

# 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

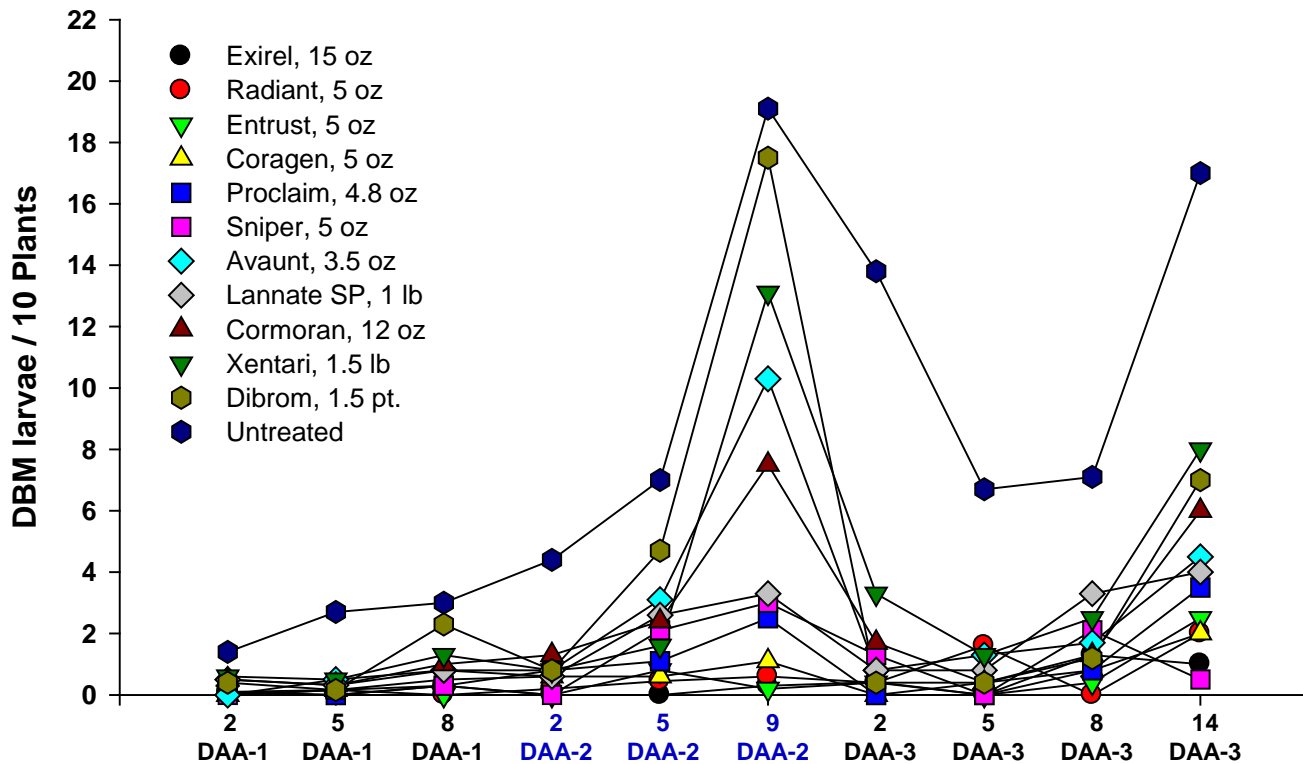
**Exp. Design:** Randomized complete block design with 4 replicates

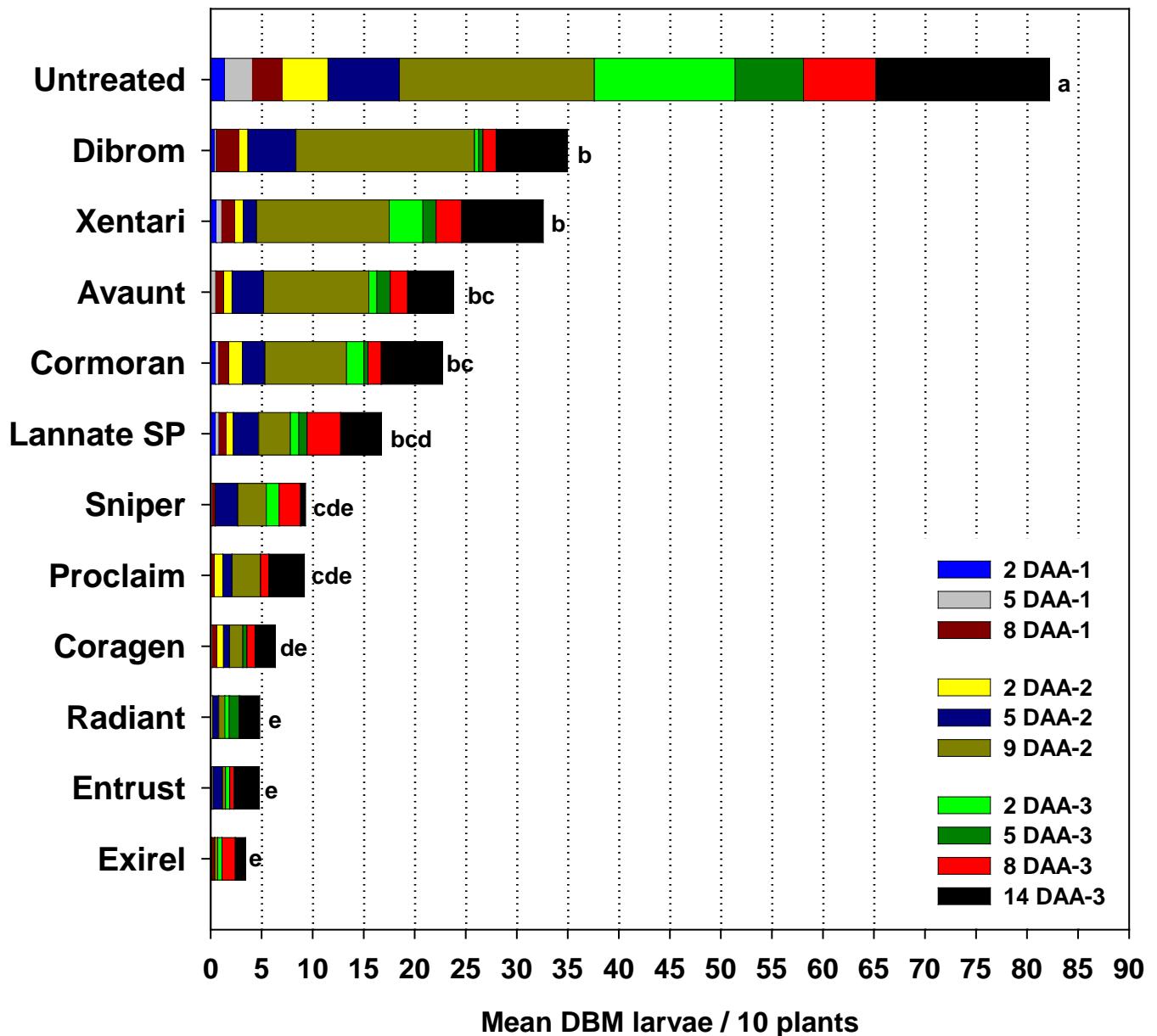
**Plot size:** Two beds wide by 45 ft long and bordered by one untreated bed.

**Applications:**  
 1) Sep-20, Pre-thinning, 1 leaf stage  
 2) Oct-1, Post thinning, 3-4 leaf stage  
 3) Oct-11, 6-7 leaf stage

**Spray Equipment:** CO<sub>2</sub> 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:** 10-20 plants were randomly selected from each replicate at various intervals after each application (DAA). Whole plants were destructively sampled for the presence of DBM larvae.





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

**Summary:** Following the 3 spray applications, all of the spray treatments provided significantly better control of DBM larvae compared to the untreated check. When averaged across all samples, the spinosyns (Radiant and Entrust), the Anthranilic diamides (Exirel and Coragen) Proclaim (emamectin benzoate) and Sniper (bifenthrin) provided the most consistent control of DBM larvae (see graph above).

The results of this trial are important because they show that the pyrethroids, Lannate and Coragen did not control DBM in similar lab bioassays and field trials conducted last season. The fact that the DBM this season are 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 it is not known where the current susceptible population originated from. Based on our trapping this fall, it is likely that the population currently on the Yuma Ag Center migrated in this fall.