



Oregon

Kate Brown, Governor

November 23, 2020

PARC
PESTICIDE ANALYTICAL
AND RESPONSE CENTER

Subject: FINAL UPDATE on Soil/Compost and Clopyralid Issues – Pesticide Use Investigations #200405, #200408, #200481, and #210040

The following information is being provided on behalf of the Oregon Department of Agriculture (ODA) and the Pesticide Analytical and Response Center (PARC) to update interested parties on the final determination made by the Department.

ODA heard from hundreds of home gardeners and small farmers this summer who experienced damage and losses to their gardens and farms associated with compost and has concluded our investigations. The enclosed information details the findings in each case.

ODA found multiple instances of compost and manure contaminated with herbicides (e.g. clopyralid and aminopyralid). The Oregon vendors that supplied compost directly to consumers were not the ones who applied clopyralid. ODA worked with compost vendors to identify the sources of clopyralid contamination and determined the contamination came from three suppliers: two mushroom compost suppliers and one cow manure supplier. In some cases, the compost and manure came from out of state. ODA referred cases to the Washington State Department of Agriculture (WSDA) in situations involving contaminated compost and manure that originated from Washington state. The issue of clopyralid and aminopyralid in compost is a complex issue involving a web of users and suppliers. Due to the complexity of the supply chain, ODA was not able to identify individual(s) responsible for allowing the treated material to enter the compost stream in violation of Oregon's pesticide control law.

ODA is collaborating with multiple agencies and the industries they work with to step up education efforts to prevent similar problems in the future. This includes education of composters on how they can monitor for and avoid contamination, and educating the end users of the compost.

Additionally, ODA collaborated with the WSDA and submitted comments to the Environmental Protection Agency (EPA) about the issues documented this year and indicated that changes to the labels for these herbicides are needed.

Enclosed are detailed summaries of the cases and final conclusion. A copy of the case narrative reports are available on ODA's Pesticides [Current Issues webpage](#) under the title: [Soil/Compost and Clopyralid Investigations](#) (scroll down until you find the Investigation updates section).

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Summary of Findings

On May 15, 2020, ODA initiated Non-Agricultural Use Follow-up Investigation number 200408. Two more investigations (# 200405 and # 2000481) were initiated based on additional concerns from citizens who purchased compost from other soil/compost vendors in the greater Portland area; and one investigation (# 210040) was initiated out of Bend.

Final Investigation Summaries and Determinations:

- ODA Pesticide Case #200405 - 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 a merchandiser of feed commodities based in California. Straw is purchased from 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. A local grower that works with numerous other growers in the Willamette Valley to market straw was also identified. 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 determined it 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 as well as manures from animals grazing on clopyralid-treated products. DEQ and Portland Metro will continue to provide outreach and education to composters; collaboration with Oregon State University (OSU) is presently in the works to develop education materials.
- ODA Pesticide Case #200408 – ODA received a complaint suspecting a batch of compost delivered from McFarlane's Bark had herbicide in it. After visiting the site, damage to tomato plants consistent with herbicide exposure

was observed. Vegetation and soil samples from the complainant and vendor locations were analyzed. The lab analysis found residues of the pesticide active ingredient clopyralid in the sample taken from the tomato plants at complainant's location. During the course of the investigation, it was discovered the complainant used a mushroom compost that had originally been produced by Yamhill County Mushrooms. ODA investigated the pesticide contamination in compost and found that Yamhill County Mushrooms had clopyralid present in their compost, but had not made any pesticide applications themselves (Refer to ODA Case #200405 for more details). From this investigation, no pesticide applications were identified. Investigation did not find contamination in the product at McFarlane's. Furthermore, McFarlane's does not utilize the ingredients found to be problematic in the other cases (i.e. mushroom compost and manure) or utilize the suppliers: Yamhill County Mushrooms, Great Western Supply or Organix Inc.

- ODA Pesticide Case #200481 – ODA received two complaints about receiving suspected herbicide-contaminated compost called Mushroom Compost from Best Buy in Town Landscape Supply. Vegetation and soil samples from the two complainants' properties and the Mushroom Compost pile at Best Buy in Town Landscape Supply were analyzed. The lab analysis found residues of the pesticide active ingredient clopyralid in all of the samples taken. During the course of the investigation, it was discovered that the Mushroom Compost had originally come from Yamhill County Mushroom. ODA investigated the pesticide contamination in compost and found that Yamhill County Mushroom had clopyralid present in their compost, but had not made any pesticide applications themselves (Refer to ODA Case #200405 for more details). From this investigation, no pesticide applications were identified. ODA discovered that Yamhill County Mushrooms was a supplier and likely the source of contamination in products that contain mushroom compost.
- ODA Pesticide Case #210040 - A complaint was made to the Department regarding potentially contaminated soil at a residence in Bend. This was at a time when the Department was responding to issues of contaminated compost in other parts of the state. Samples taken of the soil from the Bend residence did not show the presence of the pesticide ingredients found in compost in other parts of the state. The manure used by the complainant in the soil did have the presence of two herbicide ingredients. One of them, aminopyralid, has known issues with manure from livestock that have eaten hay treated with it. For that reason, hay treated with aminopyralid may only be used by the person who grew the hay for their own animals and they may not allow the manure to be used for composting. The complainant's acquisition of manure with aminopyralid shows the potential for violation of the Oregon Pesticide Control Act however, the Department is unable to pursue this without the information necessary. The Department may revisit this issue if

such information is made available at a later time. As such, no violations of the Oregon Pesticide Control Act were noted in this investigation.

Conclusion

ODA's Pesticide Program responded to multiple complaints of contaminated soil after signs of plant damage from suspected herbicide exposure were observed. ODA analysis from multiple plant and soil samples taken verified the presence of the pesticide active ingredient, clopyralid. ODA worked with vendor suppliers to identify the source of clopyralid contamination, however this was difficult due to the complexity of the supply chain channels. ODA, DEQ and Portland Metro conducted outreach and education about clopyralid to pesticide applicators & operators, CAFO operators, and composters to help prevent future similar incidents. ODA responded to many concerns expressed about composts that 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's Fertilizer Program is working with all affected compost and topsoil suppliers to make sure any product they sell in or into Oregon is properly registered and labeled or exempt from registration requirements. The Program is also reviewing the case files from the Pesticide Program investigations and fertilizer records to determine if any fertilizer compliance actions are warranted.

ODA, DEQ and Portland Metro will continue outreach and education efforts to pesticide applicators and operators, CAFO operators, and composters to help prevent future similar incidents.

If you have any questions about the update or resources provided, please send an email to contaminatedsoilquestions@oda.state.or.us

This letter, along with previously shared updates and information are available at ODA's [Current Issues webpage](#) under the title: Soil/Compost and Clopyralid Investigations (scroll down until you find the Investigation updates section).