## Section 4. Chemical Control/New Products

## NEW INSECTICIDE EVALUATION FOR POSTBLOOM CONTROL OF PEAR PSYLLA

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An experiment to test the effects of experimental and registered insecticides on pear psylla was replicated in two locations. These trials were conducted at the WSU Tree Fruit Research and Extension Center in Wenatchee, WA on pear block 25 and at Smith Tract Triangle near Orondo, WA. Treatments with location in parentheses are shown below:

Materials and Application Summary

Treatment	Materials Applied	Application Rates			
Asana (25 & Triangle)	Asana 0.66 EC	1 PT/A			
Asana/PBO (25 & Triangle)	Asana 0.66 EC/ PBO	1 PT/A, 1 PT/A			
Esteem/Saf-T-Side (25 & Triangle)	Esteem 0.88 EC/ Saf-T-Side	1 PT/A, 0.25% V/V			
Dimilin/Saf-T-Side (25 & Triangle)	Dimilin 25 WP/ Saf-T-Side	3 LB/A, 0.25% V/V			
Comply (25 & Triangle)	Comply	8 OZ/A			
Assail 0.075 (25)	Assail 70 WP	0.075 LB A/A			
Assail 0.15 (25)	Assail 70 WP	0.15 LB A/A			
Assail/Saf-T-Side (25)	Assail 70 WP/ Saf-T-Side	0.15 LB A/A, 0.25% V/V			
Agrimek/Neemix (25)	Agrimek 0.15 EC/Neemix	8 FL OZ/A, 8 OZ/A			
GWN-1535 (25)	GWN-1535	4 PT/A			
Agrimek/Saf-T-Side (25)	Agrimek 0.15 EC/ Saf-T-Side	20 FL OZ/A, 0.25% V/V			
Pyramite/Saf-T-Side (25)	Pyramite 60 WP/ Saf-T-Side	10 OZ/A, 0.25 % V/V			
Pyramite/Saf-T-Side/Savey (25)	Pyramite 60 WP/ Saf-T-Side/ Savey 50 WP	8.8 OZ/A, 0.25% V/V, 4 OZ/A			
Calypso (Triangle)	Calypso	4 FL OZ/A			
Calypso (Triangle)	Calypso	8 FL OZ/A			
Calypso/Saf-T-side (Triangle)	Calypso/ Saf-T-side	4 FL OZ/A, 0.25% V/V			
Calypso/Saf-T-side (Triangle)	Calypso/ Saf-T-side	8 FL OZ/A, 0.25% V/V			
Agri- Mek/Saf-T-side (Triangle)	Agri-Mek/ Saf-T-side	12 FL OZ/A, 0.25% V/V			
BAJ 2740 (Triangle)	BAJ 2740	11 FL OZ/A			
BAJ 2740 (Triangle)	BAJ 2740	18 FL OZ/A			
Pyramite/Saf-T-side (Triangle)	Pyramite/ Saf-T-side	10 OZ/A, 0.25% V/V			
BAJ 2740/Calypso (Triangle)	BAJ 2740 /Calypso	11FL OZ/A, 2 FL OZ/A			
BAJ 2740/Calypso (Triangle)	BAJ 2740 /Calypso	18 FL OZ/A, 3.3 FL OZ/A			

Treatments were applied to single tree plots replicated four times in a randomized complete block design. Treatments were applied with a handgun sprayer at 400 psi to the point of drip, at a spray volume of approximately 200 gal/acre. Application timings were as follows: Dormant (Asana and Asana/PBO at both sites); delayed dormant (Dimilin and Esteem at both locations); clusterbud (Comply at Smith Tract Triangle, and Comply and Assail at block 25); and petal fall (all remaining treatments). Pear psylla adult counts were made by using a beating tray with four tray samples per tree, one from each quadrant of the tree. Psylla egg and nymph counts were made through 20 April by collecting 5 spurs per tree and examining them under a binocular

dissecting scope and counting the number of eggs and nymphs. Starting on 28 April, 25 leaves were collected from each tree, and were brushed with a standard mite-brushing machine onto a glass plate. One-half the plate area was examined using a grid system and the number of egg and nymphs counted and recorded as #'s/leaf. In block 25, Assail at the high rate and Assail with Saf-T-Side were comparable to Comply on nymphs, which was highly effective in controlling pear psylla. For adults, Comply and Agri-Mek/Saf-T-Side were the most effective products, followed by Assail at the high rate, Assail/Saf-T-Side, Agri-Mek/Neemix and GWN-1535. This effect was a result of the overall population suppression provided by these insecticides. At Smith Tract Triangle, Calypso/Oil, BAJ 2740/Oil, BAJ 2740/Calypso and Esteem/Oil provided as good protection as the Industry standard Agri-Mek. If a more conventional program were to be followed, better full season control could possibly be achieved.

Block 25 Seasonal means

Treatment	Eggs		Nymphs		Adults		
Control	167.3	ab	105.5	a	105.2	b	
Asana	150.7	ab	68.66	a-d	103.1	b	
Asana/PBO	145.1	b	64.05	a-d	127.9	a	
Esteem/Saf-T-Side	135.2	ь	81.12	a-d	83.15	cde	
Dimilin/Saf-T-Side	161.2	ab	92.28	ab	102.8	b	
Comply	157.8	ab	46.84	bcd	74.17	е	
Assail 0.075	155.9	ab	37.57	cd	93.5	bcd	
Assail 0.15	142.4	b	33.97	d	81.19	cde	
Assail/Saf-T-Side	140.5	ь	37.28	cd	79.4	cde	
Agrimek/Nemix	213.6	a	70.59	a-d	78.71	cde	
GWN-1535	180.7	ab	78.01	a-d	80.5	cde	
Agrimek/Saf-T-Side	180.8	ab	90.32	ab	75.54	de	
Pyramite/Saf-T-Side	197.6	ab	85.89	abc	89.19	b-e	
Pyramite/Saf-T-Side/Savey	213	a	104.1	a	93.92	bc	

Means within the same column followed by the same letter are not significantly different (p=.05, LSD).

Triangle Seasonal means

Eggs low	Eggs hig	Eggs high Nymphs low		Nymphs high		Adults		
11.83 a	5.4	a	1.017	bc	21.975	b	11.725	de
10.99 a	5.4	a	1.777	a	45.9	a	32.119	a
16.41 a	6.9	a	1.704	a	40.075	a	36.019	a
10.47 b	7.45	a	1.038	bc	22.85	bc	14.45	bcd
17.07 a	7.825	a	1.193	b	30.275	a	20.069	bcd
11.29 a	2.275	a	0.531	С	10.825	bc	10.931	е
7.547 b	3.25	a	0.691	С	12.95	bc	12.931	cde
15.72 a	5.9	a	0.881	С	15.475	a	11.638	cde
10.99 b	3.075	a	0.945	С	14.325	С	13.088	de
11.01 a	3.5	a	0.679	С	9.95	С	12.319	ef
15.31 a	4.275	a	0.873	С	12.45	С	10.981	ef
16.41 a	2.275	a	0.817	С	10.2	С	10.294	cde
18.13 a	4.075	a	1.372	bc	10.975	bc	11.894	cde
16.53 a	7.1	a	1.476	b	25.575	bc	16.3	bcd
17.22 a	3.775	a	1.265	С	11.025	С	7.3313	f
11.73 a	6.025	a	1.196	С	13.075	bc	10.469	ef
	11.83 a 10.99 a 16.41 a 10.47 b 17.07 a 11.29 a 7.547 b 15.72 a 10.99 b 11.01 a 15.31 a 16.41 a 18.13 a 16.53 a 17.22 a	11.83 a 5.4 10.99 a 5.4 16.41 a 6.9 10.47 b 7.45 17.07 a 7.825 11.29 a 2.275 7.547 b 3.25 15.72 a 5.9 10.99 b 3.075 11.01 a 3.5 15.31 a 4.275 16.41 a 2.275 18.13 a 4.075 16.53 a 7.1 17.22 a 3.775	11.83 a 5.4 a 10.99 a 5.4 a 16.41 a 6.9 a 10.47 b 7.45 a 17.07 a 7.825 a 11.29 a 2.275 a 7.547 b 3.25 a 15.72 a 5.9 a 10.99 b 3.075 a 11.01 a 3.5 a 15.31 a 4.275 a 16.41 a 2.275 a 18.13 a 4.075 a 16.53 a 7.1 a 17.22 a 3.775 a	11.83 a 5.4 a 1.017 10.99 a 5.4 a 1.777 16.41 a 6.9 a 1.704 10.47 b 7.45 a 1.038 17.07 a 7.825 a 1.193 11.29 a 2.275 a 0.531 7.547 b 3.25 a 0.691 15.72 a 5.9 a 0.881 10.99 b 3.075 a 0.945 11.01 a 3.5 a 0.679 15.31 a 4.275 a 0.873 16.41 a 2.275 a 0.817 18.13 a 4.075 a 1.372 16.53 a 7.1 a 1.476 17.22 a 3.775 a 1.265	11.83 a 5.4 a 1.017 bc  10.99 a 5.4 a 1.777 a  16.41 a 6.9 a 1.704 a  10.47 b 7.45 a 1.038 bc  17.07 a 7.825 a 1.193 b  11.29 a 2.275 a 0.531 c  7.547 b 3.25 a 0.691 c  15.72 a 5.9 a 0.881 c  10.99 b 3.075 a 0.945 c  11.01 a 3.5 a 0.679 c  15.31 a 4.275 a 0.873 c  16.41 a 2.275 a 0.817 c  18.13 a 4.075 a 1.372 bc  16.53 a 7.1 a 1.476 b  17.22 a 3.775 a 1.265 c	11.83 a 5.4 a 1.017 bc 21.975 10.99 a 5.4 a 1.777 a 45.9 16.41 a 6.9 a 1.704 a 40.075 10.47 b 7.45 a 1.038 bc 22.85 17.07 a 7.825 a 1.193 b 30.275 11.29 a 2.275 a 0.531 c 10.825 7.547 b 3.25 a 0.691 c 12.95 15.72 a 5.9 a 0.881 c 15.475 10.99 b 3.075 a 0.945 c 14.325 11.01 a 3.5 a 0.679 c 9.95 15.31 a 4.275 a 0.873 c 12.45 16.41 a 2.275 a 0.817 c 10.2 18.13 a 4.075 a 1.372 bc 10.975 16.53 a 7.1 a 1.476 b 25.575 17.22 a 3.775 a 1.265 c 11.025	11.83 a 5.4 a 1.017 bc 21.975 b 10.99 a 5.4 a 1.777 a 45.9 a 16.41 a 6.9 a 1.704 a 40.075 a 10.47 b 7.45 a 1.038 bc 22.85 bc 17.07 a 7.825 a 1.193 b 30.275 a 11.29 a 2.275 a 0.531 c 10.825 bc 7.547 b 3.25 a 0.691 c 12.95 bc 15.72 a 5.9 a 0.881 c 15.475 a 10.99 b 3.075 a 0.945 c 14.325 c 11.01 a 3.5 a 0.679 c 9.95 c 15.31 a 4.275 a 0.873 c 12.45 c 16.41 a 2.275 a 0.817 c 10.2 c 18.13 a 4.075 a 1.372 bc 10.975 bc 16.53 a 7.1 a 1.476 b 25.575 bc 17.22 a 3.775 a 1.265 c 11.025 c	11.83     a     5.4     a     1.017     bc     21.975     b     11.725       10.99     a     5.4     a     1.777     a     45.9     a     32.119       16.41     a     6.9     a     1.704     a     40.075     a     36.019       10.47     b     7.45     a     1.038     bc     22.85     bc     14.45       17.07     a     7.825     a     1.193     b     30.275     a     20.069       11.29     a     2.275     a     0.531     c     10.825     bc     10.931       7.547     b     3.25     a     0.691     c     12.95     bc     12.931       15.72     a     5.9     a     0.881     c     15.475     a     11.638       10.99     b     3.075     a     0.945     c     14.325     c     13.088       11.01     a     3.5     a     0.679     c     9.95     c     12.319       15.31     a     4.275     a     0.817     c     12.45     c     10.981       16.41     a     2.275     a     0.817     c     10.2     c     10.294

Means within the same column followed by the same letter are not significantly different (p=.05, LSD).