10590-1)(A)	/ Soybeans Grain	10.1								120	34	52				0	102	258
Coon (T10590-24)	/ Soybeans Grain	0.1								141	40	61				0	100	250
Coon (T10590-24)(A)	/ Soybeans Grain	3.2								141	40	61				0	100	250
Coon (T10590-25)	/ Soybeans Grain	36.6								129	37	56				0	102	254
Coon (T10590-25)(A)	/ Soybeans Grain	3.4								129	37	56				0	102	254
Coon (T10590-26)	/ Soybeans Grain	6.4								120	34	52				0	102	258
Coon (T10590-3)	/ Soybeans Grain	16.4								120	34	52				0	102	258
Coon (T10590-3)(A)	/ Soybeans Grain	10.6								120	34	52				0	102	258
Coon (T10590-18)	/ Corn Grain	2.3								181	68	45				0	96	244
Coon (T10590-29)	/ Corn Grain	1.3								132	51	33				0	102	258
Coon (T10590-4)	/ Corn Grain	0.1								132	51	33				0	102	258
Coon (T10590-4)(A)	/ Corn Grain	1.6								132	51	33				0	102	258
Coon (T10590-17)	/ Soybeans Grain	1.6								120	34	52				0	102	256
Coon (T10590-5)	/ Corn Grain	61								156	59	39				0	100	250

Soil Balance Calculation based on App C of the NRCS Std (633)

MAURER-STUTZ

ANNUAL NUTRIENT BALANCE

Coon (T10590-6)	/ Corn Grain	53.4	148	57	37	0	102	254
Coon (T10590-6)(A)	/ Corn Grain	6.4	148	57	37	0	102	254
Coon (T10590-2)	/ Soybeans Grain	2.9	120	34	52	0	102	258
Coon (T10590-22)	/ Soybeans Grain	6.3	114	32	49	0	102	260
Coon (T10590-27)	/ Soybeans Grain	2.3	114	32	49	0	102	260
Coon (T10590-23)	/ Soybeans Grain	0.7	120	34	52	0	102	258
Coon (T10590-28)	/ Soybeans Grain	0.7	120	34	52	0	102	256
Coon (T10590-7)	/ Soybeans Grain	65.2	129	37	56	0	102	254
Coon (T10590-20)	/ Soybeans Grain	66.3	144	41	62	0	98	246
Coon (T10590-14)	/ Soybeans Grain	6.5	120	34	52	0	102	258
Coon (T10590-15)	/ Soybeans Grain	7.1	108	31	47	0	106	262
Coon (T10590-9)	/ Soybeans Grain	1.4	135	38	58	0	102	252
Coon (T10590-13)	/ Soybeans Grain	5.5	120	34	52	0	102	258
Coon (T10590-10)	/ Corn Grain	23.6	158	60	39	0	100	250
Coon (T10590-10)(A)	/ Corn Grain	9	158	60	39	0	100	250

MAURER-STUTZ

ANNUAL NUTRIENT BALANCE

CROP YEAR 2017

FIELD #	CROP	ACRES	SOIL TEST RESULTS % OM	P	K	PH	AVAILABLE FROM MANURE INCLUDES MANURE CREDITS) PAN	P205	K20	NEEDED BY CROP (INCLUDES CROP CREDITS) PAN	P205	K20	COMMERCIAL N	P2O5	K2O	SOIL BALANCE ORG N	P	K
York (T16198-1)	/ Corn Grain	124.3								240	86	56	238			4	128	382
York (T16198-1)(A)	/ Corn Grain	29								240	86	56	238		120	0	114	400
York (T16198-2)	/ Corn Grain	61.9								142	51	33	140			4	54	390
York (T16198-2)(A)	/ Corn Grain	12.7								142	51	33	140	51	120	0	70	410
York (T16198-3)	/ Corn Grain	23.8								169	61	39	169			4	115	326
York (T16198-3)(A)	/ Corn Grain	13.2								169	61	39	169			0	101	314
York (T16198-4)	/ Corn Grain	31.7								140	50	33	141			4	342	376
York (T16198-4)(A)	/ Corn Grain	5.7								140	50	33	141			0	328	304
York (T16198-5)	/ Corn Grain	29.7					27	56	149	142	51	33	115			5	61	371
York (T16198-5)(A)	/ Corn Grain	15.1								142	51	33	142	116		0	53	320
York (T16198-6)	/ Corn Grain	58.6					27	56	149	240	86	56	214	116		5	59	349
York (T16198-6)(A)	/ Corn Grain	16.4								240	86	56	241	116		0	45	305
York (T16198-7)	/ Corn Grain	31.4					27	56	149	140	50	33	114			5	61	371
York (T16198-8)	/ Corn Grain	65.7					27	56	149	142	51	33	115			5	51	400
York (T16198-8)(A)	/ Corn Grain	10.3								142	51	33	142			0	43	326
2 a-e (F1107-T9992-4-5)	/ Corn Grain	38.11					82	75	178	194	73	48	113		120	15	228	444
5 a-c (F1970-T9961-8)	/ Corn Grain	23.49					82	75	178	200	75	49	119			12	166	338
9 a-b (F1107-T992-2-3)	Alfalfa Hay /	14.84					66	60	143	130	48	200			122	12	99	208
9c (F1970-T9961-6A)	Alfalfa Hay /	10.34					66	60	143	130	48	200			122	12	251	244
Coon (T10293-7)	/ Corn Grain	30.7								117	46	30				0	101	255
Coon (T10293-7)(A)	/ Corn Grain	10.5								117	46	30				0	101	255
Coon (T10293-6)	/ Corn Grain	32.6								164	62	41				0	93	240
Coon (T10293-6)(A)	/ Corn Grain	6.2								164	62	41				0	93	240
Coon (T10293-8)	/ Corn Grain	6.4								136	52	34				0	96	247
Coon (T10293-8)(A)	/ Corn Grain	18.6								136	52	34				0	96	247
Coon (T10293-9)	/ Soybeans Grain	71.2								135	38	58				0	96	235
Coon (T10293-9)(A)	/ Soybeans Grain	18.3								135	38	58				0	96	235
Coon (T10590-1)	/ Corn Grain	22.1								132	51	33				0	96	250
Coon (T10590-1)(A)	/ Corn Grain	10.1								132	51	33				0	96	250
Coon (T10590-24)	/ Corn Grain	0.1								158	60	39				0	93	240
Coon (T10590-24)(A)	/ Corn Grain	3.2								158	60	39				0	93	240
Coon (T10590-25)	/ Corn Grain	36.6								148	57	37				0	96	245
Coon (T10590-25)(A)	/ Corn Grain	3.4								148	57	37				0	96	245
Coon (T10590-26)	/ Corn Grain	6.4								132	51	33				0	96	250
Coon (T10590-3)	/ Corn Grain	16.4								132	51	33				0	96	250
Coon (T10590-3)(A)	/ Corn Grain	10.6								132	51	33				0	96	250
Coon (T10590-18)	/ Soybeans Grain	2.3								159	45	69				0	91	227
Coon (T10590-29)	/ Soybeans Grain	1.3								120	34	52				0	98	245
Coon (T10590-4)	/ Soybeans Grain	0.1								120	34	52				0	98	245
Coon (T10590-4)(A)	/ Soybeans Grain	1.6								120	34	52				0	98	245
Coon (T10590-17)	/ Corn Grain	1.6								136	52	34				0	96	247
Coon (T10590-5)	/ Soybeans Grain	61								135	38	58				0	96	235

Soil Balance Calculation based on App C of the NRCS Std (633)

MAURER-STUTZ

ANNUAL NUTRIENT BALANCE

Coon (T10590-6)	/ Soybeans Grain	53.4	129	37	56	0	98	240
Coon (T10590-6)(A)	/ Soybeans Grain	6.4	129	37	56	0	98	240
Coon (T10590-2)	/ Corn Grain	2.9	132	51	33	0	96	250
Coon (T10590-22)	/ Corn Grain	6.3	130	50	33	0	96	252
Coon (T10590-27)	/ Corn Grain	2.3	130	50	33	0	96	252
Coon (T10590-23)	/ Corn Grain	0.7	132	51	33	0	96	250
Coon (T10590-28)	/ Corn Grain	0.7	136	52	34	0	96	247
Coon (T10590-7)	/ Corn Grain	65.2	148	57	37	0	96	245
Coon (T10590-20)	/ Corn Grain	66.3	176	67	43	0	91	235
Coon (T10590-14)	/ Corn Grain	6.5	132	51	33	0	96	250
Coon (T10590-15)	/ Corn Grain	7.1	117	46	30	0	101	255
Coon (T10590-9)	/ Corn Grain	1.4	151	58	38	0	96	243
Coon (T10590-13)	/ Corn Grain	5.5	132	51	33	0	96	250
Coon (T10590-10)	/ Soybeans Grain	23.6	141	40	61	0	96	235
Coon (T10590-10)(A)	/ Soybeans Grain	9	141	40	61	0	96	235

MAURER-STUTZ

ANNUAL NUTRIENT BALANCE

CROP YEAR 2018

FIELD #	CROP	ACRES	SOIL TEST RESULTS % OM	P	K	PH	AVAILABLE FROM MANURE INCLUDES MANURE CREDITS) PAN	P205	K20	NEEDED BY CROP (INCLUDES CROP CREDITS) PAN	P205	K20	COMMERCIAL N	P2O5	K2O	SOIL BALANCE ORG N	P	K
York (T16198-1)	/ Corn Grain	124.3					66	60	143	240	86	56	173			10	125	404
York (T16198-1)(A)	/ Corn Grain	29								240	86	56	238			0	104	386
York (T16198-2)	/ Corn Grain	61.9					66	60	143	142	51	33	140		120	10	55	447
York (T16198-2)(A)	/ Corn Grain	12.7								142	51	33	140	51	120	0	70	432
York (T16198-3)	/ Corn Grain	23.8					66	60	143	169	61	39	104			10	115	352
York (T16198-3)(A)	/ Corn Grain	13.2								169	61	39	169			0	94	304
York (T16198-4)	/ Corn Grain	31.7					66	60	143	140	50	33	74			10	343	404
York (T16198-4)(A)	/ Corn Grain	5.7								140	50	33	141			0	322	296
York (T16198-5)	/ Corn Grain	29.7								142	51	33	142			2	55	363
York (T16198-5)(A)	/ Corn Grain	15.1								142	51	33	142		120	0	47	342
York (T16198-6)	/ Corn Grain	58.6								240	86	56	241			2	49	335
York (T16198-6)(A)	/ Corn Grain	16.4								240	86	56	241	116	120	0	48	321
York (T16198-7)	/ Corn Grain	31.4								140	50	33	141			2	55	363
York (T16198-8)	/ Corn Grain	65.7								142	51	33	142		120	2	45	422
York (T16198-8)(A)	/ Corn Grain	10.3								142	51	33	142	116	120	0	50	348
2 a-e (F1107-T9992-4-5)	/ Soybeans Grain	38.11					29	60	158	150	42	65	122		120	11	230	497
5 a-c (F1970-T9961-8)	/ Soybeans Grain	23.49								150	42	65	151		120	5	161	352
9 a-b (F1107-T992-2-3)	Alfalfa Hay /	14.84					27	56	149	130	48	200			150	9	100	233
9c (F1970-T9961-6A)	Alfalfa Hay /	10.34					27	56	149	130	48	200			150	9	252	269
Coon (T10293-7)	/ Soybeans Grain	30.7								108	31	47				0	98	243
Coon (T10293-7)(A)	/ Soybeans Grain	10.5								108	31	47				0	98	243
Coon (T10293-6)	/ Soybeans Grain	32.6								135	38	58				0	89	225
Coon (T10293-6)(A)	/ Soybeans Grain	6.2								135	38	58				0	89	225
Coon (T10293-8)	/ Soybeans Grain	6.4								120	34	52				0	92	234
Coon (T10293-8)(A)	/ Soybeans Grain	18.6								120	34	52				0	92	234
Coon (T10293-9)	/ Corn Grain	71.2								164	62	41				0	89	225
Coon (T10293-9)(A)	/ Corn Grain	18.3								164	62	41				0	89	225
Coon (T10590-1)	/ Soybeans Grain	22.1								120	34	52				0	92	237
Coon (T10590-1)(A)	/ Soybeans Grain	10.1								120	34	52				0	92	237
Coon (T10590-24)	/ Soybeans Grain	0.1								141	40	61				0	89	225
Coon (T10590-24)(A)	/ Soybeans Grain	3.2								141	40	61				0	89	225
Coon (T10590-25)	/ Soybeans Grain	36.6								129	37	56				0	92	231
Coon (T10590-25)(A)	/ Soybeans Grain	3.4								129	37	56				0	92	231
Coon (T10590-26)	/ Soybeans Grain	6.4								120	34	52				0	92	237
Coon (T10590-3)	/ Soybeans Grain	16.4								120	34	52				0	92	237
Coon (T10590-3)(A)	/ Soybeans Grain	10.6								120	34	52				0	92	237
Coon (T10590-18)	/ Corn Grain	2.3								181	68	45				0	83	216
Coon (T10590-29)	/ Corn Grain	1.3								132	51	33				0	92	237
Coon (T10590-4)	/ Corn Grain	0.1								132	51	33				0	92	237
Coon (T10590-4)(A)	/ Corn Grain	1.6								132	51	33				0	92	237
Coon (T10590-17)	/ Soybeans Grain	1.6								120	34	52				0	92	234
Coon (T10590-5)	/ Corn Grain	61								156	59	39				0	89	225

Soil Balance Calculation based on App C of the NRCS Std (633)

MAURER-STUTZ

ANNUAL NUTRIENT BALANCE

Coon (T10590-6)	/ Corn Grain	53.4	148	57	37	0	92	231
Coon (T10590-6)(A)	/ Corn Grain	6.4	148	57	37	0	92	231
Coon (T10590-2)	/ Soybeans Grain	2.9	120	34	52	0	92	237
Coon (T10590-22)	/ Soybeans Grain	6.3	114	32	49	0	92	240
Coon (T10590-27)	/ Soybeans Grain	2.3	114	32	49	0	92	240
Coon (T10590-23)	/ Soybeans Grain	0.7	120	34	52	0	92	237
Coon (T10590-28)	/ Soybeans Grain	0.7	120	34	52	0	92	234
Coon (T10590-7)	/ Soybeans Grain	65.2	129	37	56	0	92	231
Coon (T10590-20)	/ Soybeans Grain	66.3	144	41	62	0	86	219
Coon (T10590-14)	/ Soybeans Grain	6.5	120	34	52	0	92	237
Coon (T10590-15)	/ Soybeans Grain	7.1	108	31	47	0	98	243
Coon (T10590-9)	/ Soybeans Grain	1.4	135	38	58	0	92	228
Coon (T10590-13)	/ Soybeans Grain	5.5	120	34	52	0	92	237
Coon (T10590-10)	/ Corn Grain	23.6	158	60	39	0	89	225
Coon (T10590-10)(A)	/ Corn Grain	9	158	60	39	0	89	225

MAURER-STUTZ
ENGINEERS SURVEYORS

PROJECT: 23805007
PROJECT NO.: Win Production
COMPUTATION BY: JEO DATE: 6/11/12 SH. NO.: 1
CHECKED BY: Updated DATE: OF: 1

Whole-farm Nutrient Balance (Manure-spreadable Area)

	N (Lbs)	P_2O_5 (Lbs)	K_2O (Lbs)
Available Manure Nutrients Applied[7]	88,822	104,614	260,687
Commercial Fertilizer Nutrients Applied[8]	467,072	16,617	109,410
Available Nutrients Applied[9]	555,894	121,231	370,098
Nutrient Utilization Potential[10]	1,007,125	349,808	311,867
Nutrient Balance of Spreadable Acres[11*]	(451,231)	(228,577)	58,230
Average Nutrient Balance per Spreadable Acre per Year[12*]	(72)	(36)	9

Whole-farm Nutrient Balance (Non-spreadable Area)

	N (Lbs)	P_2O_5 (Lbs)	K_2O (Lbs)
Commercial Fertilizer Nutrients Applied[8]	115,642	13,487	37,800
Available Nutrients Applied[9]	115,642	13,487	37,800
Nutrient Utilization Potential[10]	195,257	68,244	53,645
Nutrient Balance of Spreadable Acres[11*]	(79,614)	(54,757)	(15,845)
Average Nutrient Balance per Spreadable Acre per Year[12*]	(66)	(46)	(13)

7. Values indicate available manure nutrients applied on the farm based on rate, time and method of application. These values are based on the total manure nutrients applied (row 6) after accounting for state-specific nutrient losses due to rate, time and method of application.

8. Values indicate nutrients applied as commercial fertilizers and nitrates contained in irrigation water.

9. Values are the sum of available manure nutrients applied (row 7) and commercial fertilizer nutrients applied (row 8).

10. Values indicate nutrient utilization potential of crops grown. For N the value generally is based on crop N recommendation for non-legume crops and crop N uptake or other state-imposed limit for N application rates for legumes. P_2O_5 and K_2O values generally are based on fertilizer recommendations or crop removal (whichever is greatest).

11. Values indicate available nutrients applied (row 9) minus crop nutrient utilization potential (row 10). Negative values indicate additional nutrient utilization potential and positive values indicate over-application.

12. Values indicate average per acre nutrient balance. Values are calculated by dividing nutrient balance of spreadable acres (row 11) by the number of spreadable acres in plan and by the length of the plan in years. Negative values indicate additional average per acre nutrient utilization potential and positive values indicate average per acre over-application.

* Non-trivial, positive values for N indicate that the plan was not properly developed. Negative values for N indicate additional nutrient utilization potential which may or may not be intentional. For example, plans that include legume crops often will not utilize the full N utilization potential for legume crops if manure can be applied to non-legume crops that require N for optimum yield. Positive values for P_2O_5 and/or K_2O do not necessarily indicate that the plan was not developed properly. For example, producers may be allowed to apply N-based application rates of manure to fields with low soil test P values or fields with a low potential P-loss risk based on the risk assessment tool used by the state. Negative values for P_2O_5 and K_2O indicate that planned applications to some fields are less than crop removal rates.

MAURER-STUTZ

Projected Soil P And K Levels

Number of Years at Planned Nutrient Management to Reach 300 lb/acre (150 ppm) Bray P1

Rotation Start Year 2013 ***Rotation End Year*** 2018 ***Years in Rotation*** 6

Note: After soils reach 150 ppm (300 lbs/acre), nutrient management plan will need to be revised.

Field	P_1 At Start lb/Acre	P Balance @ End of Rotation	Average P1 soil change for Rotation	Average Annual change in P1	Years To Reach 300 lbs/Ac P1	K At Start lb/Acre	K Balance @ End of Rotation	Average K soil change for Rotation	Average Annual change in K
York (T16198-1)	164	125	(39)	(7)	#	380	404	24	4
York (T16198-1)(A)	164	104	(60)	(10)	#	380	386	6	1
York (T16198-2)	70	55	(15)	(3)	#	300	447	147	25
York (T16198-2)(A)	70	70	0	0	#	300	432	132	22
York (T16198-3)	136	115	(21)	(4)	#	304	352	48	8
York (T16198-3)(A)	136	94	(42)	(7)	#	304	304	0	0
York (T16198-4)	358	343	(15)	(3)	#	344	404	60	10
York (T16198-4)(A)	358	322	(36)	(6)	#	344	296	(48)	(8)
York (T16198-5)	70	55	(15)	(3)	#	300	363	63	11
York (T16198-5)(A)	70	47	(23)	(4)	#	300	342	42	7
York (T16198-6)	69	49	(20)	(4)	#	315	335	20	4
York (T16198-6)(A)	69	48	(21)	(4)	#	315	321	6	1
York (T16198-7)	70	55	(15)	(3)	#	300	363	63	11
York (T16198-8)	62	45	(17)	(3)	#	306	422	116	20
York (T16198-8)(A)	62	50	(12)	(2)	#	306	348	42	7
2 a-e (F1107-T9992-4-5)	232	230	(2)	(1)	#	194	497	303	51
5 a-c (F1970-T9961-8)	184	161	(23)	(4)	#	258	352	94	16
9 a-b (F1107-T992-2-3)	100	100	0	0	#	144	233	89	15
9c (F1970-T9961-6A)	252	252	0	0	#	180	269	89	15
Coon (T10293-7)	122	98	(24)	(4)	#	300	243	(57)	(10)
Coon (T10293-7)(A)	122	98	(24)	(4)	#	300	243	(57)	(10)
Coon (T10293-6)	122	89	(33)	(6)	#	300	225	(75)	(13)
Coon (T10293-6)(A)	122	89	(33)	(6)	#	300	225	(75)	(13)
Coon (T10293-8)	122	92	(30)	(5)	#	300	234	(66)	(11)
Coon (T10293-8)(A)	122	92	(30)	(5)	#	300	234	(66)	(11)
Coon (T10293-9)	122	89	(33)	(6)	#	300	225	(75)	(13)
Coon (T10293-9)(A)	122	89	(33)	(6)	#	300	225	(75)	(13)
Coon (T10590-1)	122	92	(30)	(5)	#	300	237	(63)	(11)
Coon (T10590-1)(A)	122	92	(30)	(5)	#	300	237	(63)	(11)
Coon (T10590-24)	122	89	(33)	(6)	#	300	225	(75)	(13)
Coon (T10590-24)(A)	122	89	(33)	(6)	#	300	225	(75)	(13)
Coon (T10590-25)	122	92	(30)	(5)	#	300	231	(69)	(12)
Coon (T10590-25)(A)	122	92	(30)	(5)	#	300	231	(69)	(12)
Coon (T10590-26)	122	92	(30)	(5)	#	300	237	(63)	(11)
Coon (T10590-3)	122	92	(30)	(5)	#	300	237	(63)	(11)

Calculation based on App C of the NRCS Std (633)

: Field with negative P1 trend that will need maintenance levels of P fertilizers to maintain soil P levels.

INF : Field with Postive P1 trend that will take more than 300 yrs to exceed 150 ppm.

MAURER-STUTZ

Projected Soil P And K Levels

Number of Years at Planned Nutrient Management to Reach 300 lb/acre (150 ppm) Bray P1

Rotation Start Year 2013 ***Rotation End Year*** 2018 ***Years in Rotation*** 6

Note: After soils reach 150 ppm (300 lbs/acre), nutrient management plan will need to be revised.

Field	P_1 At Start lb/Acre	P Balance @ End of Rotation	Average P1 soil change for Rotation	Average Annual change in P1	Years To Reach 300 lbs/Ac P1	K At Start lb/Acre	K Balance @ End of Rotation	Average K soil change for Rotation	Average Annual change in K
Coon (T10590-3)(A)	122	92	(30)	(5)	#	300	237	(63)	(11)

Calculation based on App C of the NRCS Std (633)

: Field with negative P1 trend that will need maintenance levels of P fertilizers to maintain soil P levels.

INF : Field with Postive P1 trend that will take more than 300 yrs to exceed 150 ppm.

MAURER-STUTZ

Projected Soil P And K Levels

Number of Years at Planned Nutrient Management to Reach 300 lb/acre (150 ppm) Bray P1

Rotation Start Year 2013 ***Rotation End Year*** 2018 ***Years in Rotation*** 6

Note: After soils reach 150 ppm (300 lbs/acre), nutrient management plan will need to be revised.

Field	P_1 At Start lb/Acre	P Balance @ End of Rotation	Average P1 soil change for Rotation	Average Annual change in P1	Years To Reach 300 lbs/Ac P1	K At Start lb/Acre	K Balance @ End of Rotation	Average K soil change for Rotation	Average Annual change in K
Coon (T10590-18)	122	83	(39)	(7)	#	300	216	(84)	(14)
Coon (T10590-29)	122	92	(30)	(5)	#	300	237	(63)	(11)
Coon (T10590-4)	122	92	(30)	(5)	#	300	237	(63)	(11)
Coon (T10590-4)(A)	122	92	(30)	(5)	#	300	237	(63)	(11)
Coon (T10590-17)	122	92	(30)	(5)	#	300	234	(66)	(11)
Coon (T10590-5)	122	89	(33)	(6)	#	300	225	(75)	(13)
Coon (T10590-6)	122	92	(30)	(5)	#	300	231	(69)	(12)
Coon (T10590-6)(A)	122	92	(30)	(5)	#	300	231	(69)	(12)
Coon (T10590-2)	122	92	(30)	(5)	#	300	237	(63)	(11)
Coon (T10590-22)	122	92	(30)	(5)	#	300	240	(60)	(10)
Coon (T10590-27)	122	92	(30)	(5)	#	300	240	(60)	(10)
Coon (T10590-23)	122	92	(30)	(5)	#	300	237	(63)	(11)
Coon (T10590-28)	122	92	(30)	(5)	#	300	234	(66)	(11)
Coon (T10590-7)	122	92	(30)	(5)	#	300	231	(69)	(12)
Coon (T10590-20)	122	86	(36)	(6)	#	300	219	(81)	(14)
Coon (T10590-14)	122	92	(30)	(5)	#	300	237	(63)	(11)
Coon (T10590-15)	122	98	(24)	(4)	#	300	243	(57)	(10)
Coon (T10590-9)	122	92	(30)	(5)	#	300	228	(72)	(12)
Coon (T10590-13)	122	92	(30)	(5)	#	300	237	(63)	(11)
Coon (T10590-10)	122	89	(33)	(6)	#	300	225	(75)	(13)
Coon (T10590-10)(A)	122	89	(33)	(6)	#	300	225	(75)	(13)

Calculation based on App C of the NRCS Std (633)

: Field with negative P1 trend that will need maintenance levels of P fertilizers to maintain soil P levels.

INF : Field with Postive P1 trend that will take more than 300 yrs to exceed 150 ppm.

MAURER-STUTZ

MANURE FERTILIZER VALUE

NITROGEN	PHOSPHORUS	POTASSIUM
$ 0.35	$ 0.40	$ 0.20

CROP YEAR 2013

FIELD #	CROP	ACRES	MANURE NUTRIENT VALUE NITROGEN $/Ac	NITROGEN $/FIELD	PHOSPHORUS $/Ac	PHOSPHORUS $/FIELD	POTASSIUM $/Ac	POTASSIUM $/FIELD	TOTAL VALUE $/Ac	TOTAL VALUE $/FIELD
York (T16198-1)	/ Corn Grain	124.3	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-1)(A)	/ Corn Grain	29	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-2)	/ Corn Grain	61.9	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-2)(A)	/ Corn Grain	12.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-3)	/ Corn Grain	23.8	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-3)(A)	/ Corn Grain	13.2	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-4)	/ Corn Grain	31.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-4)(A)	/ Corn Grain	5.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-5)	/ Corn Grain	29.7	$9	$281	$20	$606	$7	$196	$36	$1,083
York (T16198-5)(A)	/ Corn Grain	15.1	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-6)	/ Corn Grain	58.6	$9	$554	$22	$1,313	$11	$656	$43	$2,523
York (T16198-6)(A)	/ Corn Grain	16.4	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-7)	/ Corn Grain	31.4	$9	$297	$20	$628	$7	$207	$36	$1,132
York (T16198-8)	/ Corn Grain	65.7	$9	$621	$20	$1,340	$7	$434	$36	$2,395
York (T16198-8)(A)	/ Corn Grain	10.3	$0	$0	$0	$0	$0	$0	$0	$0
2 a-e (F1107-T9992-4-5)	/ Corn Grain	38.11	$29	$1,094	$29	$1,113	$10	$366	$68	$2,572
5 a-c (F1970-T9961-8)	/ Corn Grain	23.49	$29	$674	$30	$705	$10	$230	$69	$1,609
9 a-b (F1107-T992-2-3)	Alfalfa Hay /	14.84	$29	$426	$19	$285	$36	$528	$84	$1,239
9c (F1970-T9961-6A)	Alfalfa Hay /	10.34	$29	$297	$19	$199	$36	$368	$84	$863
Coon (T10293-7)	/ Corn Grain	30.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-7)(A)	/ Corn Grain	10.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-6)	/ Corn Grain	32.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-6)(A)	/ Corn Grain	6.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-8)	/ Corn Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-8)(A)	/ Corn Grain	18.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-9)	/ Soybeans Grain	71.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-9)(A)	/ Soybeans Grain	18.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-1)	/ Corn Grain	22.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-1)(A)	/ Corn Grain	10.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-24)	/ Corn Grain	0.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-24)(A)	/ Corn Grain	3.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-25)	/ Corn Grain	36.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-25)(A)	/ Corn Grain	3.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-26)	/ Corn Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0

Based on Crop Nutrient Uptake Only, Carry Over Nutrients **NOT** Included in Values.

MAURER-STUTZ

NURE FERTILIZER VALUE

			NITROGEN		PHOSPHORUS		POTASSIUM			
			$ 0.35		$ 0.40		$ 0.20			
Coon (T10590-3)	/ Corn Grain	16.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-3)(A)	/ Corn Grain	10.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-18)	/ Soybeans Grain	2.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-29)	/ Soybeans Grain	1.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-4)	/ Soybeans Grain	0.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-4)(A)	/ Soybeans Grain	1.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-17)	/ Corn Grain	1.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-5)	/ Soybeans Grain	61	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-6)	/ Soybeans Grain	53.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-6)(A)	/ Soybeans Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-2)	/ Corn Grain	2.9	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-22)	/ Corn Grain	6.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-27)	/ Corn Grain	2.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-23)	/ Corn Grain	0.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-28)	/ Corn Grain	0.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-7)	/ Corn Grain	65.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-20)	/ Corn Grain	66.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-14)	/ Corn Grain	6.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-15)	/ Corn Grain	7.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-9)	/ Corn Grain	1.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-13)	/ Corn Grain	5.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-10)	/ Soybeans Grain	23.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-10)(A)	/ Soybeans Grain	9	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL		$4,243		$6,188		$2,986		$13,416

Based on Crop Nutrient Uptake Only, Carry Over Nutrients **NOT** Included in Values.

MAURER-STUTZ MANURE FERTILIZER VALUE

NITROGEN	PHOSPHORUS	POTASSIUM
$ 0.35	$ 0.40	$ 0.20

CROP YEAR 2014

			MANURE NUTRIENT VALUE							
			NITROGEN		PHOSPHORUS		POTASSIUM		TOTAL VALUE	
FIELD #	CROP	ACRES	$/Ac	$/FIELD	$/Ac	$/FIELD	$/Ac	$/FIELD	$/Ac	$/FIELD
York (T16198-1)	/ Corn Grain	124.3	$23	$2,871	$24	$2,983	$11	$1,392	$58	$7,247
York (T16198-1)(A)	/ Corn Grain	29	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-2)	/ Corn Grain	61.9	$23	$1,430	$20	$1,263	$7	$409	$50	$3,101
York (T16198-2)(A)	/ Corn Grain	12.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-3)	/ Corn Grain	23.8	$23	$550	$24	$571	$8	$186	$55	$1,307
York (T16198-3)(A)	/ Corn Grain	13.2	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-4)	/ Corn Grain	31.7	$23	$732	$20	$634	$7	$209	$50	$1,575
York (T16198-4)(A)	/ Corn Grain	5.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-5)	/ Corn Grain	29.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-5)(A)	/ Corn Grain	15.1	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-6)	/ Corn Grain	58.6	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-6)(A)	/ Corn Grain	16.4	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-7)	/ Corn Grain	31.4	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-8)	/ Corn Grain	65.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-8)(A)	/ Corn Grain	10.3	$0	$0	$0	$0	$0	$0	$0	$0
2 a-e (F1107-T9992-4-5)	/ Soybeans Grain	38.11	$10	$387	$17	$640	$13	$495	$40	$1,522
5 a-c (F1970-T9961-8)	/ Soybeans Grain	23.49	$0	$0	$0	$0	$0	$0	$0	$0
9 a-b (F1107-T992-2-3)	Alfalfa Hay /	14.84	$10	$151	$19	$285	$32	$469	$61	$904
9c (F1970-T9961-6A)	Alfalfa Hay /	10.34	$10	$105	$19	$199	$32	$327	$61	$630
Coon (T10293-7)	/ Soybeans Grain	30.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-7)(A)	/ Soybeans Grain	10.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-6)	/ Soybeans Grain	32.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-6)(A)	/ Soybeans Grain	6.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-8)	/ Soybeans Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-8)(A)	/ Soybeans Grain	18.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-9)	/ Corn Grain	71.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-9)(A)	/ Corn Grain	18.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-1)	/ Soybeans Grain	22.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-1)(A)	/ Soybeans Grain	10.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-24)	/ Soybeans Grain	0.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-24)(A)	/ Soybeans Grain	3.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-25)	/ Soybeans Grain	36.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-25)(A)	/ Soybeans Grain	3.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-26)	/ Soybeans Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0

Based on Crop Nutrient Uptake Only, Carry Over Nutrients **NOT** Included in Values.

MAURER-STUTZ

NURE FERTILIZER VALUE

			NITROGEN		PHOSPHORUS		POTASSIUM			
			$ 0.35		$ 0.40		$ 0.20			
Coon (T10590-3)	/ Soybeans Grain	16.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-3)(A)	/ Soybeans Grain	10.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-18)	/ Corn Grain	2.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-29)	/ Corn Grain	1.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-4)	/ Corn Grain	0.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-4)(A)	/ Corn Grain	1.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-17)	/ Soybeans Grain	1.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-5)	/ Corn Grain	61	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-6)	/ Corn Grain	53.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-6)(A)	/ Corn Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-2)	/ Soybeans Grain	2.9	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-22)	/ Soybeans Grain	6.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-27)	/ Soybeans Grain	2.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-23)	/ Soybeans Grain	0.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-28)	/ Soybeans Grain	0.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-7)	/ Soybeans Grain	65.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-20)	/ Soybeans Grain	66.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-14)	/ Soybeans Grain	6.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-15)	/ Soybeans Grain	7.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-9)	/ Soybeans Grain	1.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-13)	/ Soybeans Grain	5.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-10)	/ Corn Grain	23.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-10)(A)	/ Corn Grain	9	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL		$6,226		$6,575		$3,487		$16,287

Based on Crop Nutrient Uptake Only, Carry Over Nutrients **NOT** Included in Values.

MAURER-STUTZ MANURE FERTILIZER VALUE

NITROGEN	PHOSPHORUS	POTASSIUM
$ 0.35	$ 0.40	$ 0.20

CROP YEAR 2015

			MANURE NUTRIENT VALUE							
			NITROGEN		PHOSPHORUS		POTASSIUM		TOTAL VALUE	
FIELD #	CROP	ACRES	$/Ac	$/FIELD	$/Ac	$/FIELD	$/Ac	$/FIELD	$/Ac	$/FIELD
York (T16198-1)	/ Corn Grain	124.3	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-1)(A)	/ Corn Grain	29	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-2)	/ Corn Grain	61.9	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-2)(A)	/ Corn Grain	12.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-3)	/ Corn Grain	23.8	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-3)(A)	/ Corn Grain	13.2	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-4)	/ Corn Grain	31.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-4)(A)	/ Corn Grain	5.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-5)	/ Corn Grain	29.7	$9	$281	$20	$606	$7	$196	$36	$1,083
York (T16198-5)(A)	/ Corn Grain	15.1	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-6)	/ Corn Grain	58.6	$9	$554	$22	$1,313	$11	$656	$43	$2,523
York (T16198-6)(A)	/ Corn Grain	16.4	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-7)	/ Corn Grain	31.4	$9	$297	$20	$628	$7	$207	$36	$1,132
York (T16198-8)	/ Corn Grain	65.7	$9	$621	$20	$1,340	$7	$434	$36	$2,395
York (T16198-8)(A)	/ Corn Grain	10.3	$0	$0	$0	$0	$0	$0	$0	$0
2 a-e (F1107-T9992-4-5)	/ Corn Grain	38.11	$29	$1,094	$29	$1,113	$10	$366	$68	$2,572
5 a-c (F1970-T9961-8)	/ Corn Grain	23.49	$29	$674	$30	$705	$10	$230	$69	$1,609
9 a-b (F1107-T992-2-3)	Alfalfa Hay /	14.84	$23	$343	$19	$285	$29	$424	$71	$1,052
9c (F1970-T9961-6A)	Alfalfa Hay /	10.34	$23	$239	$19	$199	$29	$296	$71	$733
Coon (T10293-7)	/ Corn Grain	30.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-7)(A)	/ Corn Grain	10.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-6)	/ Corn Grain	32.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-6)(A)	/ Corn Grain	6.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-8)	/ Corn Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-8)(A)	/ Corn Grain	18.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-9)	/ Soybeans Grain	71.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-9)(A)	/ Soybeans Grain	18.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-1)	/ Corn Grain	22.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-1)(A)	/ Corn Grain	10.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-24)	/ Corn Grain	0.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-24)(A)	/ Corn Grain	3.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-25)	/ Corn Grain	36.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-25)(A)	/ Corn Grain	3.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-26)	/ Corn Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0

Based on Crop Nutrient Uptake Only, Carry Over Nutrients **NOT** Included in Values.

MAURER-STUTZ NURE FERTILIZER VALUE

			NITROGEN		PHOSPHORUS		POTASSIUM			
			$ 0.35		$ 0.40		$ 0.20			
Coon (T10590-3)	/ Corn Grain	16.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-3)(A)	/ Corn Grain	10.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-18)	/ Soybeans Grain	2.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-29)	/ Soybeans Grain	1.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-4)	/ Soybeans Grain	0.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-4)(A)	/ Soybeans Grain	1.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-17)	/ Corn Grain	1.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-5)	/ Soybeans Grain	61	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-6)	/ Soybeans Grain	53.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-6)(A)	/ Soybeans Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-2)	/ Corn Grain	2.9	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-22)	/ Corn Grain	6.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-27)	/ Corn Grain	2.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-23)	/ Corn Grain	0.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-28)	/ Corn Grain	0.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-7)	/ Corn Grain	65.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-20)	/ Corn Grain	66.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-14)	/ Corn Grain	6.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-15)	/ Corn Grain	7.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-9)	/ Corn Grain	1.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-13)	/ Corn Grain	5.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-10)	/ Soybeans Grain	23.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-10)(A)	/ Soybeans Grain	9	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL		$4,102		$6,188		$2,809		$13,099

Based on Crop Nutrient Uptake Only, Carry Over Nutrients **NOT** Included in Values.

MAURER-STUTZ MANURE FERTILIZER VALUE

NITROGEN	PHOSPHORUS	POTASSIUM
$ 0.35	$ 0.40	$ 0.20

CROP YEAR 2016

			MANURE NUTRIENT VALUE							
			NITROGEN		PHOSPHORUS		POTASSIUM		TOTAL VALUE	
FIELD #	CROP	ACRES	$/Ac	$/FIELD	$/Ac	$/FIELD	$/Ac	$/FIELD	$/Ac	$/FIELD
York (T16198-1)	/ Corn Grain	124.3	$23	$2,871	$24	$2,983	$11	$1,392	$58	$7,247
York (T16198-1)(A)	/ Corn Grain	29	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-2)	/ Corn Grain	61.9	$23	$1,430	$20	$1,263	$7	$409	$50	$3,101
York (T16198-2)(A)	/ Corn Grain	12.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-3)	/ Corn Grain	23.8	$23	$550	$24	$571	$8	$186	$55	$1,307
York (T16198-3)(A)	/ Corn Grain	13.2	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-4)	/ Corn Grain	31.7	$23	$732	$20	$634	$7	$209	$50	$1,575
York (T16198-4)(A)	/ Corn Grain	5.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-5)	/ Corn Grain	29.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-5)(A)	/ Corn Grain	15.1	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-6)	/ Corn Grain	58.6	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-6)(A)	/ Corn Grain	16.4	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-7)	/ Corn Grain	31.4	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-8)	/ Corn Grain	65.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-8)(A)	/ Corn Grain	10.3	$0	$0	$0	$0	$0	$0	$0	$0
2 a-e (F1107-T9992-4-5)	/ Soybeans Grain	38.11	$10	$387	$17	$640	$13	$495	$40	$1,522
5 a-c (F1970-T9961-8)	/ Soybeans Grain	23.49	$0	$0	$0	$0	$0	$0	$0	$0
9 a-b (F1107-T992-2-3)	Alfalfa Hay /	14.84	$9	$140	$19	$285	$30	$442	$58	$867
9c (F1970-T9961-6A)	Alfalfa Hay /	10.34	$9	$98	$19	$199	$30	$308	$58	$604
Coon (T10293-7)	/ Soybeans Grain	30.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-7)(A)	/ Soybeans Grain	10.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-6)	/ Soybeans Grain	32.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-6)(A)	/ Soybeans Grain	6.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-8)	/ Soybeans Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-8)(A)	/ Soybeans Grain	18.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-9)	/ Corn Grain	71.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-9)(A)	/ Corn Grain	18.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-1)	/ Soybeans Grain	22.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-1)(A)	/ Soybeans Grain	10.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-24)	/ Soybeans Grain	0.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-24)(A)	/ Soybeans Grain	3.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-25)	/ Soybeans Grain	36.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-25)(A)	/ Soybeans Grain	3.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-26)	/ Soybeans Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0

Based on Crop Nutrient Uptake Only, Carry Over Nutrients **NOT** Included in Values.

MAURER-STUTZ

NURE FERTILIZER VALUE

			NITROGEN		PHOSPHORUS		POTASSIUM			
			$ 0.35		$ 0.40		$ 0.20			
Coon (T10590-3)	/ Soybeans Grain	16.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-3)(A)	/ Soybeans Grain	10.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-18)	/ Corn Grain	2.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-29)	/ Corn Grain	1.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-4)	/ Corn Grain	0.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-4)(A)	/ Corn Grain	1.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-17)	/ Soybeans Grain	1.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-5)	/ Corn Grain	61	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-6)	/ Corn Grain	53.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-6)(A)	/ Corn Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-2)	/ Soybeans Grain	2.9	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-22)	/ Soybeans Grain	6.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-27)	/ Soybeans Grain	2.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-23)	/ Soybeans Grain	0.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-28)	/ Soybeans Grain	0.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-7)	/ Soybeans Grain	65.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-20)	/ Soybeans Grain	66.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-14)	/ Soybeans Grain	6.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-15)	/ Soybeans Grain	7.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-9)	/ Soybeans Grain	1.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-13)	/ Soybeans Grain	5.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-10)	/ Corn Grain	23.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-10)(A)	/ Corn Grain	9	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL		$6,208		$6,575		$3,441		$16,224

Based on Crop Nutrient Uptake Only, Carry Over Nutrients **NOT** Included in Values.

MAURER-STUTZ MANURE FERTILIZER VALUE

NITROGEN	PHOSPHORUS	POTASSIUM
$ 0.35	$ 0.40	$ 0.20

CROP YEAR 2017

			MANURE NUTRIENT VALUE							
			NITROGEN		PHOSPHORUS		POTASSIUM		TOTAL VALUE	
FIELD #	CROP	ACRES	$/Ac	$/FIELD	$/Ac	$/FIELD	$/Ac	$/FIELD	$/Ac	$/FIELD
York (T16198-1)	/ Corn Grain	124.3	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-1)(A)	/ Corn Grain	29	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-2)	/ Corn Grain	61.9	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-2)(A)	/ Corn Grain	12.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-3)	/ Corn Grain	23.8	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-3)(A)	/ Corn Grain	13.2	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-4)	/ Corn Grain	31.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-4)(A)	/ Corn Grain	5.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-5)	/ Corn Grain	29.7	$9	$281	$20	$606	$7	$196	$36	$1,083
York (T16198-5)(A)	/ Corn Grain	15.1	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-6)	/ Corn Grain	58.6	$9	$554	$22	$1,313	$11	$656	$43	$2,523
York (T16198-6)(A)	/ Corn Grain	16.4	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-7)	/ Corn Grain	31.4	$9	$297	$20	$628	$7	$207	$36	$1,132
York (T16198-8)	/ Corn Grain	65.7	$9	$621	$20	$1,340	$7	$434	$36	$2,395
York (T16198-8)(A)	/ Corn Grain	10.3	$0	$0	$0	$0	$0	$0	$0	$0
2 a-e (F1107-T9992-4-5)	/ Corn Grain	38.11	$29	$1,094	$29	$1,113	$10	$366	$68	$2,572
5 a-c (F1970-T9961-8)	/ Corn Grain	23.49	$29	$674	$30	$705	$10	$230	$69	$1,609
9 a-b (F1107-T992-2-3)	Alfalfa Hay /	14.84	$23	$343	$19	$285	$29	$424	$71	$1,052
9c (F1970-T9961-6A)	Alfalfa Hay /	10.34	$23	$239	$19	$199	$29	$296	$71	$733
Coon (T10293-7)	/ Corn Grain	30.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-7)(A)	/ Corn Grain	10.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-6)	/ Corn Grain	32.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-6)(A)	/ Corn Grain	6.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-8)	/ Corn Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-8)(A)	/ Corn Grain	18.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-9)	/ Soybeans Grain	71.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-9)(A)	/ Soybeans Grain	18.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-1)	/ Corn Grain	22.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-1)(A)	/ Corn Grain	10.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-24)	/ Corn Grain	0.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-24)(A)	/ Corn Grain	3.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-25)	/ Corn Grain	36.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-25)(A)	/ Corn Grain	3.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-26)	/ Corn Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0

Based on Crop Nutrient Uptake Only, Carry Over Nutrients **NOT** Included in Values.

MAURER-STUTZ NURE FERTILIZER VALUE

			NITROGEN		PHOSPHORUS		POTASSIUM			
			$ 0.35		$ 0.40		$ 0.20			
Coon (T10590-3)	/ Corn Grain	16.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-3)(A)	/ Corn Grain	10.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-18)	/ Soybeans Grain	2.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-29)	/ Soybeans Grain	1.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-4)	/ Soybeans Grain	0.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-4)(A)	/ Soybeans Grain	1.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-17)	/ Corn Grain	1.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-5)	/ Soybeans Grain	61	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-6)	/ Soybeans Grain	53.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-6)(A)	/ Soybeans Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-2)	/ Corn Grain	2.9	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-22)	/ Corn Grain	6.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-27)	/ Corn Grain	2.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-23)	/ Corn Grain	0.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-28)	/ Corn Grain	0.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-7)	/ Corn Grain	65.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-20)	/ Corn Grain	66.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-14)	/ Corn Grain	6.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-15)	/ Corn Grain	7.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-9)	/ Corn Grain	1.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-13)	/ Corn Grain	5.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-10)	/ Soybeans Grain	23.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-10)(A)	/ Soybeans Grain	9	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL		$4,102		$6,188		$2,809		$13,099

Based on Crop Nutrient Uptake Only, Carry Over Nutrients **NOT** Included in Values.

MAURER-STUTZ

MANURE FERTILIZER VALUE

NITROGEN	PHOSPHORUS	POTASSIUM
$ 0.35	$ 0.40	$ 0.20

CROP YEAR 2018

			MANURE NUTRIENT VALUE							
			NITROGEN		PHOSPHORUS		POTASSIUM		TOTAL VALUE	
FIELD #	CROP	ACRES	$/Ac	$/FIELD	$/Ac	$/FIELD	$/Ac	$/FIELD	$/Ac	$/FIELD
York (T16198-1)	/ Corn Grain	124.3	$23	$2,871	$24	$2,983	$11	$1,392	$58	$7,247
York (T16198-1)(A)	/ Corn Grain	29	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-2)	/ Corn Grain	61.9	$23	$1,430	$20	$1,263	$7	$409	$50	$3,101
York (T16198-2)(A)	/ Corn Grain	12.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-3)	/ Corn Grain	23.8	$23	$550	$24	$571	$8	$186	$55	$1,307
York (T16198-3)(A)	/ Corn Grain	13.2	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-4)	/ Corn Grain	31.7	$23	$732	$20	$634	$7	$209	$50	$1,575
York (T16198-4)(A)	/ Corn Grain	5.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-5)	/ Corn Grain	29.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-5)(A)	/ Corn Grain	15.1	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-6)	/ Corn Grain	58.6	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-6)(A)	/ Corn Grain	16.4	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-7)	/ Corn Grain	31.4	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-8)	/ Corn Grain	65.7	$0	$0	$0	$0	$0	$0	$0	$0
York (T16198-8)(A)	/ Corn Grain	10.3	$0	$0	$0	$0	$0	$0	$0	$0
2 a-e (F1107-T9992-4-5)	/ Soybeans Grain	38.11	$10	$387	$17	$640	$13	$495	$40	$1,522
5 a-c (F1970-T9961-8)	/ Soybeans Grain	23.49	$0	$0	$0	$0	$0	$0	$0	$0
9 a-b (F1107-T992-2-3)	Alfalfa Hay /	14.84	$9	$140	$19	$285	$30	$442	$58	$867
9c (F1970-T9961-6A)	Alfalfa Hay /	10.34	$9	$98	$19	$199	$30	$308	$58	$604
Coon (T10293-7)	/ Soybeans Grain	30.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-7)(A)	/ Soybeans Grain	10.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-6)	/ Soybeans Grain	32.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-6)(A)	/ Soybeans Grain	6.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-8)	/ Soybeans Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-8)(A)	/ Soybeans Grain	18.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-9)	/ Corn Grain	71.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10293-9)(A)	/ Corn Grain	18.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-1)	/ Soybeans Grain	22.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-1)(A)	/ Soybeans Grain	10.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-24)	/ Soybeans Grain	0.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-24)(A)	/ Soybeans Grain	3.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-25)	/ Soybeans Grain	36.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-25)(A)	/ Soybeans Grain	3.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-26)	/ Soybeans Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0

Based on Crop Nutrient Uptake Only, Carry Over Nutrients **NOT** Included in Values.

MAURER-STUTZ

NURE FERTILIZER VALUE

			NITROGEN		PHOSPHORUS		POTASSIUM			
			$ 0.35		$ 0.40		$ 0.20			
Coon (T10590-3)	/ Soybeans Grain	16.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-3)(A)	/ Soybeans Grain	10.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-18)	/ Corn Grain	2.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-29)	/ Corn Grain	1.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-4)	/ Corn Grain	0.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-4)(A)	/ Corn Grain	1.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-17)	/ Soybeans Grain	1.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-5)	/ Corn Grain	61	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-6)	/ Corn Grain	53.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-6)(A)	/ Corn Grain	6.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-2)	/ Soybeans Grain	2.9	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-22)	/ Soybeans Grain	6.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-27)	/ Soybeans Grain	2.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-23)	/ Soybeans Grain	0.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-28)	/ Soybeans Grain	0.7	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-7)	/ Soybeans Grain	65.2	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-20)	/ Soybeans Grain	66.3	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-14)	/ Soybeans Grain	6.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-15)	/ Soybeans Grain	7.1	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-9)	/ Soybeans Grain	1.4	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-13)	/ Soybeans Grain	5.5	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-10)	/ Corn Grain	23.6	$0	$0	$0	$0	$0	$0	$0	$0
Coon (T10590-10)(A)	/ Corn Grain	9	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL		$6,208		$6,575		$3,441		$16,224

Based on Crop Nutrient Uptake Only, Carry Over Nutrients **NOT** Included in Values.

WIN PRO

Application Records

Spring 2012

Field 2a-e 38.11 Ac
Field 9a+c 25.76 Ac } New

16,000 gal/AC 1,000,000 gallon total pumped

Fall 2011

Field 5a,b,c 23.49 Acres - New
Field 1A-L 114.27 Acres
Field 3a,b,c,d 36.56 Acres
Field 4a,b,c,d 36.29 Acres 210.61

12,000 gal/AC 2,500,000 gallons total pumped

Spring 2011

Field 8a-i 74.65 AC

15,000 gal/AC 1,000,000 gallons total pumped

Fall 2010

Field 7a-i 73.27 AC
Field 2a-e 38.11 AC
Field 9a+c 25.76 AC } New
Field 5a,b,c 23.49 AC 160.63

15,000 gal/AC 2,400,000 gallons total pumped

WIN Pro

Application Records

Fall 2009

Field 1 a-L 114.27 Ac

Field 3 a,b,c,d 36.56 AC

Field 4 a,b,c,d 36.29 AC 187.12

15,000 gal/Ac 2,800,000 gallons total pumped

MAURER-STUTZ
ENGINEERS SURVEYORS

PROJECT: *Win Production*
PROJECT NO.: *23805038*
COMPUTATION BY: *AKO* *DATE:* ______ *SH. NO.:* 1
CHECKED BY: ______ *DATE:* ______ *OF:* 1

Subject: *5-Year Yield Avg.*

	Corn, bu						Beans, bu					
FIELD NAME	2007	2008	2009	2010	2011	Avg	2007	2008	2009	2010	2011	Avg
York 1	168	170	187	216	192	187						0
York 2	147		161		166	158		43		48		46
York 3	168	170	187	216	192	187						0
York 4	168	170	187	216	192	187						0
York 5	160		165		173	166		47		53		50
York 6	168	170	187	216	192	187						0
York 8	168	170	187	216	192	187						0
York 9						0						0
						0						0
						0						0
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Yield Records

Field 1 continues Corn

2009 - 187 bu./Ac
2010 - 216 bu./Ac
2011 - 192 bu/Ac

2008 - 170
2007 - 168

Field 2

2009 - Corn 161 bu/Ac
2010 - Beans 48 bu/AC
2011 - Corn 166 bu/Ac

2008 - Beans - 43
2007 - Corn - 147

Field 9

2009 - Hay
2010 - Hay
2011 - Hay

2007 - Hay
2008 - Hay

Field 5

2009 - Corn 165 bu/Ac
2010 - Beans 53 bu/Ac
2011 - Corn 173 bu/AC

2008 - Bean 47
2007 - Corn 160

Field 3 continues Corn

2009 - 187 bu/Ac

2010 - 216 bu/Ac

2011 - 192 bu/Ac

2008 - 170

2007 - 168

Field 4 continues Corn

2009 - 187 bu/AC

2010 - 216 bu/AC

2011 - 192 bu/AC

2008 - 170

2007 - 168

Field 7 continues Corn

2009 - 187 bu/Ac

2010 - 216 bu/AC

2011 - 192 bu/AC

2008 - 170

2007 - 168

Field 8 continues Corn

2009 - 187 bu/Ac

2010 - 216 bu/AC

2011 - 192 bu/AC

2008 - 170

2007 - 168

CNMP

APPENDICES

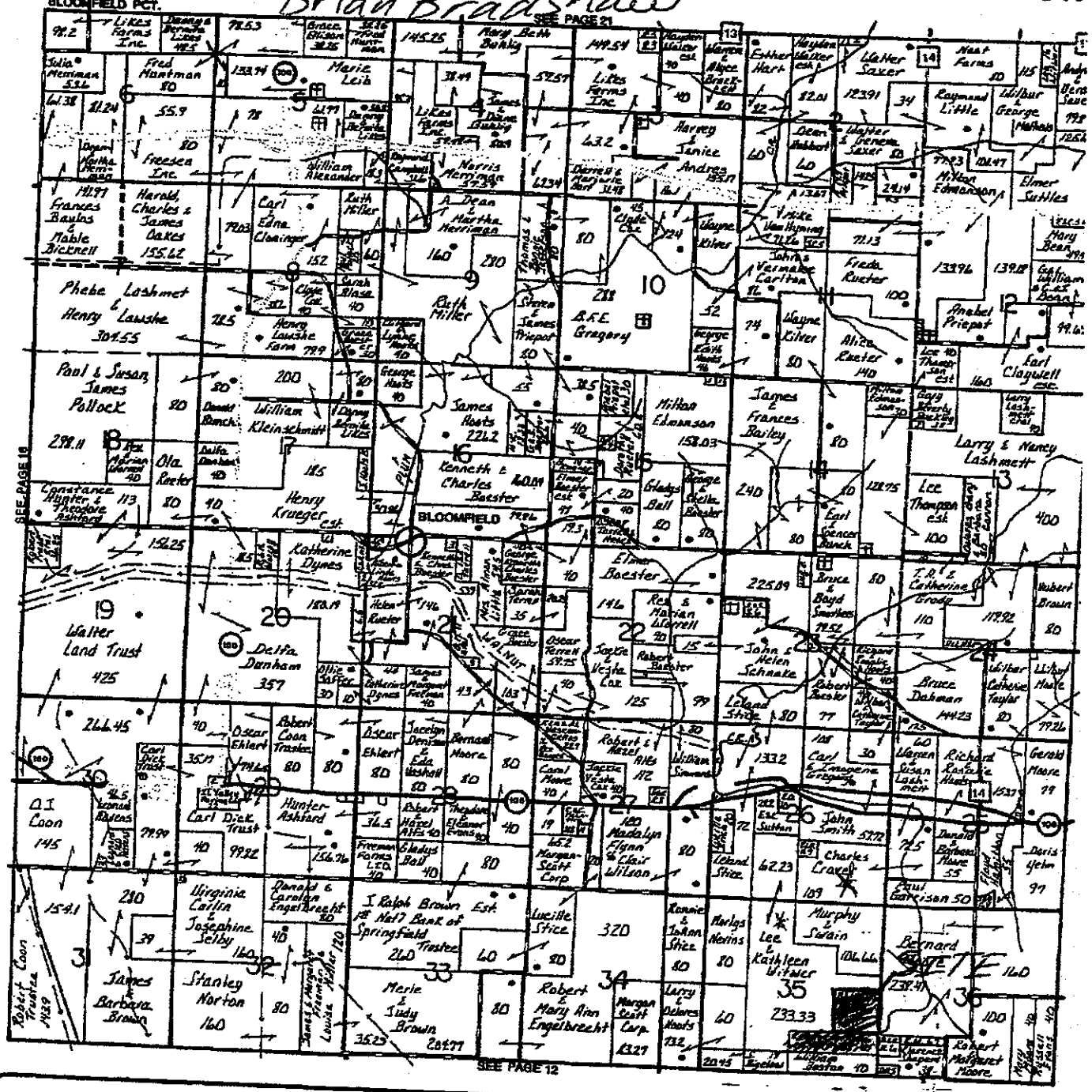
APPENDIX A
Maps
(Aerial Maps, Soils Maps)

{*Insert soil survey maps – mark field boundaries*}

{*Insert Aerial maps – field maps, mark field boundaries, wells, setback distances, sensitive areas, proposed practices*}

EAST PART **BLOOMFIELD** WIN PRODUCTION T.14N.-R.13W

Brian Bradshaw



MONTGOMERY INSURANCE AGENCY, INC.

28 South Main - Winchester, Illinois 62694

PHONE: 742-3147

Farm Owners - Homeowners - Auto - Casualty - Life - Crop Hail, Etc.

Independent Insurance Agent

Charles Carver III
Green Co.

Jan 18 06 05:01p Brian and Marina Bradshaw 2178332194 p.1

GLASGOW

T.13N.-R.13N.

WINCHESTER FARMERS ELEVATOR CO.

221 North Arch
Winchester, IL 62694
Bus. Ph. (217) 742-3415

Jan 18 06 05:02p Brian and Marina Bradshaw 217/8332194 p.2

NOT TO SCALE
Sc11-2-97-40

ILLINOIS
MORGAN
Report ID: FSA-156EZ-R001

U.S. Dept. of Agriculture
Farm Service Agency
Abbreviated 156 Farm Record

FARM 3178
Prepared:01/20/2006
Crop Year:2006
Page: 1

OPER: Name & Address	FARMLAND	CROPLAND	DCP CROPLAND	EFF DCP CROPLAND	DBL CROPPED ACRES	FARM DESCRIPTION	STATUS
	596.8	536.2	536.2	536.2	.0	YORK FARM LIMITED PARTNERSHIP	ACTIVE

RONALD L YORK JR
2335 FOX LN
JACKSONVILLE IL 62650 6264

FARMS ASSOC. WITH OP: 5148 5204

OTHER PRODUCERS ASSOCIATED WITH FARM:
JEFF YORK

CRP Cropland: .0 CRP MPL: .0
CRP Contract No.: NONE
ECON. REF. NO.: A10065 FAV/WR HISTORY: N

CROP	BASE ACREAGE	CRP REDUCTION	CRP PENDING	DIRECT PYMT YLD	CC PYMT YIELD
WHEAT	4.6	.0	.0	51	51
CORN	510.9	.0	.0	128	128
SOYBEANS	14.0	.0	.0	41	41

No. of Tracts: 1
TRACT NO.: 16198 Year: 2006
FSA RANGE UNIT NO.:

FARMLAND	CROPLAND	DCP CROPLAND	CRP CROPLAND ACRES	WBP ACRES	WRP ACRES	STATE CONSRV	OTHER CONSRV	EFF DCP CROPLAND	CRP MPL ACRES	DBL CROP ACRES
596.8	536.2	536.2	.0	.0	.0	.0	.0	536.2	.0	.0

CROP NAME	BASE ACRES	DIRECT TRACT YIELD	CC TRACT YIELD	CRP-15 REDUCTION ACRES	CRP TRACT YIELD	CRP PENDING ACRES
WHEAT	4.6	51	51	0.0	0	0.0
CORN	510.9	128	128	0.0	0	0.0
SOYBEANS	14.0	41	41	0.0	0	0.0

Photo Grid Descr: Sc11-2 SEC3 T13N R13W

HEL	027	A027	WL	CW	FW	PC	AW	MW	PCW	MG	RW	CWTE	CWNA
N	N	N	Y	N	N				N				

OWNER 1 - YORK FARM LIMITED PARTNERSHIP

ILLINOIS

578 (02-01-91)

REPORT OF COMMODITIES
FARM AND TRACT DETAIL LISTING

PROGRAM YEAR 2005

RM NUMBER: 3178

DATE: 04-20-2005

Operator Name and Address ID

ALD L YORK JR 0321
5 FOX LN
JACKSONVILLE, IL 62650-6264

Original: _____

Revision: _____

Cropland: 529.5

Farmland: 404,040.4

Tract Number	CLU/ Field	Irr Prc	C/C	Var/ Type	Int Use	Lnd Use	Rpt Unt	Reported Quantity	Determined Quantity	Crp Lnd	O/ M	C/C Stat	Prod Share	Prod ID	RMA Unt	Opt Unt
0		Ni	OFAV			F FAV	A	.00					.5000 .5000	0321 9144		

C/C Type Prac IU Non-Irrig Irrigated
OFAV N .00

Photo Number/Legal Description: None

Cropland: .0 Reported on Cropland: .00 Difference: .00 Reported on Non-Cropland: .00

16198	1	Ni	CORN	YEL	Grain		A	153.30		Y		I	.5000 .5000	0321 9144		
	2	Ni	CORN	YEL	Grain		A	74.60		Y		I	.5000 .5000	0321 9144		
	3	Ni	CORN	YEL	Grain		A	37.00		Y		I	.5000 .5000	0321 9144		
	4	Ni	CORN	YEL	Grain		A	37.40		Y		I	.5000 .5000	0321 9144		
	5	Ni	CORN	YEL	Grain		A	44.80		Y		I	.5000 .5000	0321 9144		
	6	Ni	CORN	YEL	Grain		A	75.00		Y		I	.5000 .5000	0321 9144		
	7	Ni	CORN	YEL	Grain		A	31.40		Y		I	.5000 .5000	0321 9144		
	8	Ni	CORN	YEL	Grain		A	76.00		Y		I	.5000 .5000	0321 9144		

C/C Type Prac IU Non-Irrig Irrigated
CORN YEL N GR 529.50

Photo Number/Legal Description: Sc11-2 SEC3 T13N R13W

Cropland: 529.5 Reported on Cropland: 529.50 Difference: .00 Reported on Non-Cropland: .00

MORGAN, ILLINOIS

FSA-578 (02-01-91)

FARM NUMBER: 3178

REPORT OF COMMODITIES

FARM SUMMARY

PROGRAM YEAR 2005

DATE: 04-20-2005

Operator Name and Address	ID
RONALD L YORK JR	0321
5 FOX LN	
JACKSONVILLE, IL 62650-6264	

Original: _____

Revision: _____

Cropland: 529.5

Farmland: 404,040.4

NOTE: The authority for collecting the following information is Pub.L 107-76. This authority allows for the collection of information without prior OMB approval mandated by the Paperwork Reduction Act of 1995. The data will be used to determine eligibility for assistance. Furnishing the data is voluntary, however, without it assistance cannot be provided. The data may be furnished to any agency responsible for enforcing the provisions of the Act.

Producer Name	ID	C/C	Share
RONALD L YORK JR	0321	CORN	~~.5000~~
JEFF YORK	9144	CORN	~~.5000~~

Crop	Type	Prac	IU	Reported	Determined	Crop	Type	Prac	IU	Reported	Determined
CORN	YEL	N	GR	529.50		OFAV		N		.00	

OPERATOR'S CERTIFICATION: I certify to the best of my knowledge and belief that the acreage of crops and land uses listed herein are true and correct, and that all required crops and land uses have been reported for the farm as applicable. The signing of this form gives FSA representatives authorization to enter and inspect crops and land uses on the above identified land.

Operator's Signature: Ronnie York | Date: 4-25-05

This program or activity will be conducted on a nondiscriminatory basis without regard to race, color, religion, national origin, sex, age, marital status, or disability.

ILLINOIS
SCOTT
Report ID: FSA-156EZ-R001

U.S. Dept. of Agriculture
Farm Service Agency
Abbreviated 156 Farm Record

OR: Name & Address	FARMLAND	CROPLAND	DCP CROPLAND	EFF DCP CROPLAND	DBL CROPPED ACRES	FARM DESCRIPTION	STATUS
	200.4	194.5	194.5	194.5	.0	BRUNS BOTTOM GROUND	ACTIVE

COON FARMS INC
C/O REG COON
137 N MAIN ST
WINCHESTER IL 62694 1074

FARMS ASSOC. WITH OP: 589 1607 1610 1852 65 2162 2218 1970

OTHER PRODUCERS ASSOCIATED WITH FARM:
NONE

CRP Cropland: .0 CRP MPL: .0
CRP Contract No.: NONE
RECON. REF. NO.: A80036 FAV/WR HISTORY: N

CROP	BASE ACREAGE	CRP REDUCTION	CRP PENDING	DIRECT PYMT YLD	CC PYMT YIELD
WHEAT	34.4	.0	.0	45	45
CORN	101.9	.0	.0	113	113
SOYBEANS	56.4	.0	.0	34	34

No. of Tracts: 1 Year: 2006
T NO.: 10293
B ANGE UNIT NO.:

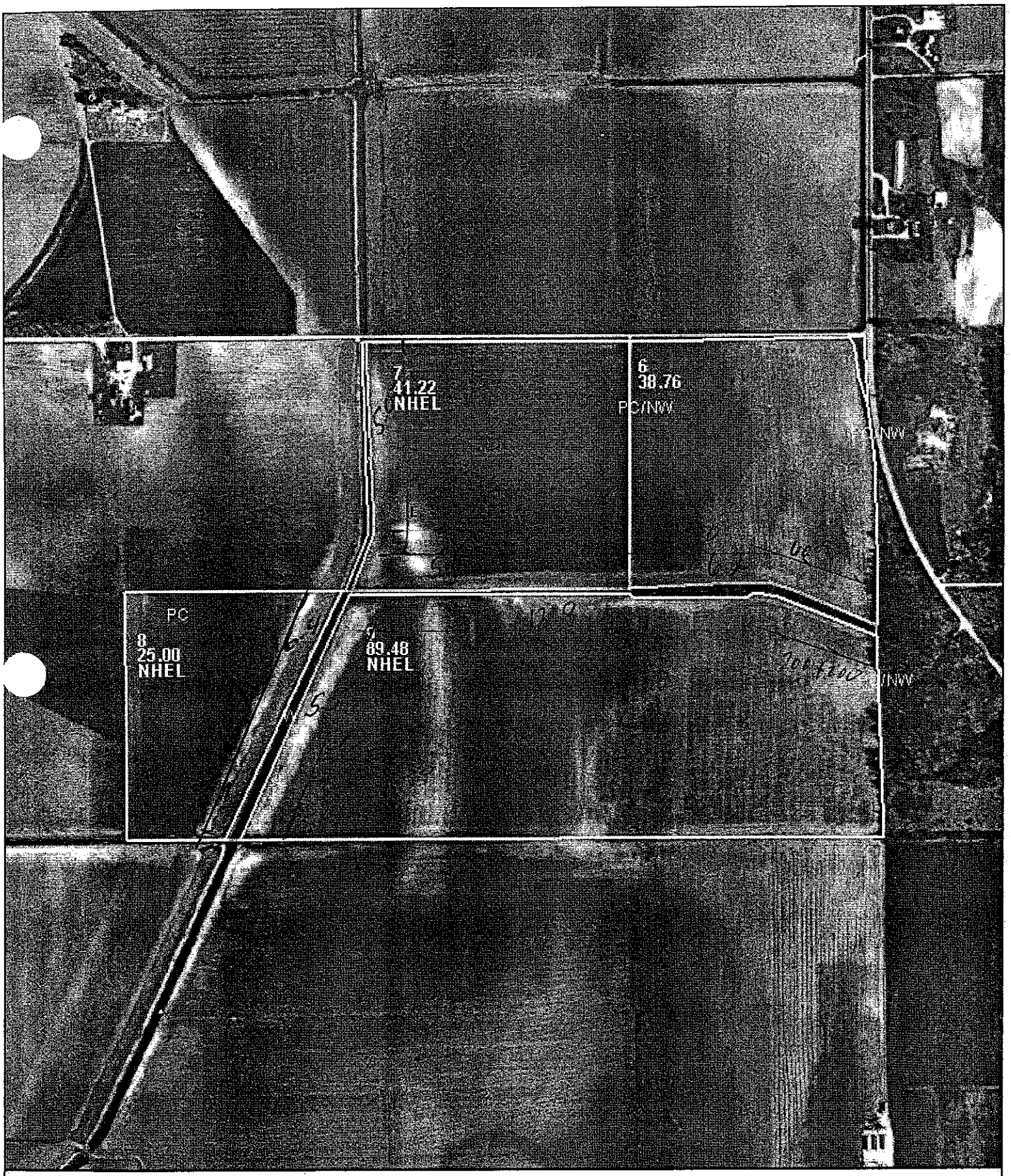
FARMLAND	CROPLAND	DCP CROPLAND	CRP CROPLAND ACRES	WBP ACRES	WRP ACRES	STATE CONSRV	OTHER CONSRV	EFF DCP CROPLAND	CRP MPL ACRES	DBL CROP ACRES
200.4	194.5	194.5	.0	.0	.0	.0	.0	194.5	.0	.0

CROP NAME	BASE ACRES	DIRECT TRACT YIELD	CC TRACT YIELD	CRP-15 REDUCTION ACRES	CRP TRACT YIELD	CRP PENDING ACRES
WHEAT	34.4	45	45	0.0	0	0.0
CORN	101.9	113	113	0.0	0	0.0
SOYBEANS	56.4	34	34	0.0	0	0.0

Photo Grid Descr: D7-6/2B

HEL	027	A027	WL	CW	FW	PC	AW	MW	PCW	MG	RW	CWTE	CWNA
Y	Y	Y	N	N					N				

OWNER 1 - BRUNS FAMILY LIMITED PARTNERSHIP



Farm: 1735
Tract: 10293

0 400 800 1200 1600 Feet

N

Scale 1:7920

This map is for FSA program purposes only.

Clu_a_il171.shp

Printed: Jun 17, 2005

SCOTT, ILLINOIS

Form Approved - OMB No. 0560-0004

FSA-578 (Producer Print)

REPORT OF ACREAGE

PROGRAM YEAR 2005

DATE: 01-20-2006

Producer Name and Address ID

ON FARMS INC 8334
C/O REG COON
137 N MAIN ST
WINCHESTER, IL 62694-1074

NOTE: The following statements are made in accordance with the Privacy Act of 1974(5 USC 552a). The Agricultural Adjustment Act of 1938, as amended, and the Agricultural Act of 1949, as amended, authorized the collection of the following data. The data will be used to determine eligibility for assistance. Furnishing the data is voluntary, however, without it assistance cannot be provided. The data may be furnished to any agency responsible for enforcing the provisions of the Acts.

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate, or any other aspect of this collection of information, including suggestions for reducing this burden, to the Department of Agriculture, Clearance Officer, Ag Box 7630, Washington, D.C. 20250; and to the Office of Management and Budget, Paperwork Reduction Project (OMB No. 0560-0004), Washington, D.C. 20503. RETURN THIS COMPLETED FORM TO YOUR FSA COUNTY OFFICE.

Farm Number	Tract Number	CLU/ Field	Ir Pr	C/C	Var/ Type	Int Use	C/C Stat	Rpt Unt	Reported Quantity	Determined Quantity	Crp Lnd	Planting Date	Prod Share	Prod Name	RMA Unt	Opt Unt
65	0		Ni	OFAV				A	.00				.5000	ST MARK CHURCH C/O FATHER		
													.5000	COON FARMS INC		
	458	1 HR	Ni	CORN	YEL	Grain	I	A	18.60		Y	04-08-2005	.5000	ST MARK CHURCH C/O FATHER		
													.5000	COON FARMS INC		
	459	1 HR	Ni	CORN	YEL	Grain	I	A	31.20		Y	04-08-2005	.5000	ST MARK CHURCH C/O FATHER		
													.5000	COON FARMS INC		
		4	Ni	SOYBN	COM	Grain	I	A	92.30		Y	05-02-2005	.5000	ST MARK CHURCH C/O FATHER		
													.5000	COON FARMS INC		
		2	Ni	CORN	YEL	Grain	I	A	1.50		Y	04-08-2005	.5000	ST MARK CHURCH C/O FATHER		
													.5000	COON FARMS INC		
	460	1 HR	Ni	CORN	YEL	Grain	I	A	14.30		Y	04-08-2005	.5000	ST MARK CHURCH C/O FATHER		
													.5000	COON FARMS INC		
		5 HR	Ni	CORN	YEL	Grain	I	A	17.40		Y	04-08-2005	.5000	ST MARK CHURCH C/O FATHER		
													.5000	COON FARMS INC		
		6	Ni	CORN	YEL	Grain	I	A	2.70		Y	04-08-2005	.5000	ST MARK CHURCH C/O FATHER		
													.5000	COON FARMS INC		
		4 HR	Ni	CORN	YEL	Grain	I	A	.30		Y	04-08-2005	.5000	ST MARK CHURCH C/O FATHER		
													.5000	COON FARMS INC		

Photo Number/Legal Descriptions: 458 H4-6/2B
459 H4-3/2B
460 H5-2/2A

Cropland: 178.3 Farmland: 218.0

589	0		Ni	OFAV				A	.00	.00			1.0000	COON FARMS INC		
	656	1	Ni	CORN	YEL	Grain	I	A	79.80	79.80	Y	04-06-2005	1.0000	COON FARMS INC		
	657	1	Ni	SOYBN	COM	Grain	I	A	68.00	68.00	Y	05-04-2005	1.0000	COON FARMS INC		
		2	Ni	SOYBN	COM	Grain	I	A	39.00	39.00	Y	05-04-2005	1.0000	COON FARMS INC		

Photo Number/Legal Descriptions: 656 D6-1/1A
657 D6-1 & 6/2A

Cropland: 186.8 Farmland: 200.0

07	0		Ni	OFAV				A	.00				1.0000	COON FARMS INC		

Farm Number	Tract Number	CLU/ Field	Ir Pr	C/C	Var/ Type	Int Use	C/C Stat	Rpt Unt	Reported Quantity	Determined Quantity	Crp Lnd	Planting Date	Prod Share	Prod Name	RMA Unt	Opt Unt
1607	569	1	Ni	CORN	YEL	Grain	I	A	20.00		Y	04-07-2005	1.0000	COON FARMS INC		
		2	Ni	CORN	YEL	Grain	I	A	74.30		Y	04-07-2005	1.0000	COON FARMS INC		
		3	Ni	CORN	YEL	Grain	I	A	47.80		Y	04-07-2005	1.0000	COON FARMS INC		
		4	Ni	CORN	YEL	Grain	I	A	4.40		Y	04-07-2005	1.0000	COON FARMS INC		
	570	2	Ni	SOYBN	COM	Grain	I	A	50.40		Y	05-06-2005	1.0000	COON FARMS INC		

Photo Number/Legal Descriptions: 569 G5-4 & 5/1B
570 G5-3/2B

Cropland: 196.9 Farmland: 220.0

1610	0		Ni	OFAV				A	.00				.5000	COON FAMILY TR		
													.5000	COON FARMS INC		
	640	1	Ni	CORN	YEL	Grain	I	A	162.10		Y	04-04-2005	.5000	COON FAMILY TR		
													.5000	COON FARMS INC		
		2	Ni	SOYBN	COM	Grain	I	A	157.80		Y	05-03-2005	.5000	COON FAMILY TR		
													.5000	COON FARMS INC		
	641	1	Ni	CORN	YEL	Grain	I	A	33.30		Y	04-02-2005	.5000	COON FAMILY TR		
													.5000	COON FARMS INC		

Photo Number/Legal Descriptions: 640 C6-1 4 & 5/1A
641 C6-4/1B

Cropland: 353.2 Farmland: 360.0

1735	0		Ni	OFAV				A	.00				1.0000	COON FARMS INC		
	10293	7	Ni	CORN	YEL	Grain	I	A	41.20		Y	04-06-2005	1.0000	COON FARMS INC		
		6	Ni	CORN	YEL	Grain	I	A	38.70		Y	04-06-2005	1.0000	COON FARMS INC		
		8	Ni	CORN	YEL	Grain	I	A	23.80		Y	04-06-2005	1.0000	COON FARMS INC		
		9	Ni	SOYBN	COM	Grain	I	A	89.00		Y	05-05-2005	1.0000	COON FARMS INC		

Photo Number/Legal Descriptions: 10293 D7-6/2B

Cropland: 192.7 Farmland: 200.0

1852	0		Ni	OFAV				A	.00				.5000	COON FARMS INC		
													.5000	ROBERT O COON 1990 TRUST		
	639	1	Ni	CORN	YEL	Grain	I	A	80.70		Y	04-07-2005	1.0000	COON FARMS INC		
	10245	1	Ni	CORN	YEL	Grain	I	A	27.50		Y	04-02-2005	1.0000	COON FARMS INC		
		2	Ni	CORN	YEL	Grain	I	A	36.20		Y	04-02-2005	1.0000	COON FARMS INC		
		5	Ni	CORN	YEL	Grain	I	A	159.30		Y	04-02-2005	1.0000	COON FARMS INC		
		4	Ni	SOYBN	COM	Grain	I	A	87.90		Y	05-02-2005	1.0000	COON FARMS INC		
	10314	1	Ni	SOYBN	COM	Grain	I	A	59.90		Y	05-06-2005	1.0000	COON FARMS INC		

Farm Number	Tract Number	CLU/ Field	Ir Pr	C/C	Var/ Type	Int Use	C/C Stat	Rpt Unt	Reported Quantity	Determined Quantity	Crp Lnd	Planting Date	Prod Share	Prod Name	RMA Unt	Opt Unt
		2	Ni	SOYBN	COM	Grain	I	A	1.70		Y	05-06-2005	1.0000	COON FARMS INC		
		3	Ni	SOYBN	COM	Grain	I	A	.70		Y	05-06-2005	1.0000	COON FARMS INC		
		5	Ni	CORN	YEL	Grain	I	A	86.00		Y	04-08-2005	1.0000	COON FARMS INC		
		6	Ni	CORN	YEL	Grain	I	A	24.70		Y	04-08-2005	1.0000	COON FARMS INC		
		4	Ni	CORN	YEL	Grain	I	A	10.00		Y	04-08-2005	1.0000	COON FARMS INC		

Photo Number/Legal Descriptions: 639 C6-2/2A
10245 C6-4 & 5/1B
10314 F7-1 & 2/1A-2A

Cropland: 574.6 Farmland: 694.0

1970	0		Ni	OFAV					.00				1.0000	COON FARMS INC		
	9961	1 HR	Ni	CORN	YEL	Grain	I	A	36.30		Y	04-09-2005	1.0000	COON FARMS INC		
		2 HR	Ni	CORN	YEL	Grain	I	A	20.80		Y	04-09-2005	1.0000	COON FARMS INC		

Photo Number/Legal Descriptions: 9961 E7-1/1A

Cropland: 57.1 Farmland: 65.0

2162	0		Ni	OFAV				A	.00				1.0000	COON FARMS INC		
	660	1	Ni	SOYBN	COM	Grain	I	A	39.10		Y	05-03-2005	1.0000	COON FARMS INC		
	10066	1	Ni	SOYBN	COM	Grain	I	A	4.00		Y	05-07-2005	1.0000	COON FARMS INC		
		2	Ni	SOYBN	COM	Grain	I	A	30.60		Y	05-07-2005	1.0000	COON FARMS INC		
		4	Ni	SOYBN	COM	Grain	I	A	.70		Y	05-07-2005	1.0000	COON FARMS INC		
		5	Ni	SOYBN	COM	Grain	I	A	4.90		Y	05-07-2005	1.0000	COON FARMS INC		
		3	Ni	SOYBN	COM	Grain	I	A	25.40		Y	05-07-2005	1.0000	COON FARMS INC		
	10244	3	Ni	SOYBN	COM	Grain	I	A	39.30		Y	05-02-2005	1.0000	COON FARMS INC		

Photo Number/Legal Descriptions: 660 D6-5/1A
10066 D6-2/2A
10244 C6-4/1B

Cropland: 144.0 Farmland: 153.0

2218	0		Ni	OFAV				A	.00				.5000	KLEIN FARMS LLP		
													.5000	COON FARMS INC		
	10590	1	Ni	CORN	YEL	Grain	I	A	31.70		Y	04-05-2005	.5000	KLEIN FARMS LLP		
													.5000	COON FARMS INC		
		24	Ni	CORN	YEL	Grain	I	A	3.90		Y	04-04-2005	.5000	KLEIN FARMS LLP		
													.5000	COON FARMS INC		
		25	Ir	CORN	YEL	Grain	I	A	38.20		Y	04-04-2005	.5000	KLEIN FARMS LLP		
													.5000	COON FARMS INC		
		26	Ni	CORN	YEL	Grain	I	A	6.60		Y	04-04-2005	.5000	KLEIN FARMS LLP		

Farm Number	Tract Number	CLU/ Field	Ir Pr	C/C	Var/ Type	Int Use	C/C Stat	Rpt Unt	Reported Quantity	Determined Quantity	Crp Lnd	Planting Date	Prod Share	Prod Name	RMA Opt Unt Unt
2218	10590	26	Ni	CORN	(continued)								.5000	COON FARMS INC	
		3	Ni	CORN	YEL	Grain	I	A	27.40		Y	04-04-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		10	Ni	SOYBN	COM	Grain	I	A	32.60		Y	05-05-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		18	Ir	SOYBN	COM	Grain	I	A	2.30		Y	05-05-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		29	Ni	SOYBN	COM	Grain	I	A	1.30		Y	05-05-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		4	Ni	SOYBN	COM	Grain	I	A	1.70		Y	05-05-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		17	Ni	CORN	YEL	Grain	I	A	1.60		Y	04-04-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		5	Ir	SOYBN	COM	Grain	I	A	61.90		Y	05-05-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		6	Ir	SOYBN	COM	Grain	I	A	59.40		Y	05-05-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		2	Ni	CORN	YEL	Grain	I	A	2.90		Y	04-04-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		22	Ni	CORN	YEL	Grain	I	A	6.30		Y	04-04-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		27	Ni	CORN	YEL	Grain	I	A	2.30		Y	04-04-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		23	Ni	CORN	YEL	Grain	I	A	.70		Y	04-04-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		28	Ni	CORN	YEL	Grain	I	A	.70		Y	04-05-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		7	Ir	CORN	YEL	Grain	I	A	65.20		Y	04-05-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		20	Ir	CORN	YEL	Grain	I	A	64.90		Y	04-05-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		14	Ni	CORN	YEL	Grain	I	A	6.50		Y	04-05-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		15	Ni	CORN	YEL	Grain	I	A	7.10		Y	04-05-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		9	Ir	CORN	YEL	Grain	I	A	1.40		Y	04-04-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	
		13	Ni	CORN	YEL	Grain	I	A	5.50		Y	04-05-2005	.5000 .5000	KLEIN FARMS LLP COON FARMS INC	

Photo Number/Legal Descriptions: 10590 D7-1 5 & 6/1A-2A-1B-2B

Cropland: 432.1 Farmland: 458.0

SCOTT, ILLINOIS

Form Approved - OMB No. 0560-0004

FSA-578 (Producer Print)

REPORT OF ACREAGE

PROGRAM YEAR 2005

DATE: 01-20-2006

Farm Number	Tract Number	CLU/ Field	Ir Pr	C/C	Var/ Type	Int Use	C/C Stat	Rpt Unt	Reported Quantity	Determined Quantity	Crp Lnd	Planting Date	Prod Share	Prod Name	RMA Unt	Opt Unt

C/C	Type	Prac	IU	Reported	Determined	C/C	Type	Prac	IU	Reported	Determined	C/C	Type	Prac	IU	Reported	Determi
CORN	YEL	N	GR	1,196.10	79.80	SOYBN	COM	N	GR	826.30	107.00	CORN	YEL	I	GR	169.70	
SOYBN	COM	I	GR	123.60													

PRODUCER'S CERTIFICATION: I certify to the best of my knowledge and belief that the acreage of crops and land uses listed herein are true and correct, and that all required crops and land uses have been reported for the farm as applicable. The signing of this form gives FSA representatives authorization to enter and inspect crops and land uses on the above identified land.

Producer's Signature | Date

This program or activity will be conducted on a nondiscriminatory basis without regard to race, color, religion, national origin, sex, age, marital status, or disability.

ILLINOIS
SCOTT
Report ID: FSA-156EZ-R001

U.S. Dept. of Agriculture
Farm Service Agency
Abbreviated 156 Farm Record

Prepared:01/20/2006
Crop Year:2006
Page: 1

OR: Name & Address	FARMLAND	CROPLAND	DCP CROPLAND	EFF DCP CROPLAND	DBL CROPPED ACRES	FARM DESCRIPTION	STATUS
	443.0	434.0	434.0	434.0	.0	KLEIN FARMS LLP	ACTIVE

COON FARMS INC
C/O REG COON
137 N MAIN ST
WINCHESTER IL 62694 1074

FARMS ASSOC. WITH OP: 589 1607 1610 1735 1852 65 2162 1970

OTHER PRODUCERS ASSOCIATED WITH FARM:
NONE

CRP Cropland: .0 CRP MPL: .0
CRP Contract No.: NONE
RECON. REF. NO.: B40077 FAV/WR HISTORY: N

CROP	BASE ACREAGE	CRP REDUCTION	CRP PENDING	DIRECT PYMT YLD	CC PYMT YIELD
WHEAT	63.5	.0	.0	51	51
CORN	222.7	.0	.0	128	128
SOYBEANS	83.1	.0	.0	28	28

No. of Tracts: 1 Year: 2006
T NO.: 10590
B NGE UNIT NO.:

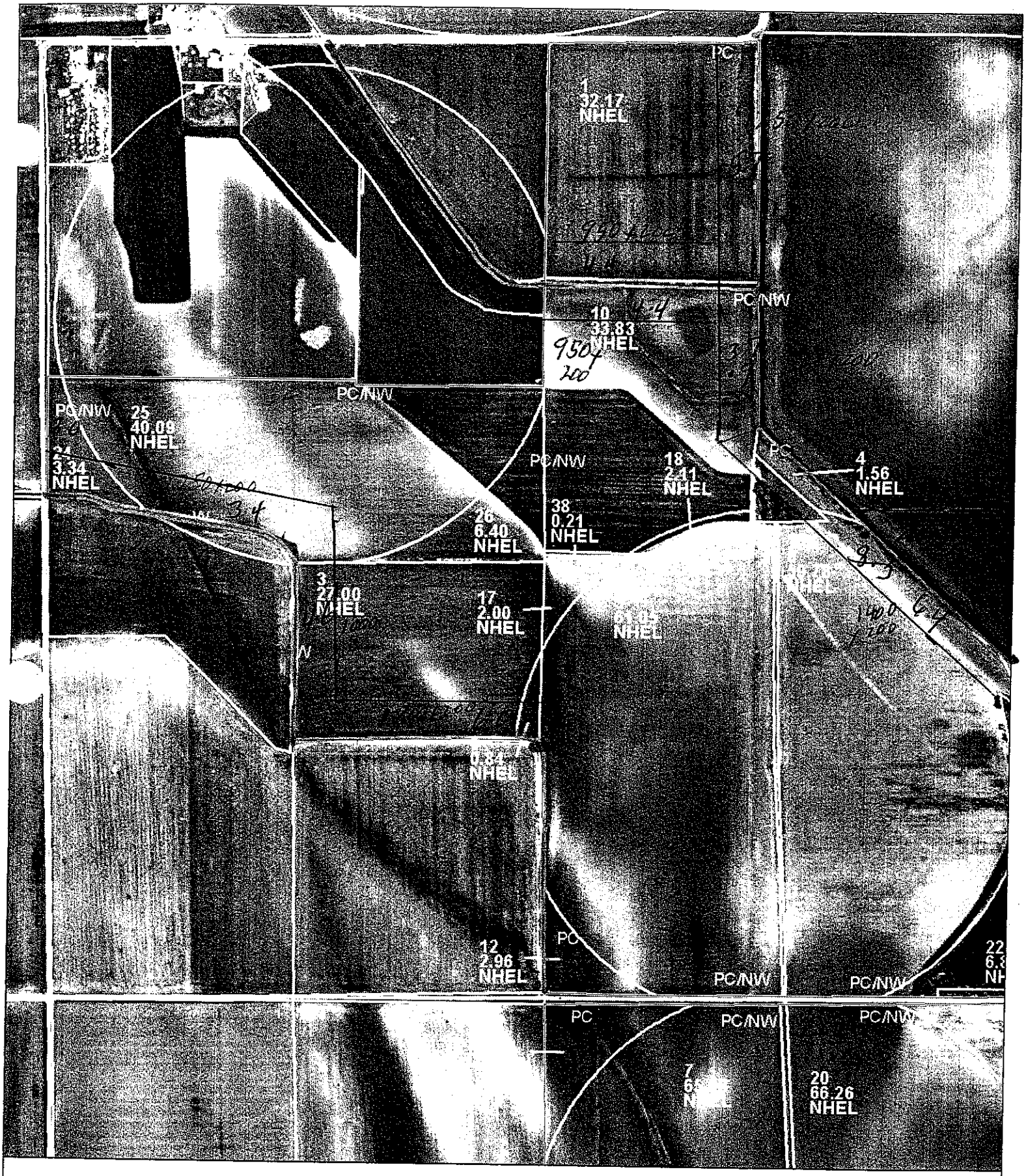
FARMLAND	CROPLAND	DCP CROPLAND	CRP CROPLAND ACRES	WBP ACRES	WRP ACRES	STATE CONSRV	OTHER CONSRV	EFF DCP CROPLAND	CRP MPL ACRES	DBL CROP ACRES
443.0	434.0	434.0	.0	.0	.0	.0	.0	434.0	.0	.0

CROP NAME	BASE ACRES	DIRECT TRACT YIELD	CC TRACT YIELD	CRP-15 REDUCTION ACRES	CRP TRACT YIELD	CRP PENDING ACRES
WHEAT	63.5	51	51	0.0	0	0.0
CORN	222.7	128	128	0.0	0	0.0
SOYBEANS	83.1	28	28	0.0	0	0.0

Photo Grid Descr: D7-1 5 & 6/1A-2A-1B-2B

HEL	027	A027	WL	CW	FW	PC	AW	MW	PCW	MG	RW	CWTE	CWNA
	N	N	Y	N		Y			N				

OWNER 1 - KLEIN FARMS LLP



arm: 2218
Tract: 10590

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Tract Boundary
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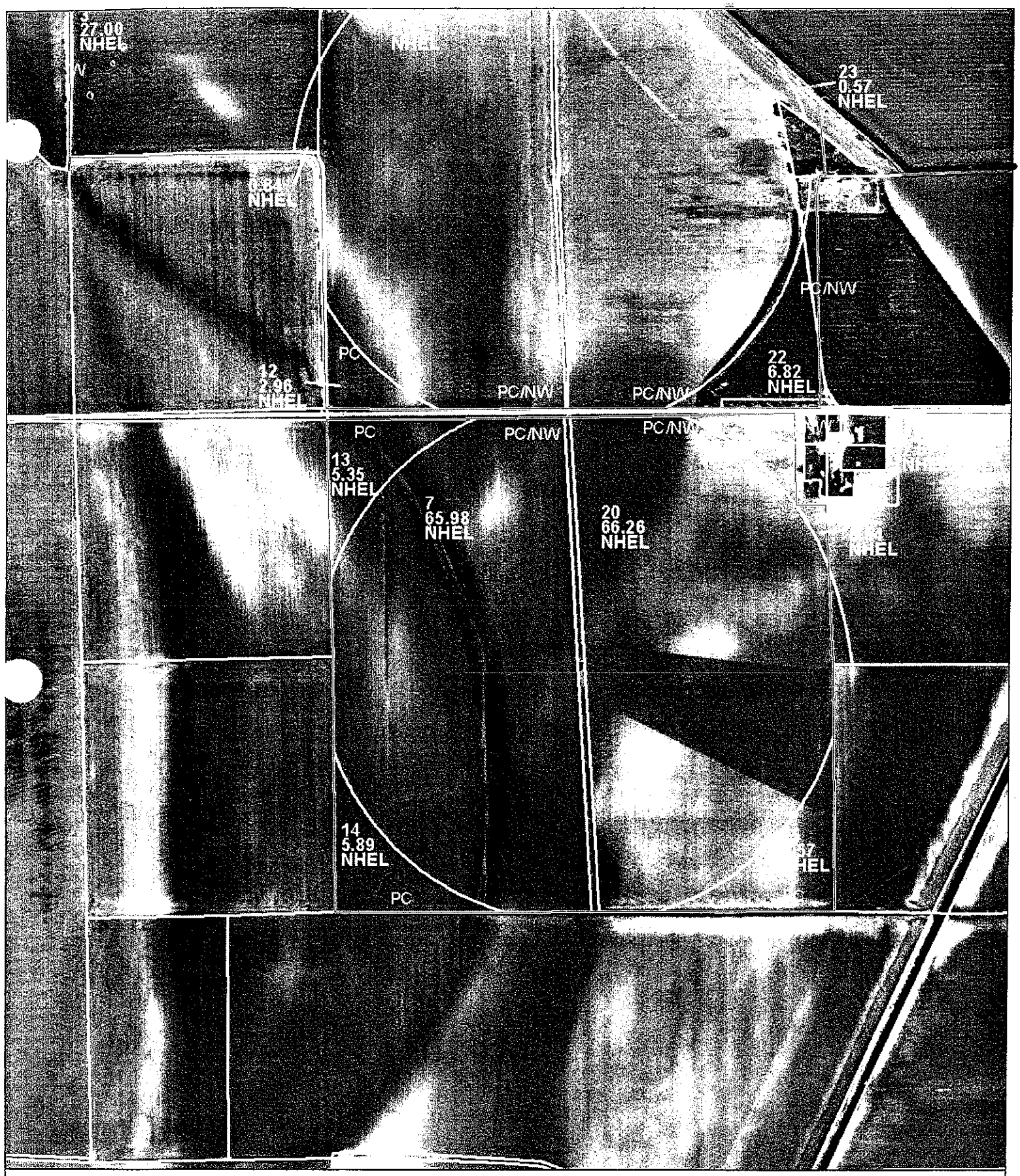
Scale 1:7920

This map is for FSA program purposes only.

Printed: Jun 30, 20



Farm: 2218
Tract: 10590

0 400 800 1200 1600 Feet

N

Tract Boundary
Clu_a_il171.shp

Scale 1:7920

This map is for FSA program purposes only.

Printed: Jun 30, 2005

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Scale: 1 : 25,000 Map Rotation: 0° Magnetic Declination: 0.3°E

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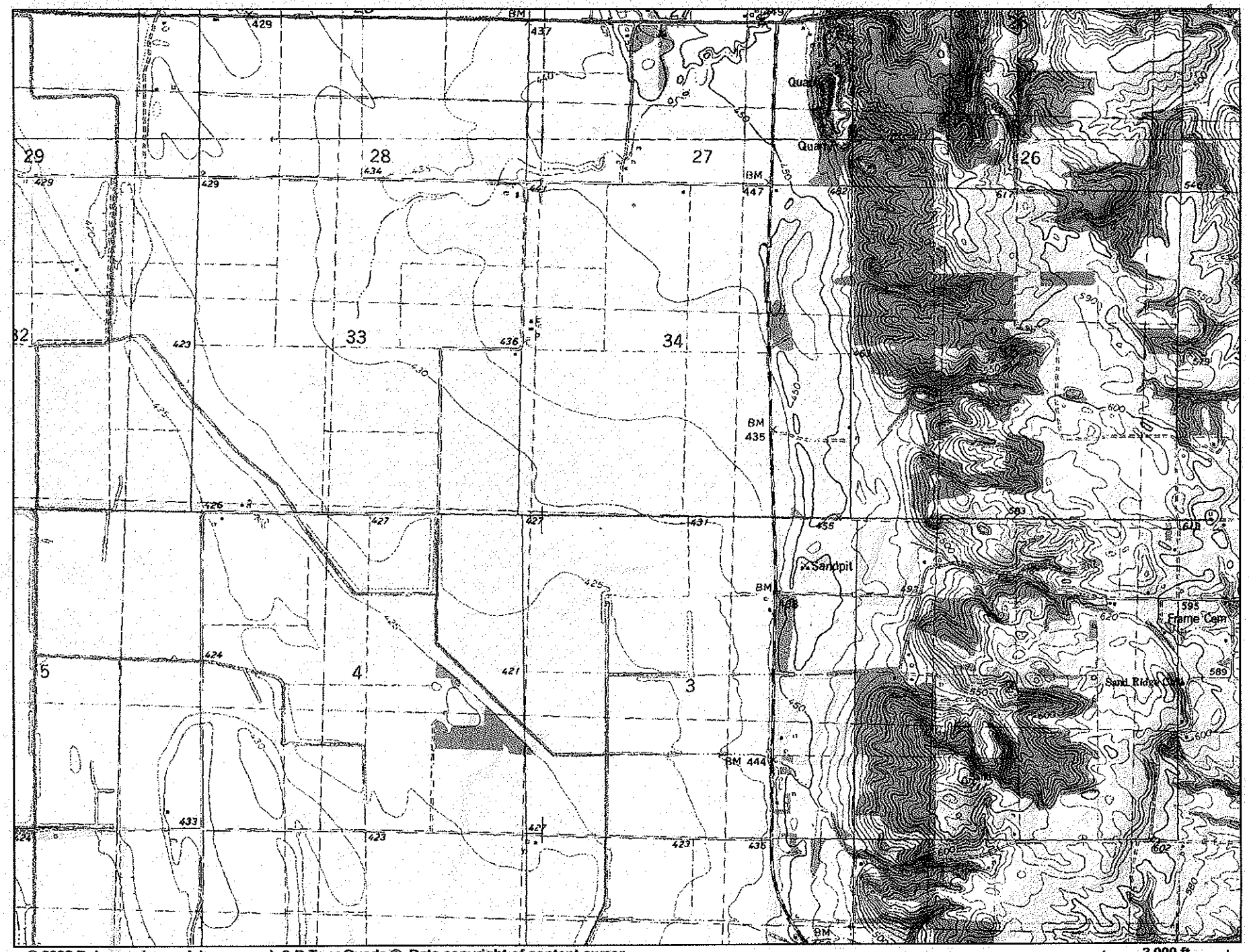

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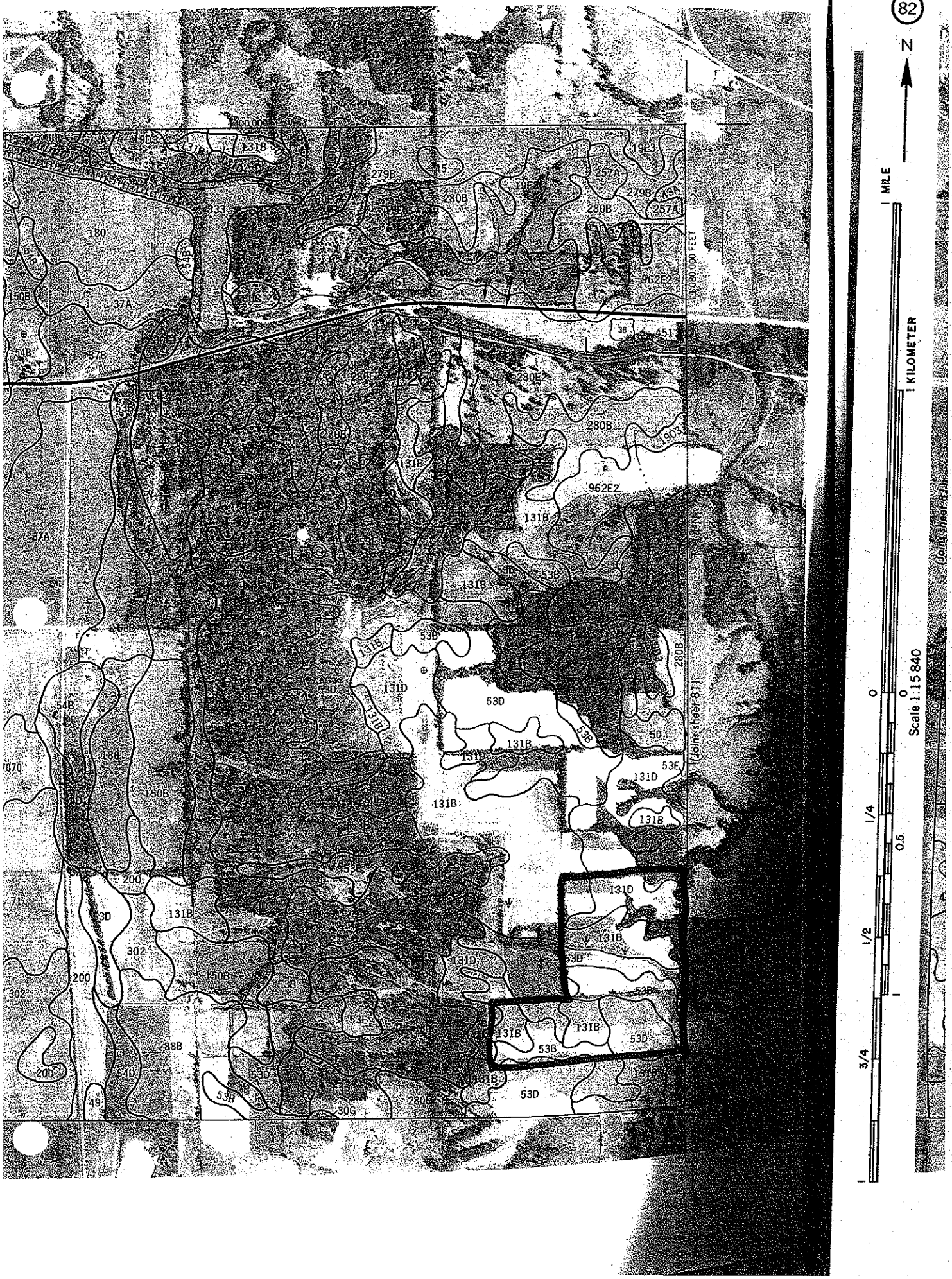
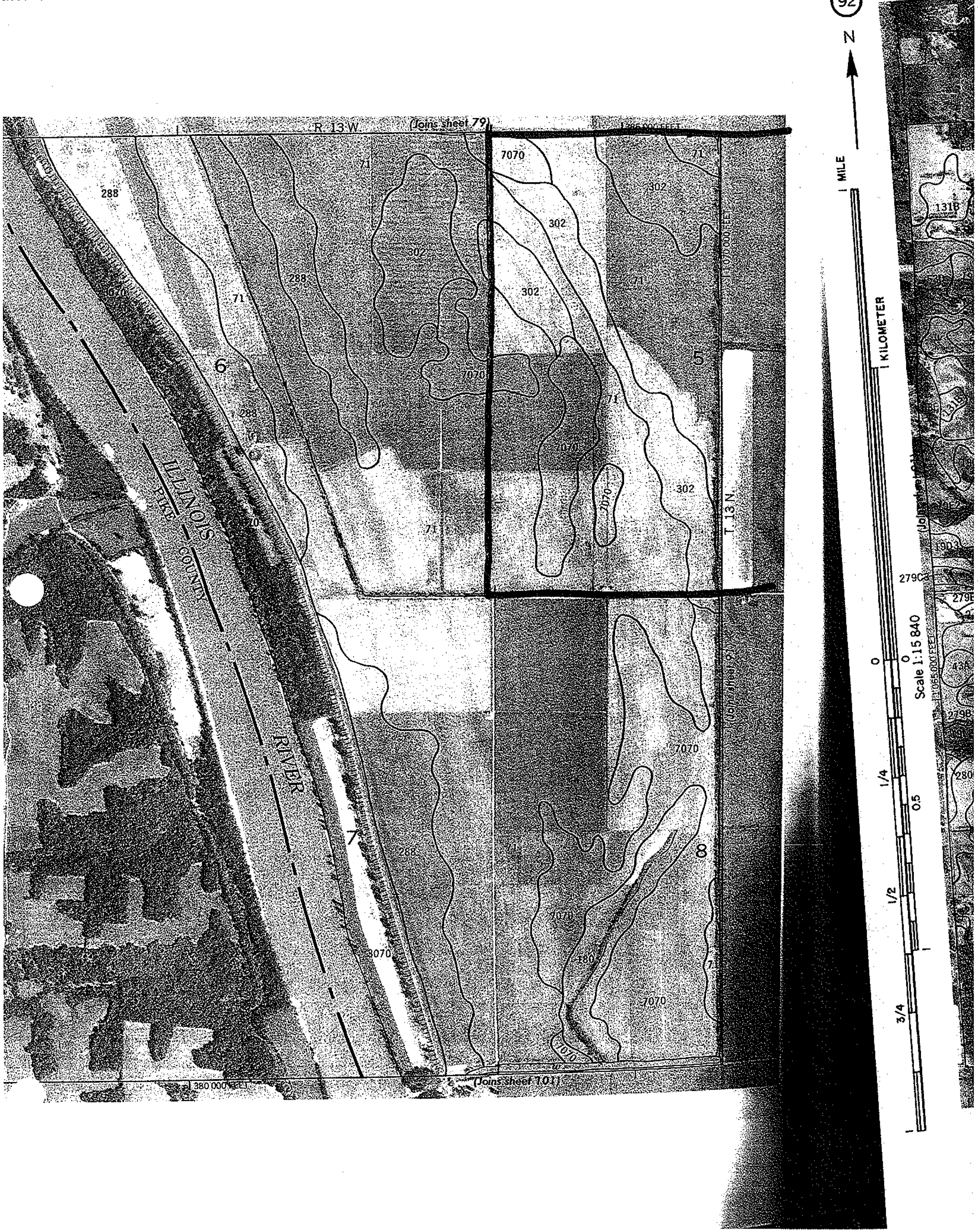
Scale: 1 : 25,000 Map Rotation: 0° Magnetic Declination: 0.3°E

— SHEET NUMBER 80




92
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ILLINOIS
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Scale 1:15 840
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131B
150B
53B
88B
172A
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540
37A
180
280C2
279B
19D2
19E
19B3
53D
310D
36B
62E3
7070
200
54B

APPENDIX B
Soil Testing Procedures
(Soil Test Results)

Soil samples for soil tests should not represent more than 2.5 acres. The fields will be sub-divided into units of approximately 2.5 acres for soil sampling and nutrient planning purposes. Soil sampling depth for P and K shall be 7 inches. Under no till conditions pH can be tested using the top 4 inches only.

Soil samples shall be collected and prepared according to The Illinois Agronomy handbook. Take soil samples prior to manure application (e.g., Mid Autumn). Since manure will typically be applied to soybean stubble anticipating a corn crop in the spring, soil tests should either be taken in corn stalks or soybean stubble prior to manure application. Wait 9 months after manure application before soil testing.

Soil testing shall include analysis for any nutrients for which specific information is needed to develop the nutrient plan. Request analyses pertinent to monitoring or amending the annual nutrient budget, e.g. pH, electrical conductivity (EC), soil organic matter, nitrogen, phosphorus, and potassium.

Soil Analysis

The minimum analysis for Illinois is to include:

- pH
- Phosphorus (P as indicated by Bray P1 test)
- Potassium (K)

{INSERT SOIL TESTS}

F 2218 T 10590

Report for Soil Fertility Sites

Printed: 3/2/2004 11:21:57 AM

Client: ~~Chris Montgomery~~
Farm: River Bottoms
Field: M1
Event: 2001 Soil Test
Participant: Soil Fertility Sites

Klein Farm
Reg Coon
Winchester, ILL.

Sample ID	pH	BpH	CEC	OM	P1	K
1	6.9	7	24.8	3.6	70	212
2	7	7	24.8	3.6	42	192
3	6.6	7	7.6	3.6	78	384
4	6.6	7	6.1	3.4	102	292
5	6.5	7	8.9	3.7	105	380
6	6.5	7	10.2	3.5	33	208
7	6.6	7	17.2	3.6	34	160
8	6.5	7	25.6	3.6	74	268
9	6.3	6.9	21.7	3.5	58	188
10	6.4	7	16.1	3.5	35	120
11	6.4	7	12.7	3.7	26	144
12	6.6	7	10.6	3.6	22	160
13	6.4	7	14.8	3.5	23	120
14	6.5	7	8.1	3.4	22	184
15	6.4	7	14.1	3.7	22	112
16	6.4	7	20.8	3.6	46	152
17	6.6	7	20.2	3.6	53	188
18	6.3	7	9.2	3.4	27	184
19	6.4	7	12.4	3.5	27	172
20	6.5	7	16.5	3.6	25	148
21	6.6	7	13.9	3.6	28	176
22	6.5	7	12.5	3.5	33	192
23	6.4	7	6.9	3.4	45	312
24	6.4	7	14.7	3.7	40	164
25	6.5	7	11.9	3.5	41	228
26	6.3	7	8.9	3.4	46	232
27	6.6	7	10.2	3.6	44	220
28	6.5	7	13.2	3.6	35	148
29	6.1	6.7	14.8	3.7	55	180
30	6.2	6.8	10	3.5	80	308
31	6.1	6.7	9.7	3.6	70	296
32	6.4	7	14.9	3.6	39	168
33	7	7	26.5	3.5	80	280
34	7	7	26.1	3.7	80	264
35	7	7	25.7	3.8	78	260
36	7	7	22.7	3.5	49	188
37	6.8	7	26.3	3.4	65	248
38	6.9	7	22.9	3.6	48	224

AGRIS

Report for Soil Fertility Sites

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Sample ID	pH	BpH	CEC	OM	P1	K
39	7	7	21.9	3.7	32	192
40	6.8	7	21.4	3.8	41	160
41	6.9	7	24.5	3.5	68	240
42	7	7	16.9	3.6	45	144
43	6.9	7	20.6	3.8	41	220
44	7	7	27.1	3.8	152	464
45	7.1	7	30.1	3.7	168	448
46	6.9	7	31.8	3.5	178	508
47	7.1	7	30	3.6	222	472
48	6.8	7	25.5	3.6	116	312
49	6.9	7	29.9	3.3	112	368
50	7	7	30.1	3.5	116	428
51	6.9	7	30.1	3.4	124	400
52	7	7	29.1	3.4	112	384
53	7	7	28	3.3	99	316
54	7.2	7	26.2	3.6	139	572
55	7.1	7	29.6	3.4	168	488
56	7.1	7	23.1	3.4	88	344
57	6.8	7	24.1	3.5	108	372
58	6.9	7	24.7	3.4	108	300
59	6.7	7	17.1	3.3	56	180
60	6.9	7	16	3.4	59	176
61	7	7	17.8	3.6	45	176
62	7	7	24.8	3.5	58	264
63	7.1	7	26.3	3.3	105	292
64	7.2	7	27.5	3.4	160	416

medium 122

Win Production - Median Soil Tests (PPM)

York 1				
	pH	P	K	% OM
A	6.4	82	191	2.41
B	6.4	83	210	2.97
C1	6.6	84	183	3.32
C2	6.6	155	153	4.07
D	6.6	185	212	1.68
E	6.8	58	215	1.14
F	6.7	40	179	2.2
G	6.6	26	158	2.58
H	6.7	44	191	1.92
I	6.7	30	174	2.26
J	6.7	35	190	1.99
K	6.8	176	202	1.21
L	7.1	106	189	1.34
MEDIANS (ppm)	6.7	82	190	2.2
MEDIANS (lb/ac)		164	380	

York 3				
	pH	P	K	% OM
A	7.2	70	147	2.83
B	6.4	70	157	1.44
C	6.6	66	161	1.81
D	6.4	41	132	2.1
MEDIANS	6.5	68	152	1.955
MEDIANS (lb/ac)		136	304	

York 4				
	pH	P	K	% OM
A	6.7	156	212	1.74
B	6.7	90	170	1.41
C	6.4	202	174	1.18
D	6.1	219	93	0.47
MEDIANS	6.55	179	172	1.295
MEDIANS (lb/ac)		358	344	

York 7				
	pH	P	K	% OM
A	6.4	45	169	7.02
B	6.8	34	142	2.55
C	6.5	35	173	9.53
D	6.6	46	184	5.81
E	6.4	34	144	2.12
F	7	12	128	1.86
G	6.5	58	146	1.03
H	7.5	24	184	1.69
I				
MEDIANS (ppm)	6.55	34.5	157.5	2.335
MEDIANS (lb/ac)		69	315	

York 8				
	pH	P	K	% OM
A	6.9	30	124	10.37
B	7.2	29	116	10
C	7.1	39	127	11.14
D	7.1	31	134	9.71
E	7.2	31	161	4.23
F	7.1	66	205	1.51
G	7.5	73	153	1.02
H	6.6	22	170	3.66
I	5.5	60	192	1.51
MEDIANS	7.1	31	153	4.23
MEDIANS (lb/ac)		62	306	

2 A-E				
	pH	P	K	% OM
A	7.2	63	84	0.74
B	7.5	109	121	0.83
C	7.1	116	97	0.88
D	5.8	149	131	0.99
E	5.5	153	68	0.55
MEDIANS (ppm)	7.1	116	97	0.83
MEDIANS (lb/ac)		232	194	

5 A-C				
	pH	P	K	% OM
A	5.7	120	160	0.95
B	5.3	92	129	1.08
C	5.7	77	115	1.19
MEDIANS	5.7	92	129	1.08
MEDIANS (lb/ac)		184	258	

9 A-C				
	pH	P	K	% OM
A	6.9	45	47	0.95
B	5.9	50	72	0.78
C	6	126	90	1.19
MEDIANS (ppm)	6	50	72	0.95
MEDIANS (lb/ac)		100	144	

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Brian Bradshaw
37808 Co. Hwy 2
New Salem, IL 62357
(217)248-2194
File #55588
Farm Name: Winchester Productions
Field 1: 115 Acres

Analytical Services By:
Brookside Laboratories, Inc.
New Knoxville, OH 45871

Map Layer 1

Grower : Brian Bradshaw

Farm : Winchester Productions

Field : FIELD 1 (Park 2 ?)

Year : 2011

Operation : Generic2

Crop / Product : NO Product

Op. Instance : Instance - 1

Area : 114.27 ac

Length : 35,188 ft

Count : 13

Name
1K(8.30 ac)
1A (7.46 ac)
1B (4.12 ac)
1C1(6.94 ac)
1C2(10.31 ac)
1D (8.23 ac)
1E (9.40 ac)
1F (8.62 ac)
1G (9.09 ac)
1H (10.53 ac)
1I (11.15 ac)
1J (9.35 ac)
1L (11.02 ac)

lb/A

BROOKSIDE LABORATORIES, INC.

55588-1

SOIL AUDIT AND INVENTORY REPORT

Name Brian Bradshaw City _____ State _____

Independent Consultant Soil-Right Consulting Services, Inc. Date 04/07/2011

Sample Location			1A	1B	1C1	1C2	1D
Sample Identification							
Lab Number			0964-1	0965-1	0966-1	0967-1	0968-1
Total Exchange Capacity (ME/100 g)			15.48	21.35	22.29	27.27	11.11
pH (H_2O 1:1)			6.4	6.4	6.6	6.6	6.6
Organic Matter (humus) %			2.41	2.97	3.32	4.07	1.68
Estimated Nitrogen Release		lb/A	68	79	83	91	54
SOLUBLE SULFUR*		ppm	9	9	9	9	9
PHOSPHORUS	MEHLICH III	lb/A P as P_2O_5	376	380	385	710	847
		ppm of P	82	83	84	155	185
	BRAY II	lb/A P as P_2O_5					
		ppm of P					
	OLSEN	lb/A P as P_2O_5					
		ppm of P					
EXCHANGEABLE CATIONS	CALCIUM*	lb/A	4072	5596	6122	7412	3118
		ppm	2036	2798	3061	3706	1559
	MAGNESIUM*	lb/A	610	898	962	1270	356
		ppm	305	449	481	635	178
	POTASSIUM*	lb/A	382	420	366	306	424
		ppm	191	210	183	153	212
	SODIUM*	lb/A	46	42	46	50	40
		ppm	23	21	23	25	20
BASE SATURATION PERCENT							
Calcium		%	65.76	65.53	68.66	67.95	70.16
Magnesium		%	16.42	17.53	17.98	19.40	13.35
Potassium		%	3.16	2.52	2.11	1.44	4.89
Sodium		%	0.65	0.43	0.45	0.40	0.78
Other Bases		%	5.00	5.00	4.80	4.80	4.80
Hydrogen		%	9.00	9.00	6.00	6.00	6.00
EXTRACTABLE MINORS							
Boron* (ppm)			0.29	0.40	0.54	0.53	0.24
Iron* (ppm)			154	159	184	275	261
Manganese* (ppm)			46	40	31	33	36
Copper* (ppm)			2.72	3.53	3.87	4.88	2.79
Zinc* (ppm)			4.91	4.00	5.04	9.25	10.92
Aluminum* (ppm)			591	615	520	545	499
Bray I P (ppm)			74	76	89	150	189
Soluble Salts (mmhos/cm)							
Chlorides (ppm)							

* Mehlich III Extractable

lb/A

BROOKSIDE LABORATORIES, INC.

55588-1

SOIL AUDIT AND INVENTORY REPORT

Name Brian Bradshaw City _____ State _____

Independent Consultant Soil-Right Consulting Services, Inc. Date 04/07/2011

Sample Location			1E	1F	1G	1H	1I
Sample Identification							
Lab Number			0969-1	0970-1	0971-1	0972-1	0973-1
Total Exchange Capacity (ME/100 g)			7.87	14.99	19.18	14.48	15.72
pH (H_2O 1:1)			6.8	6.7	6.6	6.7	6.7
Organic Matter (humus) %			1.14	2.20	2.58	1.92	2.26
Estimated Nitrogen Release		lb/A	43	64	72	58	65
ANIONS	SOLUBLE SULFUR*	ppm	8	8	8	8	8
ANIONS / PHOSPHORUS	MEHLICH III	lb/A P as P_2O_5	266	183	119	202	137
		ppm of P	58	40	26	44	30
	BRAY II	lb/A P as P_2O_5					
		ppm of P					
	OLSEN	lb/A P as P_2O_5					
		ppm of P					
EXCHANGEABLE CATIONS	CALCIUM*	lb/A	2242	4362	5280	4196	4504
		ppm	1121	2181	2640	2098	2252
	MAGNESIUM*	lb/A	250	510	814	498	594
		ppm	125	255	407	249	297
	POTASSIUM*	lb/A	430	358	316	382	348
		ppm	215	179	158	191	174
	SODIUM*	lb/A	36	56	52	44	42
		ppm	18	28	26	22	21
BASE SATURATION PERCENT							
	Calcium	%	71.22	72.75	68.82	72.44	71.63
	Magnesium	%	13.24	14.18	17.68	14.33	15.74
	Potassium	%	7.00	3.06	2.11	3.38	2.84
	Sodium	%	0.99	0.81	0.59	0.66	0.58
	Other Bases	%	4.60	4.70	4.80	4.70	4.70
	Hydrogen	%	3.00	4.50	6.00	4.50	4.50
EXTRACTABLE MINORS							
	Boron* (ppm)		0.22	0.38	0.32	0.34	0.31
	Iron* (ppm)		187	217	152	267	198
	Manganese* (ppm)		26	43	53	36	34
	Copper* (ppm)		1.46	2.66	3.03	2.57	2.36
	Zinc* (ppm)		3.21	1.43	1.26	2.07	1.16
	Aluminum* (ppm)		495	462	522	437	487
	Bray I P (ppm)		63	44	22	46	31
OTHER TESTS	Soluble Salts (mmhos/cm)						
	Chlorides (ppm)						

* Mehlich III Extractable

lb/A

BROOKSIDE LABORATORIES, INC.

55588-1

SOIL AUDIT AND INVENTORY REPORT

Name Brian Bradshaw City _____ State _____

Independent Consultant Soil-Right Consulting Services, Inc. Date 04/07/2011

Sample Location			1J		1K	1L
Sample Identification						
Lab Number			0974-1		0975-1	0976-1
Total Exchange Capacity (ME/100 g)			13.13		6.67	6.96
pH (H_2O 1:1)			6.7		6.8	7.1
Organic Matter (humus) %			1.99		1.21	1.34
Estimated Nitrogen Release		lb/A	60		44	47
ANIONS	SOLUBLE SULFUR*	ppm	7		9	9
PHOSPHORUS	MEHLICH III	lb/A P as P_2O_5	160		806	485
		ppm of P	35		176	106
	BRAY II	lb/A P as P_2O_5				
		ppm of P				
	OLSEN	lb/A P as P_2O_5				
		ppm of P				
EXCHANGEABLE CATIONS	CALCIUM*	lb/A	3830		1890	2084
		ppm	1915		945	1042
	MAGNESIUM*	lb/A	428		200	212
		ppm	214		100	106
	POTASSIUM*	lb/A	380		404	378
		ppm	190		202	189
	SODIUM*	lb/A	36		38	40
		ppm	18		19	20
BASE SATURATION PERCENT						
Calcium	%		72.92		70.84	74.86
Magnesium	%		13.58		12.49	12.69
Potassium	%		3.71		7.77	6.96
Sodium	%		0.60		1.24	1.25
Other Bases	%		4.70		4.60	4.30
Hydrogen	%		4.50		3.00	0.00
EXTRACTABLE MINORS						
Boron* (ppm)			0.38		0.26	0.34
Iron* (ppm)			216		322	348
Manganese* (ppm)			51		43	41
Copper* (ppm)			2.19		2.29	1.78
Zinc* (ppm)			1.61		11.16	4.82
Aluminum* (ppm)			427		405	359
Bray I P (ppm)			40		182	124
OTHER TESTS	Soluble Salts (mmhos/cm)					
	Chlorides (ppm)					

* Mehlich III Extractable

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Brian Bradshaw
37808 Co. Hwy 2
New Salem, IL 62357
(217)248-2194
File #55588
Farm Name: Winchester Productions
Field 2: 39 Acres
Field 3: 36 Acres
Field 4: 37 Acres
Field 5: 24 Acres
Field 9: 26 Acres

Analytical Services By:
Brookside Laboratories, Inc.
New Knoxville, OH 45871

Map Layer 1

Grower : Brian Bradshaw

Farm : Winchester Productions

Field : Field 2 (Yr 2?)

Year : 2011

Operation : Generic2

Crop / Product : NO Product

Op. Instance : Instance - 1

Area : 87.17 ac

Length : 34,732 ft

Count : 13

Name	
2A(8.20 ac)	38.11 ac
2B(6.76 ac)	
2C(7.71 ac)	
2D(9.67 ac)	
2E(5.77 ac)	
5A(10.72 ac)	23.49 ac
5B(5.26 ac)	
5C(7.51 ac)	
9A(5.51 ac)	25.76 ac
9B(9.91 ac)	
9C(10.34 ac)	

F1167 T9992 Fld 4+5 39.92 ac

F1970 T9961 Fld 8 1367 ?

lb/A

BROOKSIDE LABORATORIES, INC.

55588-1

SOIL AUDIT AND INVENTORY REPORT

Name Brian Bradshaw City _____ State _____

Independent Consultant Soil-Right Consulting Services, Inc. Date 04/07/2011

Sample Location			2A	2B	2C	2D	2E
Sample Identification							
Lab Number			0977-1	0978-1	0979-1	0980-1	0981-1
Total Exchange Capacity (ME/100 g)			6.23	6.65	6.71	5.53	3.65
pH (H_2O 1:1)			7.2	a 7.5	7.1	5.8	5.5
Organic Matter (humus) %			0.74	0.83	0.88	0.99	0.55
Estimated Nitrogen Release		lb/A	30	33	35	40	22
ANIONS	SOLUBLE SULFUR*	ppm	8	9	8	9	8
PHOSPHORUS	MEHLICH III	lb/A P as P_2O_5	289	499	531	682	701
		ppm of P	63	109	116	149	153
	BRAY II	lb/A P as P_2O_5					
		ppm of P					
	OLSEN	lb/A P as P_2O_5					
		ppm of P					
EXCHANGEABLE CATIONS	CALCIUM*	lb/A	1574	1594	1606	1076	620
		ppm	787	797	803	538	310
	MAGNESIUM*	lb/A	414	480	494	224	124
		ppm	207	240	247	112	62
	POTASSIUM*	lb/A	168	242	194	262	136
		ppm	84	121	97	131	68
	SODIUM*	lb/A	44	42	44	40	38
		ppm	22	21	22	20	19
BASE SATURATION PERCENT							
Calcium		%	63.16	59.92	59.84	48.64	42.47
Magnesium		%	27.69	30.08	30.68	16.88	14.16
Potassium		%	3.46	4.67	3.71	6.07	4.78
Sodium		%	1.54	1.37	1.43	1.57	2.26
Other Bases		%	4.20	3.90	4.30	5.80	6.40
Hydrogen		%	0.00	0.00	0.00	21.00	30.00
EXTRACTABLE MINORS							
Boron* (ppm)			0.33	0.41	0.35	< 0.20	< 0.20
Iron* (ppm)			214	196	202	252	179
Manganese* (ppm)			93	124	97	119	82
Copper* (ppm)			1.23	2.11	1.97	1.99	1.74
Zinc* (ppm)			5.02	8.90	10.67	9.39	9.81
Aluminum* (ppm)			272	286	256	431	412
Bray I P (ppm)			64	106	108	149	143
OTHER ANIONS	Soluble Salts (mmhos/cm)						
	Chlorides (ppm)						

* Mehlich III Extractable

a - alkaline soil

lb/A

BROOKSIDE LABORATORIES, INC.

55588-1

SOIL AUDIT AND INVENTORY REPORT

Name Brian Bradshaw City State

Independent Consultant Soil-Right Consulting Services, Inc. Date 04/07/2011

Sample Location			5A		5B		5C
Sample Identification							
Lab Number			0990-1		0991-1		0992-1
Total Exchange Capacity (ME/100 g)			4.47		6.06		5.46
pH (H_2O 1:1)			5.7		5.3		5.7
Organic Matter (humus) %			0.95		1.08		1.19
Estimated Nitrogen Release		lb/A	38		42		44
ANIONS	SOLUBLE SULFUR*	ppm	9		9		8
PHOSPHORUS	MEHLICH III	lb/A P as P_2O_5	550		421		353
		ppm of P	120		92		77
	BRAY II	lb/A P as P_2O_5					
		ppm of P					
	OLSEN	lb/A P as P_2O_5					
		ppm of P					
CATIONS	CALCIUM*	lb/A	902		1038		1192
		ppm	451		519		596
	MAGNESIUM*	lb/A	92		108		110
		ppm	46		54		55
	POTASSIUM*	lb/A	320		258		230
		ppm	160		129		115
	SODIUM*	lb/A	38		42		40
		ppm	19		21		20
BASE SATURATION PERCENT							
Calcium	%		50.45		42.82		54.58
Magnesium	%		8.58		7.43		8.39
Potassium	%		9.18		5.46		5.40
Sodium	%		1.85		1.51		1.59
Other Bases	%		6.00		6.80		6.00
Hydrogen	%		24.00		36.00		24.00
EXTRACTABLE MINORS							
Boron* (ppm)			< 0.20		< 0.20		< 0.20
Iron* (ppm)			254		216		192
Manganese* (ppm)			101		98		110
Copper* (ppm)			1.48		1.67		1.38
Zinc* (ppm)			4.08		4.28		3.52
Aluminum* (ppm)			485		545		464
Bray I P (ppm)			133		107		78
Soluble Salts (mmhos/cm)							
Chlorides (ppm)							

* Mehlich III Extractable

lb/A

BROOKSIDE LABORATORIES, INC.

55588-1

SOIL AUDIT AND INVENTORY REPORT

Name Brian Bradshaw City _____ State _____

Independent Consultant Soil-Right Consulting Services, Inc. Date 04/07/2011

Sample Location		9A		9B		9C
Sample Identification						
Lab Number		1010-1		1011-1		1012-1
Total Exchange Capacity (ME/100 g)		4.36		3.80		4.98
pH (H_2O 1:1)		6.9		5.9		6.0
Organic Matter (humus) %		0.95		0.78		1.19
Estimated Nitrogen Release	lb/A	38		31		44
SOLUBLE SULFUR*	ppm	11		8		10
PHOSPHORUS MEHLICH III	lb/A P as P_2O_5	206		229		577
	ppm of P	45		50		126
PHOSPHORUS BRAY II	lb/A P as P_2O_5					
	ppm of P					
PHOSPHORUS OLSEN	lb/A P as P_2O_5					
	ppm of P					
CALCIUM*	lb/A	1308		890		1254
	ppm	654		445		627
MAGNESIUM*	lb/A	150		96		118
	ppm	75		48		59
POTASSIUM*	lb/A	94		144		180
	ppm	47		72		90
SODIUM*	lb/A	40		42		48
	ppm	20		21		24
BASE SATURATION PERCENT						
Calcium	%	75.00		58.55		62.95
Magnesium	%	14.33		10.53		9.87
Potassium	%	2.76		4.86		4.63
Sodium	%	1.99		2.40		2.10
Other Bases	%	4.50		5.60		5.40
Hydrogen	%	1.50		18.00		15.00
EXTRACTABLE MINORS						
Boron* (ppm)		0.34		< 0.20		< 0.20
Iron* (ppm)		352		116		134
Manganese* (ppm)		33		32		46
Copper* (ppm)		1.01		0.60		0.96
Zinc* (ppm)		2.74		2.15		7.07
Aluminum* (ppm)		346		360		414
Bray I P (ppm)		57		46		95
Soluble Salts (mmhos/cm)						
Chlorides (ppm)						

* Mehlich III Extractable

Map Layer 1

Grower : Brian Bradshaw

Farm : Winchester Productions

Field : Fields 3-4 (York 3 & 4)

Year : 2011

Operation : Generic3

Crop / Product : NO Product

Op. Instance : Instance - 1

Area : 72.68 ac

Length : 26,337 ft

Count : 8

Name

- 3A(7.43 ac)
- 3B(12.22 ac)
- 3C(10.24 ac)
- 3D(6.67 ac)
- 4A(10.12 ac)
- 4B(9.86 ac)
- 4C(11.78 ac)
- 4D(4.53 ac)

lb/A

BROOKSIDE LABORATORIES, INC.

55588-1

SOIL AUDIT AND INVENTORY REPORT

Name Brian Bradshaw City _____ State _____

Independent Consultant Soil-Right Consulting Services, Inc. Date 04/07/2011

Sample Location			3A	3B	3C	3D
Sample Identification						
Lab Number			0982-1	0983-1	0984-1	0985-1
Total Exchange Capacity (ME/100 g)			17.47	8.75	10.84	16.39
pH (H_2O 1:1)			7.2	6.4	6.6	6.4
Organic Matter (humus) %			2.83	1.44	1.81	2.10
Estimated Nitrogen Release		lb/A	77	49	56	62
ANIONS	SOLUBLE SULFUR*	ppm	8	8	9	8
PHOSPHORUS	MEHLICH III	lb/A P as P_2O_5	321	321	302	188
		ppm of P	70	70	66	41
	BRAY II	lb/A P as P_2O_5				
		ppm of P				
	OLSEN	lb/A P as P_2O_5				
		ppm of P				
EXCHANGEABLE CATIONS	CALCIUM*	lb/A	4822	2304	3026	4348
		ppm	2411	1152	1513	2174
	MAGNESIUM*	lb/A	1010	304	384	670
		ppm	505	152	192	335
	POTASSIUM*	lb/A	294	314	322	264
		ppm	147	157	161	132
	SODIUM*	lb/A	42	44	42	44
		ppm	21	22	21	22
BASE SATURATION PERCENT						
Calcium	%		69.00	65.83	69.79	66.32
Magnesium	%		24.09	14.48	14.76	17.03
Potassium	%		2.16	4.60	3.81	2.07
Sodium	%		0.52	1.09	0.84	0.58
Other Bases	%		4.20	5.00	4.80	5.00
Hydrogen	%		0.00	9.00	6.00	9.00
EXTRACTABLE MINORS						
Boron* (ppm)			0.72	< 0.20	0.22	0.27
Iron* (ppm)			344	232	268	180
Manganese* (ppm)			28	24	13	41
Copper* (ppm)			3.47	1.63	1.80	2.92
Zinc* (ppm)			4.33	4.08	3.96	2.80
Aluminum* (ppm)			370	433	472	529
Bray I P (ppm)			73	66	63	42
OTHER TESTS	Soluble Salts (mmhos/cm)					
	Chlorides (ppm)					

* Mehlich III Extractable

lb/A

BROOKSIDE LABORATORIES, INC.

55588-1

SOIL AUDIT AND INVENTORY REPORT

Name Brian Bradshaw City _____ State _____

Independent Consultant Soil-Right Consulting Services, Inc. Date 04/07/2011

Sample Location			4A	4B	4C	4D
Sample Identification						
Lab Number			0986-1	0987-1	0988-1	0989-1
Total Exchange Capacity (ME/100 g)			13.83	11.26	6.86	5.06
pH (H_2O 1:1)			6.7	6.7	6.4	6.1
Organic Matter (humus) %			1.74	1.41	1.18	0.74
Estimated Nitrogen Release		lb/A	55	48	44	30
ANIONS	SOLUBLE SULFUR*	ppm	10	9	9	9
PHOSPHORUS	MEHLICH III	lb/A P as P_2O_5	714	412	925	1003
		ppm of P	156	90	202	219
	BRAY II	lb/A P as P_2O_5				
		ppm of P				
	OLSEN	lb/A P as P_2O_5				
		ppm of P				
EXCHANGEABLE CATIONS	CALCIUM*	lb/A	3880	3206	1754	1284
		ppm	1940	1603	877	642
	MAGNESIUM*	lb/A	530	402	234	136
		ppm	265	201	117	68
	POTASSIUM*	lb/A	424	340	348	186
		ppm	212	170	174	93
	SODIUM*	lb/A	48	46	44	44
		ppm	24	23	22	22
BASE SATURATION PERCENT						
Calcium	%		70.14	71.18	63.92	63.44
Magnesium	%		15.97	14.88	14.21	11.20
Potassium	%		3.93	3.87	6.50	4.71
Sodium	%		0.75	0.89	1.39	1.89
Other Bases	%		4.70	4.70	5.00	5.20
Hydrogen	%		4.50	4.50	9.00	13.50
EXTRACTABLE MINORS						
Boron* (ppm)			0.31	0.32	0.21	0.29
Iron* (ppm)			268	238	316	254
Manganese* (ppm)			56	48	31	24
Copper* (ppm)			3.39	2.44	2.05	2.43
Zinc* (ppm)			11.93	5.80	10.85	18.61
Aluminum* (ppm)			460	446	546	416
Bray I P (ppm)			138	97	204	203
OTHER TESTS	Soluble Salts (mmhos/cm)					
	Chlorides (ppm)					

* Mehlich III Extractable

Soil Right Consulting Services
101 First St.
Shipman, IL 62685
jpruett@soilright.com
www.soilright.com
Economically Wise ~ Environmentally Sound

Analytical Services By:
Brookside Laboratories, Inc.
New Knoxville, OH 45871

Map Layer 1

Grower : Brian Bradshaw

Farm : Winchester Productions

Field : Field 7

Year : 2011

Operation : Generic2

Crop / Product : NO Product

Op. Instance : Instance - 1

Area : 73.27 ac

Length : 24,251 ft

Count : 9

Name

- 7A(7.303 ac)
- 7B(5.373 ac)
- 7C(6.862 ac)
- 7D(9.867 ac)
- 7E(9.183 ac)
- 7F(9.101 ac)
- 7G(9.432 ac)
- 7H(10.679 ac)
- 7I(5.631 ac)

lb/A

BROOKSIDE LABORATORIES, INC.

55588-1

SOIL AUDIT AND INVENTORY REPORT

Name Brian Bradshaw City _____ State _____

Independent Consultant Soil-Right Consulting Services, Inc. Date 04/07/2011

Sample Location	7A	7B	7C	7C1	7D
Sample Identification					
Lab Number	0993-1	0994-1	0995-1	0996-1	0997-1
Total Exchange Capacity (ME/100 g)	26.21	16.09	31.42	27.45	13.38
pH (H_2O 1:1)	6.4	6.8	6.5	6.6	6.4
Organic Matter (humus) %	7.02	2.55	9.53	5.81	2.12
Estimated Nitrogen Release lb/A	110	71	123	104	62
ANIONS: SOLUBLE SULFUR* ppm	9	7	10	10	8
PHOSPHORUS: MEHLICH III lb/A P as P_2O_5	206	156	160	211	156
MEHLICH III ppm of P	45	34	35	46	34
PHOSPHORUS: BRAY II lb/A P as P_2O_5					
BRAY II ppm of P					
PHOSPHORUS: OLSEN lb/A P as P_2O_5					
OLSEN ppm of P					
CATIONS: CALCIUM* lb/A	7168	4508	8744	7842	3646
CALCIUM* ppm	3584	2254	4372	3921	1823
MAGNESIUM* lb/A	982	758	1232	1034	466
MAGNESIUM* ppm	491	379	616	517	233
POTASSIUM* lb/A	338	284	346	368	288
POTASSIUM* ppm	169	142	173	184	144
SODIUM* lb/A	42	34	42	46	38
SODIUM* ppm	21	17	21	23	19
BASE SATURATION PERCENT					
Calcium %	68.37	70.04	69.57	71.42	68.12
Magnesium %	15.61	19.63	16.34	15.70	14.51
Potassium %	1.65	2.26	1.41	1.72	2.76
Sodium %	0.35	0.46	0.29	0.36	0.62
Other Bases %	5.00	4.60	4.90	4.80	5.00
Hydrogen %	9.00	3.00	7.50	6.00	9.00
EXTRACTABLE MINORS					
Boron* (ppm)	0.57	0.46	0.63	0.64	0.31
Iron* (ppm)	366	219	357	359	322
Manganese* (ppm)	17	52	22	16	9
Copper* (ppm)	3.08	2.41	3.26	3.35	1.84
Zinc* (ppm)	4.20	1.78	4.68	5.56	1.44
Aluminum* (ppm)	456	471	458	444	474
Bray I P (ppm)	44	34	34	46	38
OTHER TESTS: Soluble Salts (mmhos/cm)					
Chlorides (ppm)					

* Mehlich III Extractable

lb/A

BROOKSIDE LABORATORIES, INC.

55588-1

SOIL AUDIT AND INVENTORY REPORT

Name Brian Bradshaw City _____ State _____

Independent Consultant Soil-Right Consulting Services, Inc. Date 04/07/2011

Sample Location			7E		7F		7G
Sample Identification							
Lab Number			0998-1		0999-1		1000-1
Total Exchange Capacity (ME/100 g)			12.76		6.66		9.90
pH (H_2O 1:1)			7.0		6.5		a 7.5
Organic Matter (humus) %			1.86		1.03		1.69
Estimated Nitrogen Release		lb/A	57		41		54
SOLUBLE SULFUR*		ppm	8		8		8
PHOSPHORUS	MEHLICH III	lb/A P as P_2O_5	55		266		110
		ppm of P	12		58		24
	BRAY II	lb/A P as P_2O_5					
		ppm of P					
	OLSEN	lb/A P as P_2O_5					
		ppm of P					
CATIONS	CALCIUM*	lb/A	3830		1792		2430
		ppm	1915		896		1215
	MAGNESIUM*	lb/A	532		218		694
		ppm	266		109		347
	POTASSIUM*	lb/A	256		292		368
		ppm	128		146		184
	SODIUM*	lb/A	36		34		34
		ppm	18		17		17
BASE SATURATION PERCENT							
Calcium		%	75.04		67.27		61.36
Magnesium		%	17.37		13.64		29.21
Potassium		%	2.57		5.62		4.77
Sodium		%	0.61		1.11		0.75
Other Bases		%	4.40		4.90		3.90
Hydrogen		%	0.00		7.50		0.00
EXTRACTABLE MINORS							
Boron* (ppm)			0.33		< 0.20		0.55
Iron* (ppm)			177		171		145
Manganese* (ppm)			47		45		144
Copper* (ppm)			2.10		1.09		2.06
Zinc* (ppm)			1.29		1.92		2.75
Aluminum* (ppm)			411		429		351
Bray I P (ppm)			10		55		14
Soluble Salts (mmhos/cm)							
Chlorides (ppm)							

* Mehlich III Extractable

a - alkaline soil

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Economically Wise ~ Environmentally Sound

Analytical Services By:
Brookside Laboratories, Inc.
New Knoxville, OH 45871

Map Layer 1

Grower : Brian Bradshaw

Farm : Winchester Productions

Field : Field 8

Year : 2011

Operation : Generic2

Crop / Product : NO Product

Op. Instance : Instance - 1

Area : 74.65 ac

Length : 24,035 ft

Count : 9

Name	
8A	(7.973 ac)
8B	(8.385 ac)
8C	(8.254 ac)
8D	(9.344 ac)
8E	(9.882 ac)
8F	(4.957 ac)
8G	(7.687 ac)
8H	(10.376 ac)
8I	(7.952 ac)

lb/A

55588-1

BROOKSIDE LABORATORIES, INC.

SOIL AUDIT AND INVENTORY REPORT

Name Brian Bradshaw City _____ State _____

Independent Consultant Soil-Right Consulting Services, Inc. Date 04/07/2011

Sample Location			8A	8B	8C	8D	8E
Sample Identification							
Lab Number			1001-1	1002-1	1003-1	1004-1	1005-1
Total Exchange Capacity (ME/100 g)			27.19	27.07	27.70	27.68	22.05
pH (H_2O 1:1)			6.9	7.2	7.1	7.1	7.2
Organic Matter (humus) %			10.37	10.00	11.14	9.71	4.23
Estimated Nitrogen Release		lb/A	125	125	126	124	92
ANIONS	SOLUBLE SULFUR*	ppm	12	17	11	9	8
PHOSPHORUS	MEHLICH III	lb/A P as P_2O_5	137	133	179	142	142
		ppm of P	30	29	39	31	31
	BRAY II	lb/A P as P_2O_5					
		ppm of P					
	OLSEN	lb/A P as P_2O_5					
		ppm of P					
EXCHANGEABLE CATIONS	CALCIUM*	lb/A	8372	8096	8814	8492	6298
		ppm	4186	4048	4407	4246	3149
	MAGNESIUM*	lb/A	1014	1274	972	1158	1170
		ppm	507	637	486	579	585
	POTASSIUM*	lb/A	248	232	254	268	322
		ppm	124	116	127	134	161
	SODIUM*	lb/A	40	42	44	40	42
		ppm	20	21	22	20	21
BASE SATURATION PERCENT							
Calcium		%	76.98	74.77	79.55	76.70	71.41
Magnesium		%	15.54	19.61	14.62	17.43	22.11
Potassium		%	1.17	1.10	1.18	1.24	1.87
Sodium		%	0.32	0.34	0.35	0.31	0.41
Other Bases		%	4.50	4.20	4.30	4.30	4.20
Hydrogen		%	1.50	0.00	0.00	0.00	0.00
EXTRACTABLE MINORS							
Boron* (ppm)			0.74	0.74	0.63	0.72	0.60
Iron* (ppm)			239	230	222	227	239
Manganese* (ppm)			19	21	22	20	63
Copper* (ppm)			4.39	3.95	4.40	3.82	3.84
Zinc* (ppm)			4.37	3.83	4.32	3.76	2.60
Aluminum* (ppm)			322	332	240	288	480
Bray I P (ppm)			30	24	39	30	29
OTHER TESTS	Soluble Salts (mmhos/cm)						
	Chlorides (ppm)						

* Mehlich III Extractable

lb/A

BROOKSIDE LABORATORIES, INC.

55588-1

SOIL AUDIT AND INVENTORY REPORT

Name Brian Bradshaw City _____ State _____

Independent Consultant Soil-Right Consulting Services, Inc. Date 04/07/2011

Sample Location			8F	8G	8H	8I
Sample Identification						
Lab Number			1006-1	1007-1	1008-1	1009-1
Total Exchange Capacity (ME/100 g)			9.24	7.79	26.18	9.78
pH (H_2O 1:1)			7.1	a 7.5	6.6	5.5
Organic Matter (humus) %			1.51	1.02	3.66	1.51
Estimated Nitrogen Release		lb/A	50	40	87	50
ANIONS	SOLUBLE SULFUR*	ppm	9	8	8	10
PHOSPHORUS	MEHLICH III	lb/A P as P_2O_5	302	334	101	275
		ppm of P	66	73	22	60
	BRAY II	lb/A P as P_2O_5				
		ppm of P				
	OLSEN	lb/A P as P_2O_5				
		ppm of P				
EXCHANGEABLE CATIONS	CALCIUM*	lb/A	2372	1806	7046	1952
		ppm	1186	903	3523	976
	MAGNESIUM*	lb/A	550	600	1250	186
		ppm	275	300	625	93
	POTASSIUM*	lb/A	410	306	340	384
		ppm	205	153	170	192
	SODIUM*	lb/A	42	38	42	34
		ppm	21	19	21	17
BASE SATURATION PERCENT						
Calcium		%	64.18	57.96	67.28	49.90
Magnesium		%	24.80	32.09	19.89	7.92
Potassium		%	5.69	5.04	1.67	5.03
Sodium		%	0.99	1.06	0.35	0.76
Other Bases		%	4.30	3.90	4.80	6.40
Hydrogen		%	0.00	0.00	6.00	30.00
EXTRACTABLE MINORS						
Boron* (ppm)			0.45	0.43	0.44	0.21
Iron* (ppm)			169	159	192	275
Manganese* (ppm)			87	108	45	27
Copper* (ppm)			3.43	2.71	3.81	1.45
Zinc* (ppm)			9.07	9.32	1.88	0.86
Aluminum* (ppm)			382	264	559	669
Bray I P (ppm)			67	76	19	48
OTHER ANALYSES	Soluble Salts (mmhos/cm)					
	Chlorides (ppm)					

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* Mehlich III Extractable

APPENDIX C
Manure Analysis Procedures
(Manure Analysis Results)

Solid Manure (Dairy, Beef, Swine, Poultry)

Collect a composite sample by following one of the procedures listed below. A method for mixing a composite sample is to pile the manure and then shovel from the outside to the inside of the pile until well mixed. Fill a one-gallon plastic heavy-duty zip lock bag approximately one-half full with the composite sample, squeeze out excess air, close and seal. Store sample in freezer if not delivered to the laboratory immediately.

Procedure 1. Sampling while loading - *Recommended method for sampling from a stack or bedded pack.* Take at least ten samples while loading several spreader loads and combine to form one composite sample. Thoroughly mix the composite sample and take an approximately one pound sub sample using a one-gallon plastic bag. *Sampling directly from a stack or bedded pack is not recommended.*

Procedure 2. Sampling during spreading - Spread a tarp in field and catch the manure from one pass. Sample from several locations and create a composite sample. Thoroughly mix the composite sample together and take a one-pound sub sample using a one-gallon plastic bag.

Procedure 3. Sampling daily haul - Place a five-gallon bucket under the barn cleaner 4-5 times while loading a spreader. Thoroughly mix the composite sample together and take a one-pound sub sample using a one-gallon plastic bag. Repeat sampling 2-3 times over a period of time and test separately to determine variability.

Procedure 4. Sampling poultry in-house - Collect 8-10 samples from throughout the house to the depth the litter will be removed. Samples near feeders and waterers may not be indicative of the entire house and sub samples taken near here should be proportionate to their space occupied in the whole house. Mix the samples well in a five-gallon pail and take a one-pound sub sample, place it in a one-gallon zip lock bag.

Procedure 5. Sampling stockpiled litter - Take ten sub samples from different locations around the pile at least 18 inches below the surface. Mix in a five-gallon pail and place a one-pound composite sample in a gallon zip lock bag.

Liquid Manure - Dairy, Beef, Swine

Obtain a composite following one of the procedures listed below and thoroughly mix. Using a plunger, an up-and-down action works well for mixing liquid manure in a five-gallon bucket. Fill a one-quart plastic bottle not more than three-quarters full with the composite sample. Store sample in freezer or refrigerator if not delivered to the lab immediately.

Procedure 1. Sampling from storage- Agitate storage facility thoroughly before sampling. Collect at least five samples from the storage facility or during loading using a five-gallon bucket. Place a sub sample of the composite sample in a one-quart plastic container. *Sampling a liquid manure storage facility without proper agitation (2-4 hrs. minimum) is not recommended due to nutrient stratification, which occurs in liquid systems. If manure is sampled from a lagoon that was not properly agitated, typically the nitrogen and potassium will be more concentrated in the top liquid, while the phosphorus will be more concentrated in the bottom solids.*

Procedure 2. Sampling during application- Place buckets around field to catch manure from spreader or irrigation equipment. Combine and mix samples into one composite sub sample in a one-quart plastic container.

Procedure 3. (Recommended for storage tanks). Use a round pip with a stopper to obtain a composite sample. Open the sampler (one left with the farm) and extend vertically into the pit slowly so air can be released and manure at each depth enters the sampler. After reaching the bottom of the pit/tank, close the sampler and remove. Place end of sampler into the sample bottle and release the stopper. Repeat as necessary to fill bottle about 2/3 full (~ 1 pint).

Sample Identification and Delivery

Identify the sample container with information regarding the farm, animal species and date. This information should also be included on the sample information sheet along with application method, which is important in determining first year availability of nitrogen.
Keep all manure samples frozen until shipped or delivered to a laboratory. Ship early in the week (Mon.-Wed.) and avoid holidays and weekends.

Manure Analysis

The minimum analysis for Illinois is to include:

- Total Nitrogen
- Ammonia Nitrogen
- Phosphorus
- Potassium

{insert manure lab analysis}

February 8, 2006

SPECIAL REPORT

ERIC BRADSHAW
115 SOUTH MEMORIAL ST.
PITTSFIELD, IL 62363

SAMPLE: *WIN PRODUCTION*	AS IS	LBS/1000 GAL	LBS/ACRE-INCH
LAB# *109*			
	%		
MOISTURE			
SOLIDS			
VOLATILE SOLIDS			
ASH			
pH			
	mg/kg		
TKN	102	0.85	25
AMMONIA	52	0.44	12
NITRATE			
ORGANIC N	49	0.41	11
P.A.N. (surface)	49	0.41	11
DISSOLVED P			
AS P			
PHOSPHORUS	75	0.62	17
MAGNESIUM			
	%		
POTASSIUM			
AS K2O	0.096	8.04	222
CALCIUM			
SULFUR			
PHOSPHORUS			
AS P2O5	0.017	1.43	39
CARBON/NITROGEN			
	mg/kg		
FACTORS: mPAN = .35 NH3 VR = .6			
Second Year Release	9	0.07	2

Perry Ag LAb

FEBUARY 8, 2012

SPECIAL REPORT AGRICULTURAL LABOPIATORY, INC.
BRIAN BRADSHAW
37808 CO HWY 2 NEW SALEM, IL 62357

SAMPLE WIN PRO AS IS	LBS/1000 GAL	LBS/ACRE INCH when irrigating
LAB# 465		

% MOISTURE
SOLIDS
VOLATILE SOLIDS
ASH
PH

For Farm Use	%	LBS/I000 GAL	LBS/ACRE-INCH
Total N (TKN) as N	0.035	2.71	78
P A N (sub-surface)	0.021	1.66	48
PAN (surface)..0.367	0.016	1.25	36
PHOSPHORUS AS P205 for farm use	0.050	4.12	115
POTASSIUM AS K20 for farm use	0.129	10.61	295

For Environmental Record Keeping	mg/kg	LBS/WOO GAL	LBS/ACRE INCH
Total N (TKN) as N	350	2.71	78
AMMONIA	145	1.25	34
NITRATE			
ORGANIC N	181	1.51	43
P A N (surface)	149	1.25	36
PAN (sub surface)	199	1.66	48
PHOSPHORUS AS P	218	1.81	52
POTASSIUM AS K	539	4.49	125

P A N is potential available N for this cropping season It is calculated using the factors below.
P A N (surface) factors Organic N release 35% Nonvolatihlized NH3 60% availability
Second Year Release 34 0.29 9
SUBSURFACE ORGANIC N RELEASE =35% NH3 FACTOR SUBSURFACE 95% availability

Perry Ag LAb

AUGUST 24, 2011

SPECIAL REPORT AGRICULTURAL LABOPIATORY, INC.
BRIAN BRADSHAW
37808 CO HWY 2 NEW SALEM, IL 62357

SAMPLE WIN PRO AS IS LBS/1000 GAL LBS/ACRE INCH
LAB# 345 when irrigating

% MOISTURE
SOLIDS
VOLATILE SOLIDS
ASH
PH

For Farm Use	%	LBS/I000 GAL	LBS/ACRE-INCH
Total N (TKN) as N	0.087	7.99	221
P A N (sub-surface)	0.052	4.68	134
PAN (surface)..0.367	0.034	3.85	99
PHOSPHORUS AS P205 for farm use	0.065	5.50	150
POTASSIUM AS K20 for farm use	0.150	12.75	349

For Environmental Record Keeping	mg/kg	LBS/WOO GAL	LBS/ACRE INCH
Total N (TKN) as N	870	7.99	221
AMMONIA	511	4.23	115
NITRATE			
ORGANIC N	455	3.74	120
P A N (surface)	466	3.85	99
PAN (sub surface)	644	4.68	134
PHOSPHORUS AS P	278	2.35	56
POTASSIUM AS K	645	5.36	139

P A N is potential available N for this cropping season It is calculated using the factors below.
P A N (surface) factors Organic N release 35% Nonvolatihlized NH3 60% availability
Second Year Release 78 0.68 18
SUBSURFACE ORGANIC N RELEASE =35% NH3 FACTOR SUBSURFACE 95% availability

Perry Ag LAb

FEBUARY 27, 2011

SPECIAL REPORT AGRICULTURAL LABOPIATORY, INC.
BRIAN BRADSHAW
37808 CO HWY 2 NEW SALEM, IL 62357

SAMPLE WIN PRO AS IS LBS/1000 GAL LBS/ACRE INCH
LAB# 588 when irrigating

% MOISTURE
SOLIDS
VOLATILE SOLIDS
ASH
PH

For Farm Use	%	LBS/I000 GAL	LBS/ACRE-INCH
Total N (TKN) as N	0.039	2.75	80
P A N (sub-surface)	0.025	1.70	50
PAN (surface)..0.367	0.018	1.27	38
PHOSPHORUS AS P205 for farm use	0.052	4.15	117
POTASSIUM AS K20 for farm use	0.131	10.68	297

For Environmental Record Keeping	mg/kg	LBS/WOO GAL	LBS/ACRE INCH
Total N (TKN) as N	390	2.75	80
AMMONIA	147	1.27	36
NITRATE			
ORGANIC N	183	1.53	44
P A N (surface)	151	1.27	38
PAN (sub surface)	201	1.70	50
PHOSPHORUS AS P	220	1.84	56
POTASSIUM AS K	542	4.52	128

P A N is potential available N for this cropping season It is calculated using the factors below.
P A N (surface) factors Organic N release 35% Nonvolatihlized NH3 60% availability
Second Year Release 36 0.30 10
SUBSURFACE ORGANIC N RELEASE =35% NH3 FACTOR SUBSURFACE 95% availability

Perry Ag LAb

SEPTEMBER 2, 2010

SPECIAL REPORT AGRICULTURAL LABOPIATORY, INC.
BRIAN BRADSHAW
37808 CO HWY 2 NEW SALEM, IL 62357

SAMPLE WIN PRO AS IS	LBS/1000 GAL	LBS/ACRE INCH when irrigating
LAB# 266		
% MOISTURE		
SOLIDS		
VOLATILE SOLIDS		
ASH		
PH		

For Farm Use	%	LBS/I000 GAL	LBS/ACRE-INCH
Total N (TKN) as N	0.099	8.23	227
P A N (sub-surface)	0.065	5.46	151
PAN (surface)..0.367	0.047	3.95	109
PHOSPHORUS AS P205 for farm use	0.066	5.51	152
POTASSIUM AS K20 for farm use	0.131	10.68	297

For Environmental Record Keeping	mg/kg	LBS/WOO GAL	LBS/ACRE INCH
Total N (TKN) as N	987	8.23	227
AMMONIA	515	4.29	118
NITRAte			
ORGANIC N	472	3.95	109
P A N (surface)	474	3.95	109
PAN (sub surface)	654	5.46	50
PHOSPHORUS AS P	289	2.41	66
POTASSIUM AS K	650	5.42	146

P A N is potential available N for this cropping season It is calculated using the factors below.
P A N (surface) factors Organic N release 35% Nonvolatihlized NH3 60% availability
Second Year Release 85 0.71 20
SUBSURFACE ORGANIC N RELEASE =35% NH3 FACTOR SUBSURFACE 95% availability

Perry Ag LAb

SEPTEMBER 23, 2009

SPECIAL REPORT AGRICULTURAL LABOPIATORY, INC.
BRIAN BRADSHAW
37808 CO HWY 2 NEW SALEM, IL 62357

SAMPLE WIN PRO AS IS LBS/1000 GAL LBS/ACRE INCH
LAB# 723 when irrigating

% MOISTURE
SOLIDS
VOLATILE SOLIDS
ASH
PH

For Farm Use	%	LBS/I000 GAL	LBS/ACRE-INCH
Total N (TKN) as N	0.078	7.23	202
P A N (sub-surface)	0.048	5.06	129
PAN (surface)..0.367	0.031	3.24	93
PHOSPHORUS AS P205 for farm use	0.047	4.22	132
POTASSIUM AS K20 for farm use	0.153	12.78	353

For Environmental Record Keeping	mg/kg	LBS/WOO GAL	LBS/ACRE INCH
Total N (TKN) as N	782	7.23	202
AMMONIA	478	3.87	104
NITRAte			
ORGANIC N	310	3.22	93
P A N (surface)	612	3.24	93
PAN (sub surface)	482	5.06	129
PHOSPHORUS AS P	266	2.21	61
POTASSIUM AS K	478	5.02	139

P A N is potential available N for this cropping season It is calculated using the factors below.
P A N (surface) factors Organic N release 35% Nonvolatihlized NH3 60% availability
Second Year Release 64 0.51 17
SUBSURFACE ORGANIC N RELEASE =35% NH3 FACTOR SUBSURFACE 95% availability

APPENDIX D
Nutrient Application Equipment Calibration

Commercial Fertilizer Application Equipment Calibration:
The nitrogen applicator, the commercial broadcast spreaders, and corn planter will be set per the manufacturers recommendations then filled with a known amount and checked over known acreage. Adjustments will be made to achieve the planned rates.

Manure Spreader Calibration
There are several methods that can be used to calibrate the application rate of a manure spreader. The two best methods are the load-area method and the plastic sheet method. It is desirable to repeat the calibration procedure 2 to 3 times and average the results to establish a more accurate calibration.

Before calibrating a manure spreader, the spreader settings such as splash plates should be adjusted so that the spread is uniform. Most spreaders tend to deposit more manure near the spreader than at the edge of the spread pattern. Overlapping can make the overall application more uniform. Calibrating of application rates when overlapping requires measuring the width of two spreads and dividing by two to get the effective spread width.

Calibration should take place annually or whenever manure is being applied from a different source or consistency.

Load-Area Method
The load-area method is the most accurate and can be used for most types of manure handling. This method consists of determining the amount (volume or weight) of manure in a spreader and the total area over which it is applied. The most accurate method to determine the amount of manure in a spreader is to weigh the spreader when it is full of manure and again when it is empty (portable pad scales work well for this). The difference is the quantity of manure applied over the area covered. Spreader capacities listed by the manufacturers can be used to determine the amount of manure in the spreader. However care must be taken when using manufactures spreader capacities. Heaped loads, loading methods and manure type may vary considerably from what is listed by manufacturers of box and side delivery manure spreaders. Spreader capacities for liquid tankers are accurate provided the tanker is filled to the manufactures recommended levels, and no foam is present in the tank.

The area of spread is determined from measuring the length and width of the spread pattern. Measuring can be done with a measuring wheel, measuring tape or by pacing.

The application rate is calculated using the following formula:

$$\frac{\text{Spreader capacity (tons or gallons) X 43560 sq. ft/acre}}{\text{Distance traveled X Spreading width}} = \text{Application Rate tons or Gallons/Acre}$$

Plastic Sheet Method
The plastic sheet method can only be used with solid or semi-solid manure. This method of calibrating spreader application rates involves **1)** cutting a plastic sheet to the specified dimensions (56 inches X 56 inches), **2)** weighing the clean plastic sheet, **3)** laying out the plastic sheet on the ground and driving the manure spreader (applying manure at a recorded speed and spreader setting) over the sheet, **4)** weighing the plastic sheet with the manure on it, and **4)** determine the net weight of the manure on the sheet (weight of manure and sheet - weight of the clean sheet), and **5)** the net pounds of manure equals tons per acre applied.

When calibrating manure spreaders, all details regarding tractor speed and manure spreader settings and date(s) of each calibration should be recorded with manure application information, and directly on the equipment. Mark equipment to ensure a known application rate is applied each time the referenced tractor speed and spreader settings are used. Manure spreader settings can include such things as: fast and slow

settings on some box spreaders, gate position on side delivery spreaders and splash plate position and fill levels on liquid tankers.

Irrigation System Calibration:
Place 3-5 buckets throughout the irrigation spray pattern and collect samples while operating the pump at a given rpm and pressure (for a traveling gun record the ground speed also). At the end of the planned sample period measure the amount of liquid collected in inches (average the samples). The following chart shows how many gallons per acre applied per inch applied.

Gallons applied per inch of liquid manure applied.

Inches Liquid Manure Applied via Irrigation	Gallons per Acre
.20	5,430
.30	8,146
.40	10,860
.50	13,577
.75	20,365
1.0	27,154
1.25	33,942
1.5	40,731

Soft Hose Injection System with Irrigation Hose:
Alternative 1. Use a flow meter mounted on the injector system and calculate the distance and width to determine amount applied over a measured area. Example the flow meter measures 1000 gallons over a distance of 600 feet and 10 feet wide.

Formula:
Gallons Applied (1000 gal) X 43560 sq. ft/acre = Application Rate (7260 gallons/acre)
Distance traveled (600 ft) X Application width (10 ft)

Alternative 2. (Requires a 10-20 gallon graduated measuring container)
Step 1) In the field, measure the flow out of one injector for 5 seconds into the graduated measuring container and record gallons, repeat three (3) times and average the results. **Step 2)** Multiply the average amount collected from one injector by the number of injectors (equals amount applied for the whole system for 5 seconds). **Step 3)** Multiply the results of Step 2 times 12 to get gallons per minute. **Step 4)** Place the injector in the soil at the planned depth and operating speed and record the distance traveled in 1 minute (average 3 different measurements). **Step 5)** Determine the effective application width (number of injectors X injector spacing in feet). **Step 6)** Multiply the effective width times the distance traveled in 1 minute (this gives the square feet covered in 1 minute). **Step 7)** Divide the result of Step 6 by 43,560 (this gives the acres covered in 1 minute). **Step 8)** Divide the results of Step 3 (gallons per minute) by the results of Step 7 (acres covered in 1 minute) - (this gives the gallons applied per acre. Example:

Step 1) Collected an average of 6 gallons from one injector for 5 seconds.
Step 2) Applicator has 8 injectors (8 injectors X 6 gallons per injector = 48 gallons for 5 seconds)
Step 3) 48 gallons in 5 seconds X 12 = 576 gallons/minute applied
Step 4) Average distance covered in 1 minute was 250 feet.
Step 5) Average width of the applicator is 12 feet.
Step 6) 12 feet wide X 250 feet long = 3000 square feet
Step 7) 3000 square feet divided by 43,560 square feet/acre = .0688 acres covered in 1 minute
Step 8) 576 gallons/minute divided by .0688 acres/minute = 8,372 gallons/acre.

APPENDIX E
Record Keeping Forms

Land Application Record Keeping

Record Keeping (Maintain for 5 years)

Maintaining records to document plan implementation. As applicable, records include:

- Soil test results and recommendations for nutrient application.
- Quantities, analyses and sources of nutrients and manure applied.
- Dates and methods of nutrient and manure applications.
- Crops planted, planting and harvest dates, yields, and crop residues removed.
- Results of water, plant, and organic by-product analyses.
- Dates of review and person performing the review, and recommendations that resulted from the review.

Operation and Maintenance

a. Review the Manure and Nutrient Management Plan component annually and make adjustments when needed.
b. Calibrate application equipment to ensure uniform distribution and accurate application rates (SEE SECTION 12).
c. Inspect and repair manure hauling and application equipment to minimize potential of accidental spillage.
d. Protect fertilizer storage areas from weather to minimize runoff, leakage, and lost of material.
e. Avoid unnecessary exposure to fertilizer and organic waste (bio-solids), and wear protective clothing when necessary.
f. Observe set backs required for nutrient applications (specified in this plan) adjacent to water bodies, drainage ways, sink holes, and other sensitive areas.
g. Maintain records of manure and nutrient applications for 5 years (SEE SECTION 7).
h. Clean up residual materials from equipment and dispose of properly.

Summary:

This Plan only applies to the fields and conditions stated in this Plan. If changes occur in your livestock operations or fields contact the NRCS/SWCD Office to get this Plan revised.

- **Manure and Wastewater Storage and Handling**
- **Manure and Fertilizer Applications**
- **Crop History**

Documentation will include:

- Annual manure tests for nutrient contents for each manure storage containment.
- Current soil test results, in accordance with Nutrient Management Code 590. Application records for each manure or commercial fertilizer application event, including:
- Containment source or type and form of commercial fertilizer.
- Field(s) where manure or organic by-products are applied.
- Amount applied per acre.
- Time and date of application.
- Weather conditions during nutrient application.
- General soil moisture condition at time of application (i.e., saturated, wet, moist, dry).
- Application method and equipment used.
- Crops planted and planting and/or harvesting dates, by field-
- Records that address manure and wastewater storage containment structures: .Dates of emptying, level before emptying, and level after emptying, and .Discharge or overflow events, including level before and after event.
- Transfer of manure off-site or to third parties:
- Manure nutrient content.
- Amount of manure transferred.
- Date of transfer.
- Recipient of manure.
- Activities associated with emergency spill response plan.
- Records associated with any reviews by NRCS, third-party consultants, or representatives of regulatory agencies:
- Dates of review.
- Name of reviewer and purpose of the review.
- Recommendations or follow-up requirements resulting from the review. Actions taken as a result of the review.
- Records of maintenance performed associated with operation and maintenance plans.
- Nutrient application equipment calibration.
- Changes made in CNMP.

SECTION 7 - Record Keeping - Manure and Wastewater Storage and Handling - Record Keeping

Type and Number of Animals	Date	Date	Date	Date	Date	Date
1.	#	#	#	#	#	#
2.	#	#	#	#	#	#
3.	#	#	#	#	#	#
4.	#	#	#	#	#	#
5.	#	#	#	#	#	#

Type of Inspections Completed	Date	Date	Date	Date	Date	Date
1.	#	#	#	#	#	#
2.	#	#	#	#	#	#
3.	#	#	#	#	#	#
4.	#	#	#	#	#	#

Type of Repairs Completed	Date	Date	Date	Date	Date	Date
1.						
2.						
3.						
4.						

Type Manure or Waste Removed	Date	Amt.	Date	Amt.	Date	Amt.	Date	Amt.	Date	Amt.	Date	Amt.
1.												
2.												
3.												
4.												
5.												

Type of Manure Transported Off the Farm	Where	Date	Amount.	Where	Date	Amount.	Where	Date	Amount.
1.									
2.									
3.									
4.									

Comments / Notes:

SECTION 7 - Fertilizer and Manure Application Record

Farm Name: _____

Field ID	Date	Manure or Fertilizer Type	Method of Application (Surface, Injected, Irrigated, Incorporated, etc.)	Ground Cover	% Soil Moisture	Rate of Application					Weather and Comments
						Rate Gallons or Tons /Acre	Acres Applied	N Lbs/A	P2O5 Lbs/A	K2O Lbs/A	

Comments / Notes:

SECTION 7 - Crops Record Keeping. (Year _____)

Field	Crop	Date Planted	Variety	Date Harvested	Yield	Comments

Crop Yield Summary (Year _____)

Field Id	Manure Source	Acres	Harvested Crop	Date Planted	Date Harvested	Yield

Daily Application Log For Solids

Date	Field ID	Acres Used	Manure Source	Loads Applied	Rate / acre	Wind Direc.	Wind Speed	Air Temp	Soil Moist.

**Make note of AM and PM climatic conditions.

Make and model of Spreader

_____

List Capacity _____ cu. Yds.

Daily Application Log for Liquid Manure

Date	Field ID	Acres Used	Manure Source	Gallons Applied	Rate / acre	Wind Direc.	Wind Speed	Air Temp	Soil Moist.

**Make note of AM and PM climatic conditions.

Make and model of Spreader

_____

List Capacity _____ gals

Annual Manure Application Summary

Date	Field Id	Amount Applied	Acres Used
	Totals		

Manure Containment Liquid Level & Berm Inspection Report

Site ID	
Inspection Done By	

Containment ID	Date	Time	Liquid Level	Change from Last	Berm Condition	Comments

Note: Use one report sheet per site.

Manure Application -- Load Record Log

Date		**Tank Size**	
Driver		**Time on Job**	
Driver		**Time on Job**	
Driver		**Time on Job**	
Time of Day	**Loads Hauled**	**Manure Source**	**Field Id**
Midnight - 2 AM			
2 AM - 4 AM			
4 AM - 6 AM			
6 AM - 8 AM			
8 AM - 10 AM			
10 AM - NOON			
NOON - 2 PM			
2 PM - 4 PM			
4 PM - 6 PM			
6 PM - 8 PM			
8 PM - 10 PM			
10 PM - Midnight			
Field Drawing/Comments:			

Mortality Management Record			
Date	Number of Mortalities	Approximate Weight	Management Used

Management Used = Incinteration, Composting or Rendering

Composter Record

Date	Compost Bin Number	Compost Pile Temperature	Turned or Mixed	Amount of Carbon Material added	Number and Approx. Weight of Mortalities added

APPENDIX F
Feed Management Considerations

APPENDIX G
Guidance Information

ODOR AND PATHOGEN MANAGEMENT

It may not be practical or feasible to eliminate all odor emissions from the operation, but it is possible to manage or mitigate the odor. Some variables that effect odor are:

*	Type of operation	*	Building design
*	Ventilation method	*	Animal numbers
*	Animal diets	*	Manure treatment systems
*	Season	*	Topography
*	Management skill or effort	*	

1. Animal Cleanliness

   a. Clean, dry, and healthy animals are less odorous. Dirty, manure-covered animals promote accelerated bacterial growth and the production of odorous gases.

   b. Animal stress can also be correlated to an increase in odor production. Ventilation and environmental controls for the buildings must be properly designed and maintained to keep the animals healthy.

2. Minimize Dust

   a. It has been established that there is a correlation between dust and odor emission. Dust particles absorb and concentrate odorous compounds. As the dust particles are carried by the wind, so is the odor.

   b. Therefore, minimizing dust will reduce odor. Most farm dust comes from feed, fecal matter and, in the case of poultry, from feathers and litter. Dust also comes from animal skin, insects, and other sources.

   c. Buildings should be cleaned of all dust between batches of animals (including fans, shutters, and screens.)

3. **Waste Storage Facility** – to reduce emissions of greenhouse gases, ammonia, volatile organic compounds, and odor:

   Consider alternatives and additional practices including covered anaerobic digesters (365), and composting facilities (317).

   Adjusting pH below 7 may reduce ammonia emissions from the waste storage facility but may increase odor when waste is surface applied.

   Consideration should be also given to the separation of the solids from the waste mixture. This will dilute the liquid waste product being treated in the lagoon and cause less odor. The solid separated material can be composted and sold or land applied.

4. **Animal diets** can also be manipulated to produce less manure production and odors from the manure. Much of the odors from manure are from nitrogen, sulfur, and carbohydrate containing

volatile compounds. Balancing the diet with proper amounts and forms of protein and reducing excess protein in the diet will reduce nitrogen excretion and odor emissions from the manure.

5. **Proper Disposal of Mortality** – Normal mortality for the animal feeding operation *must* be properly handled for both odor control and biological security of the operation. Composting, incineration, and rendering are acceptable methods for mortality disposal.

6. **Good Fly and Rodent Control Programs** – These programs must be a continuous process on the farm. When feed and waste products are properly handled, these problems are minimized.

7. **Utilize Trees** – While trees should not grow directly adjacent to facilities, wind breaks of trees correctly positioned near the facility not only create a visual barrier but can also provide a large filtration surface for dust and odorous compound removal. Trees can absorb odorous compounds and create turbulence that enhances odor dispersion and dilution. Trees also can create a cooler microclimate around the facility, which can reduce odors.

8. **Land Application**

   a. Note wind direction and void spreading when the wind is blowing toward populated areas.

   b. Avoid spreading on weekend/holidays when people are likely to be engaged in nearby outdoor and recreational activities.

   c. Spread in the morning when air begins to warm and is rising, rather than in the afternoon.

   d. Use available weather information to best advantage. Turbulent breezes will dissipate and dilute odors. Hot and humid weather tends to concentrate and intensify odors, particularly in the absence of breezes. Rain will remove the odor from the atmosphere.

   e. Use natural vegetation barriers, such as woodlots or windbreaks, to help dissipate and filter odors.

   f. Establish vegetated air filters in the field border area by planting conifers and shrubs as windbreaks and visual screens between cropland and residential developments.

<u>Pathogen Management</u>

Many of the same conservation practices used to prevent nutrient movement from this animal feeding operation, such as runoff and erosion control are likely to minimize the movement of pathogens. Pathogenic organisms occur naturally in animal wastes. Exposure to some pathogens can cause illness to humans and animals, especially for immune-deficient populations.

Illinois Phosphorus Risk Assessment Procedure

Phosphorus (P) loading to surface water can accelerate Eutrophication. The availability of other nutrients and light penetration into the water column will also influence the response of water bodies to phosphorus. Factors such as: the amount of erosion and runoff; the form, amount, and distribution of phosphorus in the soil: and fertilizer and manure application rate, timing and placement determine P loss from agricultural fields and the resulting P loading to water resources. Most phosphorus compounds found in soils have low water solubility. Consequently, P loss from agricultural land was once thought to be primarily associated with soil erosion. In many cases, sediment-bound P is still the dominant form in which P losses from agricultural fields occur. Over the past decade, research has shown that phosphorus can be lost in runoff in dissolved forms. High dissolved P concentration in runoff is more frequently observed where soil P levels are high particularly near the soil surface. High soil P levels, however, do not automatically equate to high dissolved P in runoff. As stated earlier, numerous factors interact to create the potential for P losses from agricultural fields. Many of the basic processes that govern P transport are known. It is difficult, however, to know at any given site which factor(s) influence P loss rates proportionally more than others. Insufficient data exist in Illinois to definitively guide landowners as to which factors in a specific field contribute the most to P losses. There are indications, however, that where solution P losses from crop fields are dominant, high soil P concentration at the surface are likely the most dominant factor.

The purpose of this guide is to (1) help land managers identify factors in agricultural fields known to contribute "P" runoff loss and, (2) identify practices that can reduce phosphorus loss from agricultural fields. The factors most commonly associated with both dissolved and sediment bound P loss are presented. For each factor, guidance is provided to help land managers estimate the relative potential for P transport to surface water. It is important to realize that the procedure is not a predictive tool for P loading. It is merely a tool for assessing the relative potential for phosphorus transport.

Use of P- Risk Assessment:

When possible, land managers should adopt management practices that minimize phosphorus loss risk factors. If phosphorus containing materials need to be applied to fields that have medium or high risk potentials, recommended management practices should be used to reduce the risk of phosphorus transport.

Examples of Practices to Reduce Phosphorus Risk Potential Soil Erosion Control:

- Use residue management and/or structural practices to reduce sheet and rill erosion.
- Install filter strips, riparian forest buffers, contour buffer strips, field borders, or wetlands

Minimize Connectivity to Water Bodies:

- Install water and sediment control basins to reduce quantity of sediment transported offsite
- Install conservation buffers adjacent to water resources to create nutrient application setbacks.

Reduce Runoff Potential:

- Terrace fields to reduce slope length.
- Contour strip cropping, contour buffer strips, cover crops, crop rotations that include meadow and/or small grains, and crop residue management.

Lower Soil Test Phosphorus:

- Sample soils on high testing fields to determine vertical distribution of the phosphorus.
- If phosphorus is concentrated in the top two inches of soil, invert the soil (e.g. moldboard plow) where soil erosion will not be a problem.
- Avoid stratification by placing phosphorus materials beneath the top two inches of the soil surface.

Practice Nutrient Management:

- Apply no more than maintenance levels of phosphorus when soil test P reaches the levels described in the Illinois Agronomy Handbook, Chapter 11.

Phosphorous Risk Assessment - Site Characteristic Definitions:

1. SOIL EROSION – Sheet and rill erosion as measured by the most current version of the Revised Universal Soil Loss Equation (RUSLE).
2. CONNECTIVITY TO WATER – Defines the potential for P to be transferred from the site to a perennial stream or water body. The more closely connected the runoff is from the field via concentrated flow (from a defined grassed waterway or surface drain) to a perennial stream or water body the higher the potential for of P transport.
3. RUNOFF CLASS – Represents the effect of the Hydrologic Soil Group (A, B, C, D) on runoff. This factor represents the site's runoff vulnerability.
4. SOIL "P" TEST (BRAY P1 or Mehlich 3) – The soil test procedure using the Bray P1 extraction, or other extraction test calibrated to Bray P1, that provides an index of plant available P expressed in lbs. P/ac (PPM X 2 = lbs./ac where soil samples are obtained to the 6 2/3" depth).
5. "P INPUTS" - Represents the combined effect of application method and application rate on the potential for phosphorus to be transported in runoff in both dissolved and sediment-bound phases. Phosphorus application rate is expressed in terms of the University of Illinois maintenance phosphorus recommendations applicable to crops/yields grown on the site being evaluated. See the "P Inputs Matrix" below. Phosphorus may be in the form of commercial fertilizer or organic materials such as manure, animal waste lagoon supernatant, wastewater from municipal or agricultural sources or nonagricultural biosolids such as sewage sludge or landscape waste. When using the "P Input Matrix, it is assumed that soil incorporation is performed prior to runoff events. Instances where incorporation is typically not performed prior to runoff events will be considered as non-incorporated surface applications.

P INPUT MATRIX

	Application Rate

Application Method	<= UI Recommendations	>UI – 150% UI	>150% UI
Incorporation or Injection > 3" below surface	Low	Low	Low
Shallowly incorporated surface applications <3 inches	Low	Medium	High
Non-incorporated surface applications	Medium	High	High

Recommended Management Practices to Reduce Phosphorus Losses

1. Perform soil test regularly (minimum of every four years) and follow University of Illinois' recommendations for application rates.
2. Do not maintain excessively high phosphorus soil test levels, especially in areas prone to phosphorus transport.
3. Use variable rate applications to increase the precision of phosphorus applications and to maintain rates needed for optimal crop production.
4. In areas where phosphorus losses occur primarily from surface runoff, incorporate or inject phosphorus beneath the soil surface.
5. Control soil erosion to 'T' or less.
6. Utilize agronomic practices that optimize crop production to maximize phosphorus utilization.
7. Use filter strips or riparian forest buffers to reduce offsite transport of particulate phosphorus.
8. Avoid applying nutrients when soils are frozen or covered with ice or snow.
9. Fall applications of phosphorus that are not incorporated into the soil should not be applied on slopes greater than 5% unless runoff control measures such as heavy residue cover, contour mulch tillage, contour strip cropping, or terraces have been applied.
10. Minimize surface runoff of water by reducing compaction, maintaining high crop residue levels, installing runoff control structures such as terraces, etc.
11. Avoid stratification on soils that are susceptible to runoff and erosion.

Field Specific Phosphorus Risk Factors

The table below identifies specific risk factors that may present in a given field. No attempt should be made to "average" the factors and assign a composite rating for the field. It is recognized that the risk factors do not act independently to influence phosphorus loss from agricultural fields and P loading into water resources. Simple averaging however, assumes that all risk factors have the same amount of influence. Attempts to objectively weight some factors more or less than others would be desirable but difficult without supporting data. The phosphorus assessment procedure is not a process based or empirical model. The procedure was developed as a conservation planning tool. The tool is designed to provide guidance to select and plan conservation measures that will lower the potential for phosphorus loss from agricultural fields and P loading into water resources.

	P Risk Factors					
Field Number	Soil Erosion Factor RUSLE	Connectivity to surface water	Runoff potential (Hydrological group)	P1 Soil Test	"P inputs"	**Management to maintain Low 'P inputs' risk**
E 80	Low	Low	Medium	High	Low	Manure will be injected and current tillage practices will be maintained to minimize erosion
W 80	Low	Low	Medium	High	Low	Manure will be injected and current tillage practices will be maintained to minimize erosion
Moll 80	Low	Low	Medium	High	Low	Manure will be injected and current tillage practices will be maintained to minimize erosion
Home N	Low	Low	Medium	High	Low	Manure will be injected and current tillage practices will be maintained to minimize erosion. Manure will be applied at the crop P uptake rate and will not build.
Home S	Low	Low	Medium	High	Low	Manure will be injected and current tillage practices will be maintained to minimize erosion. Manure will be applied at the crop P uptake rate and will not build.
West Farm	Low	Low	Medium	High	Low	Manure will be injected and current tillage practices will be maintained to minimize erosion
Woessner - E	Low	Low	Medium	High	Low	Manure will be injected and current tillage practices will be maintained to minimize erosion
Woessner - W	Low	Low	Medium	High	Low	Manure will be injected and current tillage practices will be maintained to minimize erosion

Generalized Interpretation of Phosphorus Ratings & Management

LOW potential for P movement from the field. If current farming practices are maintained there is a low probability of an adverse impact to surface waters from P loss.

MEDIUM potential for P movement from the field.

HIGH potential for P movement from the field and for an adverse impact on surface waters.

VERY HIGH potential for P movement from the field and an adverse impact on surface water. A complete soil and water conservation system is needed. No P application should be planned until risk is reduced.

Illinois Nitrogen Risk Assessment Procedure

Nitrate loss potentials based on soil texture, timing, and nitrification inhibitors

FIELDS:	**None**	**All Fields**	**None**
Application Timing[1]	**Soil Texture[2]**		
	Coarse	**Medium**	**Fine**
Fall with an inhibitor > 60° F	High	High	High
Fall with an inhibitor < 60° F	High	Medium	Medium
Fall without an inhibitor > 50° F	High	High	High
Fall without an inhibitor < 50° F	High	Medium	Medium
Spring without an inhibitor	Medium	Medium	Medium-Low
Spring with an inhibitor	Medium-Low	Low	Low
Spring split applied or sidedress	Medium-Low	Low	Low

Foot notes:

1. Temperatures refer to soil temperature measured at a depth of 4 inches. For this assessment, inhibitors refer to nitrification inhibitors.
2. Soil Texture: Coarse - sand, loamy sand, sandy loam
   Medium - silt, silt loam, loam
   Fine - silty clay loam, silty clay, clay, clay loam, sandy clay, loam, sandy clay

NITROGEN RISK SUMMARY

All of the fields behave essentially the same under the following management regarding nitrogen conservation:

- High risk of nitrogen losses if fall applied without use of an inhibitor until temperatures are below 50 degrees at a depth of 4”.
- Medium risk of nitrogen loss if fall applied with a nitrification inhibiter added.
- Medium to Low risk if spring applied without an inhibiter.
- Low risk if spring applied with a nitrification inhibitor added.
- Low risk if split applied or sidedress.

Recommended Management Practices to Reduce Nitrogen Losses:

1. Set realistic yield goals and follow University of Illinois’ nitrogen recommendations.

2. Take credit for nitrogen from **all** sources: previous legume crop, incidental nitrogen contained in diammonium phosphate (DAP) and other fertilizers, manure applications, etc.
3. Determine nitrate loss potential using the table above. Use this as a guideline to determine application timing for fields with various soil textures. (More detailed information on total nitrogen loss potential is available in the University of Illinois Agricultural Experiment Station Bulletin 784, Nitrogen-Loss Potential Ratings for Illinois Soils.)
4. In fields where spring applications are not usually troublesome, apply the majority of the nitrogen shortly before or after planting.
5. For fall applications, use a nitrification inhibitor or wait until the soil has cooled down to 50° F. Even when applying a nitrification inhibitor, do not apply nitrogen until soil has cooled to 60° F. Probable dates when these soil temperatures are expected are contained in the *Illinois Agronomy Handbook.* In most cases, fall nitrogen and manure applications should not begin prior to the third week in October.
6. Use adequate levels of phosphorus, potassium, and other nutrients to ensure optimum yields and nitrogen use efficiency.
7. Conduct a post-harvest evaluation of the nitrogen program:
   - Compare actual yields vs. yield goal;
   - Evaluate factors affecting yields and nitrogen use efficiency;
   - Consider using plant tissue analyses and an end-of-season corn stalk nitrate test to evaluate plant nitrogen sufficiency;
   - Refine nitrogen rates for future years.
8. Review each nutrient management plan annually to determine if changes in the nutrient budget are needed.
9. Calibrate application equipment annually, at minimum, to ensure uniform distribution of material at planned rates.
10. Use filter strips and riparian forest buffers to intercept nutrients transported surface runoff to the stream. (Note: these practices will have minimal effect in areas with extensive subsurface drainage.)
11. Avoid applying nitrogen around environmentally sensitive areas such as sinkholes, wells, gullies, ditches, surface inlets, or rapidly permeable areas.
12. Use cover crops, such as rye, to capture residual nitrogen after harvest and prevent nitrogen from being lost between harvest and planting of the next crop.
13. Utilize water table management to reduce artificial drainage when it is not needed for crop growth or field operations.
14. Utilize water table management to reduce artificial drainage when it is not needed for crop growth or field operations.
15. Outlet tiles into constructed wetlands to remove a portion of the nitrogen before tile effluent discharges into lakes or streams.

Livestock Management Facilities Act Waste Application Provisions

o)Waste applied within 1320' (1/4 mile) of any residence not owned by the facility shall be injected or incorporated on the day of application.
p) Waste shall not be applied within:
1. 200' of surface water unless the water is up-gradient or there is adequate diking to prevent runoff, and

2. 150' of a potable water supply well.

q) Waste shall not be applied in a 10-year flood plain unless the injection or incorporation method of application is used.

r) Livestock waste shall not be applied in waterways.

s) Waste that is spread on frozen or snow-covered land shall be limited to areas which:

1. Land slope is 5% or less, or
2. Adequate erosion control practices exist

t) The certified livestock manager shall inspect all berm tops, exterior sides, non-submerged interior sides for evidence of erosion, burrowing animal activity, and other indications of berm degradation at least every two weeks and keep an inspection log.

u) Livestock waste shall not be applied during a rainfall or to saturated soil and conservative application rates shall be used in the case of a high water table or shallow earth cover to fractured bedrock. Caution shall be exercised in applying livestock waste, particularly on porous soils, so as not to cause nitrate or bacteria contamination of the groundwater.

Winter Application

Application of wastes to frozen and snow covered soil. Application on frozen and snow covered soil is not recommended. However, if manure application becomes necessary on frozen or snow covered soils, only limited quantities of manure shall be applied to address waste storage limitations until non frozen soils are available for manure application. These situations need to be documented in the CNMP and in the producer records. If winter application becomes necessary, applications are to be applied only if ALL the following criteria are met:

Application rate is limited to 10 wet tons/acre for solid manure more than 50% moisture and 5 wet tons for manure less than 50% moisture. For Liquid manure the application rate is limited to 5000 gallons/acre.

Applications are to be made on land with at least 90% surface residue cover (e.g. good quality hay or pasture field, all corn grain residue remaining after harvest, all wheat residue cover remaining after harvest).

Manure shall not be applied on more than 20 contiguous acres. Contiguous areas for application are to be separated by a break of at least 200 feet. Utilize those areas for manure application that are furthest from streams, ditches, waterways, surface water, etc (areas that present the least runoff potential and are furthest from surface water).

Increase the application setback distance to 200 feet "minimum" from all grassed waterways, surface drainage ditches, streams, surface inlets, water bodies. This distance may need to be further increased due to local conditions.

The rate of application shall not exceed the rates specified in Table 4 - Determining The Most Limiting Manure Application Rates for winter application.

Additional winter application criteria for fields with significant slopes more than 6% (fields exceeding 6% are to be identified in the CNMP). Manure shall be applied in alternating strips 60 to 200 feet wide generally on the contour, or in the case of contour strips on the alternating strips.

Manure Application on Steep Fields

Steep Fields

Wastes are not to be applied to cropland over 15% slopes or to pastures/hayland over 20% slopes unless one of the following precautions is taken:

Immediate incorporation or injection with operations done on the contour, UNLESS the field has 80% ground cover (residue and/or canopy).

1. Applications are timed during periods of lower runoff and/or rainfall (Late May to Mid-October).
2. Apply low rates through split applications (separated by rainfall events). Apply no more than 10 wet tons/acre for solid manure/wastes; or 5000 gallons/acre for liquid manure/wastes.
3. The field is established and managed in contour strips with alternate strips in grass or legume.

Manure Application on Fields Subject to Flooding

Fields Subject to Flooding

Manure is not to be land-applied on soils that are frequently flooded unless incorporated immediately on the day of application.

General Liquid Manure Applications

LIQUID MANURE APPLICATIONS - For liquid wastes, the application rate is to be adjusted to the most limiting factor to avoid ponding, surface runoff, subsurface drainage (tile) discharge, the nutrient needs of the field, or the nitrogen or phosphorus risks for the field. The total application is not to exceed the field capacity of the upper 8 inches of soil. See **Table 2. Section12** (**Available Water Capacity (AWC) Practical Soil Moisture Interpretations for Various Soils Textures and Conditions to Determine Liquid Waste Volume Applications not to exceed AWC)** to determine AWC and the amount (volume) that can be applied to reach the AWC. The actual application rate shall be adjusted during application to avoid ponding or runoff. Bare/Crusted soils may require some tillage to improve infiltration. See **Table 1, Section 12,** (**Determining The Most Limiting Manure Application Rates)** to determine the most limiting application rate factor base on the field condition and site limitations.

Liquid Manure Application – Tile Drained Fields

Fields or areas of fields that are subsurface (TILE) drained require additional precautions. When liquid wastes are applied to fields with subsurface (TILE) drains, the liquid can follow soil macropores directly to the tile drains creating a surface water pollution hazard from direct tile discharge. <u>A field is considered subsurface (tile) drained if 1/3 or more of the field is subsurface (tiled) drained; however, even a field with one subsurface drainage line may present a risk of manure/wastewater movement to subsurface drains and cause a direct discharge.</u>

Do not apply application rates (volume) that would exceed the lesser of the AWC in the upper 8 inches or 13,000 gallons/acre per application.

Prior to manure application, use a tool (AERWAY tool or similar tool) that can disrupt/close (using horizontal fracturing) the preferential flow paths (worm holes, cracks, root channels) in the soil, or till the surface of the soil 3-5 inches deep to a condition that will absorb the liquid wastes. The purpose is to have the surface soil act as a sponge to soak up the liquid manure and keep it out of preferential flow channels. This is especially important if shallow tile are present (< 2 feet deep). Any pre-application tillage should leave as much residue as possible on the soil surface. The adsorption of liquid manure by the soil in the root zone will minimize nitrogen loss and the manure/nutrient runoff potential. For perennial crops (hay or pasture), or continuous no till fields where tillage is not an option, all tile outlets from the application area are to be plugged prior to application. This criteria (4b.) may be waived if the producer can verify there is no prior history of manure discharge via subsurface drains. However, if there is a discharge the producer is liable for damages and may risk being classified as a CAFO.

If injection is used, inject only deep enough to cover the manure with soil. Till the soil at least 3 inches below the depth of injection prior to application, or all tile outlets from the application area are to be plugged prior to application. This criteria (4c.) may be waived if the producer can verify there is no prior history of manure discharge via subsurface drains. However, if there is a discharge the producer is liable for damages and may risk being classified as a CAFO.

In addition to tillage prior to surface liquid waste application or injection, install in-line tile flow control structures or inflatable tile plugs that can mechanically stop or regulate tile flow either prior to application, or have on site if needed to stop tile flow. Use caution not to back tile water where it may impair the functioning of an offsite subsurface drainage system. This criteria (4d.) may be waived if the producer can verify there is no prior history of manure discharge via subsurface drains. However, if there is a discharge the producer is liable for damages and may risk being classified as a CAFO. Repair broken tile or blow holes prior to application.

Manure Application on Fields with "Systematic Surface Drainage"

Criteria for Systematic Surface Drained Fields:

Fields or areas of fields that have systematic "surface drainage" systems (e.g. shallow surface drains spaced 100 – 200 feet apart). These "internal" surface drains are considered concentrated flow areas. However, if special precautions are taken, manure can be applied in the surface drains with minimal risk of surface runoff. THIS DOES NOT APPLY TO THE COLLECTOR SURFACE DRAINS (mains) OR DRAINS BORDERING THE FIELDS. The following special manure application techniques shall be used:

Till the surface at least 3 to 5 inches deep prior to liquid manure surface application. For SOLID manure till either prior to application or incorporate within 24 hours. This can be done with a heavy disk, chisel plow, plow, field cultivator, AERWAY tool, or similar tool that can provide "full-width" soil disturbance to a depth of 3-5 inches.

Surface apply the liquid manure uniformly over the entire soil surface on the freshly tilled soil. The purpose of the surface application on the freshly tilled soil is to allow the liquid manure to be soaked/absorbed into the entire 3-5 inches of loose soil surface.

For fields that have no subsurface drainage, the liquid manure can be injected directly with no prior tillage.

Limit LIQUID application rates to 13,000 gallons per acre or less per application.

Minimum Ground Cover for Manure Applications

Medium Phosphorus Risk Fields

- The fields shall have at least 30% ground cover at the time of application or the manure or other organic by-products shall be incorporated within one week.

High Phosphorus Risk Field

- The field shall have at least 50% ground cover at the time of application unless the manure is incorporated within 7 days on areas with < 50% cover.

Generalized Interpretation of the Nitrogen Leaching Risk Analysis:

a. Fields with a rating of "LOW" or " MEDIUM" have a low/medium potential to leach nitrates below the root zone. These fields have more flexibility for timing of nitrogen application; however, care must be taken to limit loss of applied nitrogen through denitrification.
b. Fields with a rating of HIGH" have a high potential to leach nitrates below the root zone. Fields with systematic subsurface drains (tile) are rated "HIGH" potential to leach nitrates out of the root zone. These fields require management that applies the nitrogen closer to the time the crop can utilize the applied nitrogen.

Criteria for Nitrogen via Commercial Fertilizer Sources:

On fields with a "High Nitrogen Leaching Potential" apply the recommended nitrogen for spring planted crops prior to planting spring crops or split applications between pre-plant and a sidedress application. For perennial crops split the recommended application between two or three periods including early spring, early summer, or late summer. For fall planted crops apply 20-30 Lbs/Ac of the recommended amount in the fall and the remainder in the spring. Nitrogen may be fall applied for spring planted crops following the guidance in Table 1 of this standard.

Criteria for Nitrogen Application via Manure (during Summer and Fall Periods):

On fields with a "High Nitrogen Leaching Potential" (rating more than 10) and with no growing crop, manure and other organic by-products application is to be limited to 50 Lbs/ac of Nitrogen (Ammonium N + 1/3 of the Organic N) calculated at the time of application from June to October 1st to limit nitrogen leaching. When a grass or legume cover crop is growing or established immediately after waste application, manure or other organic by-products can be applied prior to October 1st at the recommended Nitrogen rate for the next non-legume crop or the nitrogen removal rate for the next legume (maximum 150 Lbs/ac) crop. See Table 1, Section 12 - Determining the Most Limiting Manure Application Rates.

APPENDIX H
Other Utilization Component

APPENDIX I

Table 1. Available Water Capacity (AWC) Practical Soil Moisture Interpretations for Various Soils Textures and Conditions to Determine Liquid Waste Volume Applications Not to Exceed AWC

This table shall be used to determine the AWC at the time of application and the liquid volume in gallons that can be applied not to exceed the AWC. To determine the AWC in the upper 8 inches use a soil probe or similar device to evaluate the soil to a depth of 8 inches.

Available Moisture in the Soil	Sands and Loamy Sands	Sandy Loam and Fine Sandy Loam	Very Fine Sandy Loam, Loam, Silt Loam, Silty Clay Loam, Clay Loam, Sandy Clay Loam	Sandy Clay, Silty Clay, Clay
< 25% Soil Moisture	Dry, loose and single-grained; flows through fingers.	Dry and loose; flows through fingers.	Powdery dry; in some places slightly crusted but breaks down easily into powder.	Hard, baked and cracked; has loose crumbs on surface in some places.
Amount to Reach AWC	20,000 gallons/ac	27,000 gallons/ac	40,000 gallons/ac	27,000 gallons/ac
25-50% or Less Soil Moisture	Appears to be dry; does not form a ball under pressure.	Appears to be dry; does not form a ball under pressure.	Somewhat crumbly but holds together under pressure.	Somewhat pliable; balls under pressure.
Amount to Reach AWC	15,000 gallons/ac	20,000 gallons/ac	30,000 gallons/ac	20,000 gallons/ac
50 - 75 % Soil Moisture	Appears to be dry; does not form a ball under pressure.	Balls under pressure but seldom holds together.	Forms a ball under pressure; somewhat plastic; slicks slightly under pressure.	Forms a ball; ribbons out between thumb and forefinger.
Amount to Reach AWC	10,000 gallons/ac	13,000 gallons/ac	20,000 gallons/ac	13,000 gallons/ac
75% to Field Capacity	Sticks together slightly; may form a weak ball under pressure.	Forms a weak ball that breaks easily, does not stick.	Forms ball; very pliable; slicks readily if relatively high in clay.	Ribbons out between fingers easily; has a slick feeling.
Amount to Reach AWC	5,000 gallons/ac	7,000 gallons/ac	11,000 gallons/ac	7,000 gallons/ac
100% Field Capacity	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.
Above Field Capacity	Free water appears when soil is bounced in hand.	Free water is released with kneading.	Free water can be squeezed out.	Puddles: free water forms on surface