

Table 1. Evaluations Of Organic Materials, Tractor Speed And Application Volume For Controlling Pear Psylla On Commercial Bosc Pears. Clarkes Farm Milton, N.Y. - 2011.

Treatment	Rate	Gallonage	Speed	Nozzle type	# of nozzles	Date	Number of pear psylla eggs present per leaf/bud								
							14Apr	25Apr	2May	13May	26May	8Jun	20Jun	11Jul	
1 Surround	50 lb/A	148.9 GPA	2.5mph	HC	8	25 Apr, 20 May	0.64	1.25	0.43	0.32	1.48	30.76	65.40	0.84	
Biocover	1%	148.9 GPA	2.5mph	HC	8	15,29 Jun									
2 Surround	50 lb/A	250 GPA	1.25mph	HC	8	25 Apr, 20 May	1.87	0.76	1.53	0.64	3.20	17.48	62.92	0.68	
Biocover	1%	250 GPA	1.25mph	HC	8	15,29 Jun									
3 Surround	50 lb/A	75 GPA	2.5mph	HC	4	25 Apr, 20 May	0.67	0.92	2.49	0.48	7.20	20.28	89.00	2.60	
Biocover	1%	75 GPA	2.5mph	HC	4	15,29 Jun									
4 Surround	50 lb/A	148.9 GPA	3.5mph	HC	4	25 Apr, 20 May	2.40	2.89	1.56	1.08	9.88	34.32	52.96	0.60	
Biocover	1%	148.9 GPA	3.5mph	HC	4	15,29 Jun									
5 Surround	50 lb/A	148.9 GPA	2.5mph	AI	8	25 Apr, 20 May	1.11	2.30	5.22	2.80	10.8	31.60	50.68	0.56	
Biocover	1%	148.9 GPA	2.5mph	AI	8	15,29 Jun									
6 Surround	50 lb/A	250 GPA	1.25mph	AI	8	25 Apr, 20 May	1.72	3.95	3.97	0.92	9.64	26.68	56.72	2.36	
Biocover	1%	250 GPA	1.25mph	AI	8	15,29 Jun									
7 Surround	50 lb/A	148.9 GPA	2.5mph	AI	4	25 Apr, 20 May	---	1.25	4.34	0.24	5.60	19.88	60.00	0.56	
Biocover	1%	148.9 GPA	2.5mph	AI	4	15,29 Jun									
8 Surround	50 lb/A	148.9 GPA	3.5mph	AI	4	25 Apr, 20 May	---	1.57	4.06	1.68	3.72	21.84	14.72	1.76	
Biocover	1%	148.9 GPA	3.5mph	AI	4	15,29 Jun									
Grower's Standards															
9 Asana XL	15 oz/A	150 GPA	2.86mph	HC	8	25 Apr	3.91	2.08	2.78	2.40	3.12	10.4	39.00	0.64	
AgriMek	20 oz/A	150 GPA	2.86mph			20 May, 14Jun									
Movento	8 oz/A	150 GPA	2.86mph			15 Jun									
+0.25% oil															
10 Asana XL	15 oz/A	150 GPA	2.86mph	HC	8	25 Apr	0.50	2.67	2.67	0.44	3.36	55.68	54.64	20.16	
Delgate WG25	7 oz/A	150 GPA	2.86mph			20 May, 14 Jun									
+0.25% oil															
Movento	8 oz/A	150 GPA	2.86mph			15 Jun									
+0.25% oil															
11 Untreated							3.40	7.38	18.16	3.56	19.2	114.64	97.80	0.80	

Evaluations were made several times throughout the growing season by collecting leaf or bud samples. Samples were brushed, then pear psylla were evaluated. Not all developmental stages were present during various evaluation periods. This is indicated by (---) if there were none present on a single sample. Numbers were obtained by dividing the total number of pear psylla found by the number of leaves or buds harvested (pp/total). Evaluation was conducted on the effectiveness of varying different aspects of the application method. This included the speed of application, nozzle type and numbers, and the gallonage. Treatment and formulation were kept constant and compared to the grower's standards and four untreated replicates. Nozzle type category HC(Hollow Cone) AI(Air Induction).

Table 2. Evaluations Of Organic Materials, Tractor Speed And Application Volume For Controlling Pear Psylla On Commercial Bosc Pears. Clarkes Farm Milton, N.Y. - 2011.

Treatment	Rate	Gallonage	Speed	Nozzle type	# of nozzles	Date	Number of pear psylla nymphs present per leaf/bud								
							14Apr	25Apr	2May	13May	26May	8Jun	20Jun	11Jul	
1 Surround	50 lb/A	148.9 GPA	2.5mph	HC	8	25 Apr, 20 May	0.00	0.01	0.20	0.32	0.36	2.52	2.96	0.40	
Biocover	1%	148.9 GPA	2.5mph	HC	8	15,29 Jun									
2 Surround	50 lb/A	250 GPA	1.25mph	HC	8	25 Apr, 20 May	0.00	0.00	0.17	0.20	0.04	2.16	6.72	0.32	
Biocover	1%	250 GPA	1.25mph	HC	8	15,29 Jun									
3 Surround	50 lb/A	75 GPA	2.5mph	HC	4	25 Apr, 20 May	0.00	0.00	0.19	0.12	0.04	1.28	6.84	0.08	
Biocover	1%	75 GPA	2.5mph	HC	4	15,29 Jun									
4 Surround	50 lb/A	148.9 GPA	3.5mph	HC	4	25 Apr, 20 May	0.00	0.02	0.07	0.24	1.08	8.12	4.44	0.08	
Biocover	1%	148.9 GPA	3.5mph	HC	4	15,29 Jun									
5 Surround	50 lb/A	148.9 GPA	2.5mph	AI	8	25 Apr, 20 May	0.00	0.05	0.51	0.68	0.20	8.12	2.88	1.08	
Biocover	1%	148.9 GPA	2.5mph	AI	8	15,29 Jun									
6 Surround	50 lb/A	250 GPA	1.25mph	AI	8	25 Apr, 20 May	0.00	0.05	0.27	0.28	0.40	4.64	3.88	1.60	
Biocover	1%	250 GPA	1.25mph	AI	8	15,29 Jun									
7 Surround	50 lb/A	148.9 GPA	2.5mph	AI	4	25 Apr, 20 May	---	0.00	0.18	0.04	0.12	2.20	3.44	0.12	
Biocover	1%	148.9 GPA	2.5mph	AI	4	15,29 Jun									
8 Surround	50 lb/A	148.9 GPA	3.5mph	AI	4	25 Apr, 20 May	---	0.03	0.28	0.08	0.48	3.40	2.04	0.32	
Biocover	1%	148.9 GPA	3.5mph	AI	4	15,29 Jun									
Grower's Standards															
9 Asana XL	15 oz/A	150 GPA	2.86mph	HC	8	25 Apr	0.00	0.01	0.14	0.00	0.08	0.64	3.68	0.88	
AgriMek	20 oz/A	150 GPA	2.86mph			20 May, 14Jun									
Movento	8 oz/A	150 GPA	2.86mph			15 Jun									
	+0.25% oil														
10 Asana XL	15 oz/A	150 GPA	2.86mph	HC	8	25 Apr	0.00	0.04	0.08	0.24	0.12	19.52	4.52	4.52	
Delgate WG25	7 oz/A	150 GPA	2.86mph			20 May, 14 Jun									
	+0.25% oil														
	Movento	8 oz/A	150 GPA	2.86mph		15 Jun									
	+0.25% oil														
11 Untreated							0.00	0.01	1.18	1.84	1.72	9.32	3.64	0.04	

Evaluations were made several times throughout the growing season by collecting leaf or bud samples. Samples were brushed, then pear psylla were evaluated. Not all developmental stages were present during various evaluation periods. This is indicated by (---) if there were none present on a single sample. Numbers were obtained by dividing the total number of pear psylla found by the number of leaves or buds harvested (pp/total). Evaluation was conducted on the effectiveness of varying different aspects of the application method. This included the speed of application, nozzle type and numbers, and the gallonage. Treatment and formulation were kept constant and compared to the grower's standards and four untreated replicates. Nozzle type category HC(Hollow Cone) AI(Air Induction).

Table 3. Evaluations Of Organic Materials, Tractor Speed And Application Volume For Controlling Pear Psylla On Commercial Bosc Pears. Clarkes Farm Milton, N.Y. - 2011.

Treatment	Rate	Gallonage	Speed	Nozzle type	Number of nozzles	Date	Number of pear psylla adults present per leaf/bud								
							14Apr	25Apr	2May	13May	26May	8Jun	20Jun	11Jul	
1 Surround	50 lb/A	148.9 GPA	2.5mph	HC	8	25 Apr, 20 May	0.00	0.03	0.01	---	0.72	0.92	1.28	0.12	
Biocover	1%	148.9 GPA	2.5mph	HC	8	15,29 Jun									
2 Surround	50 lb/A	250 GPA	1.25mph	HC	8	25 Apr, 20 May	0.00	0.01	0.03	---	0.96	1.08	1.92	0.24	
Biocover	1%	250 GPA	1.25mph	HC	8	15,29 Jun									
3 Surround	50 lb/A	75 GPA	2.5mph	HC	4	25 Apr, 20 May	0.00	0.04	0.04	---	0.88	0.80	1.60	0.12	
Biocover	1%	75 GPA	2.5mph	HC	4	15,29 Jun									
4 Surround	50 lb/A	148.9 GPA	3.5mph	HC	4	25 Apr, 20 May	0.00	0.09	0.07	---	3.24	1.20	1.32	0.24	
Biocover	1%	148.9 GPA	3.5mph	HC	4	15,29 Jun									
5 Surround	50 lb/A	148.9 GPA	2.5mph	AI	8	25 Apr, 20 May	0.00	0.17	0.05	---	2.36	1.28	0.96	0.08	
Biocover	1%	148.9 GPA	2.5mph	AI	8	15,29 Jun									
6 Surround	50 lb/A	250 GPA	1.25mph	AI	8	25 Apr, 20 May	0.00	0.11	0.03	---	1.80	0.92	1.24	0.08	
Biocover	1%	250 GPA	1.25mph	AI	8	15,29 Jun									
7 Surround	50 lb/A	148.9 GPA	2.5mph	AI	4	25 Apr, 20 May	---	0.04	0.04	---	1.04	0.96	2.52	0.04	
Biocover	1%	148.9 GPA	2.5mph	AI	4	15,29 Jun									
8 Surround	50 lb/A	148.9 GPA	3.5mph	AI	4	25 Apr, 20 May	---	0.09	0.06	---	1.52	1.36	0.88	0.28	
Biocover	1%	148.9 GPA	3.5mph	AI	4	15,29 Jun									
Grower's Standards															
9 Asana XL	15 oz/A	150 GPA	2.86mph	HC	8	25 Apr	0.00	0.13	0.07	---	0.80	0.44	0.72	0.04	
AgriMek	20 oz/A	150 GPA	2.86mph			20 May, 14Jun									
Movento	8 oz/A	150 GPA	2.86mph			15 Jun									
	+0.25% oil														
10 Asana XL	15 oz/A	150 GPA	2.86mph	HC	8	25 Apr	0.00	0.13	0.05	---	1.28	0.56	0.44	0.48	
Delgate WG25	7 oz/A	150 GPA	2.86mph			20 May, 14 Jun									
	+0.25% oil														
	Movento	8 oz/A	150 GPA	2.86mph		15 Jun									
	+0.25% oil														
11 Untreated							0.00	0.19	0.14	---	3.68	2.44	3.64	0.28	

Evaluations were made several times throughout the growing season by collecting leaf or bud samples. Samples were brushed, then pear psylla were evaluated. Not all developmental stages were present during various evaluation periods. This is indicated by (---) if there were none present on a single sample. Numbers were obtained by dividing the total number of pear psylla found by the number of leaves or buds harvested (pp/total). Evaluation was conducted on the effectiveness of varying different aspects of the application method. This included the speed of application, nozzle type and numbers, and the gallonage. Treatment and formulation were kept constant and compared to the grower's standards and four untreated replicates. Nozzle type category HC(Hollow Cone) AI(Air Induction).

Table 4. Evaluations Of Organic Materials, Tractor Speed And Application Volume For Controlling Pear Psylla On Commercial Bosc Pears. Clarkes Farm Milton, N.Y. - 2011.

	Treatment	Rate	Gallorage	Speed	% of leaves present on 5 shoots per tree of 5 trees				
					Nozzle type	#of nozzles	Date	Outer leaves	Inner leaves
1	Surround	50 lb/A	148.9 GPA	2.5mph	Hollow Cone	8	25 Apr, 20 May	88.6 cde	71.3 bc
	Biocover	1%	148.9 GPA	2.5mph	Hollow Cone	8	15,29 Jun		
2	Surround	50 lb/A	250 GPA	1.25mph	Hollow Cone	8	25 Apr, 20 May	94.4 abcd	93.5 a
	Biocover	1%	250 GPA	1.25mph	Hollow Cone	8	15,29 Jun		
3	Surround	50 lb/A	75 GPA	2.5mph	Hollow Cone	4	25 Apr, 20 May	86.3 bcd	67.2 cd
	Biocover	1%	75 GPA	2.5mph	Hollow Cone	4	15,29 Jun		
4	Surround	50 lb/A	148.9 GPA	3.5mph	Hollow Cone	4	25 Apr, 20 May	100.0 a	96.7 a
	Biocover	1%	148.9 GPA	3.5mph	Hollow Cone	4	15,29 Jun		
5	Surround	50 lb/A	148.9 GPA	2.5mph	Air Induction	8	25 Apr, 20 May	93.4 abcd	75.4 bc
	Biocover	1%	148.9 GPA	2.5mph	Air Induction	8	15,29 Jun		
6	Surround	50 lb/A	250 GPA	1.25mph	Air Induction	8	25 Apr, 20 May	96.7 abc	88.6 ab
	Biocover	1%	250 GPA	1.25mph	Air Induction	8	15,29 Jun		
7	Surround	50 lb/A	148.9 GPA	2.5mph	Air Induction	4	25 Apr, 20 May	97.6 ab	86.5 ab
	Biocover	1%	148.9 GPA	2.5mph	Air Induction	4	15,29 Jun		
8	Surround	50 lb/A	148.9 GPA	3.5mph	Air Induction	4	25 Apr, 20 May	96.8 abcd	89.8 ab
	Biocover	1%	148.9 GPA	3.5mph	Air Induction	4	15,29 Jun		
Grower's Standards									
9	Asana XL	15 oz/A	150 GPA	2.86mph	Hollow Cone	8	25 Apr	100.0 a	90.0 a
	AgriMek	20 oz/A	150 GPA	2.86mph			20 May, 14Jun		
	Movento +0.25% oil	8 oz/A	150 GPA	2.86mph			15 Jun		
10	Asana XL	15 oz/A	150 GPA	2.86mph	Hollow Cone	8	25 Apr	88.5 de	45.0 d
	Delgate WG25 +0.25% oil	7 oz/A	150 GPA	2.86mph			20 May, 14 Jun		
	Movento +0.25% oil	8 oz/A	150 GPA	2.86mph			15 Jun		
11	Untreated							73.5 e	44.3 d
P value for transformed data								0.001	0.000

Evaluation made on 26 August. Percent data were transformed using Arcsin(sqrt(x)) prior to analysis. Five replicates per treatment were placed linearly within a single block and were not randomized. Evaluation was conducted on the effectiveness of varying different aspects of the application method. This included the speed of application, nozzle type and numbers, and the gallorage. Treatment and formulation were kept constant and compared to the grower's standards and four untreated replicates. Half of the leaves were taken from the inside of the tree and half from the outer perimeter.