



Subject: Oregon Department of Agriculture, Non-Agricultural Use Follow-up (NUF) # 200405 – Dean Innovations / # 200408 – McFarlanes

The following information is being provided on behalf of the Oregon Department of Agriculture (ODA), and the Pesticide Analytical and Response Center (PARC) to provide a status update on ODA Pesticide case 200405 & 200408.

Background

On May 16, 2020, a citizen reported to 211 her concern that garden soil delivered to her property was contaminated with pesticides after observing plant growth deformities. Over the next couple of days, several similar calls came in and were forwarded to ODA for follow-up. All but one of the soil/compost concerns came from Dean Innovations. The other soil came from McFarlanes (ODA Pesticide case 200408).

Lab Results

ODA investigators collected samples from customers, Dean Innovations and McFarlanes and submitted them to ODA’s analytical laboratory for analysis. The analysis of soil taken from gardens showing symptoms confirmed the presence of clopyralid in the compost soils.

The four active ingredients analyzed for were selected because of their known persistence through the composting cycle and history of causing issues reported by many of you. Clopyralid has a history of remaining in compost so much so that in 2003 the Department issued rules prohibiting uses outside of a few specific sites. On sites where clopyralid use is still allowed, the grass clippings or other material from a treated site are prohibited for use in compost.

All four of the active ingredients analyzed are bio-active at very low concentrations, usually below the detection level of laboratory analysis. This means that they can affect plant growth at very low levels, usually lower than testing can detect. Clopyralid has shown bio-activity (plant effects) when in soil at levels down to 0.002 parts per million (ppm), which is 2 parts per billion (ppb). As you look at the analysis report from the lab you will see the MRL (Minimum Reporting Limit) is 0.010 ppm (10 ppb). The lab can't positively identify anything below the MRL. So even if the lab report shows <0.010 ppm (less than .010 ppm), it's possible there could be clopyralid at a level that may cause symptoms on your plants.

The positive results received in several of the soil samples and one plant sample confirms that there is clopyralid in those soils. The only way to truly test specific soil for the presence or absence of clopyralid is with a bio assay (planting

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susceptible plants in the soil and watching if they grow and show effects). You have done that already.

ODA plans to gather a couple more plant samples this week to confirm that the symptoms in the plants that citizens have sent pictures of are indeed caused by the clopyralid. We will not gather samples from each of you due to the limitations and time it takes to process the quantity of samples needed to do this.

Next Steps

Beyond the additional samples we will gather, ODA's Pesticide and Fertilizer program staff will start working with Dean Innovations and McFarlanes to identify the source of the contamination. This will take a great deal of time due to the multiple and changing sources of the soil mix components.

Soil Removal Options

We understand that individuals may want to have their soil removed based on this information. In order to avoid further contamination, soils that are believed to be contaminated should NOT be taken to your local compost or yard debris facility. These soils can be disposed of at the locations below. Please inform the facility that this soil is thought to be contaminated.

1. [Metro South](#) in Oregon City, 503-234-3000 for hours, pricing, and additional information
2. [Hillsboro Landfill](#), 503-640-9427 extension 0, for hours, pricing, and additional information.

Community members can contact the business where the soil was purchased to find out what options might be available through them.

For other garbage, recycling, or natural gardening resources, please contact Metro at 503-234-3000 or askmetro@oregonmetro.gov.

I am also including a [Report of Loss Form](#). Please follow the direction on how to fill out and where to submit it if you choose to complete one.

Health and Safety Concerns

Many of you have asked about the risks of having contaminated compost or soil. Because plants can show symptoms when there are very small amounts of clopyralid, plant damage may not mean there is a health risk. Clopyralid is considered very low in toxicity if ingested¹. It is currently used in agriculture to control weeds for several crops. Based on an analysis of health risks, the U.S. EPA allows residues of clopyralid on certain food crops. This is called a "tolerance", or a legal allowable residue limit.

¹ Clopyralid. Health Risk Assessment for New Uses on Apples, Teff, Brassica Leafy Greens, and Rapeseed; U.S. Environmental Protection Agency, Office of Chemical Safety and Pollution Prevention, U.S. Government Printing Office: Washington, DC, 2012



Clopyralid is considered very low in toxicity via skin exposure^{1,2}. Considering plants may show symptoms even at very small amounts, touching soil presents a low risk to gardeners. Regardless, you have the option to wear gloves and other clothing to prevent skin exposure to soil, if you choose to do so.

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Not all plants are damaged by clopyralid. Sensitive plants include legumes (peas, beans, lupine), composites (sunflowers, marigolds, lettuce), nightshades (tomatoes, potatoes, peppers), and buckwheat. Clopyralid can break down in soil over multiple months, depending on many factors³.

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Because each of us may have different comfort levels about the possible risks involved, you have several choices. These choices can range from doing nothing to abandoning affected plants this season, and more. To discuss the risks specific to your situation, call the [National Pesticide Information Center](http://www.npic.orst.edu) at 1-800-858-7378 Monday – Friday from 8:00am – 12:00pm, or email at npic@ace.orst.edu.

To read more about clopyralid, visit the links below.

Clopyralid in Compost: Questions and Answers for Gardeners and Farmers in Western Washington – Washington State University

https://s3.wp.wsu.edu/uploads/sites/411/2014/12/Paper_Clopyralid_QandA_v10.pdf

Clopyralid in Compost: Overview – Washington State University

<https://puyallup.wsu.edu/soils/clopyralid/>

ODA’s Citizen Advocate, Christina Higby will continue to serve as the Point of Contact (POC) if you have questions about this letter or the investigative process going forward. Please contact her at (503) 986-5105 or by email at chigby@oda.state.or.us and she would be happy to assist you.

ODA will continue to provide periodic updates of the status of the investigations to interested parties. Information about the ODA Pesticides Program may be found at the following web site.

<https://www.oregon.gov/ODA/programs/Pesticides/Pages/PesticidesCurrentIssues.aspx>

² Human Health Risk Assessment, BLM Vegetation Treatment Using Herbicides; U.S. Department of the Interior, Bureau of Land Management: Washington, DC, 2014

³ University of Hertfordshire. Pesticide Properties Database - Clopyralid webpage. <https://sitem.herts.ac.uk/aeru/ppdb/en/Reports/169.htm> (accessed June 8, 2020)

