State Report, New Jersey – Northeastern IPM Working Group
Spotted Wing Drosophila in New Jersey

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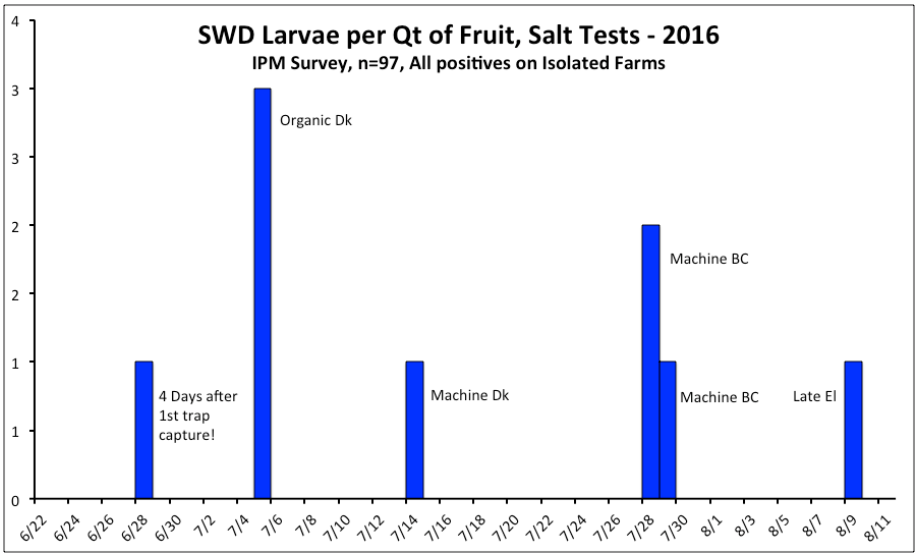
This reports deals primarily with Extension activities in highbush blueberries, although SWD was present in caneberries throughout the state, and wine grapes at non-economic levels.

A network of 80 deli cup style traps was set up throughout the commercial blueberry region of NJ. Traps were baited with the Trecé 2 component lure accompanied with 150 ml ACV drowning solution. In past years males and females emerge at the same time, and growers expressed the need to immediate feedback for data. Therefore, traps were monitored only for male SWD adults. The first capture was seen the week of June 24. In experimental traps the first capture was about 7 days earlier. Traps yielded low levels of adult until the week of July 22 as the population increased through the end of the blueberry season. The effectiveness of commercial pest management programs was evaluated with the help of 97 salt flotation tests that showed a) 1 positive test early in the season from a 'low spray' grower, and only 1 week after the first trap capture, suggesting that SWD had already been present before being found in the traps, b) 1 positive result from an organic field early in the season, and c) 5 positive results at the end of commercial hand harvest during processing, machine harvests. All positive results showed low numbers of larvae, even in the organic field with 3 larvae.



Two field tests were performed with 1) different commercial bait types, and 2) different positions in relation to the bushes. Male and female adults were recorded.

Trap type test:

- A 4 replicate test was completed on a commercial farm, using the field edge row which bordered a woods and irrigation canal in a field of mature bushes (var. Bluecrop).

- Traps were 1 L deli cup style and baited with 1) Trecé Broad Spectrum 2016 Lure, 2) Scentry 2016 lure, and 3) apple cider vinegar (ACV) -150ml. All treatments used ACV as the drowning solution w/1-2 drops of unscented dish soap.
- Traps were placed on 6/14, and read every 7 days. Commercial baits were replaced every 4 weeks, while ACV was changed weekly.
- Both commercial lures outperformed ACV, attracting significantly more adults. Both commercial lures were equally effective early in the season, but Scentry baited traps caught later season adults.

Male and female SWD adult trap capture 2016 by bait type

	Trece			Scentry			ACV Std		
Date	Males	Females	Total	Males	Females	Total	Males	Females	Total
6/22	0.50 b	7.75 a	8.25 a	0.75 b	10.25 a	11.00 a	0.00 b	1.25 b	1.25 b
6/29	0.50 b	6.50 a	7.00 a	1.00 b	7.25 a	8.25 a	0.00 b	2.00 b	2.00 b
7/6	3.25 ac	3.00 ac	6.25 a	6.00 ac	2.00 bc	8.00 a	0.00 bc	0.50 bc	0.50 bc
7/13	5.50 ac	2.50 bc	8.00 a	4.75 ad	1.75 bcd	5.00 ac	0.50 bd	0.00 bd	0.50 bd
7/20	4.25 b	3.50 b	7.75 b	31.75 ac	18.25 bc	50.00 a	0.50 b	1.75 b	2.25 b
7/27	3.00 c	9.00 c	12.00 c	49.00 b	41.50 b	90.50 a	0.25 c	1.00 c	1.25 c
8/3	9.00 c	1.75 c	10.75 bc	25.00 abe	10.50 de	35.50 a	0.75 cd	1.00 cd	1.75 cd
8/10	38.25 bcd	16.5 bd	54.75 bcd	117.00 ac	23.00 bd	140.00 a	3.00 d	0.75 d	3.75 d

Numbers followed by the same letter are not significantly different, P=.05, Fisher's LSD

Position test:

- 3 treatments used interfaces from 1) woods edge, 2) irrigation canal and 3) 1st row in a field of 'Bluecrop.'
- Trecé 2 component broad-spectrum lure w/ 150 ml ACV was used as a standard.
- 4 replicates along each interface.
- Treatment distances by position: woods to canal edge = 9M, canal edge to field edge = 18M
- Traps along the woods edge had greater adult captures early.
- These differences were not present during fruit maturation (mid to late July), but were present again after fruit harvest.

Male and female SWD adult trap capture 2016 by position

	Field			Canal Edge			Woods Edge		
Date	Males	Females	Total	Males	Females	Total	Males	Females	Total
6/22	0.00 b	3.75 b	3.75 b	0.25 b	2.00 b	2.25 b	2.75 b	16.50 a	19.25 a
6/29	0.00 c	22.00 a	11.00 b	0.00 c	4.75 bc	4.75 bc	0.25 c	5.25 bc	5.50 bc
7/6	1.00 b	8.50 ac	4.75 bc	2.00 bd	4.25 bc	6.25 acd	5.00 ab	4.25 bc	9.25 a
7/13	5.75 bc	6.50 bc	12.25 a	2.25 b	2.25 b	4.50 bc	6.25 bc	2.25 b	8.50 ac
7/20	4.00 ab	5.67 ab	7.25 ab	4.00 ab	7.25 ab	11.25 a	3.50 b	6.00 ab	9.50 ab
7/27	6.00 b	13.33 bc	14.50 bc	7.25 b	13.00 bc	20.25 b	15.00 bc	24.25 ac	39.25 a
8/3	9.00 bc	4.00 b	13.00 bc	2.50 b	6.25 b	8.75 bc	9.75 bc	15.25 c	25.00 a
8/10	22.50 b	11.50 b	17.00 b	23.00 b	15.00 b	38.00 bc	50.75 ac	22.75 b	73.50 a

Numbers followed by the same letter are not significantly different, P=.05, Fisher's LSD

Insecticide use is again being evaluated for the 2016 season, and is currently being analyzed. The same 8 farms, which we have tracked since 2010, are being evaluated for insecticide use in the variety 'Bluecrop,' since it is the most widely planted mid season variety treated for SWD.