ESPS Satellite Project

Pesticide Usage Survey and Pesticide Use Reporting

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Ten Butte County growers farming 3,500 of prunes were interviewed to see what changes have taken place in their pesticide usage over the past 5 years. All ten growers have used an annual dormant insecticide and oil treatment to control peach twig borer, San Jose Scale, European Red Mite, mealy plum aphid and leaf curl plum aphid. Many have experimented with not using a dormant insecticide spray program but most continue to use either an organophosphate or pyrethroid spray during the dormant season on much of their acreage because of the likelihood of aphid problems when a dormant spray is not used. Many growers interviewed explained that their spray programs consist of every other row spraying with reduced rates of materials. Table 1 shows the dormant programs used and table 2 show the percentage of acres treated for various pests during the growing season.

In order to see if the results of this grower survey were a good representation of the pesticide usage trends on all prunes in California, Pesticide Use Reports were evaluated over the same years that the survey covered. The results of evaluating the Pesticide Use Reports coincide with the results of the grower survey. Graph 1 clearly shows a trend of fewer acres being treated with Diazinon and Supracide, and more acres being treated with Asana. Graph 2 illustrates the total pounds of pesticides (active ingredients) applied to California prune orchards. This graph was included to show that Oils and Sulfur make up the majority of the pounds of pesticides used as reported by the California Department of Pesticide Regulations.

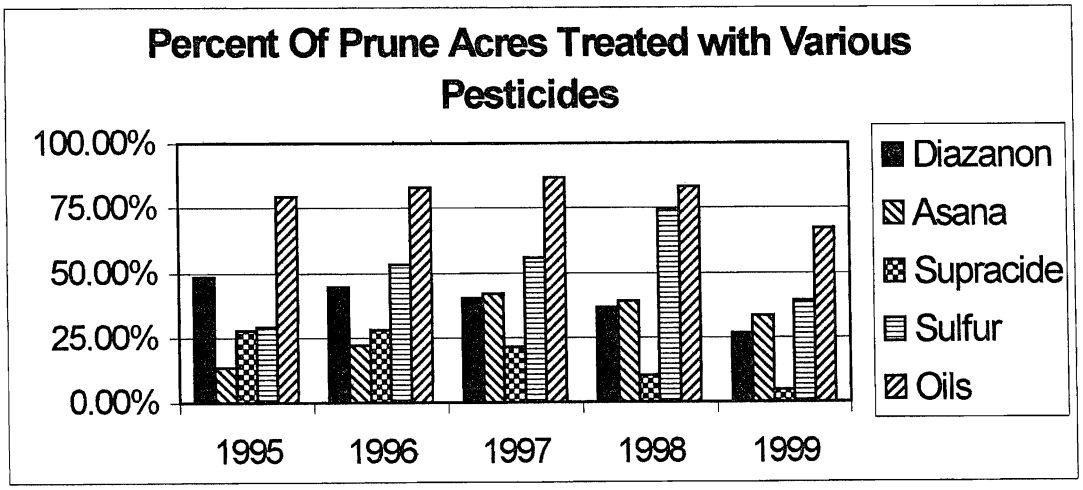
Table 1: Dormant Spray Program of 10 Growers

	Acres Sprayed out of 10 Orchards				% of Acres with	% of Acres with	% of Acres with	
	Total	Diazanon	Supracide/oil	Asana	Diazanon Applied	Supricide/oil Applied	Asana Applied	% Untreated
1995	2620	1075	850	695	41.03%	32.44%	26.53%	0.00%
1996	2620	75	220	1495	2.86%	8.40%	57.06%	31.68%
1997	3195	275	1370	420	8.61%	42.88%	13.15%	35.37%
1998	3195	0	20	1695	0.00%	0.63%	53.05%	46.32%
1999	3500	527	20	1770	15.06%	0.57%	50.57%	33.80%

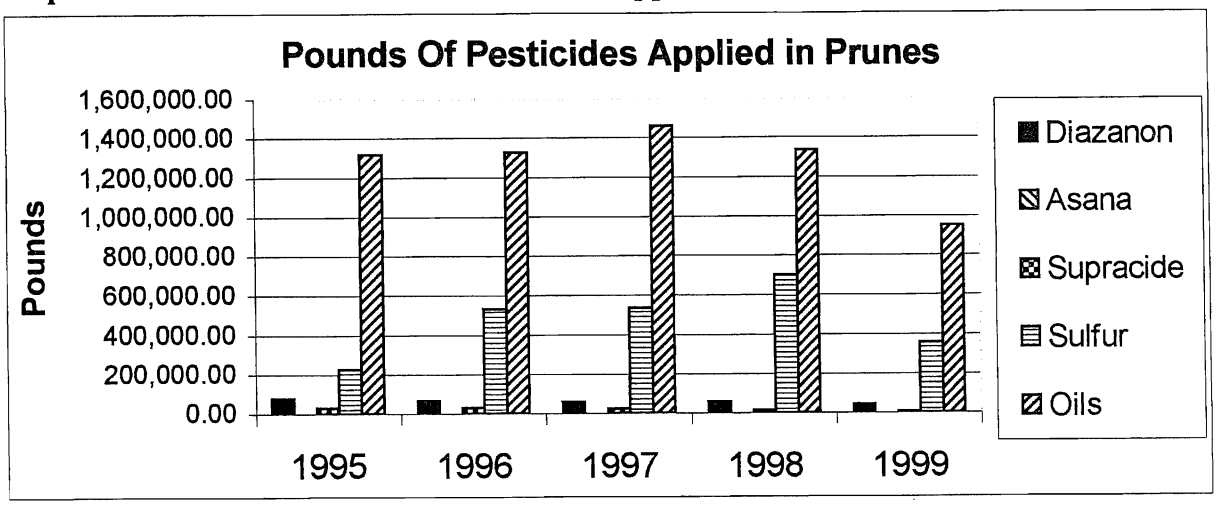
Table 2: Percent of Acreage Treated During the Growing Season for Various Prune Pests by 10 Growers

Percent of Acerage Treated for Various Prune Pests by 10 Growers						
Pest Treated For	1995	1996	1997	1998	1999	Average
Prune Rust	15	73	95	97	67	69.4
Aphids	3	19	0	8	0	6
Brown Rot	0	32	0	30	3	13
Peach Twig Borer	0	19	13	8	0	8
Webspinning Mites	0	2	0	2	7	2.2

Graph 1: Percent of Total Prune Acres in California Treated with Various Pesticides



Graph 2: Total Pounds of Various Pesticides Applied to California Prune Orchards



This survey indicates that there is a fairly clear trend of less reliance on organophosphates and a shift to more pyrethroid dormant season sprays during the 5 years covered by the interview. During the past 4 years about 30 percent of the acreage involved in this survey received no dormant spray. During the growing season, prune rust was the most frequently treated for pest with an average of 70 percent of the acreage being treated with sulfur for prune rust. Aphids and peach twig borer, controlled with dormant insecticide and oil treatments, were rarely treated for during the growing season as was fruit brown rot and web spinning mites.