

Efficacy of Foliar Insecticides Against Diamondback Moth - Fall 2017



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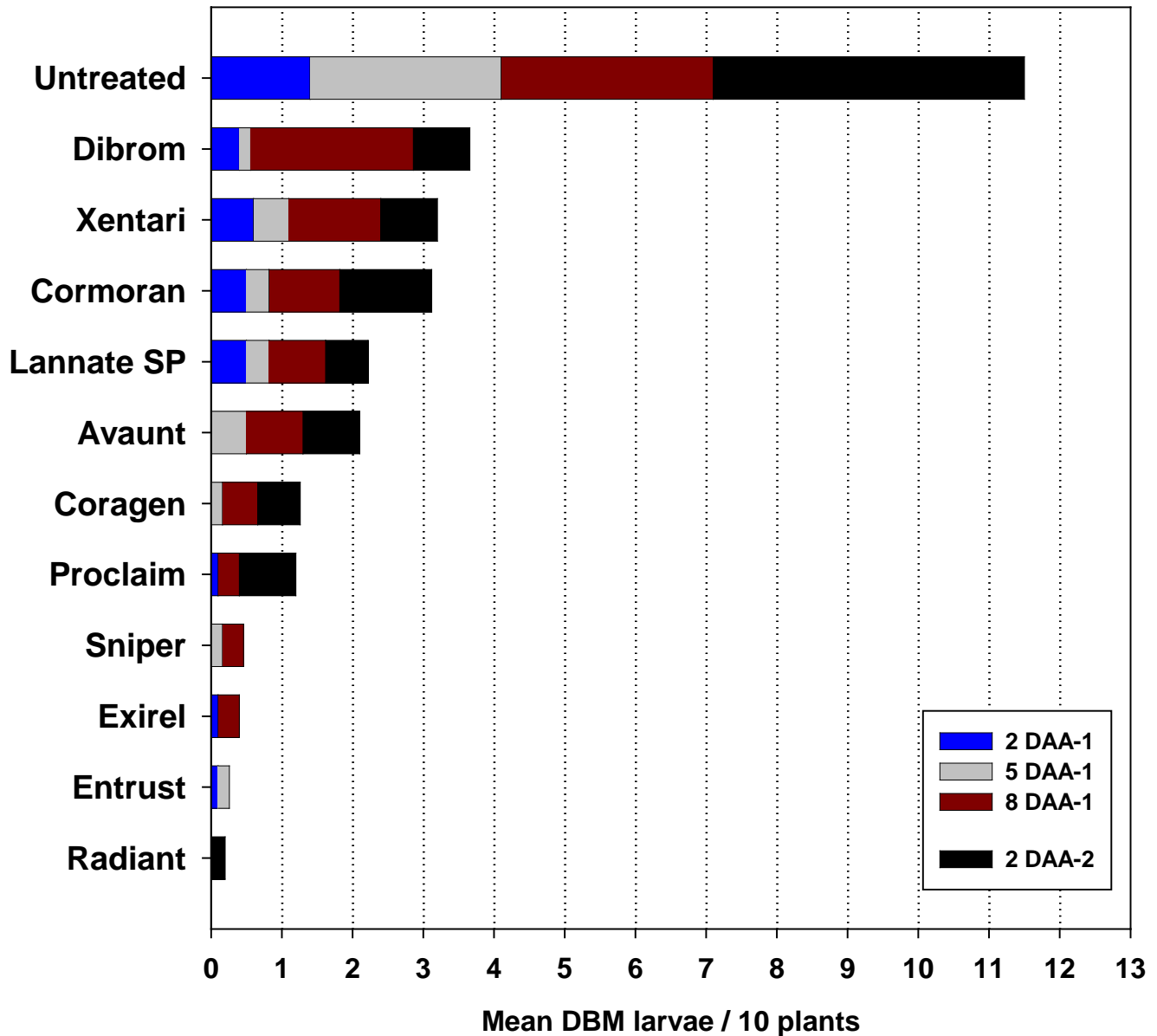
- Trial location:** Yuma Ag Center
- Crop:** Broccoli, 'Emerald Crown'
- Wet date:** Sep 7, 2017
- Exp. Design:** Randomized complete block design with 4 replicates
- Plot size:** Two beds wide by 45 ft long and bordered by one untreated bed.
- Applications:** 1) Sep-20, Pre-thinning, 1 leaf stage
2) Oct-1, Post thinning, 3-4 leaf stage
- Spray Equipment:** CO₂ pressurized boom sprayer operated at 40 psi and 22.5 gpa through 2 TXVS-18 ConeJet nozzles per bed. Dyne-Amic was applied at 0.125% vol/vol to all treatments.
- Assessments:** 15-20 plants were randomly selected from each replicate at 2, 5 and 8 days after the 1st application (DAA) and 2 DAA after the 2nd spray. Whole plants were destructively sampled for the presence of DBM larvae.

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Treatment	Rate/ac	DBM larvae / 10 plants			
		2 DAA-1	5 DAA-1	8 DAA-1	2 DAA-2
Radiant	5 oz	0 c	0 b	0 c	0.2 b
Proclaim	4.8 oz	0.1 bc	0 b	0.3 bc	0.8 b
Lannate SP	1 lb	0.5 abc	0.3 b	0.8 bc	0.6 b
Sniper	5 oz	0 c	0.2 b	0.3 bc	0 b
Coragen	5 oz	0 c	0.2 b	0.5 bc	0.6 b
Exirel	15.0 oz	0.1 bc	0 b	0.3 bc	0 b
Avaunt	3.5 oz	0 c	0.5 b	0.8 bc	0.8 b
Dibrom 8	1.5 pt	0.4 abc	0.2 b	2.3 ab	0.8 b
Cormoran	12 oz	0.4 abc	0.3 b	1.0 abc	1.3 b
Entrust	5 oz	0.2b bc	0.2 b	0 c	0 b
Xentari	1.5 lb	0.8 ab	0.5 b	1.3 abc	0.8 b
Check	-	1.4 a	3.2 a	3.0 a	4.4 a

Means followed by the same letter are not significantly different ($P>0.05$).

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Summary: All of the spray treatments provided significantly better control of DBM larvae compared to the untreated check following 2 spray applications. The spinosyns, Exirel and Sniper (bifenthrin) have provided the most consistent control thus far. The study is on-going.

It is of interest to note that the pyrethroids, Lannate and Coragen did not control DBM in similar spray trials conducted in spring 2017. The fact that the DBM in the present study were susceptible to these insecticides strongly suggests that the population presently found on the Yuma Ag Center is different than the population found on the farm in spring of 2017. The resistant population last spring originated from a local nursery, whereas is not known where the current susceptible population originated from.