

Focus on: DDT Soil Impacts on Okanogan Cannabis Farms



Cannabis farm in the Brewster area (Photo: SourceOne News)

Introduction

Ecology is using \$5,000,000 of legislatively appropriated funding to implement a pilot program that evaluates methods to reduce the impact of DDT on cultivated cannabis plants in Okanogan County.

Background

In 2023, Washington State's Liquor and Cannabis Board (LCB) sampling of retail cannabis products revealed detectable levels of dichloro-diphenyl-dichloroethylene (DDE) that exceeded LCB's pesticide action levels (WAC 314-55-108).¹

Although DDT, which can break down to DDE, was once a commonly used pesticide it was banned in the United States in 1972 due to its adverse impacts on human health.

The cannabis products were recalled from retail shelves with assistance from the affected growers and retailers.

The results further revealed the contamination in cannabis products was grown in a specific area in Okanogan County.

At the request of the LCB, Ecology sampled soils from the affected farms. These samples showed high levels of DDT, DDE, lead, arsenic, and dieldrin in the soil.

Legislative Action

Given the retail cannabis products exceeding LCB action levels as well as the high levels of pesticides seen in Ecology's soil samples, the legislature appropriated funding with the proviso language below:

"The appropriation in this section is provided solely for the department to implement a pilot program located in Okanogan County to remediate soil contaminated with dichlorodiphenyltrichloroethane (DDT) and DDT remnants if the liquor and cannabis board determines the soil in the pilot program location produced cannabis products that meet or exceed state action levels under WAC 314-55-108. If the board determines that soil in the pilot program location does not produce cannabis products that meet or exceed these levels, the amount provided in this section shall lapse.

If the department implements the pilot program under subsection (1) of this section, it shall provide a status report on remediation efforts to the legislature by December 1, 2023, and a final report on the outcome of its remediation efforts and any recommendations related to the implementation of a statewide remediation program for DDT-contaminated soil by December 1, 2024.

The department shall coordinate the implementation of the pilot program created under this section with the Washington Department of Agriculture and the Liquor and Cannabis Board."

Implementation

Ecology is assisting cannabis farmers using three simultaneous approaches. They are detailed on the next page.

¹ <https://apps.leg.wa.gov/WAC/default.aspx?cite=314-55-108>

Feasibility Study

Ecology recently issued a Request for Qualifications and Quotations (RFQQ) to develop and evaluate cleanup options for DDT and DDE-contaminated soil on cannabis farms in Okanogan County. Ecology received bids ranging from approximately \$66,000 to \$169,000 and is currently evaluating the proposals with an anticipated contract start date of mid-April.

In summary, the selected contractor will:

- Review any literature or studies concerning DDT and DDE soil contamination related to cannabis farms in Washington State and nationwide.
- Perform a detailed review and evaluation of specific cleanup options for DDT and DDE-contaminated soil, including the excavation and removal of contaminated soil, mixing of contaminated soil with clean soil, capping in place, consolidation and capping of contaminated soil, and bioremediation of contaminated soil.

WSU Plant Study

Under an interagency agreement between Washington State University (WSU) and Ecology, WSU is performing a study to measure the uptake of DDT and DDE compounds into low-TCH versions of plants that are very similar to cannabis, called hemp.

Funded for approximately \$720,000, the Laboratory for Cellular Metabolism and Engineering at WSU will use a combination of DDT and DDE-contaminated soils from Okanogan County, as well as laboratory-managed soils, to simulate the on-farm conditions. The study will look at the timing of plant uptake during growth cycles, as well as where the compounds accumulate in the plants. WSU will collaborate with LCB for the study.

Clean Soil Distribution

Through Ecology's collaboration with the Washington State Department of Agriculture, we were able to connect with the Okanogan Soil Conservation District (OSCD). Tentatively, the OSCD has plans to implement a grant program to give cannabis farmers access to uncontaminated, clean soil using the remaining balance of appropriated funds. The cannabis plants would then be grown from this clean soil.

Next Steps

Ecology will use information gathered in the feasibility study, plant study, and clean soil distribution to present a final report to the Washington State Legislature by December 1, 2024.

Conclusion

Ecology anticipates our work on these three fronts will fulfill the requirements outlined in the legislative proviso. We hope to help improve the health and safety of the cannabis industry as it relates to farming in soils potentially affected by historic pesticide application.

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ADA Accessibility

To request an ADA accommodation, contact Ecology by phone at 509-406-6931 or email at rhonda.luke@ecy.wa.gov, or visit <https://ecology.wa.gov/accessibility>. For Relay Service or TTY call 711 or 877-833-6341.