

Implementation Programs

The Use of Pheromone-Oil as an Areawide Selective Control Program for Pear Pest in Southern Oregon

Philip VanBuskirk, Richard Hilton and Peter Westigard
Oregon State University Southern Oregon Research and Extension Center, Medford, OR

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A pilot selective program to control arthropod pest of pear in southern Oregon was initiated in 1994 on about eighty acres. This program which utilizes codling moth (CM) mating disruption (MD) and three horticultural spray oil applications was expanded in 1995 to about 300 acres in size and contained 10 varieties of pear. Table 1 provides an outline of the basic selective control program that was used by the five orchardists involved in the program.

The program, as outlined above with very little deviation by the orchardists involved, reduced foliar use of organophosphates use by 72% and overall synthetic pesticides by 80%, suppressed primary and secondary pear pests to an average of 1.53% downgrading fruit damage for the season, allowed for the survival of natural enemies, while lowering the total cost of arthropod control.

Along with the strengths of the program, weaknesses were identified: prediction of CM damage from pheromone traps was inadequate when populations were low to moderate; protocols for the monitoring of leafrollers and sucking bugs and natural enemies need improvement; sources of unidentified fruit injury need to be determined; resolution of problem with CM control on orchard borders; grower concerns regarding long-term chronic effects of oil on pear; and concerns regarding gradual buildup in CM levels. This program is ongoing and present plans are to expand the area to 400 acres in 1996.

Table 1. Basic selective control program.

Timing of application	Target pest	Material and rate
Dormant	pear psylla	oil, 4 gal
Delayed dormant	pear psylla San Jose scale pear rust mite	oil, 4 gal lime sulfur, 12 gal
Prior to CM Biofix, about 200 DD	codling moth	Isomate C+, 400/acre
200 DD from CM Biofix	codling moth twospotted mite pear psylla, etc.	Orchex 796 oil, 1%
400 DD from CM Biofix	as above	as above
600 DD from CM Biofix	as above	as above
1250 DD from CM Biofix	codling moth	Guthion or Imidan, 2.5-4 lb