UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Office of Chemical Safety and Pollution Prevention

MEMORANDUM

OPP OFFICIAL RECORD
HEALTH EFFECTS DIVISION
SCIENTIFIC DATA REVIEWS
EPA SERIES 361

Date. 26-October-2011

Subject: **Difenoconazole.** Acute and Chronic Aggregate Dietary Exposure and Risk Assessments for the Amended Section 3 Registration to Add Seed Treatment Uses on Oats and Rye.

PC Code: 128847	DP Barcode: 389652
Decision No.: 440121	Registration No.: None
Petition Nos.: 0F7785	Regulatory Action: Amended Section 3
Assessment Type: Single Chemical, Dietary	Registration Case No.: NA
TXR No.: None	CAS No.: 119446-68-3
MRID No.: None	40 CFR: 180.475

Reviewer: Thurston G. Morton, Chemist
Risk Assessment Branch IV/Health Effects Division (RABIV/HED; 7509P)

Through: Dennis McNeilly Chemist
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Dietary Exposure Science Advisory Council (DESAC)

And

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RABIV/HED (7509P)

To: Rebecca Daiss, Risk Assessor
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Executive Summary

Aggregate (food + water) acute and chronic dietary risk assessments were conducted using the Dietary Exposure Evaluation Model - Food Consumption Intake Database (DEEM-FCID™, ver. 2.03). This model uses food consumption data from the United States Department of Agriculture's (USDA's) Continuing Surveys of Food Intakes by Individuals (CSFII; 1994-1996 and 1998). The analyses were performed to support an amended Section 3 registration to add seed treatment uses on oats and rye of the fungicide difenoconazole [1-[2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-methyl-1,3-dioxolan-2-ylmethyl]-1*H*-1,2,4-triazole].

The unrefined acute analysis assumed tolerance-level residues, maximum expected residues for wheat grain and barley grain from field trials with a lower method limit of quantitation (LOQ) , 100% crop treated (CT), and the available empirical or DEEM™ (ver. 7.81) default processing factors. The EDWC of 15.8 µg/L (ppb) was used for the acute dietary exposure analysis and an EDWC of 10.4 µg/L (ppb) was used for the chronic dietary exposure analysis.

The resulting acute food plus water exposure estimates were less than HED's level of concern (-<100% of the acute population-adjusted dose (aPAD)) at the 95th percentile of the exposure distribution for the general U.S. population (8 % aPAD) and all population sub-groups; the most highly exposed population subgroup was children1 - 2 years old with 19 % aPAD. The somewhat refined chronic analysis assumed tolerance-level residues for some commodities, average field trial residues for the majority of commodities, the available empirical or DEEM™ (ver. 7.81) default processing factors, and 100 % CT. The resulting chronic food plus water exposure estimates were less than HED's level of concern (<100% of the chronic population-adjusted dose (cPAD)) for the general U.S. population (18 % cPAD) and all population sub-groups; the most highly exposed population subgroup was children 1 - 2 years old with 46 % cPAD.

The requested amended uses of difenoconazole did not result in an increase in dietary exposure estimates for free triazole or conjugated triazoles. Therefore, the last dietary exposure analyses for the triazole metabolites (D388469, T. Morton, 27 Apr. 2011) will not need to be updated and still applies.

I. Introduction

Dietary risk assessment incorporates both exposure and toxicity of a given pesticide. For acute and chronic assessments, the risk is expressed as a percentage of a maximum acceptable dose (i.e., the dose which HED has concluded will result in no unreasonable adverse health effects). This dose is referred to as the PAD. The PAD is equivalent to the point of departure (POD, NOAEL, LOAEL, e.g.) divided by the required uncertainty or safety factors.

For acute and non-cancer chronic exposures, HED is concerned when estimated dietary risk exceeds 100% of the PAD. HED is generally concerned when estimated cancer risk exceeds one in one million. References which discuss the acute and chronic risk assessments in more detail are available on the EPA/pesticides web site: "Available Information on Assessing Exposure from Pesticides, A User's Guide," 21-JUN-2000, web link: http://www.epa.gov/fedrgstr/EPA-

PEST/2000/July/Day-12/6061.pdf; or see SOP 99.6 (20-AUG-1999).

The most recent dietary risk assessment for difenoconazole was conducted by T. Morton (3-March-2011; DP#378938).

II. Residue Information

Difenoconazole tolerances are published in 40 CFR§180.475.

Residues of Concern in Plants and Livestock: The HED Metabolism Assessment Review Committee (MARC) has determined that for tolerance expression and risk assessment purposes, the residue of concern is difenoconazole *per se* for plant and livestock commodities. The MARC, however, stated that if tolerances are proposed for difenoconazole resulting from foliar uses which result in higher residue levels of CGA-205375 than parent, then the need to include CGA-205375 should be reconsidered (Memo, G. Kramer, 22-JUL-1994; No DP#). Because the petitioner has now proposed foliar uses of difenoconazole, which result in higher residues in crop commodities, the need to include metabolite CGA 205375 in the tolerance expression and/or risk assessment has been re-examined. Based upon a review of the previously-submitted metabolism data for difenoconazole, HED concludes the residue of concern for both tolerance setting and risk assessment for the crops included in this petition is difenoconazole. However, HED concludes the residue of concern in livestock for tolerance setting and risk assessment are difenoconazole and its metabolite CGA 205375 (for more details, see the summary document, DP# 340379). Table 1 below summarizes tolerance expression and the residues of concern in plant and livestock commodities.

Table 1. Difenoconazole Residues of Concern in Plants and Ruminants.

Matrix		Residues of Concern	
		For Risk Assessment	**For Tolerance Expression**
Plants	Primary and Rotational crops	Parent Only	Parent Only
Livestock	Ruminant and Poultry	Parent and CGA 205375	Parent and CGA 205375
Drinking Water		Parent Only	NA

No new residue data was submitted to support an amended Section 3 registration to add seed treatment uses on oats and rye. These amended uses are covered by previously submitted residue data. The amended uses of difenoconazole do not increase the livestock dietary burden and does not affect the livestock tolerances.

Previously Recommended Tolerances: Based on the residue chemistry data submitted with the previous petitions, HED recommended for establishment of the new food tolerances (DP# 366507, B. Cropp-Kohlligian, 23-Feb-2011). The newly recommended, established, and revised tolerances are listed in Table 2 below.

Table 2. Tolerance Summary for Difenoconazole (non feed items).

Commodity	Existing/Established Tolerances (ppm)	New Tolerances (ppm)
Almond, nutmeat	0.03	------
Brassica subgroup 5A	1.9	------
Brassica subgroup 5B	35	------
Citrus oil	25	------
Fruit, citrus, group 10	0.6	------
Grape	4.0	------
Grape, raisin	6.0	------
Nut, tree, group 14	0.03	------
Onion, bulb, subgroup 3—07A	0.20	------
Onion, green, subgroup 3—07B	6.0	------
Pistachios	0.03	------
Vegetable, cucurbit, group 9	0.7	------
Fruit, Pome, group 11	1.0	------
Vegetable, Fruiting, Group 8	0.60	------
Vegetable, Tuberous and Corm, subgroup 1C	0.01	------
Beet, sugar	0.30	------
Papaya	0.30	------
Banana	0.2	------
Barley, grain	0.1	**0.10**
Canola, seed	0.01	------
Cattle fat	0.10	------
Cattle, meat	0.05	------
Cattle, meat byproducts	0.10	------
Cattle, liver	0.40	------
Corn, sweet, kernel plus cob with husks removed	0.01	------
Cotton, undelinted seed	0.05	------
Egg	0.02	------
Goat, fat	0.10	------
Goat, meat	0.05	------
Goat, meat byproducts (except liver)	0.10	------
Goat, liver	0.40	------
Hog, fat	0.10	------
Hog, meat	0.05	------
Hog, meat byproducts (except liver)	0.1	------
Hog, liver	0.40	------
Horse, fat	0.10	------
Horse, meat	0.05	------
Horse, meat byproducts (except	0.10	------

Table 2. Tolerance Summary for Difenoconazole (non feed items).		
Commodity	Existing/Established Tolerances (ppm)	New Tolerances (ppm)
liver)		
Horse, liver	0.40	------
Milk	0.01	------
Rye, grain	0.1	**0.01**
Sheep, fat	0.10	------
Sheep, meat	0.05	------
Sheep, meat byproducts (except liver)	0.10	------
Sheep, liver	0.40	------
Wheat, grain	0.1	**0.10**
Wax apple	0.07	------
Mango	0.07	------
Carrot	------	0.50
Chickpea	------	0.08
Soybean, seed	------	0.15
Fruit, stone, group 12	------	2.5
Strawberry	------	2.5
Turnip greens	------	35
Oat, grain	------	**0.01**

The requested amended uses of difenoconazole did not result in an increase in dietary exposure estimates for free triazole or conjugated triazoles. Therefore, the last dietary exposure analyses for the triazole metabolites (D388469, T. Morton, 27 Apr. 2011) will not need to be updated.

Food Residues and processing factors used in the Acute and Chronic Analysis: The acute analysis assumed tolerance-level residues, maximum expected residues for wheat grain and barley grain from field trials with a lower method LOQ, and 100% CT for all the registered and proposed crops. Tolerance-level residues were also assumed for all livestock tissues in this assessment. The chronic analysis assumed tolerance-level residues for some commodities, average field trial residues for the majority of commodities, and 100 % CT. Those commodities where field trial data were used are summarized below. HED SOP 2000.1 *Guidance for Translation of Field Trial Data from Representative Commodities in the Crop Group Regulation to Other Commodities in Each Crop Group/Subgroup* dated 9/12/2000 was used in translating to other commodities in the crop group. Experimental processing factors were used for apple juice (0.04x), grape juice (0.2x), citrus juices (0.1x), potato chips (0.5x), potato granules/flakes (0.5x), raisin (3.5x chronic only since raisin tolerance used in acute), sugar beet molasses (0.6x), tomato paste (1.6x), and tomato puree (0.5x); DEEM™ (ver. 7.81) default processing factors were assumed for other processed commodities.

Almond: Field trial residues were used from MRID 47586101.

Apple: Field trial residues were used from MRID 46950233.

Broccoli: Field trial residues were used from MRID 47586102. Residues from 1-7 day PHI were used since registered labels allow from 1-7 day PHIs.

Cabbage: Field trial residues were used from 47586102. Residues from 1-7 day PHI were used since registered labels allow from 1-7 day PHIs. To refine the dietary exposure data from only cabbage samples without wrapper leaves were used.

Cantaloupe: Field trial residues were used from MRID 47586103. Residues from 0-1 day PHI were used since registered labels allow from 0-1 day PHI.

Carrot: Field trial residues were used from MRID 47929804.

Chickpea: Field trial residues were used from MRID 47929805.

Cucumber: Field trial residues were used from MRID 47586103. Residues from 0-1 day PHI were used since registered labels allow from 0-1 day PHI.

Grape: Field trial residues were used from MRID 47586105.

Grapefruit: Field trial residues were used from MRID 47586104.

Lemon: Field trial residues were used from MRID 47586104.

Lime: Field trial residues were used from MRID 47586104.

Mustard Greens: Field trial residues were used from MRIDs 47417704, 47417707, and 47586102. Residues from 1-7 day PHI were used since registered labels allow from 1-7 day PHIs.

Orange: Field trial residues were used from MRID 47586104.

Pear: Field trial residues were used from MRID 46950233.

Pecan: Field trial residues were used from MRID 47586106.

Peppers: Field trial residues were used from MRID 46950234.

Potato: Field trial residues were used from MRID 46950235.

Soybean: Field trial residues were used from MRID 47929801.

Stone Fruit: Field trial residues were used from MRID 47929803.

Strawberry: Field trial residues were used from MRID 47929802.

Sugar Beet: Field trial residues were used from MRID 46950236.

Summer Squash: Field trial residues were used from MRID 47586103. Residues from 0-1 day PHI were used since registered labels allow from 0-1 day PHIs.

Tomato: Field trial residues were used from MRIDs 46950234, 47417705, and 47417708.

III. Drinking Water Data

The drinking water estimates used in the dietary risk assessment were provided by the Environmental Fate and Effects Division (EFED; Memo, I. Maher, 1-June-2010; D371044). EFED conducted a Tier II drinking water assessment for surface water sources using the Pesticide Root Zone/Exposure Analysis Modeling System (PRZM/EXAMS) for the registered and proposed new uses. Among all the registered and proposed new uses, the highest estimated drinking water concentrations (EDWCs) for surface water sources were derived for aerial applications of difenoconazole to New York grapes at the maximum annual application rate of 0.46 lb ai/acre. The estimated drinking water residues for 1-in-10 year annual peak, 1-in-10 year annual mean, and 36-year annual mean are 15.8, 10.4, and 7.62 µg/L (ppb) respectively.

The highest SCI-GROW estimated drinking water concentration of difenoconazole from shallow ground water sources is 1.28×10^{-2} µg/L, obtained for the maximum application rate for ornamentals (0.52 lb ai/A; D333319). These concentrations can be considered as both the acute and chronic groundwater values. The EDWCs from ground water sources are expected to be the same for the proposed golf course turf uses as estimated for ornamentals.

The 1-in-10 year annual peak EDWC of 15.8 µg/L (ppb) was used for the acute dietary (food plus water) exposure analysis and the 1-in-10 year annual mean EDWC of 10.4 µg/L (ppb) was used for the chronic dietary (food plus water) exposure analysis.

IV. DEEM-FCID™ Program and Consumption Information

Difenoconazole acute and chronic dietary exposure assessments were conducted using the DEEM-FCID™ (ver. 2.03), which incorporates consumption data from USDA's CSFII (1994-1996 and 1998). The 1994-96, 98 data are based on the reported consumption of more than 20,000 individuals over two non-consecutive survey days. Foods "as consumed" (*e.g.*, apple pie) are linked to EPA-defined food commodities (*e.g.*, apples, peeled fruit - cooked; fresh or N/S; baked; or wheat flour - cooked; fresh or N/S, baked) using publicly available recipe translation files developed jointly by USDA/ARS and EPA. For chronic exposure assessment, consumption data are averaged for the entire U.S. population and within population subgroups, but for acute exposure assessment are retained as individual consumption events. Based on analysis of the 1994-96, 98 CSFII consumption data, which took into account dietary patterns and survey respondents, HED concluded that it is most appropriate to report risk for the following population subgroups: the general U.S. population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, adults 20-49, females 13-49, and adults 50+ years old.

For chronic dietary exposure assessment, an estimate of the residue level in each food or food-form (*e.g.*, orange or orange juice) on the food commodity residue list is multiplied by the average daily consumption estimate for that food/food form. The resulting residue consumption estimate for each food/food form is summed with the residue consumption estimates for all other food/food forms on the commodity residue list to arrive at the total average estimated exposure. Exposure is expressed in mg/kg body weight/day and as a percent of the cPAD. This procedure is performed for each population subgroup.

For acute exposure assessments, individual one-day food consumption data are used on an individual-by-individual basis. The reported consumption amounts of each food item can be multiplied by a residue point estimate and summed to obtain a total daily pesticide exposure for a deterministic exposure assessment, or "matched" in multiple random pairings with residue values and then summed in a probabilistic assessment. The resulting distribution of exposures is expressed as a percentage of the aPAD on both a user (*i.e.*, those who reported eating relevant commodities/food forms) and a per-capita (*i.e.*, those who reported eating the relevant commodities as well as those who did not) basis. In accordance with HED policy, per capita exposure and risk are reported for all tiers of analysis. However, for Tiers 1 and 2, significant differences in user vs. per capita exposure and risk are identified and noted in the risk assessment.

V. Toxicological Information

On 08-SEP-1998, HED's Hazard Identification Assessment Review Committee (HIARC) evaluated the toxicology database of difenoconazole and re-assessed the RfD established in 1994, as well as the toxicological endpoints for the dietary and occupational exposure risk assessments that were selected in 1994. At this meeting, the HIARC also addressed the potential enhanced sensitivity of infants and children from exposure to difenoconazole as required by the Food Quality Protection Act (FQPA) of 1996 (HED Doc. No. 012873, 25-SEP-1998). In July, 2007, the RAB1 toxicologists and risk assessment team met to reevaluate the endpoints selected by the HIARC since new studies were submitted. RAB1 toxicologists and risk assessment team also reevaluated FQPA assessments. The risk assessment team concluded that the default 10x FQPA Safety Factor (SF) should be reduced to 1x when assessing acute and chronic dietary exposures (M.Sahafeyan, D333320, 09-AUG-07). The relevant endpoints are shown in Table 3.

In accordance with HED's current policy and EPA's 2005 Cancer Guidelines, difenoconazole is classified as "Suggestive Evidence of Carcinogenic Potential," based on excessive toxicity observed at the two highest doses, the absence of tumors at the lower doses and the absence of genotoxic effects. A margin-of-exposure (MOE) approach in risk assessment was advocated by HED's CPRC in 1994. Use of an MOE approach was reviewed and reaffirmed in 2007 by the CPRC Chair (PV Shah, 3/1/07, HED Doc. No. 0054532).

Therefore, a separate cancer dietary assessment is not being conducted for difenoconazole.

Table 3. Summary of Toxicological Doses and Endpoints for Difenoconazole for Use in Dietary Risk Assessments.

Exposure Scenario	Point of Departure	Uncertainty/FQPA Safety Factors	RfD, PAD, for Risk Assessment	Study and Relevant Toxicological Effects
Acute Dietary (All populations)	NOAEL = 25 mg/kg	UF_A = 10X UF_H = 10X FQPA SF = 1X	aRfD = aPAD = 0.25 mg/kg/day	**Acute Neurotoxicity Study in Rats** LOAEL= 200 mg/kg in males based on reduced fore-limb grip strength in males on day 1.
Chronic Dietary (All populations)	NOAEL = 0.96 mg/kg/day	UF_A = 10X UF_H = 10X FQPA SF = 1X	cRfD = cPAD = 0.01mg/kg/day	**Combined chronic toxicity/carcinogenicity (rat; dietary)** LOAEL = 24.1/32.8 mg/kg/day (M/F) based on cumulative decreases in body-weight gains.
Cancer (oral, dermal, inhalation)	Difenoconazole is classified as a Group C, possible human carcinogen with a non-linear (MOE) approach for human risk characterization (CPRC Document, 7/27/94, Memo, P. V. Shah dated March 3, 2007, HED Doc. No. 0054532). The chronic dietary exposure assessment is protective of cancer effects.			

Point of Departure (POD) = A data point or an estimated point that is derived from observed dose-response data and used to mark the beginning of extrapolation to determine risk associated with lower environmentally relevant human exposures. NOAEL = no observed adverse effect level. LOAEL = lowest observed adverse effect level. UF = uncertainty factor. UF_A = extrapolation from animal to human (interspecies). UF_H = potential variation in sensitivity among members of the human population (intraspecies). FQPA SF = FQPA Safety Factor. PAD = population adjusted dose (a = acute, c = chronic). RfD = reference dose.

VI. Results/Discussion

As stated above, for acute and chronic assessments, HED is concerned when dietary risk exceeds 100% of the aPAD or cPAD, respectively. The following paragraphs are summaries of the DEEM-FCID™ (ver. 2.03) acute and chronic exposure analyses.

Acute and chronic aggregate (food + water) analyses were performed using DEEM-FCID™ estimating the dietary exposure of the U.S. population and various population subgroups. The results are summarized in Tables 4 and 5 below for acute and chronic analyses respectively.

The resulting acute food exposure estimates were less than HED's level of concern (<100% aPAD) at the 95th percentile of the exposure distribution for general US population (8 % aPAD) and all population sub-groups; the most highly exposed population subgroup was Children 1-2 years old with 19 % aPAD. The resulting chronic food exposure estimates were less than HED's level of concern (<100% cPAD) for the general U.S. population (17 % cPAD) and all population sub-groups; the most highly exposed population subgroup was children 1-2 years old with 46 % cPAD. A separate cancer dietary assessment was not conducted for difenoconazole because the cancer NOAEL is higher than the chronic RfD; therefore, the chronic dietary risk estimate is considered protective of all chronic effects including carcinogenicity.

Table 4. Summary of Acute Dietary (Food plus Water) Exposure and Risk for Difenoconazole at the 95th Percentile.

Population Subgroup	aPAD (mg/kg/day)	Exposure (mg/kg/day)	%aPAD
General U.S. Population	0.25	0.020538	8
All Infants (< 1 year old)		0.039780	16
Children 1-2 years old		**0.047638**	**19**
Children 3-5 years old		0.037050	15
Children 6-12 years old		0.021576	9
Youth 13-19 years old		0.011240	5
Adults 20-49 years old		0.014699	6
Adults 50+ years old		0.019351	8
Females 13-49 years old		0.015084	6

The bolded %aPAD is the highest.

Table 5. Summary of Chronic Dietary (Food plus Water) Exposure and Risk for Difenoconazole.

Population Subgroup	cPAD (mg/kg/day)	Exposure (mg/kg/day)	%cPAD
General U.S. Population	0.01	0.001687	17
All Infants (< 1 year old)		0.003001	30
Children 1-2 years old		**0.004573**	**46**
Children 3-5 years old		0.003607	36
Children 6-12 years old		0.002027	20
Youth 13-19 years old		0.001307	13
Adults 20-49 years old		0.001317	13
Adults 50+ years old		0.001562	16
Females 13-49 years old		0.001373	14

The bolded %cPAD is the highest.

VII. Characterization of Inputs/Outputs

The acute analysis assumed tolerance-level residues, maximum expected residues for wheat grain and barley grain from field trials with a lower method LOQ, 100% CT, and empirical or DEEM™ default processing factors. The chronic analysis assumed tolerance-level residues for some commodities, average field trial residues for the majority of commodities, 100 % CT, and empirical or DEEM™ default processing factors. Therefore, these analyses are considered conservative. While they could be significantly refined, further refinement is not warranted as estimated risks are not of concern.

VIII. Conclusions

An acute aggregate (food + water) dietary risk assessment was conducted for difenoconazole using the DEEM-FCID™ (ver. 2.03) Model and assumed tolerance-level residues, maximum expected residues for wheat grain and barley grain from field trials with a lower method LOQ , 100% CT, and empirical or DEEM™ default processing factors. The chronic aggregate dietary risk assessment assumed tolerance-level residues for some commodities, average field trial residues for the majority of commodities, 100 % CT, and empirical or DEEM™ default processing factors. The resulting acute and chronic aggregate exposure estimates were less than HED's level of concern. For the general U.S. population, the aPAD and cPAD were 8 % and 17 %, respectively. The most highly-exposed population subgroups in the acute (at the 95th percentile of the exposure distribution) and chronic analyses were Children 1-2 years old (19 % aPAD) and children 1-2 years old (46 % cPAD), respectively.

IX. Attachments

Attachment 1: DEEM-FCID™ Acute Residue File
Attachment 2: DEEM-FCID™ Acute Exposure Estimates
Attachment 3: DEEM-FCID™ Chronic Residue File
Attachment 4: DEEM-FCID™ Chronic Exposure Estimates

cc with all attachments: T. Morton (RABIV)
RDI: D. McNeilly and D. Hrdy - DESAC (26-October-2011); S. Hummel (26-October-2011)
Petition Number(s): 0F7785
DP#: 389652
PC Code: 128847
T. Morton:S10838:PY1:(703)305-6691

Attachment 1: DEEM-FCID™ Acute Residue File

Filename: C:\Documents and Settings\tmorton\My Documents\MyFiles\DEEM Files\128847 Difenoconazole 0F7785 May 2011\difenoconazole_acute-05-11.R98
Chemical: Difenoconazole
RfD(Chronic): .01 mg/kg bw/day NOEL(Chronic): 0 mg/kg bw/day
RfD(Acute): .25 mg/kg bw/day NOEL(Acute): 0 mg/kg bw/day
Date created/last modified: 05-10-2011/07:02:12/8 Program ver. 2.03

EPA Code	Crop Grp	Commodity Name	Def Res (ppm)	Adj.Factors #1	#2	Comment
01010520	1A	Beet, sugar	0.300000	1.000	1.000	
01010521	1A	Beet, sugar-babyfood	0.300000	1.000	1.000	
01010530	1A	Beet, sugar, molasses	0.300000	0.600	1.000	
01010531	1A	Beet, sugar, molasses-babyfood	0.300000	0.600	1.000	
01010780	1AB	Carrot	0.500000	1.000	1.000	
01010781	1AB	Carrot-babyfood	0.500000	1.000	1.000	
01010790	1AB	Carrot, juice	0.500000	1.000	1.000	
01032960	1C	Potato, chips	0.010000	0.500	1.000	
01032970	1C	Potato, dry (granules/ flakes)	0.010000	0.500	1.000	
01032971	1C	Potato, dry (granules/ flakes)-b	0.010000	0.500	1.000	
01032980	1C	Potato, flour	0.010000	0.500	1.000	
01032981	1C	Potato, flour-babyfood	0.010000	0.500	1.000	
01032990	1C	Potato, tuber, w/peel	0.010000	1.000	1.000	
01032991	1C	Potato, tuber, w/peel-babyfood	0.010000	1.000	1.000	
01033000	1C	Potato, tuber, w/o peel	0.010000	1.000	1.000	
01033001	1C	Potato, tuber, w/o peel-babyfood	0.010000	1.000	1.000	
03001640	3	Garlic	0.200000	1.000	1.000	
03001650	3	Garlic, dried	0.200000	1.000	1.000	
03001651	3	Garlic, dried-babyfood	0.200000	1.000	1.000	
03001980	3	Leek	6.000000	1.000	1.000	
03002370	3	Onion, dry bulb	0.200000	1.000	1.000	
03002371	3	Onion, dry bulb-babyfood	0.200000	1.000	1.000	
03002380	3	Onion, dry bulb, dried	0.200000	9.000	1.000	
03002381	3	Onion, dry bulb, dried-babyfood	0.200000	9.000	1.000	
03002390	3	Onion, green	6.000000	1.000	1.000	
03003380	3	Shallot	0.200000	1.000	1.000	
05010610	5A	Broccoli	1.900000	1.000	1.000	
05010611	5A	Broccoli-babyfood	1.900000	1.000	1.000	
05010620	5A	Broccoli, Chinese	1.900000	1.000	1.000	
05010640	5A	Brussels sprouts	1.900000	1.000	1.000	
05010690	5A	Cabbage	1.900000	1.000	1.000	
05010710	5A	Cabbage, Chinese, napa	1.900000	1.000	1.000	
05010720	5A	Cabbage, Chinese, mustard	1.900000	1.000	1.000	
05010830	5A	Cauliflower	1.900000	1.000	1.000	
05011960	5A	Kohlrabi	1.900000	1.000	1.000	
05020630	5B	Broccoli raab	35.000000	1.000	1.000	
05020700	5B	Cabbage, Chinese, bok choy	35.000000	1.000	1.000	
05021170	5B	Collards	35.000000	1.000	1.000	
05021940	5B	Kale	35.000000	1.000	1.000	
05022290	5B	Mustard greens	35.000000	1.000	1.000	
05023180	5B	Rape greens	35.000000	1.000	1.000	
05023890	5B	Turnip, greens	35.000000	1.000	1.000	
06003470	6	Soybean, seed	0.150000	1.000	1.000	
06003480	6	Soybean, flour	0.150000	1.000	1.000	
06003481	6	Soybean, flour-babyfood	0.150000	1.000	1.000	
06003490	6	Soybean, soy milk	0.150000	1.000	1.000	
06003491	6	Soybean, soy milk-babyfood or in	0.150000	1.000	1.000	
06003500	6	Soybean, oil	0.150000	1.000	1.000	
06003501	6	Soybean, oil-babyfood	0.150000	1.000	1.000	
06030980	6C	Chickpea, seed	0.080000	1.000	1.000	
06030981	6C	Chickpea, seed-babyfood	0.080000	1.000	1.000	
06030990	6C	Chickpea, flour	0.080000	1.000	1.000	
08001480	8	Eggplant	0.600000	1.000	1.000	
08002340	8	Okra	0.600000	1.000	1.000	
08002700	8	Pepper, bell	0.600000	1.000	1.000	
08002701	8	Pepper, bell-babyfood	0.600000	1.000	1.000	
08002710	8	Pepper, bell, dried	0.600000	1.000	1.000	
08002711	8	Pepper, bell, dried-babyfood	0.600000	1.000	1.000	
08002720	8	Pepper, nonbell	0.600000	1.000	1.000	
08002721	8	Pepper, nonbell-babyfood	0.600000	1.000	1.000	
08002730	8	Pepper, nonbell, dried	0.600000	1.000	1.000	
08003740	8	Tomatillo	0.600000	1.000	1.000	
08003750	8	Tomato	0.600000	1.000	1.000	

08003751	8	Tomato-babyfood	0.600000	1.000	1.000
08003760	8	Tomato, paste	0.600000	1.600	1.000
08003761	8	Tomato, paste-babyfood	0.600000	1.600	1.000
08003770	8	Tomato, puree	0.600000	0.500	1.000
08003771	8	Tomato, puree-babyfood	0.600000	0.500	1.000
08003780	8	Tomato, dried	0.600000	14.300	1.000
08003781	8	Tomato, dried-babyfood	0.600000	14.300	1.000
08003790	8	Tomato, juice	0.600000	1.500	1.000
09010750	9A	Cantaloupe	0.700000	1.000	1.000
09010800	9A	Casaba	0.700000	1.000	1.000
09011870	9A	Honeydew melon	0.700000	1.000	1.000
09013990	9A	Watermelon	0.700000	1.000	1.000
09014000	9A	Watermelon, juice	0.700000	1.000	1.000
09020210	9B	Balsam pear	0.700000	1.000	1.000
09020880	9B	Chayote, fruit	0.700000	1.000	1.000
09021020	9B	Chinese waxgourd	0.700000	1.000	1.000
09021350	9B	Cucumber	0.700000	1.000	1.000
09023080	9B	Pumpkin	0.700000	1.000	1.000
09023090	9B	Pumpkin, seed	0.700000	1.000	1.000
09023560	9B	Squash, summer	0.700000	1.000	1.000
09023561	9B	Squash, summer-babyfood	0.700000	1.000	1.000
09023570	9B	Squash, winter	0.700000	1.000	1.000
09023571	9B	Squash, winter-babyfood	0.700000	1.000	1.000
10001060	10	Citrus citron	0.600000	1.000	1.000
10001070	10	Citrus hybrids	0.600000	1.000	1.000
10001080	10	Citrus, oil	25.000000	1.000	1.000
10001800	10	Grapefruit	0.600000	1.000	1.000
10001810	10	Grapefruit, juice	0.600000	0.100	1.000
10001970	10	Kumquat	0.600000	1.000	1.000
10001990	10	Lemon	0.600000	1.000	1.000
10002000	10	Lemon, juice	0.600000	0.100	1.000
10002001	10	Lemon, juice-babyfood	0.600000	0.100	1.000
10002010	10	Lemon, peel	0.600000	1.000	1.000
10002060	10	Lime	0.600000	1.000	1.000
10002070	10	Lime, juice	0.600000	0.100	1.000
10002071	10	Lime, juice-babyfood	0.600000	0.100	1.000
10002400	10	Orange	0.600000	1.000	1.000
10002410	10	Orange, juice	0.600000	0.100	1.000
10002411	10	Orange, juice-babyfood	0.600000	0.100	1.000
10002420	10	Orange, peel	0.600000	1.000	1.000
10003070	10	Pummelo	0.600000	1.000	1.000
10003690	10	Tangerine	0.600000	1.000	1.000
10003700	10	Tangerine, juice	0.600000	0.100	1.000
11000070	11	Apple, fruit with peel	1.000000	1.000	1.000
11000080	11	Apple, peeled fruit	1.000000	1.000	1.000
11000081	11	Apple, peeled fruit-babyfood	1.000000	1.000	1.000
11000090	11	Apple, dried	1.000000	8.000	1.000
11000091	11	Apple, dried-babyfood	1.000000	8.000	1.000
11000100	11	Apple, juice	1.000000	0.040	1.000
11000101	11	Apple, juice-babyfood	1.000000	0.040	1.000
11000110	11	Apple, sauce	1.000000	1.000	1.000
11000111	11	Apple, sauce-babyfood	1.000000	1.000	1.000
11001290	11	Crabapple	1.000000	1.000	1.000
11002100	11	Loquat	1.000000	1.000	1.000
11002660	11	Pear	1.000000	1.000	1.000
11002661	11	Pear-babyfood	1.000000	1.000	1.000
11002670	11	Pear, dried	1.000000	6.250	1.000
11002680	11	Pear, juice	1.000000	1.000	1.000
11002681	11	Pear, juice-babyfood	1.000000	1.000	1.000
11003100	11	Quince	1.000000	1.000	1.000
12000120	12	Apricot	2.500000	1.000	1.000
12000121	12	Apricot-babyfood	2.500000	1.000	1.000
12000130	12	Apricot, dried	2.500000	1.000	1.000
12000140	12	Apricot, juice	2.500000	1.000	1.000
12000141	12	Apricot, juice-babyfood	2.500000	1.000	1.000
12000900	12	Cherry	2.500000	1.000	1.000
12000901	12	Cherry-babyfood	2.500000	1.000	1.000
12000910	12	Cherry, juice	2.500000	1.000	1.000
12000911	12	Cherry, juice-babyfood	2.500000	1.000	1.000
12002300	12	Nectarine	2.500000	1.000	1.000
12002600	12	Peach	2.500000	1.000	1.000
12002601	12	Peach-babyfood	2.500000	1.000	1.000
12002610	12	Peach, dried	2.500000	1.000	1.000
12002611	12	Peach, dried-babyfood	2.500000	1.000	1.000
12002620	12	Peach, juice	2.500000	1.000	1.000
12002621	12	Peach, juice-babyfood	2.500000	1.000	1.000
12002850	12	Plum	2.500000	1.000	1.000

12002851	12	Plum-babyfood	2.500000	1.000	1.000
12002860	12	Plum, prune, fresh	2.500000	1.000	1.000
12002861	12	Plum, prune, fresh-babyfood	2.500000	1.000	1.000
12002870	12	Plum, prune, dried	2.500000	1.000	1.000
12002871	12	Plum, prune, dried-babyfood	2.500000	1.000	1.000
12002880	12	Plum, prune, juice	2.500000	1.000	1.000
12002881	12	Plum, prune, juice-babyfood	2.500000	1.000	1.000
14000030	14	Almond	0.030000	1.000	1.000
14000031	14	Almond-babyfood	0.030000	1.000	1.000
14000040	14	Almond, oil	0.030000	1.000	1.000
14000041	14	Almond, oil-babyfood	0.030000	1.000	1.000
14000590	14	Brazil nut	0.030000	1.000	1.000
14000680	14	Butternut	0.030000	1.000	1.000
14000810	14	Cashew	0.030000	1.000	1.000
14000920	14	Chestnut	0.030000	1.000	1.000
14001550	14	Filbert	0.030000	1.000	1.000
14001560	14	Filbert, oil	0.030000	1.000	1.000
14001850	14	Hickory nut	0.030000	1.000	1.000
14002130	14	Macadamia nut	0.030000	1.000	1.000
14002690	14	Pecan	0.030000	1.000	1.000
14002820	14	Pistachio	0.030000	1.000	1.000
14003910	14	Walnut	0.030000	1.000	1.000
15000250	15	Barley, pearled barley	0.010000	1.000	1.000
15000251	15	Barley, pearled barley-babyfood	0.010000	1.000	1.000
15000260	15	Barley, flour	0.010000	1.000	1.000
15000261	15	Barley, flour-babyfood	0.010000	1.000	1.000
15000270	15	Barley, bran	0.010000	1.000	1.000
15001270	15	Corn, sweet	0.010000	1.000	1.000
15001271	15	Corn, sweet-babyfood	0.010000	1.000	1.000
15002310	15	Oat, bran	0.010000	1.000	1.000
15002320	15	Oat, flour	0.010000	1.000	1.000
15002321	15	Oat, flour-babyfood	0.010000	1.000	1.000
15002330	15	Oat, groats/rolled oats	0.010000	1.000	1.000
15002331	15	Oat, groats/rolled oats-babyfood	0.010000	1.000	1.000
15003280	15	Rye, grain	0.010000	1.000	1.000
15003290	15	Rye, flour	0.010000	1.000	1.000
15004010	15	Wheat, grain	0.020000	1.000	1.000
15004011	15	Wheat, grain-babyfood	0.020000	1.000	1.000
15004020	15	Wheat, flour	0.020000	1.000	1.000
15004021	15	Wheat, flour-babyfood	0.020000	1.000	1.000
15004030	15	Wheat, germ	0.020000	1.000	1.000
15004040	15	Wheat, bran	0.020000	1.000	1.000
20003190	20	Rapeseed, oil	0.010000	1.000	1.000
20003191	20	Rapeseed, oil-babyfood	0.010000	1.000	1.000
21000440	M	Beef, meat	0.050000	1.000	1.000
21000441	M	Beef, meat-babyfood	0.050000	1.000	1.000
21000450	M	Beef, meat, dried	0.050000	1.920	1.000
21000460	M	Beef, meat byproducts	0.100000	1.000	1.000
21000461	M	Beef, meat byproducts-babyfood	0.100000	1.000	1.000
21000470	M	Beef, fat	0.100000	1.000	1.000
21000471	M	Beef,fat-babyfood	0.100000	1.000	1.000
21000480	M	Beef, kidney	0.100000	1.000	1.000
21000490	M	Beef, liver	0.400000	1.000	1.000
21000491	M	Beef, liver-babyfood	0.400000	1.000	1.000
23001690	M	Goat, meat	0.050000	1.000	1.000
23001700	M	Goat, meat byproducts	0.100000	1.000	1.000
23001710	M	Goat, fat	0.100000	1.000	1.000
23001720	M	Goat, kidney	0.100000	1.000	1.000
23001730	M	Goat, liver	0.400000	1.000	1.000
24001890	M	Horse, meat	0.050000	1.000	1.000
25002900	M	Pork, meat	0.050000	1.000	1.000
25002901	M	Pork, meat-babyfood	0.050000	1.000	1.000
25002910	M	Pork, skin	0.100000	1.000	1.000
25002920	M	Pork, meat byproducts	0.100000	1.000	1.000
25002921	M	Pork, meat byproducts-babyfood	0.100000	1.000	1.000
25002930	M	Pork, fat	0.100000	1.000	1.000
25002931	M	Pork, fat-babyfood	0.100000	1.000	1.000
25002940	M	Pork, kidney	0.100000	1.000	1.000
25002950	M	Pork, liver	0.400000	1.000	1.000
26003390	M	Sheep, meat	0.050000	1.000	1.000
26003391	M	Sheep, meat-babyfood	0.050000	1.000	1.000
26003400	M	Sheep, meat byproducts	0.100000	1.000	1.000
26003410	M	Sheep, fat	0.100000	1.000	1.000
26003411	M	Sheep, fat-babyfood	0.100000	1.000	1.000
26003420	M	Sheep, kidney	0.100000	1.000	1.000
26003430	M	Sheep, liver	0.400000	1.000	1.000
27002220	D	Milk, fat	0.010000	1.000	1.000

27002221	D	Milk, fat - baby food/infant for	0.010000	1.000	1.000
27012230	D	Milk, nonfat solids	0.010000	1.000	1.000
27012231	D	Milk, nonfat solids-baby food/in	0.010000	1.000	1.000
27022240	D	Milk, water	0.010000	1.000	1.000
27022241	D	Milk, water-babyfood/infant form	0.010000	1.000	1.000
27032251	D	Milk, sugar (lactose)-baby food/	0.010000	1.000	1.000
70001450	P	Egg, whole	0.020000	1.000	1.000
70001451	P	Egg, whole-babyfood	0.020000	1.000	1.000
70001460	P	Egg, white	0.020000	1.000	1.000
70001461	P	Egg, white (solids)-babyfood	0.020000	1.000	1.000
70001470	P	Egg, yolk	0.020000	1.000	1.000
70001471	P	Egg, yolk-babyfood	0.020000	1.000	1.000
86010000	O	Water, direct, all sources	0.015800	1.000	1.000
86020000	O	Water, indirect, all sources	0.015800	1.000	1.000
95000230	O	Banana	0.200000	1.000	1.000
95000231	O	Banana-babyfood	0.200000	1.000	1.000
95000240	O	Banana, dried	0.200000	3.900	1.000
95000241	O	Banana, dried-babyfood	0.200000	3.900	1.000
95001280	O	Cottonseed, oil	0.050000	1.000	1.000
95001281	O	Cottonseed, oil-babyfood	0.050000	1.000	1.000
95001750	O	Grape	4.000000	1.000	1.000
95001760	O	Grape, juice	4.000000	0.200	1.000
95001761	O	Grape, juice-babyfood	4.000000	0.200	1.000
95001770	O	Grape, leaves	4.000000	1.000	1.000
95001780	O	Grape, raisin	6.000000	1.000	1.000
95001790	O	Grape, wine and sherry	4.000000	1.000	1.000
95002150	O	Mango	0.070000	1.000	1.000
95002151	O	Mango-babyfood	0.070000	1.000	1.000
95002160	O	Mango, dried	0.070000	1.000	1.000
95002170	O	Mango, juice	0.070000	1.000	1.000
95002171	O	Mango, juice-babyfood	0.070000	1.000	1.000
95002450	O	Papaya	0.300000	1.000	1.000
95002451	O	Papaya-babyfood	0.300000	1.000	1.000
95002460	O	Papaya, dried	0.300000	1.800	1.000
95002470	O	Papaya, juice	0.300000	1.500	1.000
95002830	O	Plantain	0.200000	1.000	1.000
95002840	O	Plantain, dried	0.200000	3.900	1.000
95003590	O	Strawberry	2.500000	1.000	1.000
95003591	O	Strawberry-babyfood	2.500000	1.000	1.000
95003600	O	Strawberry, juice	2.500000	1.000	1.000
95003601	O	Strawberry, juice-babyfood	2.500000	1.000	1.000

Attachment 2: DEEM-FCID™ Acute Exposure Estimates

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U.S. Environmental Protection Agency                                    Ver. 2.02
DEEM-FCID ACUTE Analysis for DIFENOCONAZOLE                        (1994-98 data)
Residue file: difenoconazole_acute-05-11.R98          Adjustment factor #2 used.
Analysis Date: 05-10-2011/07:05:35    Residue file dated: 05-10-2011/07:02:12/8
Daily totals for food and foodform consumption used.
Run Comment: ""
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Summary calculations (per capita):

	95th Percentile Exposure	95th Percentile % aRfD	99th Percentile Exposure	99th Percentile % aRfD	99.9th Percentile Exposure	99.9th Percentile % aRfD
U.S. Population:	0.020538	8.22	0.055384	22.15	0.143944	57.58
All infants:	0.039780	15.91	0.062606	25.04	0.118345	47.34
Children 1-2 yrs:	0.047638	19.06	0.094024	37.61	0.252955	101.18
Children 3-5 yrs:	0.037050	14.82	0.076959	30.78	0.375828	150.33
Children 6-12 yrs:	0.021576	8.63	0.044683	17.87	0.148114	59.25
Youth 13-19 yrs:	0.011240	4.50	0.039654	15.86	0.137650	55.06
Adults 20-49 yrs:	0.014699	5.88	0.041863	16.75	0.109721	43.89
Adults 50+ yrs:	0.019351	7.74	0.063235	25.29	0.138873	55.55
Females 13-49 yrs:	0.015084	6.03	0.042143	16.86	0.121368	48.55

Attachment 3: DEEM-FCID™ Chronic Residue File

Filename: C:\Documents and Settings\tmorton\My Documents\MyFiles\DEEM Files\128847 Difenoconazole 0F7785 May 2011\difenoconazole_chronic-05-11AverageFT.R98
Chemical: Difenoconazole
RfD(Chronic): .01 mg/kg bw/day NOEL(Chronic): 0 mg/kg bw/day
RfD(Acute): .25 mg/kg bw/day NOEL(Acute): 0 mg/kg bw/day
Date created/last modified: 05-10-2011/07:03:40/8 Program ver. 2.03

EPA Code	Crop Grp	Commodity Name	Def Res (ppm)	Adj.Factors #1	#2	Comment
01010520	1A	Beet, sugar	0.300000	1.000	1.000	
01010521	1A	Beet, sugar-babyfood	0.300000	1.000	1.000	
01010530	1A	Beet, sugar, molasses	0.300000	0.600	1.000	
01010531	1A	Beet, sugar, molasses-babyfood	0.300000	0.600	1.000	
01010780	1AB	Carrot	0.062000	1.000	1.000	
01010781	1AB	Carrot-babyfood	0.062000	1.000	1.000	
01010790	1AB	Carrot, juice	0.062000	1.000	1.000	
01032960	1C	Potato, chips	0.005000	0.500	1.000	
01032970	1C	Potato, dry (granules/ flakes)	0.005000	0.500	1.000	
01032971	1C	Potato, dry (granules/ flakes)-b	0.005000	0.500	1.000	
01032980	1C	Potato, flour	0.005000	0.500	1.000	
01032981	1C	Potato, flour-babyfood	0.005000	0.500	1.000	
01032990	1C	Potato, tuber, w/peel	0.005000	1.000	1.000	
01032991	1C	Potato, tuber, w/peel-babyfood	0.005000	1.000	1.000	
01033000	1C	Potato, tuber, w/o peel	0.005000	1.000	1.000	
01033001	1C	Potato, tuber, w/o peel-babyfood	0.005000	1.000	1.000	
03001640	3	Garlic	0.200000	1.000	1.000	
03001650	3	Garlic, dried	0.200000	1.000	1.000	
03001651	3	Garlic, dried-babyfood	0.200000	1.000	1.000	
03001980	3	Leek	6.000000	1.000	1.000	
03002370	3	Onion, dry bulb	0.200000	1.000	1.000	
03002371	3	Onion, dry bulb-babyfood	0.200000	1.000	1.000	
03002380	3	Onion, dry bulb, dried	0.200000	9.000	1.000	
03002381	3	Onion, dry bulb, dried-babyfood	0.200000	9.000	1.000	
03002390	3	Onion, green	6.000000	1.000	1.000	
03003380	3	Shallot	0.200000	1.000	1.000	
05010610	5A	Broccoli	0.221000	1.000	1.000	
05010611	5A	Broccoli-babyfood	0.221000	1.000	1.000	
05010620	5A	Broccoli, Chinese	0.221000	1.000	1.000	
05010640	5A	Brussels sprouts	29.000000	1.000	1.000	
05010690	5A	Cabbage	0.029000	1.000	1.000	
05010710	5A	Cabbage, Chinese, napa	0.029000	1.000	1.000	
05010720	5A	Cabbage, Chinese, mustard	0.221000	1.000	1.000	
05010830	5A	Cauliflower	0.221000	1.000	1.000	
05011960	5A	Kohlrabi	0.029000	1.000	1.000	
05020630	5B	Broccoli raab	5.100000	1.000	1.000	
05020700	5B	Cabbage, Chinese, bok choy	5.100000	1.000	1.000	
05021170	5B	Collards	5.100000	1.000	1.000	
05021940	5B	Kale	5.100000	1.000	1.000	
05022290	5B	Mustard greens	5.100000	1.000	1.000	
05023180	5B	Rape greens	5.100000	1.000	1.000	
05023890	5B	Turnip, greens	5.100000	1.000	1.000	
06003470	6	Soybean, seed	0.021500	1.000	1.000	
06003480	6	Soybean, flour	0.021500	1.000	1.000	
06003481	6	Soybean, flour-babyfood	0.021500	1.000	1.000	
06003490	6	Soybean, soy milk	0.021500	1.000	1.000	
06003491	6	Soybean, soy milk-babyfood or in	0.021500	1.000	1.000	
06003500	6	Soybean, oil	0.021500	1.000	1.000	
06003501	6	Soybean, oil-babyfood	0.021500	1.000	1.000	
06030980	6C	Chickpea, seed	0.017000	1.000	1.000	
06030981	6C	Chickpea, seed-babyfood	0.017000	1.000	1.000	
06030990	6C	Chickpea, flour	0.017000	1.000	1.000	
08001480	8	Eggplant	0.133000	1.000	1.000	
08002340	8	Okra	0.600000	1.000	1.000	
08002700	8	Pepper, bell	0.133000	1.000	1.000	
08002701	8	Pepper, bell-babyfood	0.133000	1.000	1.000	
08002710	8	Pepper, bell, dried	0.133000	1.000	1.000	
08002711	8	Pepper, bell, dried-babyfood	0.133000	1.000	1.000	
08002720	8	Pepper, nonbell	0.133000	1.000	1.000	
08002721	8	Pepper, nonbell-babyfood	0.133000	1.000	1.000	
08002730	8	Pepper, nonbell, dried	0.133000	1.000	1.000	
08003740	8	Tomatillo	0.165000	1.000	1.000	

08003750	8	Tomato	0.165000	1.000	1.000
08003751	8	Tomato-babyfood	0.165000	1.000	1.000
08003760	8	Tomato, paste	0.165000	1.600	1.000
08003761	8	Tomato, paste-babyfood	0.165000	1.600	1.000
08003770	8	Tomato, puree	0.165000	0.500	1.000
08003771	8	Tomato, puree-babyfood	0.165000	0.500	1.000
08003780	8	Tomato, dried	0.165000	14.300	1.000
08003781	8	Tomato, dried-babyfood	0.165000	14.300	1.000
08003790	8	Tomato, juice	0.165000	1.500	1.000
09010750	9A	Cantaloupe	0.137000	1.000	1.000
09010800	9A	Casaba	0.137000	1.000	1.000
09011870	9A	Honeydew melon	0.137000	1.000	1.000
09013990	9A	Watermelon	0.137000	1.000	1.000
09014000	9A	Watermelon, juice	0.137000	1.000	1.000
09020210	9B	Balsam pear	0.055000	1.000	1.000
09020880	9B	Chayote, fruit	0.310000	1.000	1.000
09021020	9B	Chinese waxgourd	0.055000	1.000	1.000
09021350	9B	Cucumber	0.055000	1.000	1.000
09023080	9B	Pumpkin	0.031000	1.000	1.000
09023090	9B	Pumpkin, seed	0.031000	1.000	1.000
09023560	9B	Squash, summer	0.031000	1.000	1.000
09023561	9B	Squash, summer-babyfood	0.031000	1.000	1.000
09023570	9B	Squash, winter	0.031000	1.000	1.000
09023571	9B	Squash, winter-babyfood	0.031000	1.000	1.000
10001060	10	Citrus citron	0.208000	1.000	1.000
10001070	10	Citrus hybrids	0.208000	1.000	1.000
10001080	10	Citrus, oil	25.000000	1.000	1.000
10001800	10	Grapefruit	0.120000	1.000	1.000
10001810	10	Grapefruit, juice	0.120000	0.100	1.000
10001970	10	Kumquat	0.208000	1.000	1.000
10001990	10	Lemon	0.176000	1.000	1.000
10002000	10	Lemon, juice	0.176000	0.100	1.000
10002001	10	Lemon, juice-babyfood	0.176000	0.100	1.000
10002010	10	Lemon, peel	0.176000	1.000	1.000
10002060	10	Lime	0.176000	1.000	1.000
10002070	10	Lime, juice	0.176000	0.100	1.000
10002071	10	Lime, juice-babyfood	0.176000	0.100	1.000
10002400	10	Orange	0.208000	1.000	1.000
10002410	10	Orange, juice	0.208000	0.100	1.000
10002411	10	Orange, juice-babyfood	0.208000	0.100	1.000
10002420	10	Orange, peel	0.208000	1.000	1.000
10003070	10	Pummelo	0.120000	1.000	1.000
10003690	10	Tangerine	0.208000	1.000	1.000
10003700	10	Tangerine, juice	0.208000	0.100	1.000
11000070	11	Apple, fruit with peel	0.203000	1.000	1.000
11000080	11	Apple, peeled fruit	0.203000	1.000	1.000
11000081	11	Apple, peeled fruit-babyfood	0.203000	1.000	1.000
11000090	11	Apple, dried	0.203000	8.000	1.000
11000091	11	Apple, dried-babyfood	0.203000	8.000	1.000
11000100	11	Apple, juice	0.203000	0.040	1.000
11000101	11	Apple, juice-babyfood	0.203000	0.040	1.000
11000110	11	Apple, sauce	0.203000	1.000	1.000
11000111	11	Apple, sauce-babyfood	0.203000	1.000	1.000
11001290	11	Crabapple	0.203000	1.000	1.000
11002100	11	Loquat	0.123000	1.000	1.000
11002660	11	Pear	0.123000	1.000	1.000
11002661	11	Pear-babyfood	0.123000	1.000	1.000
11002670	11	Pear, dried	0.123000	6.250	1.000
11002680	11	Pear, juice	0.123000	1.000	1.000
11002681	11	Pear, juice-babyfood	0.123000	1.000	1.000
11003100	11	Quince	0.123000	1.000	1.000
12000120	12	Apricot	0.421000	1.000	1.000
12000121	12	Apricot-babyfood	0.421000	1.000	1.000
12000130	12	Apricot, dried	0.421000	1.000	1.000
12000140	12	Apricot, juice	0.421000	1.000	1.000
12000141	12	Apricot, juice-babyfood	0.421000	1.000	1.000
12000900	12	Cherry	0.622000	1.000	1.000
12000901	12	Cherry-babyfood	0.622000	1.000	1.000
12000910	12	Cherry, juice	0.622000	1.000	1.000
12000911	12	Cherry, juice-babyfood	0.622000	1.000	1.000
12002300	12	Nectarine	0.421000	1.000	1.000
12002600	12	Peach	0.421000	1.000	1.000
12002601	12	Peach-babyfood	0.421000	1.000	1.000
12002610	12	Peach, dried	0.421000	1.000	1.000
12002611	12	Peach, dried-babyfood	0.421000	1.000	1.000
12002620	12	Peach, juice	0.421000	1.000	1.000
12002621	12	Peach, juice-babyfood	0.421000	1.000	1.000

12002850	12	Plum	0.295000	1.000	1.000
12002851	12	Plum-babyfood	0.295000	1.000	1.000
12002860	12	Plum, prune, fresh	0.295000	1.000	1.000
12002861	12	Plum, prune, fresh-babyfood	0.295000	1.000	1.000
12002870	12	Plum, prune, dried	0.295000	2.600	1.000
12002871	12	Plum, prune, dried-babyfood	0.295000	2.600	1.000
12002880	12	Plum, prune, juice	0.295000	1.000	1.000
12002881	12	Plum, prune, juice-babyfood	0.295000	1.000	1.000
14000030	14	Almond	0.005000	1.000	1.000
14000031	14	Almond-babyfood	0.005000	1.000	1.000
14000040	14	Almond, oil	0.005000	1.000	1.000
14000041	14	Almond, oil-babyfood	0.005000	1.000	1.000
14000590	14	Brazil nut	0.007000	1.000	1.000
14000680	14	Butternut	0.007000	1.000	1.000
14000810	14	Cashew	0.007000	1.000	1.000
14000920	14	Chestnut	0.005000	1.000	1.000
14001550	14	Filbert	0.007000	1.000	1.000
14001560	14	Filbert, oil	0.007000	1.000	1.000
14001850	14	Hickory nut	0.007000	1.000	1.000
14002130	14	Macadamia nut	0.007000	1.000	1.000
14002690	14	Pecan	0.007000	1.000	1.000
14002820	14	Pistachio	0.005000	1.000	1.000
14003910	14	Walnut	0.007000	1.000	1.000
15000250	15	Barley, pearled barley	0.010000	1.000	1.000
15000251	15	Barley, pearled barley-babyfood	0.010000	1.000	1.000
15000260	15	Barley, flour	0.010000	1.000	1.000
15000261	15	Barley, flour-babyfood	0.010000	1.000	1.000
15000270	15	Barley, bran	0.010000	1.000	1.000
15001270	15	Corn, sweet	0.010000	1.000	1.000
15001271	15	Corn, sweet-babyfood	0.010000	1.000	1.000
15002310	15	Oat, bran	0.010000	1.000	1.000
15002320	15	Oat, flour	0.010000	1.000	1.000
15002321	15	Oat, flour-babyfood	0.010000	1.000	1.000
15002330	15	Oat, groats/rolled oats	0.010000	1.000	1.000
15002331	15	Oat, groats/rolled oats-babyfood	0.010000	1.000	1.000
15003280	15	Rye, grain	0.010000	1.000	1.000
15003290	15	Rye, flour	0.010000	1.000	1.000
15004010	15	Wheat, grain	0.020000	1.000	1.000
15004011	15	Wheat, grain-babyfood	0.020000	1.000	1.000
15004020	15	Wheat, flour	0.020000	1.000	1.000
15004021	15	Wheat, flour-babyfood	0.020000	1.000	1.000
15004030	15	Wheat, germ	0.020000	1.000	1.000
15004040	15	Wheat, bran	0.020000	1.000	1.000
20003190	20	Rapeseed, oil	0.010000	1.000	1.000
20003191	20	Rapeseed, oil-babyfood	0.010000	1.000	1.000
21000440	M	Beef, meat	0.050000	1.000	1.000
21000441	M	Beef, meat-babyfood	0.050000	1.000	1.000
21000450	M	Beef, meat, dried	0.050000	1.920	1.000
21000460	M	Beef, meat byproducts	0.100000	1.000	1.000
21000461	M	Beef, meat byproducts-babyfood	0.100000	1.000	1.000
21000470	M	Beef, fat	0.100000	1.000	1.000
21000471	M	Beef,fat-babyfood	0.100000	1.000	1.000
21000480	M	Beef, kidney	0.100000	1.000	1.000
21000490	M	Beef, liver	0.400000	1.000	1.000
21000491	M	Beef, liver-babyfood	0.400000	1.000	1.000
23001690	M	Goat, meat	0.050000	1.000	1.000
23001700	M	Goat, meat byproducts	0.100000	1.000	1.000
23001710	M	Goat, fat	0.100000	1.000	1.000
23001720	M	Goat, kidney	0.100000	1.000	1.000
23001730	M	Goat, liver	0.400000	1.000	1.000
24001890	M	Horse, meat	0.050000	1.000	1.000
25002900	M	Pork, meat	0.050000	1.000	1.000
25002901	M	Pork, meat-babyfood	0.050000	1.000	1.000
25002910	M	Pork, skin	0.100000	1.000	1.000
25002920	M	Pork, meat byproducts	0.100000	1.000	1.000
25002921	M	Pork, meat byproducts-babyfood	0.100000	1.000	1.000
25002930	M	Pork, fat	0.100000	1.000	1.000
25002931	M	Pork, fat-babyfood	0.100000	1.000	1.000
25002940	M	Pork, kidney	0.100000	1.000	1.000
25002950	M	Pork, liver	0.400000	1.000	1.000
26003390	M	Sheep, meat	0.050000	1.000	1.000
26003391	M	Sheep, meat-babyfood	0.050000	1.000	1.000
26003400	M	Sheep, meat byproducts	0.100000	1.000	1.000
26003410	M	Sheep, fat	0.100000	1.000	1.000
26003411	M	Sheep, fat-babyfood	0.100000	1.000	1.000
26003420	M	Sheep, kidney	0.100000	1.000	1.000
26003430	M	Sheep, liver	0.400000	1.000	1.000

27002220	D	Milk, fat	0.010000	1.000	1.000
27002221	D	Milk, fat - baby food/infant for	0.010000	1.000	1.000
27012230	D	Milk, nonfat solids	0.010000	1.000	1.000
27012231	D	Milk, nonfat solids-baby food/in	0.010000	1.000	1.000
27022240	D	Milk, water	0.010000	1.000	1.000
27022241	D	Milk, water-babyfood/infant form	0.010000	1.000	1.000
27032251	D	Milk, sugar (lactose)-baby food/	0.010000	1.000	1.000
70001450	P	Egg, whole	0.020000	1.000	1.000
70001451	P	Egg, whole-babyfood	0.020000	1.000	1.000
70001460	P	Egg, white	0.020000	1.000	1.000
70001461	P	Egg, white (solids)-babyfood	0.020000	1.000	1.000
70001470	P	Egg, yolk	0.020000	1.000	1.000
70001471	P	Egg, yolk-babyfood	0.020000	1.000	1.000
86010000	O	Water, direct, all sources	0.010400	1.000	1.000
86020000	O	Water, indirect, all sources	0.010400	1.000	1.000
95000230	O	Banana	0.200000	1.000	1.000
95000231	O	Banana-babyfood	0.200000	1.000	1.000
95000240	O	Banana, dried	0.200000	3.900	1.000
95000241	O	Banana, dried-babyfood	0.200000	3.900	1.000
95001280	O	Cottonseed, oil	0.050000	1.000	1.000
95001281	O	Cottonseed, oil-babyfood	0.050000	1.000	1.000
95001750	O	Grape	0.613000	1.000	1.000
95001760	O	Grape, juice	0.613000	0.200	1.000
95001761	O	Grape, juice-babyfood	0.613000	0.200	1.000
95001770	O	Grape, leaves	0.613000	1.000	1.000
95001780	O	Grape, raisin	0.613000	3.500	1.000
95001790	O	Grape, wine and sherry	0.613000	1.000	1.000
95002150	O	Mango	0.070000	1.000	1.000
95002151	O	Mango-babyfood	0.070000	1.000	1.000
95002160	O	Mango, dried	0.070000	1.000	1.000
95002170	O	Mango, juice	0.070000	1.000	1.000
95002171	O	Mango, juice-babyfood	0.070000	1.000	1.000
95002450	O	Papaya	0.300000	1.000	1.000
95002451	O	Papaya-babyfood	0.300000	1.000	1.000
95002460	O	Papaya, dried	0.300000	1.800	1.000
95002470	O	Papaya, juice	0.300000	1.500	1.000
95002830	O	Plantain	0.200000	1.000	1.000
95002840	O	Plantain, dried	0.200000	3.900	1.000
95003590	O	Strawberry	0.495000	1.000	1.000
95003591	O	Strawberry-babyfood	0.495000	1.000	1.000
95003600	O	Strawberry, juice	0.495000	1.000	1.000
95003601	O	Strawberry, juice-babyfood	0.495000	1.000	1.000

Attachment 4: DEEM-FCID™ Chronic Exposure Estimates

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U.S. Environmental Protection Agency                                    Ver. 2.00
DEEM-FCID Chronic analysis for DIFENOCONAZOLE                      (1994-98 data)
Residue file name: C:\Documents and Settings\tmorton\My Documents\MyFiles\DEEM Files\128847
Difenoconazole 0F7785 May 2011\difenoconazole_chronic-05-11AverageFT.R98
                                                   Adjustment factor #2 used.
Analysis Date 05-10-2011/07:07:12     Residue file dated: 05-10-2011/07:03:40/8
Reference dose (RfD, Chronic) = .01 mg/kg bw/day
===============================================================================
                    Total exposure by population subgroup
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Population Subgroup	Total Exposure mg/kg body wt/day	Total Exposure Percent of Rfd
U.S. Population (total)	0.001687	16.9%
U.S. Population (spring season)	0.001678	16.8%
U.S. Population (summer season)	0.001793	17.9%
U.S. Population (autumn season)	0.001618	16.2%
U.S. Population (winter season)	0.001659	16.6%
Northeast region	0.001620	16.2%
Midwest region	0.001651	16.5%
Southern region	0.001578	15.8%
Western region	0.001956	19.6%
Hispanics	0.001605	16.1%
Non-hispanic whites	0.001609	16.1%
Non-hispanic blacks	0.001946	19.5%
Non-hisp/non-white/non-black	0.002414	24.1%
All infants (< 1 year)	0.003001	30.0%
Nursing infants	0.001638	16.4%
Non-nursing infants	0.003518	35.2%
Children 1-6 yrs	0.003782	37.8%
Children 7-12 yrs	0.001901	19.0%
Females 13-19 (not preg or nursing)	0.001191	11.9%
Females 20+ (not preg or nursing)	0.001484	14.8%
Females 13-50 yrs	0.001445	14.5%
Females 13+ (preg/not nursing)	0.001325	13.3%
Females 13+ (nursing)	0.001582	15.8%
Males 13-19 yrs	0.001419	14.2%
Males 20+ yrs	0.001323	13.2%
Seniors 55+	0.001597	16.0%
Children 1-2 yrs	0.004573	45.7%
Children 3-5 yrs	0.003607	36.1%
Children 6-12 yrs	0.002027	20.3%
Youth 13-19 yrs	0.001307	13.1%
Adults 20-49 yrs	0.001317	13.2%
Adults 50+ yrs	0.001562	15.6%
Females 13-49 yrs	0.001373	13.7%

13544

R195624

Chemical Name: Difenoconazole

PC Code: 128847
HED File Code: 11000 Chemistry Reviews
Memo Date: 10/26/2011
File ID: 00000000
Accession #: 000-00-0137

HED Records Reference Center
10/31/2011