Chemical Control/New Products

SEASONAL CONTROL OF CODLING MOTH IN PEARS

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These trials were conducted at the WSU Tree Fruit Research and Extension Center Smith Tract Block 14 Bartlett pears and Block 4 d'Anjou pears near Orondo, WA. Treatments were applied to plots that were three rows wide by 3 trees long replicated four times in a randomized complete block design. Treatments were applied with an airblast sprayer calibrated to deliver 200 gallons of spray per acre on prebloom applications and 100 gallons per acre on postbloom applications. The outer rows of each plot were sprayed inward only to control overspray to adjacent plots. The middle row was sprayed from both sides to give good overall spray coverage. The Raynox treatments were applied to single tree plots replicated four times using a handgun sprayer at 200 gallons per acre. All insect counts were made on the middle tree of the middle row of each plot or, in the case of the Raynox treatments, on each of the treated trees. The d'Anjou plot was set up as follows: Guthion 50WP was applied on a 21-day schedule for both generations, Calypso 4EC was applied on a 14-day schedule for both generations. Calypso/Guthion was applied at 7 days first generation and 21 days second generation, Calypso/Guthion 14 days first generation, 21 days second generation. Calypso/Guthion was applied at 21 days both generations. Dimilin was applied 14 days first generation and 21 days second generation. Block 14 was sampled once at the end of the season, Block 4 was sampled twice, 6/30 and 9/11. Fifty pears/replicate were examined for codling moth entries. If a tree had less than 50 pears, all pears were examined.

The Bartlett study was against a high population of codling moth; this block had not received any treatment for codling moth in a number of years. The full season application of Raynox provided significant control when compared with the untreated check.

The d'Anjou study examined timing of applications. Calypso provided control equal to the industry standard Guthion. This shows the ability to replace organophosphates with a material able to provide suitable control of codling moth.

Applications—Bartletts

Treatment	Materials	Rates	Dates Applied
Prebloom Surround	Surround	50 lb/acre	24 Mar, 3 Apr, and 10 Apr
Postbloom Surround	Surround	50 lb/acre	24 Mar, 3 Apr, 10 Apr, 25 Apr, 9 May, 24 May, 6 Jun, 27 Jun, 21 Jul
Full season Surround	Surround	50 lb/acre	27 Jun & 27 Jul
Prebloom Raynox	Raynox	40 lb/acre	24-Mar
Postbloom Raynox	Raynox	40 lb/acre	24 Mar, 3 Apr, 10 Apr, 25 Apr, 9 May, 24 May, 6 Jun, 27 Jun, and 21 Jul
Full season Raynox	Raynox	40 lb/acre	25 Mar, 3 Apr, 10 Apr, 25 Apr, 9 May, 24 May, 6 Jun, 27 Jun, and 21 Jul

Results—Bartletts

Treatment	% Infested
Control	81.48
Conventional/Surround	77.53
Surround	56.6
Raynox/conventional	34.78
Conventional/Raynox	27
Raynox	25

Applications—d'Anjou

Control		Rates	Application	Dates
Guthion	50WP	2 lb/acre	21 day both gen	5/18,6/7,7/19,8/8
Calypso	4EC	4 fl oz/acre	14 day both gen	5/11,5/24,6/7,7/7,7/21,8/2
Calypso	4EC	4 fl oz/acre	7 day 1st gen	5/11,5/18,5/24,6/1,6/7,7/19,8/8
Guthion	50WP	2 lb/acre	21 day 2nd gen	7/19,8/8
Calypso	4EC	4 fl oz/acre	14 day 1st gen	5/11,5/24,6,7
Guthion	50WP	2 lb/acre	21 day 2nd gen	7/19,8/8
Calypso	4EC	4 fl oz/acre	21 day 1st gen	5/11,6/1
Guthion	50WP	2 lb/acre	21 day 2nd gen	7/19,8/8
Dimilin	25WP	1 lb/acre	14 day 1st gen	5/11,5/24,6/7
Dimilin	25WP	1 lb/acre	21 day 2nd gen	7/7,7/27

Results—d'Anjou

	% infested		
Treatment	6/30	9/11	Means
Control	22	44.5	a
Guthion	1.5	1	c
Calypso	3	1	c
Calypso/Guthion	0.5	1.5	c
Calypso/Guthion	3.5	4	bc
Calypso/Guthion	6	3.5	bc
Dimilin/Dimilin	7.5	12.5	b

Means followed by the same letter are not significantly different.