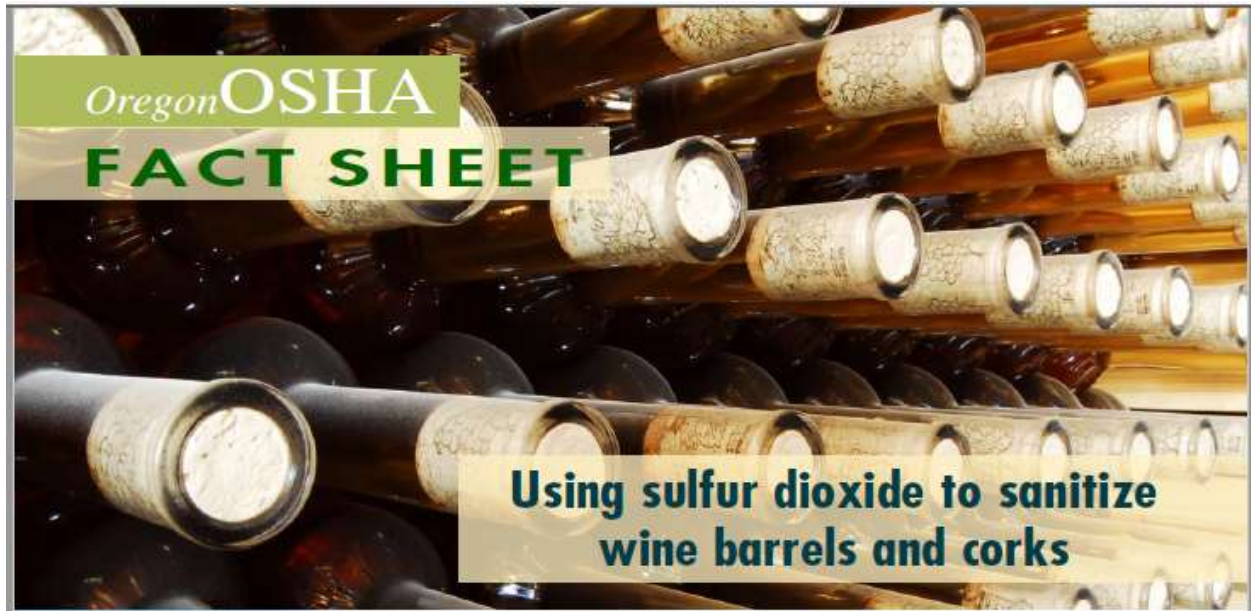


OREGON OSHA PESTICIDE EMPHASIS PROGRAM ANNUAL REPORT Federal Fiscal Year 2017



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Introduction:

Oregon OSHA and the United States Environmental Protection Agency (EPA), Region 10 Pesticides and Toxics Unit, 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 2017 (FY2017). 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 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 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 programmed Agricultural Health 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 FY2017 activity. Please see each section for tables and explanations of each.

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◆ **Inspection Activity:**

In FY2017, 57 inspections were done, with 45 inspections (79%) resulting in citations, and covering 1152 employees. The Worker Protection Standard (WPS) was applicable in 44 inspections, indicated by Tier 1 and Tier 2 in the table below. For all pesticide emphasis inspections where WPS was applicable, 80% (35/44) were classified as Tier 1 and 20% (9/44) 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.

In the selected NAICS, 37 inspections were conducted with citations issued in 31 cases, of these, 94% (29/31) were classified as WPS Tier 1 inspections. Of the 57 pesticide emphasis inspections, 23% (13/57) fell outside the scope of the Worker Protection Standard.

Statistics for Completed Inspections by Industry (NAICS), FY2017

Industry (NAICS)		Completed inspections	Citation issued	In compliance	Percent with citation issued	Percent in compliance	WPS Tier 1	WPS Tier 2	Pesticide Emphasis, Non-WPS	Employees covered
Selected NAICS	111339	5	4	1	80	20	5	0	0	106
	111421	13	10	3	76.9	23.1	7	6	0	310
	111422	9	8	1	89	11	8	1	0	122
	111998	7	7	0	100	0	7	0	0	51
	115112	3	2	1	67	33	2	1	0	62
	111219	2	1	1	50	50	2	-	-	65
	111334	1	1	0	100	-	-	-	1	16
	111419	3	2	1	67	33	2	1	-	78
	113210	1	1	0	100	0	1	-	-	12
	113310	2	0	2	-	100	-	-	2	11
	115310	1	1	0	100	-	1	-	-	1
	237990	1	0	1	-	100	-	-	1	4
	441120	1	1	0	100	-	-	-	1	13
	484220	1	0	1	-	100	-	-	1	23
	561710	1	1	0	100	-	-	-	1	7
	561730	1	1	0	100	-	-	-	1	16
	611310	1	1	0	100	-	-	-	1	8
	621111	1	1	0	100	-	-	-	1	15
	622110	1	1	0	100	-	-	-	1	150
	623312	1	1	0	100	-	-	-	1	70
624410	1	1	0	100	-	-	-	1	12	
Total		57	45	12	79%	21%	35	9	13	1152

Source: Information Management Division, Oregon Department of Consumer and Business Services, December 2017

Based on the types of inspections listed below, 28 were programmed planned and all of these were completed in the selected NAICS. There were 20 complaint inspections with 65% (13/20) receiving citations; of these 85% (11/13) had serious violations. There were 9 referrals in FY2017 with 66% (6/9) receiving citations; with 83% (5/6) having serious violations. Complaints accounted for 35% (20/57) of the total inspections conducted. Two of the complaints involved Cannabis grow operations, and both had serious violations.

Attempted and completed inspections by inspection type and industry (NAICS), FY2017

	Total	Selected NAICS					Other NAICS
		111339	111421	111422	111998	115112	
Total completed inspections	57	5	13	9	7	3	20
Complaint	20	1	3	2	1	0	13
Referral	9	0	0	0	0	2	7
Programmed Planned	28	4	10	7	6	1	0
Attempted (triple zero)	21	4	6	1	3	0	7

Source: Information Management Division, Oregon Department of Consumer and Business Services, December 2017

◆ Violation characteristics:

The following table highlights the distribution of violations. In FY2017, there were 232 pesticide related violations cited with penalties totaling \$8950. WPS penalties accounted for \$3740. In the selected NAICS 189 violations were cited with penalties totaling \$4900. WPS violations accounted for 47% (89/189) of those violations with penalties totaling \$2800. Pesticide-related violations 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 FY2017 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	111339	30	6	7	0	670	10	7	0	440
	111421	47	1	21	0	180	3	22	0	540
	111422	57	7	21	0	420	4	25	0	220
	111998	44	9	11	1	880	6	15	2	900
	115112	11	5	0	0	650	3	3	0	0
	Totals	189	28	60	1	\$2800	26	72	2	\$2100
	111219	11	5	1	0	420	4	1	-	210
	111334	1	-	-	-	-	1	-	-	200
	111419	6	1	-	-	100	4	1	-	660
	113210	3	2	-	-	300	-	1	-	0
	113310	0	-	-	-	-	-	-	-	0
	115310	5	1	-	-	120	4	-	-	120
	237990	0	-	-	-	-	-	-	-	0
	441120	1	-	-	-	-	-	1	-	0
	484220	0	-	-	-	-	-	-	-	0
	561710	1	-	-	-	-	-	1	-	100
	561730	4	-	-	-	-	4	-	-	120
	611310	1	-	-	-	-	1	-	-	300
	621111	2	-	-	-	-	2	-	-	200
	622110	3	-	-	-	-	3	-	-	\$600
	623312	2	-	-	-	-	-	2	-	0
624410	3	-	-	-	-	3	-	-	500	
	Totals	43	9	1	0	\$940	26	8	0	\$3010
Grand Total		232	37	61	1	\$3740	52	79	2	\$5110

Source: Information Management Division, Oregon Department of Consumer and Business Services, December 2017

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 of 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 personal protective equipment (PPE-Respirators and PPE-Other), hazard communication and pesticide storage.

Pesticide Violations Cited in FY2017

	Violation type	Violations
Handler related	PPE Respirators	34
	PPE- Other	34
	Hazard communication	35
	Pesticide storage	30
	Central posting	14
	Training	16
	Decontamination	9
	Emergency eyewash	9
	Label specific information	2
	Health Hazard Control Measures/Hazard ID	7
	Fumigants	2
Worker related	Central posting	21
	Training	7
	Safe Practices brochure	6
	Notification to workers	3
	Early Entry	5
	Decontamination	1
	Non-pesticide related	23

Source: Information Management Division, Oregon Department of Consumer and Business Services, December 2017

Pesticide Analytical Response Center (PARC) Cases: For the seven PARC cases listed, WPS applied in none of the cases. The pesticides involved were primarily insecticides (57%); herbicides (14%) and disinfectants (14%). Five of the seven PARC cases originated as complaints to Oregon OSHA. There were three cases with multiple people exposed. Health care facilities accounted for the most frequent type of establishment. There were none in agriculture.

PARC Cases with Oregon OSHA Involvement in FY2017									
Source	Exposure Type	Product	Signal Word	# Exp	Type of Establishment	WPS Applies	Citation Issued	Primary cause	Medical Treatment sought
C*	Inhalation	Hot Shot Flying Insect Killer	Caution	1	Health Clinic	no	yes	Failure to follow label	yes
C	Bystander	Undetermined	Unknown	1	Forestry	no	no	Unable to determine	no
C	Bystander exposure	Hot Shot Ant & Roach Killer	Caution	1	Assisted living facility	no	yes	Failure to inform, no SDS	no
R*	Dermal contact, inhalation	Tempo SC Ultra Premise Spray	Caution	6	Child care	no	yes	Failure to train, failure to notify	yes
OERS*	Inhalation, dermal contact	Chlorpyrifos & Sulfotepp	N/A	4	Road Maintenance Culvert cleaning	no	no	Illegal dumping, Fire Dept. no restrict access	yes
C	Inhalation	Big N Tuf (Glyphosate)	Caution	1	Landscaping	no	yes	Small spill inside enclosed area in summer	yes
C*	Dermal contact, inhalation	Virex Plus One Step	Danger	6	Hospital	no	yes	Inadequate PPE, Hazard training deficient	no

Source: C = Complaint filed with Oregon OSHA; R = Referral from PARC; OERS = Oregon Emergency Response System; # exp = the number exposed; ER= Report of hospitalization submitted by employer; * indicates narrative to follow.

◆ Four PARC Cases Highlighted

The following narratives (referenced in the previous table with an asterisk) provide a synopsis for four cases.

A complaint was received regarding an adverse pesticide exposure at a cardiac physician's office that resulted in a joint investigation by Oregon OSHA and the Oregon Department of Agriculture. The office had experienced a problem with their HVAC system that, while under repair, resulted in a severe infestation of flies that inundated the clinic. One of the clinic's physicians complained, and the wife of the clinic's owner went and purchased a consumer product "Hot Shot Flying Insect Killer." She proceeded to use the product in the waiting area and in exam rooms while workers were present. The product label stated when used as a space spray: "Close all doors and windows, point nozzle upward. Direct spray into all parts of the room, especially windows and other light sources that attract insects. Fill room with mist, then leave treated area immediately. Keep room closed for at least 15 minutes. Ventilate the room when treatment is complete." The product label directed the applicator to immediately exit the structure, which demonstrated the product was not intended to be used in an area with other people present. One employee had an acute asthmatic episode. Serious violations were issued by Oregon OSHA, and the Oregon Department of Agriculture issued violations as well.

An incident at a child care facility was brought to PARC's attention by a newspaper reporter. It was not reported to PARC by the county health department, Oregon Department of Education's Early Learning Division or by any of the center's employees. The facility had an issue with fleas and the child care owner purchase an insecticide -Tempo SC Ultra Premise Spray- at a farm supply store. The child care owner's husband applied the product to the carpets. An additional application was made by the building owner. Numerous children as well as 6 employees were affected. Multiple PARC agencies were involved, with media attention as well. The owner shut the business prior to the initiation of the inspection and did not re-open. Multiple serious violations were alleged by Oregon OSHA, with the Oregon Department of Agriculture also issuing violations.

OERS made a referral to PARC after receiving a report from the director of Polk County Public Works who reported 4 employees had been exposed to two organophosphate insecticides, Chlorpyrifos and Sulfotepp plugging a culvert pipe. Two employees had had attempted to jet route a culvert pipe when they encountered a blockage, and upon a second attempt, the contamination shot out of the pipe, and was carried on the wind toward one employee who received substantial contact, with the second employee mildly exposed. They moved further up the road, decontaminated with water, contacted their supervisor, and returned to the shop. There they decontaminated with soap and water and then went home to shower. The most affected employee became ill almost immediately. The two additional employees affected were the director and the employees' supervisor who went to the site the following day after the fire department had "cleared" it and suffered minor effects when they attempted to look inside the culvert. All four sought medical care at a local immediate care clinic where they were told they couldn't be treated as the agent was unknown. The director then contacted an environmental cleanup contractor who sampled, and when the results were received, OERS was notified. The most affected employee sought additional medical care. Chlorpyrifos levels were 207,000 ppm, and Sulfotepp at 678 ppm. DEQ contracted two cleanups of the site, and EPA Criminal Investigation opened an investigation.

A confidential complaint was filed alleging exposure over a period of time in a large hospital to the disinfectant Virex Plus One-step Disinfectant & Deodorant. Employees used diluted Virex in a tub to clean walls, beds, counters, etc., where it would some times splash. Employees wore short nitrile gloves and no eye protection. Hazard training was deficient on chemicals. Interviews revealed 6 employees had experienced adverse health effects, although none sought medical treatment. Symptoms included nasal irritation, tingling lips, eye burns, respiratory irritation, skin irritation. Serious violations were alleged inadequate personal protective equipment.

◆ External Training:

External training consists of speaking requests performed in conjunction with Oregon Department of Agriculture credit events and workshops put on by the Oregon OSHA Public Education Section. Speaking requests were conducted mostly in conjunction with day long multi-pesticide agendas put on by grower groups, such as the Horticultural Society, the Oregon Agricultural Chemical and Fertilizer Association's Pesticide Stewardship Seminars, the Oregon Department of Agriculture, or the Oregon State University Extension Service, for the purpose of maintaining credits for pesticide licensees.

Oregon OSHA speaking requests in FY2017

Date	Topic	Attendees
10/19/2016	Reducing Pesticide Exposure	52
10/26/2016	Respiratory Protection for Ag Ops	10
11/1/2016	What do the Changes to WPS Mean to You?	175
11/2/2016	What do the Changes to WPS Mean to You?	314
12/6/2016	Pesticide Spills	25
12/6/2016	Respiratory Decoding	70
12/8/2016	Respiratory Protection Ag Ops/SO2	11
12/8/2016	Revised WPS Training Requirements for Trainers	30
1/3/2017	How to Read an SDS	230
1/3/2017	Worker Protection Standard	30
1/17/2017	WPS: Train the Trainer	22
1/19/2017	WPS: Train the Trainer	18
1/25/2017	Cooke n' Cohen in: Spraying with Safety in Mind	45
1/26/2017	Cooke n' Cohen in: Spraying with Safety in Mind	28
2/1/2017	Pesticides and Personal Protective Equipment	110
2/7/2017	Pesticide Spills: Learning from History	68
2/7/2017	WPS: Train the Trainer	25
2/9/2017	Respiratory Protection Ag Ops/SO2	14
2/10/2017	Preventing Pesticide Spills	83
2/14/2017	WPS: Train the Trainer	20
2/16/2017	WPS: Train the Trainer	30
3/2/2017	Respirators and the Worker Protection Standard	32
4/6/2017	Respiratory Protection Ag Ops/SO2	10
4/11/2017	PPE for Pesticides	18
4/11/2017	Cannabis & Pesticides	16
4/12/2017	Hazard Communication Aligned with GHS	30
6/27/2017	OG Analytical – Cannabis Science Pub	25
0/14/2017	SHARP Alliance: Safety and Health in the Marijuana Industry	15
		1556

Consultative Services FY2017

Consultations addressing WPS	
111339	2
111421	2
111998	5
Other NAICS	44
Total	53

Source: Information Management Division,
Oregon Department of Consumer and Business Services, December 2017

Pesticide Related Interventions – External Training, FY2017

Classes (Workshop & Internet)	Sessions	Attendees
Hazard Communication – Aligned with GHS (HazCom)	7	852
Personal Protective Equipment (PPE)	Internet	990
Worker Protection Standard (WPS)	5	60
		1902

Source: Information Management Division,
Oregon Department of Consumer and Business Services, December 2017

Public Outreach: Oregon OSHA tracks publication circulation and video requests. The next few tables show activity for FY2017.

Oregon OSHA Publications in FY2017

Titles	Number Distributed
Pesticide Use and Your PPE	494
Safe Practices When Working Around Agricultural Chemicals (English/Spanish)	9649
Air You Breathe: Oregon OSHA's Respiratory Protection Guide for Agricultural Employers	419
Pesticide Worker Protection Standard reference guide	329
Agricultural Activities AO 3-2014	18

Oregon OSHA Resource Center Pesticide-related Videos, FY2017

No	Name	English	Spanish	Requests
1177	A SAFE PLACE FOR YOUR CHILD/ UN LUGAR SEGURO PARA SUS NINOS		X	1
170	PESTICIDE HANDLERS AND THE WORKER PROTECTION STANDARD	X		1
171	PESTICIDE HANDLERS AND THE WORKER PROTECTION STANDARD		X	1
285	PESTICIDE SAFETY FOR AGRICULTURAL WORKERS	X	X	5
323	PESTICIDE SAFETY WORKER PROTECTION (1987. REVISED 1997)	X	X	1
169	WORKING SAFELY IN THE GREENHOUSE	X		1
				10

Source: Information Management Division, Oregon Department of Consumer and Business Services, December 2017

◆ Oregon Pesticide Symposium—Multi-Agency Annual Meeting:

The annual Oregon Pesticide Symposium was held in March 2017. The Oregon Pesticide Symposium provides opportunities for agencies to collaborate and coordinate around pesticide safety and worker protection issues. The number of agencies present and people in attendance has grown. Agencies represented included: Oregon OSHA, Oregon Department of Agriculture, Oregon Department of Forestry, Oregon Department of Environmental Quality, Oregon Health Authority, Oregon Liquor Control Commission, Oregon Department of Transportation, Oregon State Fire Marshal, Oregon Institute of Occupational Health Sciences, the National Pesticide Information Center, the Marion Soil and Water Conservation District, Oregon State Police, Marion County Sheriff's Office, Oregon State University and the EPA Region 10.

◆ Conclusions:

The working relationships between Oregon OSHA and the EPA Pesticides Unit (Region 10) remain positive and productive. Oregon OSHA has continued to provide assistance to the EPA on developing solutions to the outdated and incorrect respirator language on pesticide labels. PARC remains a vital connection for communicating and coordinating agency actions related to pesticide exposure incidents.

◆ Accomplishments:

- ◆ Collaborated with Oregon Department of Agriculture and Oregon State University to develop a WPS Train-the-Trainer program for Oregon. Four sessions were conducted around the state in 2017.
- ◆ Partnered with the Oregon Department of Agriculture to provide outreach and education on the use of the compressed gas, Sulfur Dioxide – newly registered as a Restricted Use Pesticide- to wineries who use the product to disinfect empty wine barrels. Conducted 3 4-hour workshops in 2 locations.
- ◆ Developed a fact sheet on using Sulfur Dioxide gas to sanitize wine barrels and corks.
- ◆ Presented an entire track at the Governor's Occupational Safety and Health Conference on the health and safety aspects associated with the emerging Cannabis industry.
- ◆ Continued to update and provide assistance to the regulated communities regarding the changes made to the Worker Protection Standard.
- ◆ Oregon OSHA completed rulemaking changes to the Worker Protection Standard made by EPA, with the exception of the application exclusion zone (AEZ) in outdoor production areas. Oregon OSHA provided additional opportunity for stakeholders comments and financial impact analysis. Final rulemaking on AEZs is still pending. Oregon OSHA contributed to producing the , "Worker Protection Standard Respirator Protection Guide: Requirements for Employers of Pesticide Handlers." (www.pesticideresources.org) Kathleen Kincade and Garnet Cooke were principal authors in the development of this 45 page guide.
- ◆ Presented on-going efforts to correct respiratory protection language on pesticide labels at the Pesticide Stewardship Alliance Conference in San Diego, California.
- ◆ Oregon OSHA completed the annual review and updated the "Pesticide Incident Referral Procedures" Standard Operating Procedure (SOP) #58 that ensures effective communication between Oregon OSHA and PARC on when pesticide exposures occur in the work setting.

◆ Goals for the coming year:

- ◆ Develop outreach for the newly regulated marijuana industry with regards to pesticide use.
- ◆ Develop outreach for the resulting rules regarding the Application Exclusion Zone.
- ◆ Partner with worker advocacy groups to produce easy to understand pesticide safety information for labor housing occupants.
- ◆ Oregon OSHA will update Program Directive A-235, "Local Emphasis Program for Pesticides" to add cannabis grow operations and "Pesticide Incident Referral Procedures" - SOP # 58.