



Oregon

Kate Brown, Governor

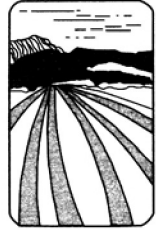
Department of Agriculture

635 Capitol Street NE
Salem, OR 97301-2532

Case Number: 200405

Case Name: Dean Innovations, Inc. / Estes, Lyles, Bao, Nason, et al

Case Closed



Overview

Investigator

Jennifer Marin

Case Reviewer

Michael Babbitt

Date Started 05/18/2020

Date Completed 09/16/2020

ROL Provided? Yes No

List Test(s) Requested
Aminocyclopyrachlor
Aminopyralid
Clopyralid
Picloram

Number of Samples Taken 23

Number of Samples Analyzed 23

Number of Applicators 0

Complaint? Yes No

Sample Type
 Air Veg
 Animal Other
 Soil
 Swab
 Water

Complaint Form Provided? Yes No

Type of Investigation NUF

PARC Yes No

Cease & Desist Yes No

Verified Compliance? Yes No

Date Reviewed 09/16/2020

Related Cases

Date Case Completed 09/21/2020

Sixty Days 07/17/2020

One Hundred Twenty Days 09/15/2020

| | |
|------------------|--------------------|
| Tracking Devices | Non-target species |
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| Nature | |
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Parties Involved

| <u>Parties Involved</u> | <u>Last / Business Name</u> | <u>First</u> | <u>License #</u> | <u>License Type</u> | <u>Expiration Date</u> | <u>Category</u> |
|-------------------------|---|--------------|------------------|------------------------------|------------------------|-----------------|
| | <u>Address</u> | <u>State</u> | <u>Zip</u> | <u>Phone</u> | <u>County</u> | |
| | <u>City</u> | | | <u>Phone 2</u> | | |
| | <u>Email</u> | | | | | |
| Retailer | Dean Innovations / Dean 6400 SE 101st Ave Portland nigel@deaninnovations.com | Nigel OR | 97266 | 503-281-1637 503-519-5918 | | |
| Interested party | Yamhill County 7246 NW Lilac Hill Road Yamhill | Holden OR | 97148 | 503-662-4131 | | |
| Interested party | Organix / Davis 120 Birch St, Suite #9 Walla Walla rdavis@organix.us | Russ WA | 99362 | 509-527-0526 | | |

May 18, 2020

The Oregon Department of Agriculture (ODA) Pesticides Program received a complaint through 211info from **Camille Estes** in Portland, OR. Estes indicated she purchased soil from **Dean Innovations** (a landscaping business) that she was told would not contain any pesticides or herbicides and is advertised as use for things like food gardens. Following use of the soil, she noticed that some of the vegetables are starting to look deformed. She said that she contacted the Oregon State University and spoke to a Weston Miller who advised her that it looked that the soil was likely contaminated with herbicide based on the deformities she is seeing in the vegetables. Lead Pesticide Investigator **Mike Odenthal** forwarded the information to me, Pesticide Investigator **Jenny Marin**, and asked me to follow up with Estes.

Shortly thereafter, ODA Pesticides Program received emails from **Kerry Lyles** and **Erica Lyman** in Portland, OR, with similar concerns about a product called White Lightning that they purchased from Dean Innovations. Both indicated their product was delivered on March 24, 2020. Odenthal forwarded those emails to me, as well.

I called Estes and inquired about the product she had purchased from Dean Innovations (DI). She said the product is called White Lightning (WL) and her product was delivered on March 28. She indicated some of her neighbors were noticing similar issues with the same product that purchased from DI around the same time. I said I would send Estes an email with the ODA Pesticide Complaint form and my contact information, which she could supply to her neighbors. I arranged to meet with Estes the following day around 10 am to collect a sample.

I called and spoke to Lyles. She indicated she was part of a garden group on Facebook (Portland Organic Gardeners Group) and after seeing different people posting photos of their plants in compost from DI, she noticed her plants were showing similar symptoms. I arranged to collect a sample from her the following day, as well. She inquired about the types of pesticides that would be tested for, and I explained our lead investigator was putting together a list of active ingredients.

I received a call from **Iris Nason**, who said she got my information from Estes. She had also purchased White Lightning from DI and was noticing several symptoms on plants in her garden. Her product was delivered on May 28, 2020. Nason was able to meet with me the following day, so I arranged to collect a sample from her property, as well.

I touched base with Odenthal, who indicated a few more similar complaints were coming through, however, we did not need to collect anymore samples than those already planned at this point.

I received a call from **Sandra Bao**, who got my information from Estes. She indicated she had purchased a different product from DI, called Fun Guy, a mushroom compost which was one of the ingredients in White Lightning. Bao was also experiencing plant symptoms and suspected it may be the Fun Guy ingredient that had been contaminated. Bao's compost was delivered on March 26, 2020. Considering this was a different product, I arranged to meet with her the following day to collect a sample.

Narrative

I called and left a message for DI. Shortly thereafter, I received a call from **Nigel Dean**, Owner. I briefly explained the nature of the complaints we were receiving and inquired about the White Lightning (WL) product. Dean explained WL was a compost mix they blended using different inputs. I explained I was going to be conducting sampling of some customers' purchased product, but was also interested in getting some product DI had on site. I arranged to meet with him the following day to collect some samples of product that was currently at their facility. Dean was curious about testing requirements or permissible levels of herbicides in these products. I said I was familiar with such processes in pesticide products, but would have to acquire that information for fertilizer products. I said I would ask some people at the office and be able to discuss it with him the following day.

Lyman did not leave a phone number in her email; I sent her an email explaining I had already arranged to collect 4 different samples to have analyzed for various herbicide active ingredients, and at this point, we did not need more samples to determine whether or not there is a contamination issue coming from Dean Innovations/their suppliers. I stated I would include her in the case report and keep her updated once sample results are received. I attached a pdf of labs in Oregon, should she wish to pursue sampling.

Odenthal forwarded complaints received from **Tessa Klaren, Irie Midori, Sean Brochin, Rachel Weinhausen, Amanda Soares**, and **Jessica Krepel**. Nason and Bao had also submitted a complaint through 211info following my conversations with them.

I called and spoke with Klaren. Klaren had purchased Fun Guy from DI, which was delivered on March 26. She indicated she had used it as a top dressing to various areas in her front yard and in annual vegetable beds. She first noticed symptoms three weeks after applying the top dressing in the elder tree; there were several twisting leaves and some discoloration. She also began noticing curling in her peas. I explained I had already arranged to collect various samples, including someone who had purchased Fun Guy, and at this point, we did not need more samples to determine whether or not there is a contamination issue coming from Dean Innovations/their suppliers. I stated I would include her in the case report and keep her updated once sample results are received. I discussed the Report of Loss (ROL), and sent her an email in which I included a copy of the form.

I called and spoke with Midori who stated she had purchased WL, which was delivered on May 5. She had not yet noticed any symptoms in her garden, however, saw some of the posts within an online gardening group; since she had purchased the same product others noticing symptoms had used, she was wanting to know if her load was also contaminated. I explained I had arranged to collect various samples, and at this point, we did not need more samples to determine whether or not there is a contamination issue coming from Dean Innovations/their suppliers. I stated I would include her in the case report and keep her updated once sample results are received. I said I would send her a list of labs in Oregon should she wish to pursue independent soil analysis.

Narrative

I called Brochin and left a voicemail. He called later in the day and left a voicemail identifying hours he would be available to talk due to his current work schedule.

I called and spoke with Weinhausen. Weinhausen explained she purchased WL from DI, which was delivered on April 19, 2020. The product was used in various garden beds and as a top dressing throughout the yard. She was noticing symptoms in strawberries, spinach, and had poor germination in carrots and parsnips. I explained ODA's current sampling plan and followed up with an email in which I included a copy of the ROL.

I called and spoke with Soares. Soares explained she received 2 separate loads of WL from DI; one load was delivered on March 17, 2020, and another load she picked up from DI on April 26, 2020. She said she still had some product remaining from both loads, if needed. She has since noticed her peas growing in a deformed fashion, with cupping and twisting. I followed up the conversation with an email in which I included a copy of the ROL.

Krepel's complaint did not include a phone number; I sent her an email explaining I had already arranged to collect 4 different samples to have analyzed for various herbicide active ingredients, and at this point, we did not need more samples to determine whether or not there is a contamination issue coming from Dean Innovations/their suppliers. I stated I would include her in the case report and keep her updated once sample results are received. I attached a pdf of labs in Oregon, should she wish to pursue sampling, as well as a copy of the ROL.

I discussed the situation with Pesticide Program Manager **Toby Primbs**. He recommended looping the ODA Fertilizer Program in with the situation, as they had more regulatory authority over such products. We talked with **Matt Haynes**, Fertilizer Program, who had worked with DI in the past to get WL registered. He explained the complexities of testing requirements for fertilizer products and their inputs. I got one of Haynes' business cards to pass on to Dean the following day. I obtained a copy of the WL label on file with ODA.

May 19, 2020

I arrived at Estes' property around 9:20 am. Estes came out and said she was able to meet with me early. I introduced myself and provided identification and a business card. Estes walked me to the back garden where there were various raised beds. She indicated one of them had just the White Lightning compost, while the others were a mix of older soil and the White Lightning. She stated the plants showing symptoms had been planted in the compost/soil mix on April 1st. I chose to collect the sample from the bed with just WL compost. I took photos of the tomato and pea plants showing symptoms. I provided her with an informational brochure about the National Pesticide Information Center (NPIC), and said I would follow up as soon as we received sample results. I asked about the gardening group and whether or not there was an email address that would reach all members of the group. She explained it was a Facebook group, but was willing to make a post on the group asking anyone who was interested in following the case/receiving updates to provide their email address. She said she would send the list to me. I thanked her for her help.

Narrative

I arrived at Nason's property around 10 am. I introduced myself, provided identification, a business card, NPIC brochure, and list of labs in Oregon. Nason walked me around her property, identifying different areas where WL had been used and plants that seemed to be impacted. The plants showing symptoms included tomatoes, peas, beans, zinnia, squash, and potatoes. Nason had begun her own bioassay test with various soils, including the WL. I asked if she had any product that had not been incorporated with soil/other products. She said yes and walked me to the front of her property where she still had containers of just WL. I collected a sample from the buckets and said ODA would be in touch as soon as we received results.

I arrived at Lyles' property a bit after 11 am. I introduced myself, provided identification, a business card, and NPIC brochure. There were a couple raised beds and various potted plants and plants exhibiting symptoms in each. Lyles identified a bed that was solely filled with WL and I collected a sample. I indicated ODA would be in touch as soon as we received sample results.

I arrived at Bao's property around 11:30 am. I introduced myself, provided identification, a business card, and NPIC brochure. Bao walked me around to the various locations where she used the Fun Guy product. I took photos of symptomatic vegetation. I asked about any Fun Guy product she may have that had not been incorporated in other soil. She said she put straight Fun Guy in some service containers for her neighbor to use, however, they had not yet been used. She walked me to the containers and I collected a sample. I said ODA would be in touch as soon as we received sample results.

I arrived at DI around 12:20 pm. I introduced myself to Dean, and provided identification and a business card. Dean began walking me around the facility to areas I had indicated I would want to sample. He first brought me to the bay on the facility housing the Fun Guy compost. I collected a sample. As I was collecting my sample, I noticed Dean began to scoop some product into a bag. He said he was going to send samples off, as well. I mentioned I could have taken a split sample, however, we just continued sampling individually. He next moved to a nearby bay that had a product called Planet Earth in it. He said this was another ingredient in WL. I collected a sample. We then moved to the WL presently on site, and collected a sample. Finally, we moved to another ingredient in WL, Stinky Bull. Dean indicated the pile of Stinky Bull contained product from a couple different vendors. I asked which vendor would have supplied the product in the batches of compost sold to customers in March/April, and he said Organix. He located a spot within the pile that was likely from Organix; it was toward the top of one end of the pile, so he used a shovel to bring some down.

Narrative

I asked about suppliers of the products sampled. Dean said Fun Guy is purchased from Yamhill County Mushrooms, Planet Earth is purchased from Grimms, and Stinky Bull is purchased from Organix. Dean said WL is a mix of those products plus sand, pumice, and top soil. I said I was not sure which active ingredients ODA was going to look for, but said I would follow up with him when I knew so he could pass that information on to whichever lab he used. I said some complainants have said that when they called DI, they were told DI had some idea of a contaminated source and were looking into that. I asked about that and he said he was not aware of that; he said he would have to check in with office staff to see what kind of messaging they were giving customers. I explained I had discussed the situation with Primbs and Haynes and recommended he reach out to Haynes for more specific testing requirements. I explained if a residue was detected, the Pesticide Program's involvement would be to follow up with all suppliers and try to work back to the initial use of a pesticides and determine whether or not there was some sort of violation with the use.

Sampling Plan

To prove or disprove presence of a contaminant within the purchased compost, I decided to take soil samples from various DI customers noticing planODA responded to this complaint and analyzed environmental samples, and found no violations of ORS Chapter 634.

symptoms. I aimed my collection to areas indicated as being primarily the purchased product, rather than having already been incorporated into other soils. I also collected samples of product presently available at DI, focusing on WL and the components in the product. All soil samples were collected wearing alcohol-rinsed, disposable nitrile gloves. Each soil sample was scooped into a mylar bag with a new, disposable plastic trowel. Sample bags were taped, identified, and sealed. Samples were placed on ice and locked in state vehicle until sampling completion and delivery to the lab.

NUF200405-1 - White Lightning; Camille Estes

NUF200405-2 - White Lightning; Iris Nason

NUF200405-3 - White Lightning; Kerry Lyles

NUF200405-4 - Fun Guy; Sandra Bao

NUF200405-5 - Fun Guy; Dean Innovations

NUF200405-6 - Planet Earth; Dean Innovations

NUF200405-7 - White Lightning; Dean Innovations

NUF200405-8 - Stinky Bull; Dean Innovations

I drove the samples to the ODA lab. Odenthal sent an email to the lab requesting the samples be run for the following active ingredients: aminocyclopyrachlor, aminopyralid, clopyralid, and picloram.

Narrative

Odenthal forwarded additional complaints received from **Brittany Clarke, Danielle Signore, Brianna Tarnower, Lindsey Oldani, Wendy Meyers, Linnea Hoffman, Stefanie Greene, and Jill Hendrick.**

I received an email from ODA Citizen Advocate Liaison **Christina Higby** who was notified of the case and would be assisting with communication. She wondered if there was a leader within the gardening group she could send updates to that would reach the wider group.

May 20, 2020

I emailed Higby, indicating individuals were part of a Facebook group. I explained I had various emails for the complainants who have already contacted us, and Estes was working to collect more emails of individuals who wanted to be notified of updates. I said I would pass those addresses to Higby as soon as I got them.

Odenthal forwarded an additional complaint received from **Cassandra Haynes.**

I called and spoke with Clarke, who explained she had purchased WL from DI and received a delivery on April 30, 2020. She explained she only started using the soil about a week ago, and had not yet noticed symptoms on plants. However, she saw some posts on social media indicating there might be contamination. She explained her soil does have a lot of clumps in it and a pungent odor. I explained ODA had already collected enough samples at this point, and would send her a list of labs should she want to pursue testing independently. She was concerned about the safety of the produce that would be grown in the compost if there was in fact contamination. I recommended she contact NPIC with such health/residual toxicity questions. I said I would include their contact information in an email, as well. I explained she would be included in the case and would be updated once sample results were received, at which point she could contact NPIC and provide the name of any active ingredient found, and they could look into information about those specifically.

I called Signore and left a voicemail.

I called Tarnower who explained she had purchased WL from DI and received a delivery on April 5, 2020. She has since observed curling and twisting symptoms in various plants. I discussed the sampling that had already been conducted, explaining no additional samples were needed at this point. I said I would add her to the case and she would be updated when we received sample results.

Narrative

I called Oldani who explained she received two deliveries of WL from DI on 4/19/20 and 5/9/20. She said the deliveries looked vastly different; the soil received on 5/9/20 had clumps of manure and hay in it. Squash and cucumber grown in that soil is yellowing. Oldani said she planted the following in the 4/19/20 soil: cucumber, squash, tomato, peas; these crops presently look good. She stated she did not mix the compost with anything else prior to planting. I discussed the sampling that had already been conducted, explaining no additional samples were needed at this point. I said I would add her to the case and she would be updated when we received sample results. I followed up with an email in which I provided contact information for NPIC.

I called Meyers who stated she had purchased WL from DI and received a delivery on March 9, 2020. She said she had potted plants with the WL in a greenhouse, and those plants looked poor right away. The product was also used in beds; she mixed 1/3 WL with 1/3 perlite and 1/3 bagged potting soil. She had sent photos to OSU Extension, and they had indicated the symptoms looked like herbicide damage. Following initial symptoms, Meyers contacted ODA indicating she was concerned about phenoxy damage to her tomato plants, as she is surrounded by neighbors that use 2,4-D. Pesticide Investigator **Keawe Molifua** had been assigned the case and had already visited her property to collect samples (ODA Pesticide Case No 200396). Results had not yet been received. After hearing that others were experiencing similar issues with plants grown in WL, she thinks it might be an issue with the soil rather than drift. She said she had collected her own samples and sent them to Pacific Ag Labs for analysis. She indicated she has sold some of the plants grown in this soil and was wondering what she should do about that. I indicated it was up to her, but we would be able to provide a bit more guidance once we had more information from sampling. I discussed the sampling that had already been conducted, explaining no additional samples were needed at this point. I said I would add her to the case and she would be updated when we received sample results. I followed up with an email in which I provided contact information for NPIC.

I called Hoffman who explained she and her mother purchased soil from DI a total of 5 different times. (3/12, 3/18, 4/14, 4/15 & 4/29) They purchased both WL and Fun Guy. They have begun noticing leaf curling on peas and fava beans. She was concerned about the safety of the produce that would be grown in the compost if there was in fact contamination. I recommended she contact NPIC with such health/residual toxicity questions. I said I would include their contact information in an email, as well. I explained she would be included in the case and would be updated once sample results were received, at which point she could contact NPIC and provide the name of any active ingredient found, and they could look into information about those specifically.

I called Greene, however, it went to voicemail and the mailbox was full.

Narrative

I called Hendrick who said she purchased WL from DI which was delivered on April 18, 2020. While she had not yet noticed any extreme symptoms, she had become aware that the soil may be contaminated. I discussed the sampling that had already been conducted, explaining no additional samples were needed at this point. I said I would add her to the case and she would be updated when we received sample results. I followed up with an email in which I provided contact information for NPIC, as well as a list of labs in Oregon, should she wish to pursue sampling independently.

I called Haynes who said she purchased WL from DI and picked up the product on May 4, 2020. She has since noticed unusual growth in her tomato plants. She explained the soil had some clumps of hay and uncomposted manure. I discussed the sampling that had already been conducted, explaining no additional samples were needed at this point. I said I would add her to the case and she would be updated when we received sample results. I followed up with an email in which I provided contact information for NPIC.

I called Brochin who indicated he has used Fun Guy, as well as WL over half an acre. He has been receiving various deliveries of Fun Guy since November 2019, and WL in April 2020. Several of his plants were showing symptoms including leaf curling and death of new growth. I discussed the sampling that had already been conducted, explaining no additional samples were needed at this point. I said I would add him to the case and he would be updated when we received sample results. Since he had used the product over such a large area, he was interested in remediation methods. I indicated we would have a better idea of how that might be done once we knew more about if/what contaminant was in the soil.

I sent an email to Dean informing him of the active ingredients ODA intended to search for in the samples collected.

I received an email from Estes in which she included email addresses of various people who indicated they wanted to be updated on the case.

May 21, 2020

I forwarded the list of emails from Estes to Higby.

Odenthal forwarded an email received from **Sara James**. James indicated she purchased 3 yards of WL from DI, which was delivered on April 21, 2020. She attached some photos of symptomatic plants in her garden. There was no phone number. I noticed James' email was already on the list of individuals requesting an update.

I received an email from **Will Ennis**, Solid Waste Inspector with Portland Metro. He explained Metro regulates the acceptance of yard debris at Dean's, and wanting to chat about the present complaint involving DI composts.

Narrative

I received an email from Nason indicating she is seeing several more people share their photos of an array of plants showing herbicide toxicity. She wondered how to get the word out more and let people know what to look for. She inquired about a timeline for results and if tissue samples were needed. I responded explaining ODA is working on putting together a first update email for all those individuals who reported, plus some who responded to Estes' post indicating they wanted to be updated. I said that would be put on ODA's website and could be uploaded to the gardening group to reach more people. I recommended sharing NPIC's information on the group page and provided a list of active ingredients for which the lab was testing. I explained at this point, ODA was sticking with the soil samples to be able to confirm/refute the compost as the source of a contaminant. I said results may be available in 1-2 weeks.

I received an email from **Katee Foxx** in which she explained she recently purchased some tomato plants from a nursery that began showing symptoms (photos were included). Tomatoes showing symptoms were from the same grower.

May 22, 2020

I called and spoke briefly with Ennis, providing him an update on the investigation. He was interested in knowing the sample results, and I said I would inform him once we had the results.

I received an email from Estes with more email addresses; I forwarded them to Higby.

I emailed Foxx asking if she had followed up with the grower of the tomato plants to see where they purchased their compost. She responded saying she had not yet, but would; she indicated the grower was called Edible Horizons. She later followed up with me to say she had spoken with Edible Horizons and they did purchase WL from DI.

I received a call from **Kji McIntyre**, with Edible Horizons. He said he became aware of this situation when a customer contacted him. He explained he purchased 4 yards of WL in the last month, as well as a yard in late February/early March. He explained no symptoms had been noticed in the plants prior to delivering them to nurseries. I briefly explained what ODA had done up to this point and said we were still waiting on sample results. He provided an email address and I said I would add them to the list of individuals being updated.

I received a call from **Shannon Kane**, with Wild Grown Farm. She explained she purchased WL from DI on 3/18/20 and used it to grow produce that they sold, as well as used it as a top dress for plant starts they also sold. I briefly explained what ODA had done up to this point and said we were still waiting on sample results. I discussed sampling options independently, and she said she had seen the list of labs, and was considering doing so. She indicated she had already supplied her email address to be updated on the case.

Narrative

I received a call from Signore who said she purchased WL from DI and received a delivery on March 30, 2020. She used product in pots alone and incorporated into soil and is noticing symptoms in several plants. She explained she has a business selling produce grown in her garden to restaurants. I discussed the sampling that had already been conducted, explaining no additional samples were needed at this point. She said she still had some unincorporated WL available if needed eventually. I said I would add her to the case and she would be updated when we received sample results. I followed up with an email in which I attached a copy of the ROL, list of labs in Oregon, and NPIC contact information.

After attempting to try Greene again, and not being able to leave a voicemail, I sent an email to what I presumed to be her address within the list sent by Estes. I discussed the sampling that had already been conducted. I said I would add her to the case and she would be updated when we received sample results. I also provided contact information for NPIC.

Higby sent out an informational letter to all parties for whom we had an email address. The document was also put on the ODA website.

May 27, 2020

I received an email from Meyers who indicated she received her independent sample results. She followed up with a phone call in which she shared her results did reveal detection of clopyralid; there was no detection of any phenoxy herbicide active ingredients. I thanked her for the information, indicating ODA would be waiting to get our sample results before making a plan of action going forward.

Higby received a voicemail from Nason with some questions about the testing and whether or not we would test for additional active ingredients (chlorinated herbicide panel). I followed up with Nason explaining the reason ODA selected the four active ingredients to analyze for is because they are the actives that have a tendency to remain in composted soils through the composting process and still be active; other active ingredients do not usually survive the composting process and remain at a level that could produce plant injury symptoms. She indicated many people have concerns about safety of eating produce that might have been grown in a soil contaminated with one of those actives. I discussed tolerances set by the Environmental Protection Agency (EPA), and sent her a link to obtain tolerance information for clopyralid.

May 29, 2020

I received an email from Ennis inquiring about sample results. I responded indicating we had not yet received them.

June 3, 2020

Narrative

Anticipating sample results would be available soon, ODA Pesticide Program decided to arrange a conference call with other agencies that might be interested in the case or be able to provide support/information to concerned citizens about soil removal and herbicide risks. We brainstormed individuals to include from the following agencies: ODA, Oregon Department of Environmental Quality (DEQ), Metro, NPIC, and Oregon Health Authority (OHA).

June 4, 2020

Higby sent a doodle poll to all agencies on behalf of the Pesticide Analytical and Response Center (PARC) to determine the most convenient time to have a conference call. OHA opted not to participate at this point. It was decided the call would be the following day, June 5, 2020, at 1:00 pm.

I received the sample results from the lab via email:

| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|--------------------------|---------------------|--------------|------------|
| NUF200405-1 0.010 ppm | Aminocyclopyrachlor | <0.010 ppm | |
| 0.010 ppm | Aminopyralid | <0.010 ppm | |
| 0.010 ppm | Clopyralid | <0.010 ppm | |
| 0.010 ppm | Picloram | <0.010 ppm | |
| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
| NUF200405-2 0.010 ppm | Aminocyclopyrachlor | <0.010 ppm | |
| 0.010 ppm | Aminopyralid | <0.010 ppm | |
| | Clopyralid | 0.016 ppm | 0.010 ppm |
| 0.010 ppm | Picloram | <0.010 ppm | |
| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
| NUF200405-3 0.010 ppm | Aminocyclopyrachlor | <0.010 ppm | |
| 0.010 ppm | Aminopyralid | <0.010 ppm | |

Narrative

0.010 ppm Clopyralid <0.010 ppm

0.010 ppm Picloram <0.010 ppm

Sample # **A.I.** **Level**
MRL

NUF200405-4 Aminocyclopyrachlor <0.010 ppm
0.010 ppm

0.010 ppm Aminopyralid <0.010 ppm

0.010 ppm Clopyralid 0.14 ppm

0.010 ppm Picloram <0.010 ppm

Sample # **A.I.** **Level**
MRL

NUF200405-5 Aminocyclopyrachlor <0.010 ppm
0.010 ppm

0.010 ppm Aminopyralid <0.010 ppm

0.010 ppm Clopyralid 0.081 ppm 0.010 ppm

0.010 ppm Picloram <0.010 ppm

Sample # **A.I.** **Level**
MRL

NUF200405-6 Aminocyclopyrachlor <0.010 ppm
0.010 ppm

0.010 ppm Aminopyralid <0.010 ppm

0.010 ppm Clopyralid <0.010 ppm

0.010 ppm Picloram <0.010 ppm

Sample # **A.I.** **Level**
MRL

NUF200405-7 Aminocyclopyrachlor <0.030 ppm
0.030 ppm

| Narrative | | |
|---|---------------------|---------------------|
| 0.010 ppm | Aminopyralid | <0.010 ppm |
| 0.010 ppm | Clopyralid | <0.010 ppm |
| 0.010 ppm | Picloram | <0.010 ppm |
| <u>Sample #</u> <u>MRL</u> | <u>A.I.</u> | <u>Level</u> |
| NUF200405-8 0.010 ppm | Aminocyclopyrachlor | <0.010 ppm |
| 0.010 ppm | Aminopyralid | <0.010 ppm |
| | Clopyralid | 0.027 ppm 0.010 ppm |
| 0.010 ppm | Picloram | <0.010 ppm |

June 5, 2020

ODA's Pesticide and Fertilizer Programs, DEQ, NPIC, and Portland Metro conducted a conference call to discuss the sample results and information to include in a second update to those interested. ODA Pesticide Program determined we would follow up the soil samples with some vegetation samples. I was encouraged to gather a couple from some different individuals who had plants showing symptoms.

June 8, 2020

Higby sent an email to all individuals on the update list, including the sample results, an explanation of the results, and information about Clopyralid and disposal resources. The information was also put on the ODA website.

June 9, 2020

I contacted **Lindsay Freedman**, Weinhausen, Signore, and Klasen, indicating ODA wanted to collect some samples of symptomatic vegetation. All individuals agreed to allow ODA to sample their vegetation and we arranged to meet the following day.

June 10, 2020

Narrative

I arrived at Freedman's property around 9 am. Freedman showed me around her garden. She had several small tomato and amaranth plants growing in little pots of just WL. WL had been delivered on March 20, 2020. Plants were exhibiting twisting and curling symptoms. I collected the vegetation of both for sample 200405-9. Freedman showed me two beds in her yard; She explained one bed contained the following mix: 1/3 clay, 1/3 WL, 1/3 Stinky Bull (also from DI). There were peas and potatoes in that bed. I collected both for sample 200405-10. The other bed contained just WL. Freedman stated she had added mycorrhizae to that bed. The bed had lettuce and pepper plants which I collected for sample 200405-11.

I arrived at Weinhausen's property just before 10 am. On June 1, 2020, Weinhausen had sent photos of abnormal blueberry vegetation growth, which ODA was interested in sampling. She showed me those blueberry plants, which she explained had been recently transplanted. She had used WL in the transplanting process. She also showed me symptomatic vegetation on her apple tree. She said the tree had previously been very healthy, and after using the WL as a top dressing, she began noticing the symptoms. I collected symptomatic vegetation from the apple tree, as I was interested in seeing if residue would be detected in vegetation that received WL as a top dressing.

I arrived at Signore's property a bit after 10:30 am. A lot of her impacted vegetation had already been pulled, as she had to quickly replant in the interest of maintaining her business. She had maintained the pulled vegetation on a tarp, which was covered. I collected a composite of that vegetation which was a variety of different lettuces and broccoli.

I arrived at Klaren's property around 11:30 am. Klaren had used Fun Guy as a top dressing around an Elder tree and an apple tree, which began showing symptomatic vegetation after use. I collected symptomatic vegetation of both as part of a composite sample. She also used the Fun Guy in a bed with symptomatic potato vegetation. I collected this vegetation as part of the composite sample, as well.

Sampling Plan

All vegetation samples were collected wearing alcohol-rinsed, disposable nitrile gloves. Samples were placed in mylar bags. Sample bags were taped, identified, and sealed. Samples were placed on ice and locked in state vehicle until sampling completion and delivery to the lab.

NUF200405-9 - Freedman property; tomato/amaranth vegetation

NUF200405-10 - Freedman property; peas/potato vegetation

NUF200405-11 - Freedman property; lettuce/pepper vegetation

NUF200405-12 - Weinhausen property; apple vegetation

NUF200405-13 - Weinhausen property; blueberry vegetation

NUF200405-14 - Signore property; composite vegetation

NUF200405-15 - Klaren property; composite vegetation

Narrative

I drove the samples to the lab.

I called Organix and spoke to **Russ Davis**. I briefly explained the present case. Davis explained they receive manure from 3 sources; they call the product Power Plant ("Stinky Bull") which is supplied to ~30 customers, one of which is Dean Innovations. He indicated they had already been made aware of the situation and had proactively pulled samples of material from those 3 sources (3 dairies in Washington). Samples were going to be sent to Pacific Ag Labs and he said he would follow up with me when he got those results. Davis was not quite ready to supply the names of the dairies, in an effort to protect them at this point, however, he understood eventually I would need that information.

I called Yamhill County Mushrooms (YCM) and spoke to **Holden House** - Assistant Manager/Grower. He indicated they make a compost to grow their mushrooms in; they receive chicken manure and straw to make that compost. Once they grow and harvest the mushrooms, they sell that compost. Chicken manure is received from Wilcox Farms (Potent Grow is supplier); Straw is received from Eric Kuehne. They receive straw from Kuehne only once every summer. I inquired about the product that would be supplied presently to DI, asking whether the straw used in the product being sold now is straw from 2019; he indicated it would have been from 2018.

June 11, 2020

ODA, DEQ, Metro, and NPIC conducted a second coordination conference call to discuss the case.

June 16, 2020

I received a call from **Beau Ellis**, attorney representing Dean Innovations. He indicated he and his staff would be working to get ODA a list of suppliers/Bills of Lading/etc.

I received the sample results from the ODA lab via email:

| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|-----------------|-------------|---------------------|------------|
| NUF200405-9 | Clopyralid | 0.092 ppm 0.020 ppm | |

| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|-----------------|-------------|---------------------|------------|
| NUF200405-10 | Clopyralid | 0.060 ppm 0.010 ppm | |

| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|-----------------|-------------|---------------------|------------|
| NUF200405-11 | Clopyralid | 0.014 ppm 0.010 ppm | |

| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|---------------------------|-------------|--------------|------------|
| NUF200405-12 0.010 ppm | Clopyralid | <0.010 ppm | |

Narrative

| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|---------------------------|-------------|--------------|------------|
| NUF200405-13 0.010 ppm | Clopyralid | <0.010 ppm | |

| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|-----------------|-------------|---------------------|------------|
| NUF200405-14 | Clopyralid | 0.012 ppm 0.010 ppm | |

| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|---------------------------|-------------|--------------|------------|
| NUF200405-15 0.010 ppm | Clopyralid | <0.010 ppm | |

June 19, 2020

ODA shared a Frequently Asked Questions document to all individuals on the distribution list. The document was also uploaded to the ODA website.

June 22, 2020

I sent an email to Davis, inquiring about an update regarding the samples collected from the Power Plant suppliers. He said the staff at Pacific Ag Labs indicated it would be about 10 business days after the samples were received; samples were received on June 16.

I called Freedman and discussed the results for the samples collected from her property. I explained ODA was in the process of putting together an update that would go out to all parties on the update list, as well as our website, including the results and an explanation of the results.

I called and left a voicemail for Weinhausen.

I called and left a voicemail for Signore. She returned my call later and I discussed the results for the samples collected from her property. I explained ODA was in the process of putting together an update that would go out to all parties on the update list, as well as our website, including the results and an explanation of the results. She requested the results and I sent them via email.

I called and left a voicemail for Klaren. She returned my call later and I discussed the results for the samples collected from her property. I explained ODA was in the process of putting together an update that would go out to all parties on the update list, as well as our website, including the results and an explanation of the results.

June 23, 2020

I received an email from Ellis in which he included PDFs of DI suppliers for Stinky Bull and Fun Guy.

June 24, 2020

I sent an email thanking Ellis for the information.

I called Kuehne and briefly explained the present case. I said Yamhill County Mushrooms (YCM) indicated they got their straw from him. I asked if the straw he sells to YCM was his own or if he sold other growers' straw to them. He said he sold both his own and straw of other growers to YCM. I listed off the names of some products containing clopyralid and asked if he had used them on his cereal crops. he said he wasn't sure, stating he might have to control thistles, if such products were labeled for wheat.

I received a call from Ellis to ensure I was not having any problems reviewing the information supplied. He asked if there was anything else they could do. I indicated there was at least one person indicating they purchased Planet Earth and were noticing symptoms. In an effort to be as thorough as possible, I indicated I wanted to follow up with the suppliers of Planet Earth, too. I said when I was visiting with DI, Dean had said Grimms was the supplier of Planet Earth. I asked if they could verify that. I received an email from Ellis shortly thereafter in which he attached a report identifying the sources of Planet Earth in 2020. All deliveries, with the exception of one, were from Grimms Fuel Co. One delivery was from McFarlanes Bark Inc, however, Ellis stated he was told that load was not re-sold to consumers due to not meeting quality specifications of Dean Innovations.

June 25, 2020

ODA, DEQ, Metro, and NPIC and conducted a third coordination conference call to discuss the case.

June 26, 2020

ODA issued a Pesticide Advisory to all licensed individuals informing of the present case and reminding applicators and growers of the restrictions around clopyralid use. The advisory was also published on the ODA website.

June 29, 2020

Following review of the Stinky Bull and Fun Guy supplier documents from DI, I began to follow up with all suppliers. I called Great Western Supply (GWS) and spoke with **Ayra** in the office. I briefly explained the current case and inquired about where GWS received their mushroom compost which was in turn sold to DI. She said they get it from Ostrom Mushroom Farm out of Lacey, WA. She thought Ostrom had since shut down that location and moved to eastern WA. She indicated they still had product from Ostrom that they were selling.

Narrative

I called Lane Forest Products (LFP) and spoke with **Oren Posner**, Vice President. I briefly explained the current case and inquired about where LFP received their manure which was in turn sold to DI. He said he would have to check, but he believed only 7 sales had been made to DI this year and the manure was delivered straight from the dairy. I said DI had supplied 7 invoices from LFP, some of which indicated product was shipped directly from Hazenberg Dairy by way of JNB Transport. I asked if he could confirm if all deliveries were transported by JNB directly from the dairy. He asked me to send the invoices of LFP, and the invoice numbers for JNB. After reviewing the information, Posner responded that the loads in all LFP invoices corresponded to the loads hauled by JNB from Hazenberg Dairy.

June 30, 2020

Toby Primbs, Russ Davis, **Chery Sullivan** (WSDA Dairy Nutrient Management Program Manager) and myself had a conference call to discuss the results for samples collected by Organix of the 3 suppliers of "Power Plant" (Stinky Bull). One of the three samples yielded a result detecting clopyralid at a level of 0.027 mg/kg. It was explained that Organix produces 125,000 lbs of compost annually with varying blends for different uses. Flushed dairy compost is primarily sold to clients for landscape use (Power Plant customers). Corral/unflushed dairy compost is sold to agricultural growers for their fields. This year, the demand for landscape compost was so high due to the pandemic; around April, when Organix received orders and were low on Power Plant, they reached out to all clients indicating they could offer an interim product, which is a blend of flushed/unflushed dairy compost. Otherwise, it would be a couple weeks until Power Plant product was available. Davis explained nearly all clients requested the interim product. Organix ended up delivering 3 loads of this interim product to DI. The product had manure from the dairy whose sample resulted in a detection of clopyralid. Primbs and I indicated we would want to follow up with that dairy to get information about their feed/bedding suppliers. Sullivan said she would follow up with that dairy to give them a heads up and then pass their contact information on to me.

July 1, 2020

Following receipt of a concern over compost purchased at Greenlands and Bottens, Odenthal requested I reach out to those retailers.

I called Recology Organics (Greenlands) and briefly explained the current case to Operations Manager **Nick Olheiser**. I indicated we received notification from one individual who said they were experiencing plant symptoms after purchasing Greenlands' "Premium Compost" and inquired about where they get their inputs for the compost. Nick said the compost is all mixed on site. It is a mix of type 1 compost (yard debris) and type 3 compost (residential food waste). He said all input comes from residents of McMinnville and other nearby cities. They have a 110 day compost process, after which the product is screened and undergoes various tests. One test is a cucumber bioassay. After following up with Odenthal and deciding ODA should sample from Greenlands, I called Nick and informed him Pesticide Investigator Keawe Molifua would be following up with him to arrange a time to collect a sample.

Narrative

I called Bottens Equipment & Event Rental (Bottens) and briefly explained the current case to Assistant Manager **Daniel Zuniga**. I indicated we received notification from one individual who said they were experiencing plant symptoms after purchasing mushroom compost from Bottens and inquired about where they get their mushroom compost. Zuniga said the mushroom compost comes from Yamhill County Mushrooms. After following up with Odenthal and deciding ODA should sample from Bottens, I called Zuniga and informed him Molifua would be following up with him to arrange a time to collect a sample.

I received an email from Sullivan indicating she'd contacted Liberty Dairy, from which the manure sample testing for clopyralid had come. She provided me contact information for a gentleman named **Henry Bosma** and requested I hold off on contacting him a couple days as he was traveling.

July 2, 2020

Molifua collected a sample from Greenlands and Bottens, and delivered them to the ODA lab.

200405-16 - Mushroom compost at Bottens

200405-17 - Premium compost at Greenlands

July 7, 2020

I called Weinhausen and discussed the sample results with her.

I sent an email to Ellis inquiring about the use of top soil in the WL mix, and where DI gets the top soil.

July 8, 2020

I called YCM and arranged to meet with them on Wednesday, July 15, 2020, at 9 am. Pesticide Investigator Keawe Molifua planned to join me, as he had collected various samples of compost from customers of YCM.

July 9, 2020

I called Hazenberg Dairy and left a voicemail.

I called Ostrom Mushroom Farm and left a voicemail.

I called and left a voicemail for **Tom Hoffmann**, WSDA Regional Pesticide Manager for the Walla Walla area. I explained my interest in getting information from three WA dairies that supply manure to Organix. I indicated it might be more appropriate to have WSDA staff reach out to the Washington dairies.

ODA, DEQ, Metro and OHA conducted a 4th coordination conference call to discuss the case.

July 10, 2020

Narrative

Bob Barrows with DEQ reached out to ODA indicating he was interested in joining Molifua and myself on the site visit to YCM. He indicated he has a 15-year relationship with YCM as they are a DEQ permitted facility, and figured he may be able to provide some perspective on the facility. I called Barrows and provided information about when Molifua and I planned to visit YCM. He planned to make his schedule work so he could join.

I received a call from **Brandon Hazenberg**, with Hazenberg Dairy (HD). I briefly explained the present case and my interest in getting more information about the Hazenberg Dairy operation, as they were a supplier of manure to LFP, which in turn sold their manure to DI. Hazenberg informed me HD had ended relations with LFP over this issue; HD had allegedly sold manure to LFP with the understanding LFP was going to use the product around their facility. Hazenberg explained LFP rerouted the manure directly from the dairy to DI. Hazenberg said the dairy had made an effort to avoid sales to composters/compost vendors for this very reason. He stated all hay for his cattle comes from an alfalfa grower in eastern Oregon. He said he would follow up with the grower about clopyralid use. He did not think they used any products containing clopyralid around the dairy, but indicated he would follow up with their agronomist who makes all their recommendations. Hazenberg said they typically flail for weeds. He also explained they recycle a lot of their waste on their own facility. They make their own compost and each employee has their own garden space at the dairy. He indicated he has been using compost with the manure in his garden; he had not noticed any symptoms in his garden, nor had he heard of any employees making such observations.

Hazenberg called me back shortly after the first conversation; he had followed up with the alfalfa grower who had said he does not use clopyralid. I asked for the grower's name and Hazenberg said he did not want to provide the name if it was not necessary at this time. He also spoke to his agronomist who stated he has never recommended the use of clopyralid on their facility. I thanked Hazenberg for his help.

ODA received an email from Chery Sullivan, WSDA, touching base and asking if there was any way WSDA staff could provide assistance with the case. I responded indicating I had reached out to Hoffmann to see if WSDA staff could get information about the Washington dairies. I asked if that was a good plan or if her staff in the Dairy Program would be able to assist. Tim Schultz, WSDA Pesticide Compliance Program Manager, indicated Hoffmann and his team were quite busy. Sullivan indicated she would work with WSDA staff to get the information.

July 11, 2020

ODA received an email from Tricia Hall, with Puddin Foot Farm, in which she attached analysis results from an independent sample she had run on Planet Earth purchased from DI. Lab results (Anatek Labs, Inc.) indicated the detection of fluroxypyr.

July 13, 2020

I sent an email to the lab requesting samples 200405-5 through 200405-8 be analyzed for fluroxypyr.

Narrative

Higby sent a case update to the distribution list, informing of additional sample results and resources.

July 15, 2020

Barrows, Molifua, and myself arrived at YCM around 9 am. We introduced ourselves to Holden House. He provided a list of ingredients used in the mix to grow the mushrooms, which is then sold as a compost after harvest. The list included the vendors from which the ingredients are purchased. I inquired about the use of horse manure; House said he had been there for several years and in that time, horse manure had not been used. We explained we wanted to sample the mushroom compost presently available, as well as the various ingredients. House walked us to the compost pile. Prior to sampling, I explained split sampling and asked House if he was interested in having a split sample taken; he indicated he would take a split for the compost sample. As I was sampling the mushroom compost, another pile of material was observed nearby. House explained that was the soil mix prepared and ready for use to grow mushrooms (pre-mushroom compost). We decided to collect a sample from that pile, as well. House explained they had a 22-day compost cycle. The straw that went into the compost had to be at least 6 months old. Once the 22-day compost cycle was done, the compost was pasteurized. Mushrooms would then be planted and picked 5 weeks later. The spent compost would be heated to 160 degrees, and ultimately ready for sale. Following the compost samples, samples of straw, chicken manure, alfalfa seed, and canola meal were collected.

Sampling Plan

All samples were collected wearing alcohol-rinsed, disposable nitrile gloves. Samples were placed in mylar bags. Compost, manure, alfalfa seed and canola meal samples were each collected with a new, disposable trowel. The split sample was collected in a brown paper bag; with a new pair of gloves, the sample was split by alternating scoops of the compost into two mylar bags. Sample bags were taped, identified, and sealed. Samples were placed on ice and locked in state vehicle until sampling completion and delivery to the lab.

NUF200405-18b - YCM; post-mushroom compost

NUF200405-19 - YCM; 2019 straw

NUF200405-20 - YCM; chicken manure

NUF200405-21 - YCM; alfalfa seed

NUF200405-22 - YCM; canola meal

NUF200405-23 - YCM; pre-mushroom compost

We thanked House for his help and said we would follow up when sample results were received. Molifua drove the samples to the ODA lab.

I spoke with Ellis about the top soil question. He indicated there is not an easy way to identify where the top soil is; it is generally residential sod collected from the Portland area.

Narrative

We received the following sample results from the lab via email:

| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|---------------------------|---------------------|--------------|------------|
| NUF200405-16 0.020 ppm | Aminocyclopyrachlor | <0.020 ppm | |
| 0.010 ppm | Aminopyralid | <0.010 ppm | |
| | Clopyralid | 0.046 ppm | 0.010 ppm |
| 0.010 ppm | Picloram | <0.010 ppm | |

| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|---------------------------|---------------------|--------------|------------|
| NUF200405-17 0.010 ppm | Aminocyclopyrachlor | <0.010 ppm | |
| 0.010 ppm | Aminopyralid | <0.010 ppm | |
| 0.010 ppm | Clopyralid | <0.010 ppm | |
| 0.020 ppm | Picloram | <0.020 ppm | |

July 17, 2020

I received appended sample results for 200405-5 through 200405-8, including analysis for fluroxypyr. All four samples came back ND at the MRL 0.010 ppm.

July 19, 2020

I followed up with Odenthal and Primbs to discuss potential sampling of the Ostrom Mushroom Farm compost available for sale through GWS. We arranged a call with Tim Schultz, WSDA Pesticide Management Division Program Manager, for the following day to see if WSDA staff would be available to collect a sample from the Olympia, WA, facility.

July 20, 2020

Primbs, Odenthal and myself spoke with Schultz. He indicated it should not be a problem to have one of his staff collect a sample from GWS.

July 23, 2020

ODA, DEQ, Metro, and NPIC conducted a 5th coordination conference call to discuss the case.

July 24, 2020

Narrative

Daleena Blair, WSDA, collected a sample of Ostrom mushroom compost at GWS (200405-24).

July 29, 2020

I received a call from Ellis indicating conversation with Dean had brought up the Springwater Corridor which runs behind Dean Innovations; Dean had allegedly noticed the corridor being maintained and wondered if herbicides had been used there. I said I would look into it.

I called and left a voicemail for **James Turner**, Multnomah County Road Operations Manager, to inquire about whether or not the county maintains the Springwater Corridor.

August 5, 2020

I received the following sample results from the lab via email:

| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|----------------------------|---------------------|--------------|------------|
| NUF200405-18b 0.010 ppm | Aminocyclopyrachlor | <0.010 ppm | |
| 0.010 ppm | Aminopyralid | <0.010 ppm | |
| 0.010 ppm | Clopyralid | <0.010 ppm | |
| 0.040 ppm | Fluroxypyr | <0.040 ppm | |
| 0.010 ppm | 2,4-D | <0.010 ppm | |
| 0.020 ppm | Picloram | <0.020 ppm | |

| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|---------------------------|---------------------|--------------|------------|
| NUF200405-19 0.020 ppm | Aminocyclopyrachlor | <0.020 ppm | |
| 0.010 ppm | Aminopyralid | <0.010 ppm | |
| 0.040 ppm | Clopyralid | 0.024 ppm | 0.020 ppm |
| 0.040 ppm | Fluroxypyr | <0.040 ppm | |
| 0.020 ppm | 2,4-D | <0.020 ppm | |

Narrative

0.020 ppm Picloram <0.020 ppm

| | | | |
|------------------------|--------------------|---------------------|-------------------|
| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|------------------------|--------------------|---------------------|-------------------|

NUF200405-20 Aminocyclopyrachlor <0.040 ppm
0.040 ppm

0.010 ppm Aminopyralid <0.010 ppm

0.020 ppm Clopyralid <0.020 ppm

0.040 ppm Fluroxypyr <0.040 ppm

0.010 ppm 2,4-D <0.010 ppm

0.010 ppm Picloram <0.010 ppm

| | | | |
|------------------------|--------------------|---------------------|-------------------|
| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|------------------------|--------------------|---------------------|-------------------|

NUF200405-21 Aminopyralid <0.010 ppm
0.010 ppm

0.010 ppm Clopyralid <0.010 ppm

0.040 ppm Fluroxypyr <0.040 ppm

0.010 ppm 2,4-D 0.051 ppm 0.010 ppm

0.010 ppm Picloram <0.010 ppm

| | | | |
|------------------------|--------------------|---------------------|-------------------|
| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|------------------------|--------------------|---------------------|-------------------|

NUF200405-22 Aminopyralid <0.010 ppm
0.010 ppm

0.040 ppm Clopyralid 0.027 ppm 0.020 ppm

0.040 ppm Fluroxypyr <0.040 ppm

0.010 ppm 2,4-D 0.021 ppm 0.010 ppm

0.010 ppm Picloram <0.010 ppm

Narrative

| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|---------------------------|---------------------|--------------|------------|
| NUF200405-23 0.010 ppm | Aminocyclopyrachlor | <0.010 ppm | |
| 0.010 ppm | Aminopyralid | <0.010 ppm | |
| | Clopyralid | 0.030 ppm | 0.010 ppm |
| 0.040 ppm | Fluroxypyr | <0.040 ppm | |
| 0.010 ppm | 2,4-D | <0.010 ppm | |
| 0.010 ppm | Picloram | <0.010 ppm | |

| <u>Sample #</u> | <u>A.I.</u> | <u>Level</u> | <u>MRL</u> |
|---------------------------|---------------------|--------------|------------|
| NUF200405-24 0.010 ppm | Aminocyclopyrachlor | <0.010 ppm | |
| 0.010 ppm | Aminopyralid | <0.010 ppm | |
| | Clopyralid | 0.015 ppm | 0.010 ppm |
| 0.040 ppm | Fluroxypyr | <0.040 ppm | |
| 0.010 ppm | 2,4-D | <0.010 ppm | |
| 0.050 ppm | Picloram | <0.050 ppm | |

I sent an email to **Hila Ritter**, Portland Metro, asking if she knew who at Metro I might contact to inquire about Metro's involvement, if any, in maintaining the Springwater Corridor. She responded indicating the City of Portland owned the stretch of the corridor near DI and figured they might manage it, as well.

August 6, 2020

I called and left a voicemail for **Mitch Bixby** with the City of Portland Environmental Services division, inquiring about the maintenance of the Springwater Corridor.

ODA, DEQ, and Metro conducted a 6th coordination conference call to discuss the case.

I called and spoke with **Neil Lanning**, WSDA, and we agreed to allow WSDA follow up with Great Western Supply; he indicated he would give them a call, provide them the analytical results for the sample of mushroom compost collected from their facility, and encourage them to not sell it to home gardeners.

August 7, 2020

I called and left a voicemail for **Nichole Linehan**, City of Portland Parks and Recreation IPM Coordinator, inquiring about the maintenance of the Springwater Corridor.

August 10, 2020

Barrows and I arranged to call YCM to discuss the sample results with Holden. Holden was unavailable so I left a message. He called back later; I briefly explained the sample results and sent a copy to him via email. I explained Barrows and I wanted to spend a few minutes discussing the results and steps going forward with compost at their facility. We arranged to have a call the following morning and House indicated he would try to have Bob Darm, owner, present for the call, as well.

August 11, 2020

Barrows and I called YCM and spoke with House and Darm. They explained they had sent their split sample to Pacific Agricultural Laboratory which was returned with no detection for clopyralid at the limit of quantitation of 0.0067 mg/kg. The split run by ODA had also been a ND at the minimum reporting limit of 0.010 ppm. YCM expressed their confusion over why the post mushroom compost would have come back with ND while the pre-mushroom compost had a detection. I explained it was tricky when sampling compost; the material is not homogenous throughout, and the sampled area may have been a pocket with little to no residue. I also explained the low bioactivity of clopyralid, indicating it might be present in that compost at levels below our lab's detection limit. Based on the results of YCM compost at various vendors in and around Portland, along with the various detections of samples collected at the YCM facility, we encouraged them to take caution as they proceeded with the compost they had on site. Darm and House understood and were receptive to ideas going forward to prevent similar issues. We discussed bioassays, and YCM indicated they might move forward with creating a greenhouse to conduct bioassays with different loads of compost prior to offering for sale. Barrows and I encouraged them to reach out to our programs if they ever had any questions or concerns going forward.

August 12, 2020

I spoke with Linehan who indicated the Springwater Corridor trail was owned by the City of Portland Parks and Recreation. I explained the area of the trail I was interested in; Linehan said she could confirm clopyralid is not an active ingredient used by Parks, she said she would follow up with the team to see if any applications had been conducted recently to that stretch of the trail.

I received an email from Linehan shortly after in which she stated "I can confirm that Parks has not conducted any pesticide application work near Dean Innovations on the Springwater Corridor Trail in the last years." [sic]

August 19, 2020

Narrative

Higby sent an update to the distribution list discussing the remaining sample results. It was explained that ODA's Pesticide Program would be working with the compost suppliers to try and identify

the source of the contamination, indicating it may be difficult due the complexity of the supply chain channels. It was explained that ODA, DEQ and Portland Metro have been working on outreach and education efforts to pesticide applicators and operators, CAFO operators, and composters to help prevent future similar incidents.

August 20, 2020

ODA, DEQ, and Metro conducted a 7th coordination conference call to discuss the case. As all sampling results were received, discussed, and the case was winding down, it was determined this would be the final conference call.

License Review

No specific application(s) identified. Clopyralid products are general use herbicides; license would not be required to make an application of the product to one's own property.

Record Review

No specific application(s) identified. No application records reviewed.

Label Review

No specific application(s) identified.

Applicable statements from Stinger label:

Residues in Plants or Manure: Do not use plant residues, including hay or straw from treated areas, or manure or bedding straw from animals that have grazed or consumed forage from treated areas, for composting or mulching where susceptible plants may be grown the following season. Do not spread manure from animals that have grazed or consumed forage or hay from treated areas on land used for growing susceptible broadleaf plants or apply such materials to land used for growing broadleaf crops, ornamentals, orchards, or other susceptible desirable plants. Plant materials or manure may contain enough clopyralid to cause injury to susceptible plant species. To promote herbicidal decomposition, plant residues should be evenly incorporated or burned. Breakdown of clopyralid in crop residues or manure is more rapid under warm, moist soil conditions and may be enhanced by supplemental irrigation.

Do not transfer livestock from treated grazing areas (or feeding of treated hay) to sensitive broadleaf crop areas without first allowing 7 days of grazing on an untreated pasture (or feeding of treated hay). If livestock are transferred within less than 7 days of grazing untreated pasture or eating untreated hay, urine and manure may contain enough clopyralid to cause injury to sensitive broadleaf plants.

Applicable law:

603-057-0378

Limitations on Pesticide Products Containing Clopyralid

(1) Any application or use of a pesticide product known to contain the active ingredient clopyralid to a location other than an agricultural, forest, right-of way, golf course or cemetery site is prohibited.

(2) For the application or use of a pesticide product containing clopyralid on a site allowed under (1) above, all applicable label instructions must be followed. Providing grass clippings or other materials from a treated site for use in compost is prohibited.

(3) Pesticide products known to contain the active ingredient clopyralid and having product labeling which authorizes application or use on an agricultural, forest, right-of way, golf course or cemetery site, or on any other site, may be registered and distributed during 2003. For 2004 and subsequent years, a pesticide product known to contain the active ingredient clopyralid must satisfy one of the following requirements in order to be registered:

(a) The label must specify that the product may only be used on sites allowed by (1) above; or

(b) The label must clearly and prominently display the following statement: "Use of this product in Oregon is limited to the sites stated on this label which are agricultural, forest, right-of-way, golf course or cemetery sites."

(4) Failure to comply with sections (1), (2), or (3) above may result in one or more of the following actions:

(a) Revocation, suspension or refusal to issue or renew the license or certification of an applicant, licensee or certificate holder in accordance with ORS 634.322(4);

(b) Imposition of a civil penalty, in accordance with ORS 634.900;

(c) Any other enforcement action authorized under ORS 634.

Summary

Narrative

Following receipt of numerous concerns of contaminated soil purchased from Dean Innovations in Portland, OR, ODA narrowed its search of Dean Innovations' suppliers to three potential sources of contamination based on positive lab results. The two types of materials from these three sources were mushroom compost from Yamhill County Mushrooms (Yamhill, OR) and Great Western Supply (Olympia, WA), and cow manure from Organix Inc (Walla Walla, WA). ODA has referred information about the Washington based companies to the Washington State Department of Agriculture (WSDA) to follow-up with Washington sources. ODA worked, and will continue to work with DEQ on follow-up with Yamhill County Mushrooms. Sampling at Yamhill County Mushrooms revealed the straw and canola meal used in the mix to grow mushrooms (ultimately sold as compost after mushroom harvest) contained levels of clopyralid. Levels detected were within the tolerance levels established by the Environmental Protection Agency. Canola meal is obtained through Boer Commodities, a merchandiser of feed commodities based in California. Straw is purchased from Pacific Ag, a company based in Hermiston, OR, that assists growers with harvesting and marketing of crop residue as feedstock to a diverse array of large, established markets including domestic and export animal protein, erosion control products manufacturers and commercial mushroom production. Eric Kuehne Farms is a local grower that works with numerous other growers in the Willamette Valley to market straw. The complexity of the straw origins makes it difficult to identify which grower's straw might have been used in a batch of mushroom compost. Moreover, the issue was documented in mushroom compost that came from Washington, as well, further complicating enforcement action. ODA will develop an advisory to routinely publish in the quarterly newsletter, which reaches all licensees. Outreach efforts will continue with an aim to reach individuals who do not have a license with ODA, educating on appropriate use of products containing clopyralid, and disposal of crop residues treated with clopyralid/manures from animals grazing on clopyralid-treated products. DEQ and Portland Metro will continue to provide outreach and education to composters; collaboration with OSU is presently in the works to develop education materials.

Conclusion

ODA responded to many concerns expressed about composts that apparently were contaminated with an herbicide/s. Analysis of samples from various levels of the compost industry did find residues of clopyralid, but nothing so definitive as to clearly document a particular violation of ORS Chapter 634. ODA will continue working with other agencies to reach out to composters and help with providing additional information.

Attachments

| Attachment Name | Type |
|---|----------------|
| 200405 - Anatek Labs Planet Earth Sample Result.pdf | Misc. |
| 200405 - appended sample results 5-8.pdf | Misc. |
| 200405 - attachments from emails.zip | Misc. |
| 200405 - August 19 Update.pdf | Correspondence |
| 200405 - correspondence.zip | Correspondence |
| 200405 - Dean Innovations Supplier Info.zip | Records |
| 200405 - July 13 Update.pdf | Correspondence |
| 200405 - June 8 Update.pdf | Correspondence |
| 200405 - May 22 Update.pdf | Correspondence |
| 200405 - notes.pdf | Case notes |
| 200405 - PesticideAdvisory062620.pdf | Correspondence |
| 200405 - photos 5.19.20.zip | Photos |
| 200405 - photos 6.10.20.zip | Photos |
| 200405 - photos 7.15.20 .zip | Photos |
| 200405 - Sample Results - Ostrom.pdf | Misc. |
| 200405 - Sample Results - YCM.pdf | Misc. |
| 200405 - sample results (16.17).pdf | Misc. |
| 200405 - Sample Results 2.pdf | Misc. |
| 200405 - Sample Results.pdf | Misc. |
| 200405 - sampling maps.zip | Maps |
| 200405 - SoilFAQ.pdf | Correspondence |
| 200405 - White Lightning Label.pdf | Label |
| 200405 - YCM supplier info.pdf | Misc. |

Enforcement Summary

| <u>Name</u> | <u>License Type</u> | <u>Prohibition Violated</u> | <u>Number of Actions</u> | <u>Action</u> NONE | <u>CP Paid?</u> | <u>Notice Issued</u> | <u>Notice Served</u> | <u>Orig CP Amount \$</u> | <u>Hearing Regsted</u> | <u>Informal Held</u> | <u>Final Order Date</u> | <u>Actual CP Amount \$</u> |
|--------------------------------|---------------------|-----------------------------|--------------------------|-----------------------|-----------------|----------------------|----------------------|----------------------------------|------------------------|----------------------|-------------------------|----------------------------|
| TOTAL Orig CP Amount \$ | | | | | | | | TOTAL Actual CP Amount \$ | | | | |