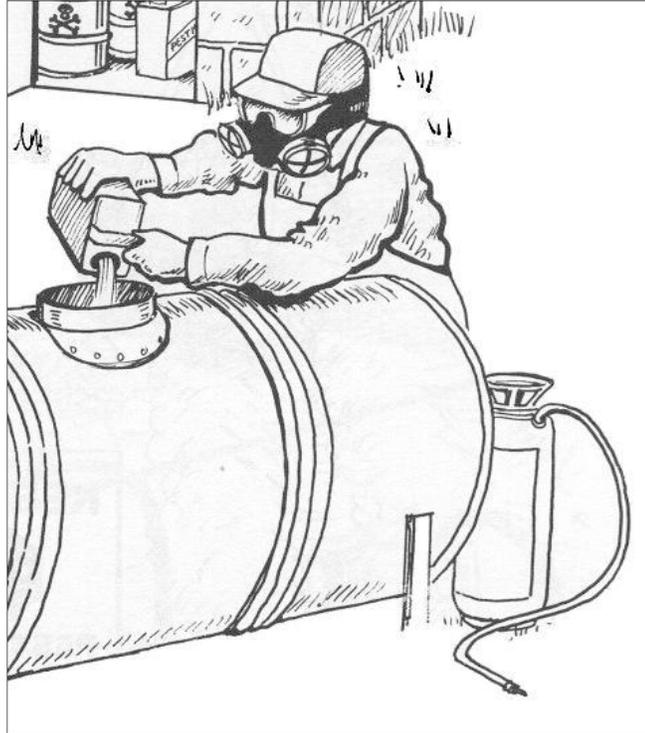


# **OREGON OSHA PESTICIDE EMPHASIS PROGRAM ANNUAL REPORT**

**Federal Fiscal Year 2010**



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# **Oregon OSHA Pesticide Emphasis Program FFY 2010 Annual Report**

## **Introduction**

Oregon OSHA (OR-OSHA) and the United States Environmental Protection Agency (EPA), Region 10 Pesticides and Toxics Unit, have worked together on pesticide safety issues since 1993. OR-OSHA enforces the Worker Protection Standard, which is supplemented with a pesticide emphasis program. The Pesticide Emphasis Program has been in effect since 2000. This report is the annual review of the pesticide emphasis program for federal fiscal year 2010 (FFY 2010). 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 OR-OSHA's Program Directive A-235, entitled "Local Emphasis Program for Pesticides." Inspections were completed from a programmed list selected from the following list of North American Industrial Classification System (NAICS) codes they 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 Nursery & Tree Production
- NAICS 111422 Floriculture Production
- NAICS 115112 Crop preparation including pesticide spraying

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, and 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 FFY 2010 activity.

## Inspection Activity

In FFY 2010, 86 inspections were completed which identified 385 pesticide-related violations. Shown in the table below are the inspections attempted, whether they were Complaint, Referral or Program Planned inspections. A Program Planned inspection means it was a scheduled Pesticide Emphasis inspection from the emphasis list.

Summary tables show previous inspection data for 2002 thru 2009 and are included as a reference.

Inspection type	Federal fiscal year								
	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total completed inspections	89	72	61	75	74	74	99	90	86
Fat/Cat	1	-	-	-	-	-	-	-	-
Complaint	8	10	8	9	4	9	11	7	8
Referral	11	5	4	6	8	11	15	8	9
Monitoring	-	-	-	-	-	1	-	-	-
Follow-up	-	-	-	-	-	-	-	-	1
Unprog. Related	1	2	-	-	-	-	2	-	3
Programmed Planned	68	55	49	60	62	52	70	73	63
Programmed Related	-	-	-	-	-	1	1	2	2
Attempted (triple zero)	12	30	19	22	16	11	18	11	11

## Attempted and Completed inspections by inspection type

*Source: Information Management Division, Oregon Department of Consumer and Business Services, January 2011*

The table below denotes whether the completed inspections were Tier 1\* or Tier 2\*\* inspections, with further discussion on the following page.

## Completed inspections by WPS/emphasis type

Inspection type	Federal fiscal year								
	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total completed inspections	89	72	61	75	74	74	99	90	86
WPS Tier 1	46	46	39	56	55	49	77	74	70
WPS Tier 2	22	17	12	12	15	16	14	11	8
WPS (no tier specified)	13	-	-	-	-	-	-	-	-
Pesticide Emphasis, Non-WPS	8	9	10	7	4	9	8	5	8

\*Tier 1 Inspections: Pesticides used within the preceding 30 days plus the restricted entry interval

\*\*Tier 2 Inspections: Pesticides NOT used within the preceding 30 days plus the restricted entry interval.

### Violation characteristics

Of the 385 pesticide-related violations in FFY 2010, 19% (72/385) were cited as serious. Within the Selected NAICS, 84% (61/72) violations were classified as serious. These included violations of the Worker Protection Standard (WPS) and other occupationally-related standards pertaining to pesticides. Pesticide-related violations include the Oregon OSHA standards addressing hazard communication, respiratory protection, emergency eyewash, supervision, pesticide storage and fumigation. From the previous tables, WPS Tier 1 inspections accounted for 81% (70/86) of the pesticide emphasis inspections, and 19% (16/86) were Tier 2. Sixty-three of the 86 inspections were programmed planned. In FFY 2010, there were 3 repeat violations. A violation is termed a repeat when a specific standard is violated, is corrected, and occurs again within a three-year period. To encourage employers to maintain diligence in preventing the reoccurrence of previously cited violations, repeat violations carry higher penalties. These data support the continued focus of our inspection resources within the Selected NAICS as an effective means to address worker protection and pesticide safety.

## Pesticide violations and penalties in FFY 2010

Industry (NAICS)		Total violations	WPS Violations				Pesticide Related / Other Violations			
			Serious	Other than serious	Repeat	Total penalties	Serious	Other than serious	Repeat	Total penalties
Selected NAICS	111339	134	6	65	1	\$1,025	6	56	-	\$695
	111421	87	1	42	1	\$365	5	37	1	\$840
	111422	15	-	11	-	\$0	-	4	-	\$200
	111998	113	10	41	-	\$2,190	28	34	-	\$2,350
	115112	7	5	-	-	\$350	-	2	-	\$0
Other NAICS	111219	1	-	-	-	-	-	1	-	\$0
	111331	7	-	1	-	\$0	-	6	-	\$0
	111332	2	-	2	-	\$0	-	-	-	-
	111334	1	-	1	-	\$0	-	-	-	-
	111336	2	-	1	-	\$0	-	1	-	\$0
	111940	6	4	1	-	\$375	1	-	-	\$0
	115115	10	2	2	-	\$165	4	2	-	\$165
<b>Total</b>		385	28	167	2	\$4,470	44	143	1	\$4,250

*Source: Information Management Division, Oregon Department of Consumer and Business Services, January 2011. 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.*

**Summary of previous years:**

The tables below summarize inspections, violations and penalties for federal fiscal years 2002 through 2010.

**Stats for completed inspections by federal fiscal year**

Federal fiscal year	Completed inspections	Citation issued	In compliance	Percent with citation issued	Percent in compliance	WPS Tier 1	WPS Tier 2	WPS (no tier specified)	Pesticide Emphasis, Non-WPS	Employees covered
2002	89	69	20	77.5	22.5	46	22	13	8	1,884
2003	72	63	9	87.5	12.5	46	17	-	9	1,928
2004	61	45	16	73.8	26.2	39	12	-	10	2,235
2005	75	60	15	80.0	20.0	56	12	-	7	1,561
2006	74	59	15	79.7	20.3	55	15	-	4	2,779
2007	74	66	8	89.2	10.8	49	16	-	9	1,792
2008	99	87	12	87.9	12.1	77	14	-	8	2,361
2009	90	80	10	88.9	11.1	74	11	-	5	2,214
2010	86	69	17	80.2	19.8	70	8	-	8	2,411

**Pesticide violations and penalties, FFY totals**

Federal fiscal year	Total violations	WPS Violations					Pesticide Related / Other Violations				
		Serious	Other than serious	Repeat	General	Total penalties	Serious	Other than serious	Repeat	General	Total penalties
2002	299	27	85	-	-	\$3,065	47	132	8	-	\$6,040
2003	315	29	88	-	-	\$3,225	38	159	1	-	\$2,490
2004	271	26	62	2	-	\$3,580	29	147	5	-	\$4,465
2005	324	7	122	-	-	\$1,575	28	167	-	-	\$3,400
2006	316	22	121	2	-	\$3,580	23	144	4	-	\$2,065
2007	409	42	127	1	6	\$5,925	80	131	1	21	\$23,365
2008	492	23	187	1	-	\$4,055	98	176	1	6	\$10,175
2009	448	30	160	-	-	\$5,735	103	154	1	-	\$15,760
2010	385	28	167	2	-	\$4,470	44	143	1	-	\$4,250

*Source: Information Management Division, Oregon Department of Consumer and Business Services, January 2011  
 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 divided up into either handler or worker related, showing the categories of issues for each group.

### **Pesticide violations cited in FFY 2010**

	<b>Violation type</b>	<b>Violations</b>
<b>Handler related</b>	Central posting	45
	Decontamination	25
	Emergency eyewash	5
	Fumigation	7
	Hazard communication	43
	Label specific	2
	Notice of app to ag emps	5
	PPE - Other	36
	PPE - Respirators	59
	Pesticide storage	45
	Training	22
<b>Worker related</b>	Central posting	41
	Decontamination	5
	Health haz control measures	1
	Notification to workers	8
	Safe practices	6
	Training	15
<b>Other</b>	Other	15

While the violations for many of the above topics have remained relatively stable, one area has seen a significant decrease. The requirement for a 15-minute emergency eyewash became effective in fall of 2006 (FFY 2007 Pesticide Emphasis Report) and was cited 23 times that year, and the following year it was cited 25 times. In FFY 2010, the lack of a 15-minute emergency eyewash was only cited 5 times.

## Inspection History for WPS Inspections:

### WPS Tier 1

Previous Oregon OSHA inspections prior to FFY 2010	Inspection results from FFY 2010					Total employers
	Cited for WPS Violations	Cited for other pesticide violations	Cited for non-pesticide violations	Ag Exempt	In compliance - no violations	
Last health inspection was within the last five years	24	1	1	-	1	27
Last health inspection was more than five years ago	9	1	-	2	-	12
Previous Oregon OSHA inspection(s) were other than health	17	1	-	-	-	18
Never inspected by Oregon OSHA	10	1	-	-	1	12
<b>Total employers</b>	<b>60</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>69</b>

### WPS Tier 2

Previous Oregon OSHA inspections prior to FFY 2010	Inspection results from FFY 2010					Total employers
	Cited for WPS Violations	Cited for other pesticide violations	Cited for non-pesticide violations	Ag Exempt	In compliance - no violations	
Last health inspection was within the last five years	2	-	-	-	-	2
Last health inspection was more than five years ago	-	-	-	-	-	-
Previous Oregon OSHA inspection(s) were other than health	-	2	-	-	-	2
Never inspected by Oregon OSHA	-	1	-	1	1	3
<b>Total employers</b>	<b>2</b>	<b>3</b>	<b>-</b>	<b>1</b>	<b>1</b>	<b>7</b>

### Pesticide Emphasis, Non-WPS

Previous Oregon OSHA inspections prior to FFY 2010	Inspection results from FFY 2010					Total employers
	Cited for WPS Violations	Cited for other pesticide violations	Cited for non-pesticide violations	Ag Exempt	In compliance - no violations	
Last health inspection was within the last five years	2	1	-	-	-	3
Last health inspection was more than five years ago	-	-	-	1	-	1
Previous Oregon OSHA inspection(s) were other than health	-	-	-	-	-	-
Never inspected by Oregon OSHA	-	-	-	1	2	3
<b>Total employers</b>	<b>2</b>	<b>1</b>	<b>-</b>	<b>2</b>	<b>2</b>	<b>7</b>

*Source: Information Management Division, Oregon Department of Consumer and Business Services, January 2011*  
*If an employer was inspected more than once in FFY 2010 they were categorized only once based on inspection type in the following order of precedence: WPS tier 1; WPS tier 2; non-WPS.*

*If an employer was inspected more than once in FFY 2010 their current inspection results were categorized based on the following order of precedence: WPS violations; other pesticide violations; non-pesticide violations; Ag Exempt; in compliance.*

*If an employer had more than one inspection prior to FFY 2010 they were categorized based on the following order of precedence: health inspection; other than health inspection; no previous inspections.*

## **Pesticide Analytical Response Center (PARC) Cases**

In FFY 2010, there were two occupationally-related pesticide exposure cases referred to Oregon OSHA from PARC which represented six symptomatic individuals.

The first case involved 5 workers, employees of a seed company, pulling 'off types' of grass in a 5-acre grass seed field. The workers were at the south end of the field when a commercial applicator showed up and began spraying the same field. The workers ran to the next field, with the applicator spraying 20 feet from them. Four of the 5 workers experienced symptoms ranging from nose and throat irritation, to nausea, and intense headaches which lasted the rest of the day. The active ingredient of the pesticide involved was 2, 4-D amine. The workers' employer failed to make contact with the grower of the fields the workers enter to identify if any pesticide applications had taken place, or were scheduled to take place. The commercial applicator failed to notify the employer of the workers in the field when he would be making an application. The applicator stated if there were irrigation pipes in the field he would contact the grower; however, he did not follow this same protocol if people were present.

The second case involved a Christmas tree grower who, together with his son, mixed Warhawk (Chlorpyrifos) without wearing any personal protective equipment, and had two teenage (16 and 17 years old) boys spray the pesticide on the Christmas trees using a backpack power mister. The boys would take turns donning the power mister and would walk down a row of Christmas trees, spraying on either side while walking through the mist, returning by walking and spraying down another row. They continued applying in this manner for three hours. The teens were not provided with any personal protective equipment as required by the pesticide label. The label required: long sleeve shirt, long pants, chemical resistant gloves, coveralls, chemical resistant footwear, chemical resistant headgear and a dust/mist respirator. Upon completion the teenagers were instructed to go home and shower. There were no decontamination supplies at the application/mix site. Each drove home in their personal vehicle. The 17 year old took three showers before his skin stopped burning and flushed his eyes with contact solution before his eyes stopped burning. He indicated he had slight difficulty breathing in addition to the burning skin and eyes. He threw away his contaminated clothing. The 16 year old took a quick shower and changed clothes, but wore the same boots and went to work baling straw for another employer. At 7 p.m. his breathing was short, his chest felt tight and had stomach cramps. Twenty minutes later the 16 year old was feeling dizzy and his employer took him to the emergency room. The 17 year old was notified to report to the emergency room as well. In the emergency room the symptoms the 16 year old experienced progressed to include numbness in hands and face, burning eyes, and significant difficulty breathing.

## External Training

External training consists of two parts, workshops put on by the OR-OSHA Public Education Section, and speaking requests performed in conjunction with Oregon Department of Agriculture events. External speaking requests were conducted mostly in conjunction with day long multi-program agendas put on by grower groups, the Oregon Department of Agriculture, or the Oregon State University Extension Service for the purpose of maintaining credits for pesticide licenses. These multi-program events carried the greatest attendance numbers.

## Oregon OSHA speaking requests in FFY 2010

Date	Topic	Group	Location	Attendees
21-Oct	PPE for Pesticides	Oregon Veg Mgmt Assoc	Seaside	298
22-Oct	OR-OSHA's PEP Prog.	NPIC (Nat'l Pesticide Info Center)	Corvallis	13
3-Nov	Pesticide Storage	OACFA	Pendleton	110
4-Nov	Pesticide Storage	OACFA	Springfield	115
5-Nov	Pesticide Storage	OACFA	Wilsonville	198
1-Dec	Respiratory Protection/Ag - 4 hours	Chemeketa Community College	Salem	11
12/3&4	WPS	Hermiston Farm Fair	Hermiston	120
17-Dec	Pesticide Storage	OSU Extention/ via PolyCom	In Salem for LaGrande	40
6-Jan	Pesticide Storage	OSU Chem App Short Course	Wilsonville	110
26-Jan	Pesticide Storage, PPE, Haz Com, PEP inspections -4hours	Horticultural Society	Portland	50
2-Feb	Pesticide Storage	OSU Ext. Weed Day	Douglas County	50
5-Feb	Pesticide Storage	OSU Ext.	Redmond	91
5-Jun	Pesticide Storage	Oregon State Fire Marshal/CR2K	Salem	14
3-Aug	Respiratory Protection /Ag - 4 hours	Chemeketa Community College	Albany	21
4-Aug	Farm/Harvest Safety	Nut Growers	McMinville	180
22-Sep	Pesticide Safety for Roadside Spraying	Oregon Dept. of Transportation	Salem	100
23-Sep	Agriculture Health & Safety	Stayton High School	Stayton	36
				<b>1,557</b>

## Pesticide Related Interventions – External Training, FFY 2010

Agriculture classes	Attendees
401- - Worker Protection Standard, Workshops and on site training	187
203- - Personal Protective Equipment, Workshops and onsite training	147
	<b>334</b>

## Pesticide Inspectors Forum—Multi-Agency Annual Meeting

The joint Oregon-OSHA – ODA Pesticide Inspectors Forum garnered continuing education units for attendees in a multi-agency gathering featuring NIOSH Personal Protective Equipment Testing Laboratory, EPA Region 10 and EPA Headquarters, the National Pesticide Information Center (NPIC), CROET/OHSU, Oregon State University and the Salem-Keizer School District. Topics included an overview of NIOSH's Personal Protective Equipment Testing Laboratory and their new agriculture initiatives; EPA's container containment regulations; Integrated Pest Management Programs in schools; NPIC initiatives and resources; the new soil fumigation requirements; and what Oregon OSHA staff look for during pesticide emphasis inspections for the benefit of other agencies present to aid their understanding of Oregon OSHA requirements, and to assist them in their outreach efforts.

The work of Oregon OSHA's Pesticide Emphasis Program was highlighted in two poster presentations at the joint Agricultural Safety and Health Council of America/NIOSH Conference in Dallas, Texas. Garnet Cooke, Pesticide Coordinator presented: "Preventing Pesticide Exposure: The Oregon OSHA Experience." The second: "Non-Compliance with Personal Protective Equipment Regulations in Agriculture are Common" was presented by Kim Faulkner, PhD., of the NIOSH National Personal Protective Technology Laboratory, et al. The latter used Oregon OSHA data from the Pesticide Emphasis Program inspections. Both abstracts were published in the conference proceedings in the summer 2010 issue of the Journal of Agromedicine.

### **Conclusions**

OR-OSHA enforcement and voluntary compliance activities continue to provide effective means for addressing worker protection and pesticide safety in various ways. The annual meeting among multiple agencies affords opportunities for developing strategies that enhance and improve worker protection. This collaboration and coordination makes for more effective use of limited resources towards enhancing pesticide safety.

### **Accomplishments**

- ◆ A brochure was developed by Oregon OSHA on selection, care and use of personal protective equipment related to pesticides. It is available on-line at <http://www.orosha.org/pdf/pubs/1018.pdf>.
- ◆ The OR-OSHA poster, "Protect Yourself From Pesticides," targeting pesticide safety in forest activities, has been used by the Pacific Northwest Agricultural Safety and Health (PNASH) Center, which is affiliated with the University of Washington, in their own outreach activities.
- ◆ External trainings exceeded last year, even though there were significant reductions within the public education section.
- ◆ Developed an effective multiagency format for the Pesticide Inspector's forum, which was extremely well received by attendees.

### **Goals for the coming year**

- ◆ Conduct referral inspections where pesticide applications are documented during OR-OSHA silviculture inspections.
- ◆ Provide continued assistance to the NIOSH NPPTL program in addressing barriers to the use of personal protective equipment used by pesticide applicators.

## Oregon OSHA publications in FFY 2010

Titles	Internal Oregon OSHA requests	External requests
Safe Practices When Handling Agricultural Chemicals (brochure)	1,200	9,493
Washing pesticide contaminated clothing magnet (Spanish)	75	427
Washing pesticide contaminated clothing (English)	75	810
Cultivate a Safe Environment	150	15
The Air You Breathe	850	315
Field Sanitation Notice	400	389
Agriculture Seasonal Worker Orientation - Discontinued 1/27/10	75	227
Division 4, Agriculture	100	11
Pesticide Use and Your Personal Protective Equipment (PPE)	1,125	537

## Pesticide Related Interventions – Consultative Services – Booth shows, FFY 2010

Show	Date of show
North West Ag Show	January
Willamette Valley Ag Expo	November
Oregon Landscape Expo	December
Far West Ag Show	August

## Oregon OSHA consultations by NAICS in FFY 2010

Industry (NAICS)	Health	Safety*
111339	2	52
111421	6	22
111422	3	2
111998	1	9
115112	-	1
<b>Total</b>	<b>12</b>	<b>86</b>

*\*Does not include pesticides, but identifies outreach potential*

## Oregon OSHA resource center pesticide related videos, FFY 2010

#	Name	English	Spanish	Requests
464	EPA WPS for Orchard Workers	x	x	1
465	EPA WPS for Pesticide Handlers	x	x	0
474	Oregon Pesticide Safety Guide	x		0
475	Oregon Pesticide Safety Guide		x	0
384	Greenhouse Pesticide Safety Training Workers & Handlers	x	x	2
352	How to Conduct Worker Protection Training/Train the Trainer	x		3
380	Pesticide Handlers and the Worker Protection Standard	x		0
383	Pesticide Handlers and the Worker Protection Standard		x	0
600	Pesticide Safety: Help Workers Protect Themselves	x		3
608	Pesticide Safety: Help Workers Protect Themselves		x	4
323	Pesticide Safety Worker Protection Oregon- DVD # 95	x	x	4
392	Pesticide Training for Agricultural Employees	x	x	0
327	Shedding Some Light on Pesticide Protection	x		2
332	Worker Protection Standard An Overview	x		1
1051	Protecting Yourself From Pesticide Hazards	x	x	1
446/ 447	Breathe Easy: Respiratory Protection Program	x	x	14
				<b>35</b>