Message

From: Cozad.David@epa.gov [Cozad.David@epa.gov]
Sent: 2/16/2021 4:36:21 PM
To: Whisnant, Amber [Whisnant.Amber@epa.gov]
Subject: Fwd: Beekill in NE
Attachments: FF05151E9C744CFFB07CDE73A8101160.png; 7CADF5E7DABE4981BA9D2DB1D33A549F.png; 3279152687C94313BA4FCB09D9B03345.png; Vakil residue_data_with_distance_direction.xlsx; 122117_ar06081UNL BeeKill2017.pdf; 061819_as20574-585Vakil.pdf; ENREC waterwayfeb12_2021b.jpg; ENREC waterwayfeb12_2021g.jpg; ENREC waterwayfeb12_2021h.jpg

Sent from my iPhone

Begin forwarded message:

> **From:** "Green, Jamie" <Green.Jamie@epa.gov>
> **Date:** February 16, 2021 at 6:47:30 AM CST
> **To:** "Singletary, DeAndre" <Singletary.DeAndre@epa.gov>, "Smith, John" <Smith.John@epa.gov>, "Cozad, David" <Cozad.David@epa.gov>, "Bednar, Candace" <Bednar.Candace@epa.gov>, "Weekley, Erin" <weekley.erin@epa.gov>, "Buchholz, Ken" <Buchholz.Kenneth@epa.gov>, "Beringer, Mike" <Beringer.Michael@epa.gov>, "Jones, Doug" <jones.doug@epa.gov>, "Beringer, Mike" <Beringer.Michael@epa.gov>
> **Cc:** "Rosado-Chaparro, Wilfredo" <Rosado-Chaparro.Wilfredo@epa.gov>, "Daniels, Michael" <daniels.michael@epa.gov>
> **Subject: FW: Beekill in NE**
>
> FYI – unrelated to current events but additional data collected by UNL this past summer.
>
> ---
>
> **From:** Steeger, Thomas <Steeger.Thomas@epa.gov>
> **Sent:** Friday, February 12, 2021 6:37 PM
> **To:** Green, Jamie <Green.Jamie@epa.gov>
> **Subject:** Fwd: Beekill in NE
>
> FYI
>
> Thomas Steeger, Ph.D.
> Senior Science Advisor
> Environmental Fate and Effects Division
> EPA Office of Pesticide Programs
>
> Begin forwarded message:
>
> > **From:** "Steeger, Thomas" <Steeger.Thomas@epa.gov>
> > **Date:** February 12, 2021 at 7:35:52 PM EST
> > **To:** "Matuszko, Jan" <Matuszko.Jan@epa.gov>
> > **Subject: Fwd: Beekill in NE**

Please see below. Dr Wu-Smart is requesting a contact to discuss concerns regarding a purported release from processed water retention lagoons located at an ethanol production plant in Nebraska.

Thomas Steeger, Ph.D.
Senior Science Advisor
Environmental Fate and Effects Division
EPA Office of Pesticide Programs

Begin forwarded message:

> **From:** Judy Wu-Smart <jwu-smart@unl.edu>
> **Date:** February 12, 2021 at 5:43:15 PM EST
> **To:** "Steeger, Thomas" <Steeger.Thomas@epa.gov>, Beekill <Beekill@epa.gov>
> **Subject: RE: Beekill in NE**

> Hi,

> Attached are some pesticide results from my students drift barrier study. She set up sticky traps across ENREC to examine the role treelines play in mitigating pesticide drift from corn planting. While our experimental design wasn't meant to examine concerns with the AltEn plant, we did reexamine this data by proximity to the plant and found alarmingly high levels of clothianidin residues in the air in samples closest to the plant (high of 520.64 ppb clothianidin). These concentrations would be toxic for honey bees foraging in the area and may even present human health concerns, particularly chronic inhalation exposure at these levels.

> I've also attached the pesticide reports from the USDA Gastonia lab from the 2017 dead bees (which showed few residues except clothianidin) and the milkweeds samples that yielded 3,000-5,000 ppb clothianidin and indicated to us regarding the issues originating from the water ways.

> Also, unfortunately, there was a spill this morning from AltEn and massive amounts of effluent discharge was released into the waterways. We recorded water rising from 0.5 inches at 1053am to 7 inches by 1230p. It took 8-9 hours for an accident response team to come out to investigate and it may have even been spurred by our calls informing NDEE of this situation.

> Is there someone from EPA that we can connect with given the severity of these issues with water, soil, and air contaminates?

> Thanks for your patience on getting data. We are heavily understaffed and underfunded but our students are trying their best to process the dead bee counts.

Judy

Sent from Mail for Windows 10

From: Steeger, Thomas
Sent: Monday, February 8, 2021 6:53 AM
To: Judy Wu-Smart; Beekill
Subject: RE: Beekill in NE

Non-NU Email

Dear Dr. Wu-Smart,

Just checking to learn whether any progress has been made on pulling together an incident report which addresses some of the questions forwarded earlier.

Tom Steeger

Beekill@epa.gov
Office of Pesticide Programs
Environmental Fate and Effects Division

From: Judy Wu-Smart <jwu-smart@unl.edu>
Sent: Monday, November 30, 2020 3:25 PM
To: Beekill <Beekill@epa.gov>
Subject: Re: Beekill in NE

Hi,

Yes, sorry for the delayed response. I have some students helping pull the data together but most are on holiday break until the semester restarts so we likely won't have the data together for a few more weeks.

Judy

Get Outlook for Android

From: Steeger, Thomas <Steeger.Thomas@epa.gov> on behalf of Beekill <Beekill@epa.gov>
Sent: Monday, November 30, 2020 5:07:40 AM
To: Judy Wu-Smart <jwu-smart@unl.edu>
Subject: FW: Beekill in NE

Dear Dr. Smart,

Once again thank you for reporting the bee kill incident on November 12, 2020. Will you be able to provide some additional details as identified in the earlier email?

Beekill@epa.gov
Office of Pesticide Programs
Environmental Fate and Effects Division

From: Beekill
Sent: Friday, November 13, 2020 8:11 AM
To: Judy Wu-Smart <jwu-smart@unl.edu>
Subject: RE: Beekill in NE

Dear Dr. Wu-Smart,

Thank you for reporting the bee kill incident through the beekill@epa.gov portal. Risk assessors in the EPA Office of Pesticide Programs utilize incident data as a line of evidence in evaluating the extent to which a pesticide can affect non-target organisms under actual use conditions. Therefore, the more detail that can be provided on an incident, the greater its utility in assessing risk.

I am interested in learning more about the circumstances surrounding the losses; therefore, below are some additional questions to which I hope you will be willing to provide a response.

- <!--[if !supportLists]--><!--[endif]-->How many total colonies were present in the affected apiary in each of the years in which you reported losses?
- <!--[if !supportLists]--><!--[endif]-->Were these losses complete dead-outs that occurred suddenly or where the losses over a protracted period of time?
- <!--[if !supportLists]--><!--[endif]-->Did the effect occur across all colonies at roughly the same time? If so, when specifically did the loss occur each year?
- <!--[if !supportLists]--><!--[endif]-->Leading up to the losses, did the bees/colonies appear to be thriving?
- <!--[if !supportLists]--><!--[endif]-->Are the affected colonies located in a rural or urban environment? At the time of the losses do you know what the bees may have been foraging on (*i.e.*, source(s) of pollen and nectar)?
- <!--[if !supportLists]--><!--[endif]-->At the time of the losses, do you know whether there was any agricultural activity in the vicinity of the colonies?
- <!--[if !supportLists]--><!--[endif]-->Do you suspect that the losses may have been associated with exposure to pesticides? If so, states have primacy in investigating pesticide-related losses. For Nebraska, the

state lead agency is the Nebraska Department of Agriculture (NDA) and their contact number for reporting incidents is: (402) 471-2351. Was the NDA notified and if so, did they conduct an investigation? If NDA conducted an investigation, are you willing to share the results of that investigation?

- <!--[if !supportLists]--><!--[endif]-->You indicated that various samples had been collected at the time of the loss. Do you intend to have these samples analyzed for pesticide residues, diseases, parasites? Please note that depending on the state, there may be restrictions on their ability to accept/analyze sample collected outside their normal process due to concerns regarding documented "chain of custody". However, there are laboratories (*e.g.*, USDA National Science Laboratory in Gastonia, NC) which offer a fee-for-service pesticide residue analysis. Pesticide residue analyses can be expensive though.
- <!--[if !supportLists]--><!--[endif]-->If you suspect that the losses may have been associated with exposure to pesticide(s), do you know whether any pesticides were being applied at the time of the loss? If so, which pesticide(s) and by what method of application? Did you notice whether other insects (*e.g.*, beetles, butterflies) also appeared to be affected? Did the affected bees exhibit any unusually behavior (*e.g.,* excessive grooming, loss of equilibrium, erratic movements)?
- <!--[if !supportLists]--><!--[endif]-->Have you been monitoring/treating for varroa mites? If so, what were the mite loads at the time of the losses? What products have you used to treat for mites?
- <!--[if !supportLists]--><!--[endif]-->Prior to the losses each year, have you been monitoring for disease(s)? If so, what diseases were identified?
- <!--[if !supportLists]--><!--[endif]-->Are you aware of any other beekeeping operations in the vicinity of you apiaries and if so, have they experienced losses as well? If so, do you know whether they reported the incident(s) to the NDA?

Thank you again for reporting the incidents, and I apologize for all of the questions; however, as indicated, the more detail that is available on an incident, the greater its utility as a line of evidence in assessing risk.

Beekill@epa.gov
Office of Pesticide Programs
Environmental Fate and Effects Division

From: Judy Wu-Smart <jwu-smart@unl.edu>
Sent: Thursday, November 12, 2020 11:40 AM
To: Beekill <Beekill@epa.gov>
Subject: Beekill in NE

To whom this concerns,

I'm formally submitting a report for bee kills in Mead, NE. I'm an assistant professor at the University of Nebraska-Lincoln and director of the UNL Bee Laboratory. We conduct research and education on honey bee management and pollinator health throughout the state. I have one apiary location in Mead, NE that has had consistent losses of honey bee colonies over the past four years and I have been encouraged by Dr. Tom Steeger (USEPA) to report these to this email.

This year (2020) we lost a total of 16 hives, 8 hives were lost in 2019, 12 hives in 2018, and 4 hives in 2017. We have collected samples of bees, comb, and food stores for losses that occurred in 2018 through 2020. I'm happy to provide more information and I look forward to hearing from you.

Best,

Judy Wu-Smart
Assistant Professor & Extension Specialist
University of Nebraska-Lincoln
Department of Entomology
Email: jwu-smart@unl.edu
Teleworking #: 925-305-7588

Sent from Mail for Windows 10