

OREGON OSHA PESTICIDE EMPHASIS PROGRAM ANNUAL REPORT Federal Fiscal Year 2021



*Sign of the Pandemic Times: Shelves emptied of the horse wormer Ivermectin:
Unauthorized treatment for COVID-19*
Photo credit: G Cooke

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Introduction:

Oregon OSHA and the United States Environmental Protection Agency (EPA), Region 10 Enforcement and Compliance Assurance Division in the Air & Toxics Enforcement Section, collaborate on pesticide safety issues. Oregon OSHA enforces the Worker Protection Standard, which is supplemented with a pesticide emphasis program. This report is the annual review of the pesticide emphasis program for federal fiscal year 2021 (FY2021). The data elements and analysis are presented, along with recommendations for program improvements for the coming year.

Data Elements:

The data elements examined in this report are based on Oregon OSHA’s Program Directive A-235, entitled “Local Emphasis Program for Pesticides.” Inspections were completed from a programmed list selected from these North American Industrial Classification System (NAICS) codes which will be referred to as “selected NAICSs” for the purposes of this report.

- NAICS 111219 & 111998 General farming, field Crops, except Cash Grains, Not Elsewhere Classified
- NAICS 111339 Deciduous Tree Fruits
- NAICS 111421 Nurseries & Tree Production
- NAICS 111422 Floriculture Production
- NAICS 111332 Grape Vineyards
- NAICS 111419 Crops Grown Undercover (primary focus Cannabis)
- NAICS 113110 Timber Tract Operations
- NAICS 115112 Crop preparation including pesticide spraying

NAICS were selected based on the amount and toxicity of pesticides in use, frequency of pesticide applications, the diversity of crops, and the number of workers employed, and work practices in use. Other NAICSs inspected as a result of complaints, referrals or accident inspections are included in this report if the inspection addressed pesticide-related issues.

Data Summary:

Pesticide exposures occur throughout the handling process, from purchase to disposal. The goal of the Pesticide Emphasis Program is to reduce occupational exposures to pesticides in agriculture through enforcing the pesticide-related standards such as the Worker Protection Standard, Hazard Communication, Respiratory Protection, Pesticide Storage, Fumigation, and supervision. Implementation of these requirements can reduce the likelihood of exposures resulting in acute or chronic effects. The Pesticide Emphasis Program continues to be an effective tool for disseminating information, education, compliance assistance and enforcement activities to reduce occupational exposures to pesticides in the agriculture industry.

The following is a brief summary of the findings resulting from the evaluation of FY2021 activity. Please see each section for tables and explanations of each.

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◆ Inspection Activity:

Inspection activity in FY 2021 was increased from 2020, despite the ongoing pandemic. In FY2021, 48 inspections were done, with 33 inspections resulting in citations, with 1117 employees covered, above the pre-COVID 2019 levels. The Worker Protection Standard (WPS) was applicable in 42 inspections, indicated by Tier 1 and Tier 2 in the table below. For all pesticide emphasis inspections where WPS was applicable, 71% (34/48) were classified as Tier 1 and 17% (8/48) were Tier 2. Inspections where pesticides have been used within the preceding 30 days plus the restricted entry interval are classified as Tier 1; inspections where pesticides have not been used within the preceding 30 days plus the restricted entry interval are classified as Tier 2. Vineyards and cannabis/hemp are the two grower groups which rely heavily on contract labor. Related inspections of labor contractors that occurred with inspections of the Selected NAICS which included vineyards and cannabis/hemp were included in the Selected NAICS.

In the selected NAICS, 39 inspections were conducted with citations issued in 26 cases, of these, 59% (23/39) were classified as WPS Tier 1 inspections. Of the 48 pesticide emphasis inspections, 13% (6/48) fell outside the scope of the Worker Protection Standard. In FY2020 that percentage was 41%.

Cannabis inspections were pulled from 4 different NAICS codes – 7 from 111998, 1 from 111422, 2 from 115115 and 2 from 111419. These were collectively listed together under Cannabis. Citations were issued in 70% of the Cannabis inspections.

Statistics for Completed Inspections by Industry (NAICS), FY2021

| Industry (NAICS) | | Completed inspections | Citation issued | No citation | Percent with citation issued | Percent with no citation issued | WPS Tier 1 | WPS Tier 2 | Pesticide Emphasis Non-WPS | Employees covered |
|------------------|----------|-----------------------|-----------------|-------------|------------------------------|---------------------------------|------------|------------|----------------------------|-------------------|
| Selected NAICS | 111219 | - | - | - | - | - | - | - | - | - |
| | 111332* | 11 | 7 | 4 | 64% | 36% | 9 | 2 | - | 227 |
| | 111339 | 3 | 2 | 1 | 67% | 33% | 3 | - | - | 27 |
| | 111421 | 6 | 2 | 4 | 33% | 67% | 4 | 2 | - | 153 |
| | 111998 | 6 | 5 | 1 | 83% | 17% | 4 | 2 | - | 172 |
| | 115112 | 1 | 1 | - | 100% | 0 | 1 | - | - | 3 |
| | Cannabis | 12 | 9 | 3 | 75% | 25% | 9 | 2 | 1 | 186 |
| | 111211 | 2 | 2 | - | 100% | 0 | 2 | - | - | 135 |
| | 115310 | 2 | 1 | 1 | 50% | 50% | 2 | - | - | 5 |
| | 561730 | 2 | 2 | - | 100% | 0 | - | - | 2 | 110 |
| | 611110 | 1 | - | 1 | 0 | 100% | - | - | 1 | 80 |
| | 713940 | 1 | 1 | - | 100% | 0 | - | - | 1 | 10 |
| | 721211 | 1 | 1 | - | 100% | 0 | - | - | 1 | 9 |
| Total | | 48 | 33 | 15 | 69% | 31% | 34 | 8 | 6 | 1117 |

*Includes labor contractors; ** Cannabis is a compilation of multiple NAICS

Source: Information Management Division, Oregon Department of Consumer and Business Services, December 2021

Based on the types of inspections listed below, 18 were programmed planned, with 61% (11/18) receiving citations; of these, (9/11) had serious violations. There were 22 complaint inspections with 73% (16/22) receiving citations; of these, 81% (13/16) had serious violations. There were 3 referrals in FY2021, all of which received citations. Complaints accounted for 46% (22/48) of the total inspections conducted. Cannabis inspections in the table below were not grouped as a stand alone entity and appear under the four NAICS codes.

Attempted and completed inspections by inspection type and industry (NAICS), FY2021

| | Total | Selected NAICS | | | | | Other NAICS |
|-----------------------------|-------|----------------|--------|--------|-------------------|--------|-------------|
| | | 115112 | 111339 | 111332 | 111421/ 111422 | 111998 | |
| Total completed inspections | 48 | 1 | 3 | 7 | 7 | 13 | 17 |
| Complaint | 22 | - | 1 | 2 | 2 | 6 | 11 |
| Referral | 3 | - | - | 1 | - | 1 | 1 |
| Programmed Planned | 18 | - | 2 | 4 | 5 | 6 | 1 |
| Programmed Related | 4 | 1 | - | - | - | - | 3 |
| Unprogrammed Related | 1 | - | - | - | - | - | 1 |
| Attempted (triple zero) | 2 | - | - | 1 | - | 1 | - |

Source: Information Technology and Research Section, Central Services Division, Oregon Department of Consumer and Business Services, December 2021

◆ Violation characteristics:

The following table highlights the distribution of violations. In FY2021, there were 145 pesticide related violations cited with penalties totaling \$8810. WPS penalties accounted for \$3,590 overall. In the selected NAICS, WPS violations accounted for 46% (58/127) of the violations cited with penalties totaling \$3,590. Pesticide-related violations accounted for 69 violations with penalties totaling \$4,010. WPS and pesticide related violations in the Cannabis/Hemp sector accounted for 43% (55/127) of the total in the selected NAICS. The resulting penalties totaled \$3,820, 50% of the total. Pesticide-related violations, excluding WPS, include the Oregon OSHA standards addressing hazard communication, respiratory protection, personal protective equipment, emergency eyewash, fumigants, supervision, pesticide storage, and work-site inspections.

Pesticide Violations and Penalties in FY2021 Totals

| Industry (NAICS) | | Total Pesticide Related Violations | WPS Violations | | | | Other Pesticide Related Violations | | | |
|------------------|--------------------|------------------------------------|----------------|--------------------|----------|-----------------|------------------------------------|--------------------|----------|-----------------|
| | | | Serious | Other than serious | Repeat | Total penalties | Serious | Other than serious | Repeat | Total penalties |
| Selected NAICS | 111219 | - | - | - | - | - | - | - | - | - |
| | 111339 | 3 | 1 | 2 | - | \$150 | - | - | - | - |
| | 111332 | 34 | 11 | 8 | - | \$1,380 | 7 | 8 | - | \$440 |
| | 111421 | 19 | 5 | 2 | - | \$330 | 9 | 3 | - | \$660 |
| | 111998 | 14 | 1 | 5 | - | \$180 | 6 | 2 | - | \$640 |
| | 115112 | 2 | - | - | - | - | - | 2 | - | 0 |
| | Cannabis | 55 | 16 | 7 | - | \$1,550 | 24 | 8 | - | \$2,270 |
| | Totals | 127 | 34 | 24 | - | \$3,590 | 46 | 23 | - | \$4,010 |
| Grand Total | 111211 | 5 | - | 3 | - | - | - | - | - | 0 |
| | 315310 | 1 | - | 1 | - | - | 2 | - | - | \$330 |
| | 561730 | 5 | - | - | - | - | 4 | 1 | - | \$180 |
| | 713940 | 5 | - | - | - | - | 3 | - | 2 | \$700 |
| | 721211 | 2 | - | - | - | - | - | 2 | - | 0 |
| | Totals | 18 | - | 4 | - | 0 | 9 | 3 | 2 | \$1,210 |
| | Grand Total | 145 | 34 | 28 | - | \$3,590 | 55 | 26 | 2 | \$5,220 |

Source: Information Technology and Research Section, Central Services Division, Oregon Department of Consumer and Business Services, December 2021

If a WPS violation is grouped with another violation, the WPS and non-WPS violations are counted separately, but the penalty amount for the whole group is retained with the WPS violation.

The violations below are classified as either handler or worker related using the definitions in the Worker Protection Standard. A handler is an employee who either mixes, loads, applies, or works on spray equipment and can be exposed to the concentrated form of the pesticide. Workers are employees who are working with plant materials that may have pesticide residue on them. The most frequently violated standards were for combined personal protective equipment (PPE-Respirators and PPE-Other) followed by issues related to the display of pesticide safety information and hazard communication and/or WPS training for pesticide handlers.

Pesticide Violations Cited in FY2021

| | Violation type | Violations |
|-----------------|-----------------------------------|------------|
| Handler related | PPE Respirators | 36 |
| | PPE- Other | 12 |
| | Training & trainer qualifications | 21 |
| | Hazard communication | 16 |
| | Emergency eyewash, first aid | 9 |
| | Pesticide Storage | 5 |
| Worker related | Access to Pesticide Info | 2 |
| | Display of Pesticide Info | 23 |
| | Establishment Specific Info | 1 |
| | Decontamination | 1 |
| | Notification | 1 |
| | Training & trainer qualifications | 14 |
| | Safe Practices brochure | 4 |
| | Non-pesticide related | 10 |

Source: Information Technology and Research Section, Central Services Division, Oregon Department of Consumer and Business Services, December 2021

Pesticide Analytical Response Center (PARC) Cases: For the 4 PARC cases listed, WPS applied in none of them. The pesticide involved were all disinfectants/sanitizers/biocides. Half involved one product, Virex II 256. Three of the four PARC cases originated as complaints to Oregon OSHA. Three of cases denoted with P/F in the "Citation Issued column," were addressed through off-site measures.

| Source | Exposure Type | Product | Signal Word | # Exp | Type of Establishment | Citation Issued | Primary cause | Medical Treatment sought |
|--------|---------------|--------------|-------------|-------|-----------------------|-----------------|--|--------------------------|
| C* | Use | Waxie 710 | Danger | 2 | Public swimming pool | yes | Lack of training and PPE | yes |
| OERS* | Use | Solution QA | Danger | 5 | Restaurant | P/F | Improper dilution, lack of training | no |
| C | Bystander | Virex II 256 | Danger | 2 | School Bus | P/F | Note: use of a device Inadequate PPE | yes |
| C* | Bystander | Virex II 256 | Danger | 2 | Electric Utility | P/F | Application made when workers present. Note: Use of a device | ? |

Source: C = Complaint filed with Oregon OSHA; R = Referral from PARC; OERS = Oregon Emergency Response System; # exp = the number exposed; * indicates narrative to follow. Blue shading indicates the case involved a disinfectant.

Pesticide Analytical Response Center (PARC) Referrals (No adverse Health Effects):

| Source | Exposure Type | Product | Signal Word | # Emp | Type of Establishment | WPS Applies | Citation Issued | Concern | Inspection/ Phone Fax |
|--------|----------------|--------------------------|-------------|-------|-----------------------|-------------|-----------------|---|------------------------|
| C | Use | Orbio os3 MultiMicro 200 | Caution | 80 | School busses | no | no | Affecting employees Note: Use of a device | Inspection |
| R | Use | Cheetah Pro | Caution | 2 | Landscaping | no | yes | Lack of PPE | Inspection |
| C/R | None mentioned | ? | ? | 10 | Fast food rest. | no | no | Cockroaches only in complaint; then concern thru PARC regarding application | Referral to County HD |
| R | Use & disposal | Multiple | Danger Pos | 1 | Aerial applicator | yes | no | No W/C on loader of aircraft, NO use of PPE, or work clothes | No jurisdiction Assist |
| R | Use | CuSol5 | Danger | 4 | Roof preserving | no | no | Resource sharing | Assist ODA |
| R | Bystander | Unknown | ? | Fam | Farm | yes | no | Neighbor concern | No employees |

PARC Cases Highlighted

The following narratives (referenced in the previous table with an asterisk) by the type of establishment provide a synopsis for a variety of cases.

Swimming Pool: Originating as a complaint to Oregon OSHA, this case was referred to PARC when the agency became aware the disinfectant used was an EPA Registered product. This was a joint investigation with the Oregon Department of Agriculture. Lifeguards were tasked with hosing down the pool deck, bathrooms, benches and lockers with the disinfectant WAXIE 710 (EPA Reg. #1839-167-1499) at mid-day when the pool closed, and in the evening after the pool closed for the night due to COVID-19. The dispensing unit which attached to the hose was malfunctioning, and one employee experienced burns to wrists and forearms and another developed a rash. During the investigation, the activity was observed where none of the employees wore the appropriate personal protective equipment as required by the product label when performing the task. The applicators wore short pants, short sleeved t-shirts, and flip flops. The complaint alleged lack of training and personal protective equipment. None of the employees had received effective hazard communication training. The hazard communication training that had been provided, was an online video which consisted of explaining what hazard communication was, and what the pictograms meant. This ineffectiveness resulted in the issues related to personal protective equipment. The employer had been previously cited for lack of hazard communication training and personal protective equipment, and two repeat serious violations were issued.

Restaurant: The Oregon Emergency Response System (OERS) notified PARC who notified Oregon OSHA-, who had already received a complaint- about an incident involving a sanitizer – Solution-QA (EPA Reg/ # 6243-1) to wipe down lottery machines at a restaurant. OERS and the complaint both noted symptomatic employees after the use of the product. This investigation occurred through offsite measures which included multiple contacts with the employer. The employer identified training and improper mixing (concentration too high). Employees were retrained and specific individuals were to perform the dilutions. The employer cooperated with providing contact information for follow-up by Oregon Health Authority. Resources were provided.

Electric utility: This complaint was addressed through off-site measures. The response from the employer was through their attorney. The company began using Virex II 256 (EPA Reg. # 70627-24) in 2014 through a dispensing machine. The diluted Virex II 256 was then put in spray bottles, applied to surfaces and wiped down. In response to COVID, their cleaning company was tasked to clean and disinfect daily. In June of 2020, a new company was hired, and while still using VirexII 256, they applied it, not with spray bottles, but with an electrostatic sprayer. In August, the utility purchased their own electrostatic sprayer, spraying rooms before and after meetings, in addition to wiping surfaces. After a second spraying took place in November, multiple employees became symptomatic. The utility stated they consulted with a safety expert- the owner of a safety supply company- who informed the utility the product was not harmful. Despite the announcement to employees of the product's harmlessness, a 'no-spray' sign was placed on the office door of an employee who suffered asthma related symptoms. Requests to the attorney for the affected individuals' names to provide to the Oregon Health Authority were promptly responded to, and information about PARC and NPIC was provided.

◆ **External Training:**

External training consists of speaking requests, and in the time of the COVID-19 Pandemic, took the form of virtual webinars. While the interaction between folks was limited, it allowed for greater reach into areas where in person meetings are limited. These events were performed in conjunction with Oregon Department of Agriculture credit events and workshops put on by the Oregon OSHA Public Education Section. Chemeketa Community College did not hold in-person classes during the winter quarter when the Respiratory Protection for Agricultural Operations class is offered. Speaking requests are normally conducted mostly in conjunction with day long multi-pesticide agendas put on by grower groups, such as the Northwest Ag Show, the Oregon Department of Agriculture, or the Oregon State University Pesticide Safety Education Program (PSEP), for the purpose of maintaining credits for pesticide licensees.

Oregon OSHA speaking requests in FY2021

| Date | Topic | Attendees |
|---------|--|------------|
| Oct. 14 | Virtual OSU - PPE for Pesticide Applicators | 57 |
| Oct. 22 | Virtual OSU – PPE for Pesticide Applicators | 50 |
| Nov. 10 | Virtual OACFA – Pesticide Storage and Wildfire | 252 |
| Nov. 18 | Virtual OSU Forestry PPE for Pesticide Applicators | 57 |
| Dec. 9 | Virtual OSU PPE for Pesticide Applicators | 85 |
| Jan. 6 | Virtual OSU PPE for Pesticide Applicators | 100 |
| Feb. 10 | Virtual OSU PPE for Pesticide Applicators | 50 |
| Mar. 2 | Virtual NW Ag Show Pesticide Safety Topics- 4 hours - Salem | 74 |
| Mar. 3 | Virtual NW Ag Show Pesticide Safety Topics – 4 hours - Salem | 38 |
| | | 763 |

Pesticide Related Interventions – External Training, FY2021

| Classes (Workshop & Internet) | Sessions | Attendees |
|---|----------|-------------|
| Hazard Communication – Aligned with GHS (HazCom) Virtual workshop | 7 | 122 |
| Hazard Communication – Aligned with GHS (online English) | | 1899 |
| Hazard Communication – Aligned with GHS (online Spanish) | | 110 |
| Personal Protective Equipment (General – all Industries) (online) | | 2252 |
| Worker Protection Standard (WPS) | 5 | 48 |
| | | 4500 |

Source: Information Technology and Research Section, Central Services Division, Oregon Department of Consumer and Business Services, December 2021

Consultative Services FY2021

Consultations addressing WPS

| Industry (NAICS) | | Health | Safety |
|------------------|--------|--------|--------|
| <i>Totals</i> | | 5 | 9 |
| Selected NAICS | 111339 | 1 | - |
| | 111998 | 2 | - |
| Other NAICS | 111335 | 2 | - |
| | 493190 | - | 1 |
| | 562998 | - | 1 |
| | 713940 | - | 1 |
| | 921140 | - | 6 |

Source: Information Technology and Research Section, Central Services Division, Oregon Department of Consumer and Business Services, December 2021

Public Outreach: Oregon OSHA tracks publication circulation and video requests. The next few tables show activity for FY2021.

Oregon OSHA Publications in FY2021

| Titles | Number Distributed |
|--|--------------------|
| Pesticide Use and Your PPE | 77 |
| Safe Practices When Working Around Agricultural Chemicals (English/Spanish) | 4003 |
| The Air You Breathe: Oregon OSHA's Respiratory Protection Guide for Agricultural Employers | 2 |
| Pesticide Worker Protection Standard reference guide | 51 |

Oregon OSHA Resource Center Pesticide-related Videos, FY20201

| | Name | English | Spanish | Requests |
|-----|---------------------------------------|---------|---------|----------|
| 392 | PESTICIDE SAFETY FOR FORESTRY WORKERS | X | X | 1 |
| 169 | WORKING SAFELY IN THE GREENHOUSE | X | X | 3 |

*Source: Information Technology and Research Section, Central Services Division,
Oregon Department of Consumer and Business Services, December 2021*

Oregon OSHA On-Line Pesticide-related Videos, FY 2021

| Name | English | Spanish | Views |
|--|---------|---------|-------|
| Application Exclusion Zone Explained | X | | 110 |
| Application Exclusion Zone Explained (Spanish) | | X | 88 |

*Source: Information Technology and Research Section, Central Services Division,
Oregon Department of Consumer and Business Services, December 2021*

◆ Oregon Pesticide Symposium—Multi-Agency Annual Meeting:

The annual Oregon Pesticide Symposium was held virtually in April due to COVID-19. One benefit of the virtual meeting was the increased attendance by the Oregon Department of Forestry and the Washington Department of Agriculture. A new venue at the Chemeketa Community College's new Agriculture Center is the planned location for the 2022 Oregon Pesticide Symposium.

Conclusions:

The working relationships between Oregon OSHA and the Region 10 Enforcement and Compliance Assurance Division in the Air & Toxics Enforcement Section, formerly known as the EPA Pesticides Unit remains positive and productive. This also includes the cooperative nature between the entire Region 10 partners including the departments of agriculture in Washington, Idaho and Alaska, and the PSEPs in those states. PARC remains a vital connection for communicating and coordinating agency actions related to pesticide exposure incidents.

◆ Accomplishments:

- ◆ Provided input into the development and review of the newly published National Non-Soil Fumigation Core Manual through the Pesticide Education Resources Collaborative.
- ◆ Consultative services section developed web-based outreach materials for the Cannabis grow and processing industry.
- ◆ Brought informative discussion to the issues related to pesticide storage and wildfire.

◆ Goals for the coming year:

- ◆ Develop a fact sheet on ways to reduce take home contamination for landscapers. Landscapers who perform pesticide applications have increased opportunities for pesticide exposure due to the lack of decontamination supplies on their vehicles by spraying and moving site to site with the resulting vehicle contamination.
- ◆ Translate the "Information for the Landscaping Profession" booklet into Spanish.
- ◆ Continue the development with the PARC member agencies on the pesticide storage publication with Oregon specific requirements to aide in the design and construction of these facilities.
- ◆ Create a Disinfectant web page to address the specific applicable Oregon OSHA rules that apply, including links to materials developed by the National Pesticide Information Center to aide in the proper use, as well as links to the Oregon Department of Agriculture to ensure proper licensing requirements are met.