

What's New at ADAPCO



Creating value, growing together



DeltA Gard[®]

PUBLIC HEALTH INSECTICIDE



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What is deltamethrin?

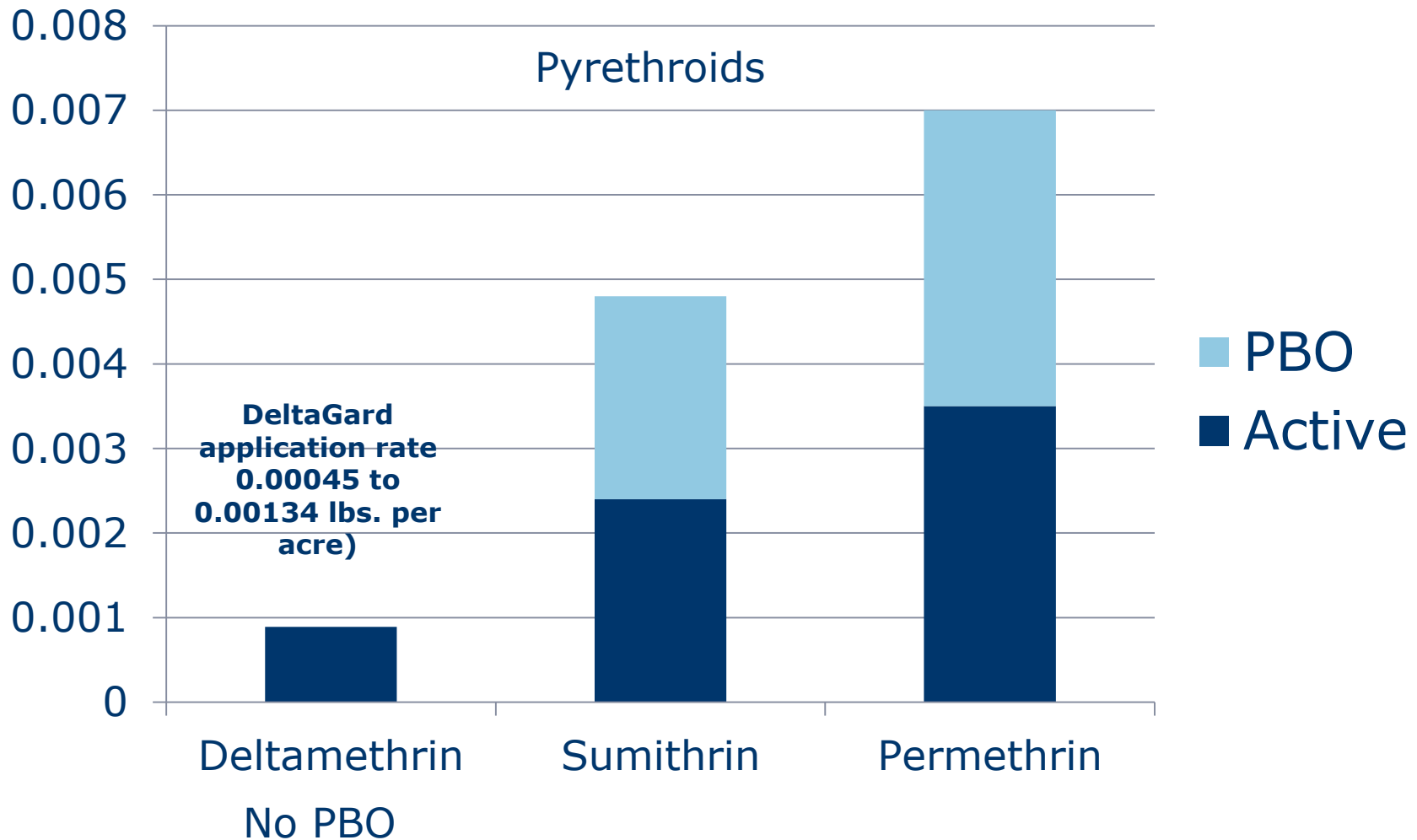
- Deltamethrin is an insecticide belonging to the pyrethroid family. Pyrethroids are the man-made versions of pyrethrins, natural insecticides from chrysanthemum flowers. Deltamethrin is used outdoors on lawns, ornamental gardens, golf courses, and indoors as a spot or crack and crevice treatment. In its purest form, deltamethrin is colorless or white to light beige crystals that have no odor.
- Deltamethrin was first described in 1974 and entered the marketplace in 1978.

FFAST Process

FFAST stands for Film-Form Aqueous Spray Technology. This patented technique that allows water droplets to behave as oil droplets. It is currently available only in Aqua-Reslin and Deltagard.

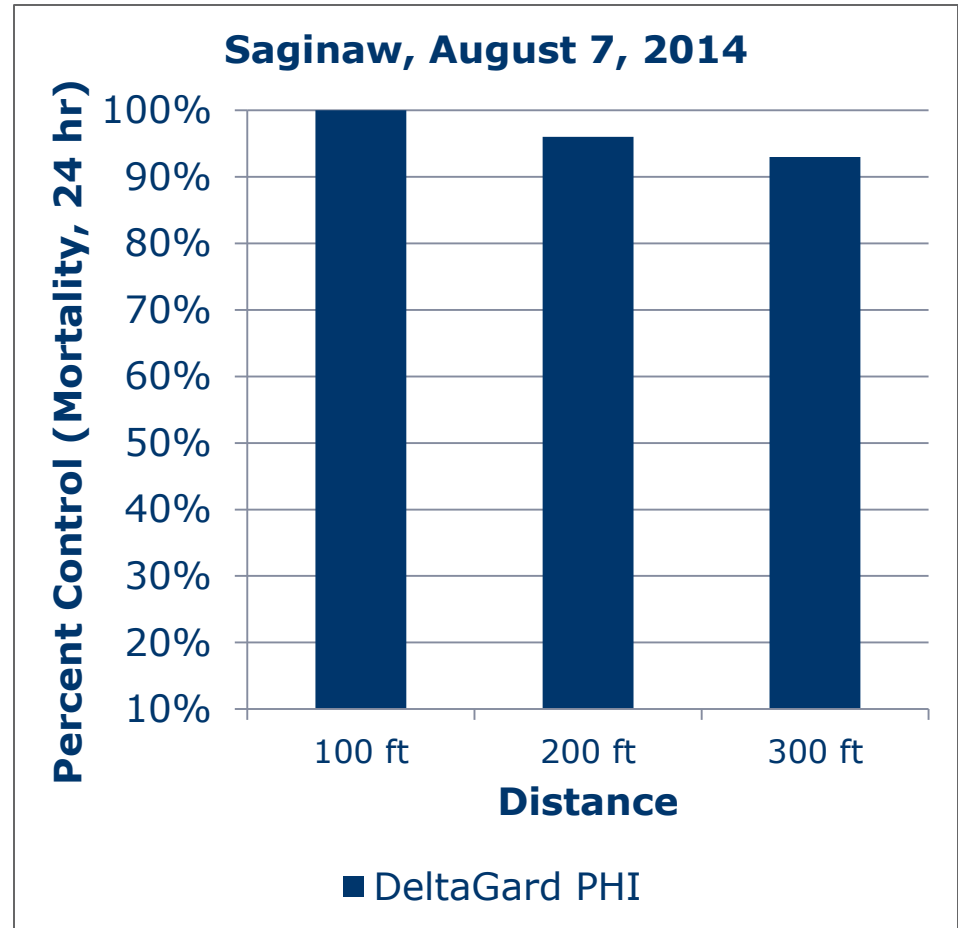
DeltaGard = Lowest Dose

Pounds of active ingredient / acre / treatment mid-label rate, ULV application for adult mosquito control



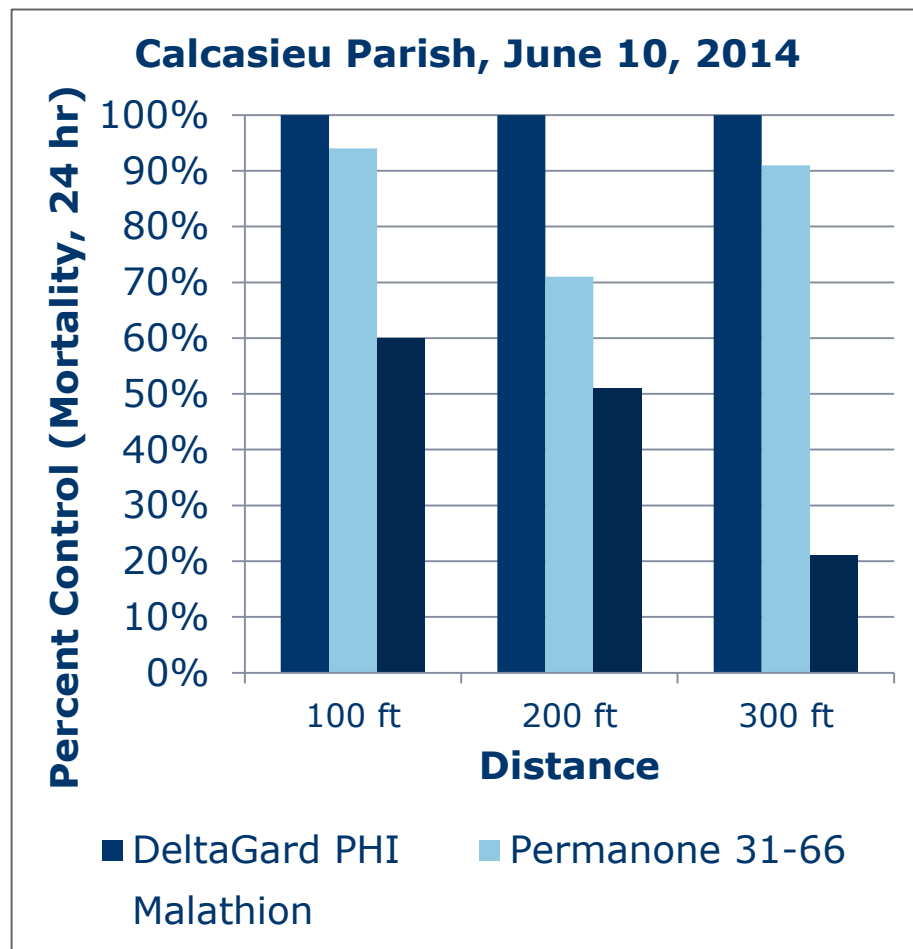
Saginaw Mosquito Abatement District, Michigan

- ❑ Mixed Mosquito Species including *Anopheles quadrimaculatus*, collected from the field for this trial.
- ❑ DeltaGard: applied at 0.00045 lbs.ai/acre (Low Rate)



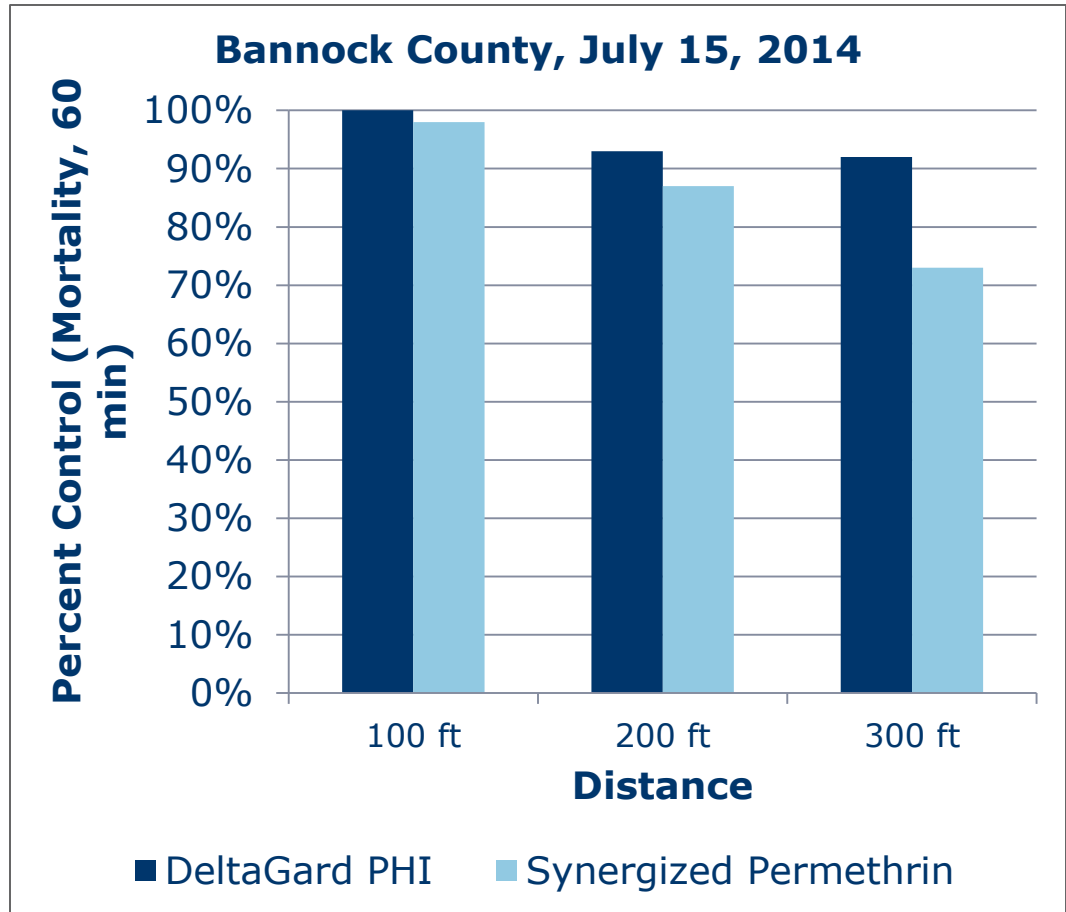
Calcasieu Parish Mosquito Control District, Louisiana

- ❑ Documented resistant strain of *Culex quinquefasciatus*
- ❑ All applications made on the same day.
- ❑ Application rates:
 - ❑ DeltaGard: applied at 0.00134lb ai/acre (high rate)
 - ❑ Permanone: applied at 0.003lb ai/acre (low rate)
 - ❑ Malathion: applied at 0.058lb ai/acre (high rate)
- ❑ DeltaGard 100% mortality 1 hr after treatment



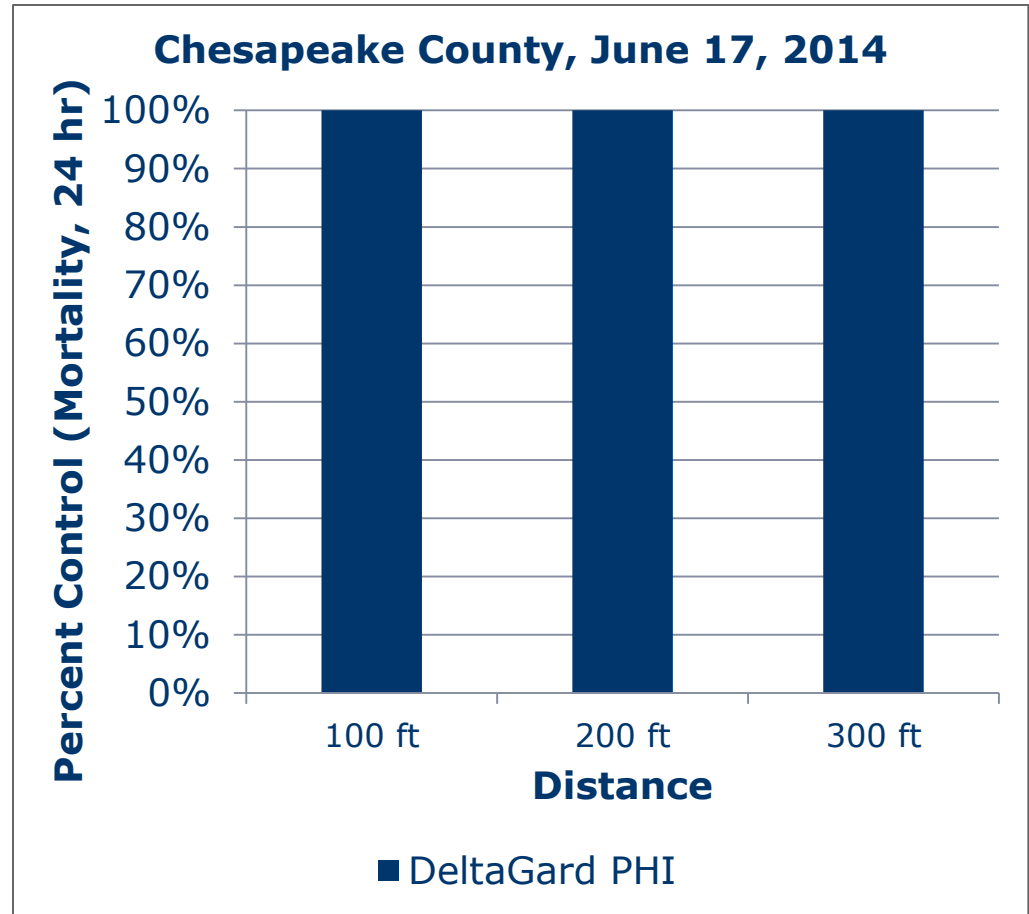
Bannock County Mosquito Abatement District, Idaho

- Field collected *Culex tarsalis*
- All applications made on the same day.
- Application rates:
 - DeltaGard: applied at 0.00045lb ai/acre (low rate)
 - Kontrol 4-4 : Permethrin / PBO applied at 0.0035lbs ai/acre (mid rate)



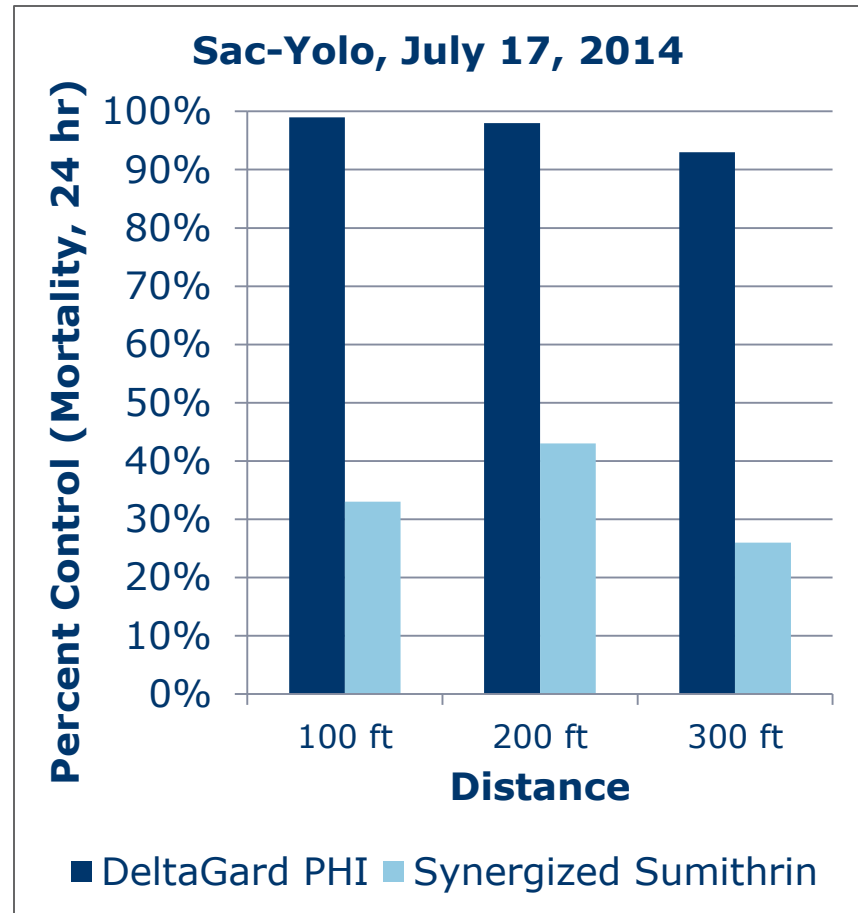
City of Chesapeake, Virginia

- ❑ Mixed population of *Coquillettidia perturbans*, *Aedes albopictus* and *Aedes canadensis*
- ❑ DeltaGard: applied neat, 4 oz/min
0.00089lb ai/acre (mid-rate)
- ❑ Very fast knockdown ~20 min all cages



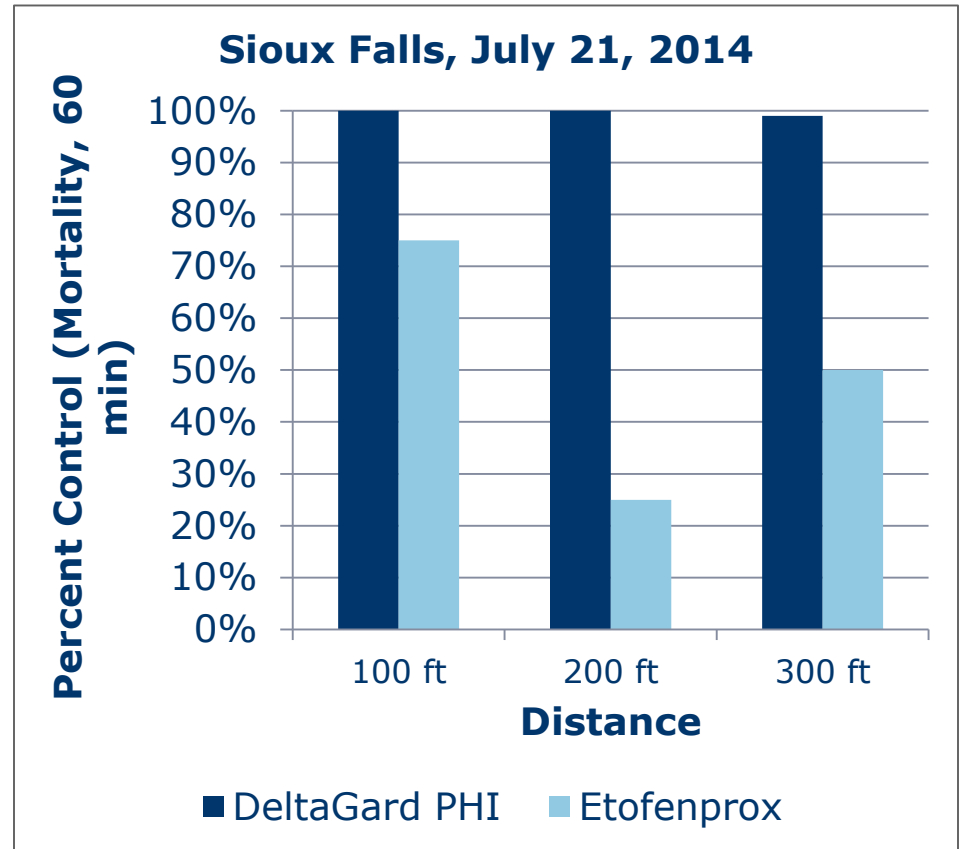
Sac-Yolo Mosquito & Vector Control District, California

- ❑ *Culex quinquefasciatus* (susceptible colony), *Culex pipiens* (resistant colony), and field collected *Culex tarsalis* were used for this study.
- ❑ All applications made on the same day.
- ❑ Application rates:
 - ❑ DeltaGard: applied at 0.00089lb ai/acre (mid rate)
 - ❑ Anvil 10+10 : applied at 0.0036lb ai/acre



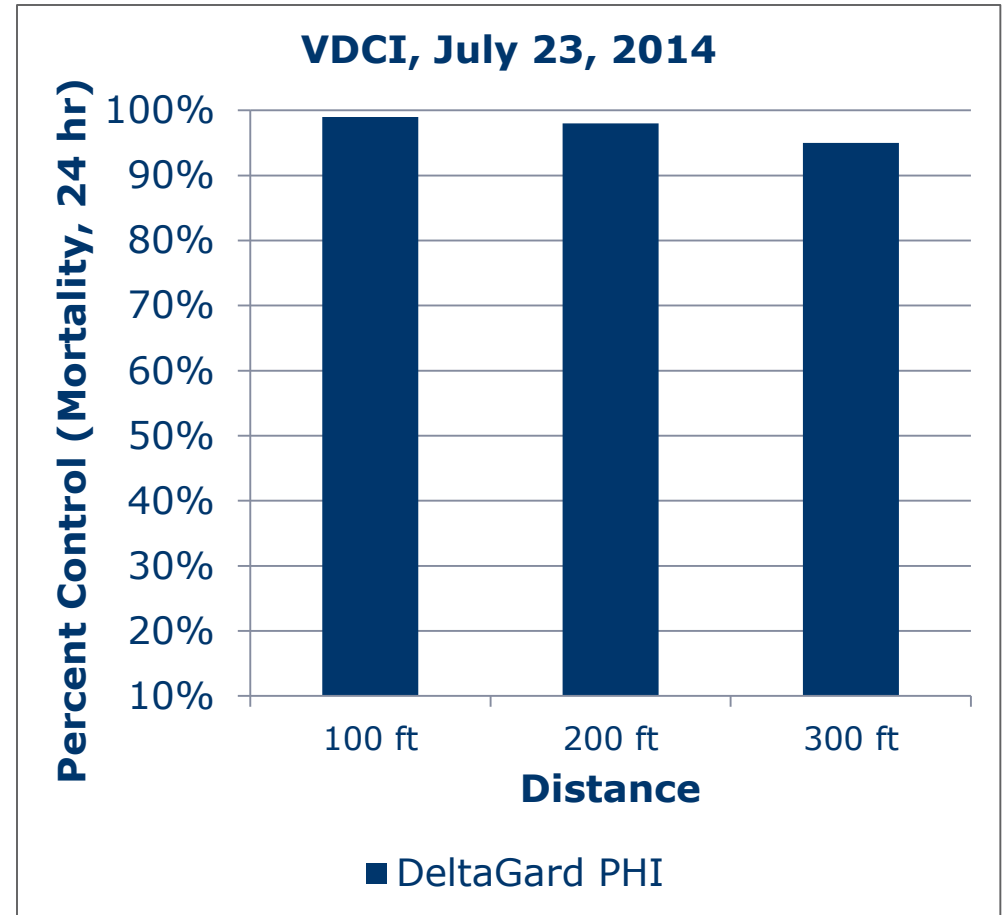
Sioux Falls Mosquito Abatement District, South Dakota

- ❑ A mixed population of field collected mosquitoes
- ❑ All applications made on the same day.
- ❑ Application rates:
 - ❑ DeltaGard: applied at 0.00089lb ai/acre (mid-rate)
 - ❑ Zenivex E20: applied at 0.007lb ai/acre (High Rate)
- ❑ DeltaGard applied at a lower rate than the competitive standard provided better control.



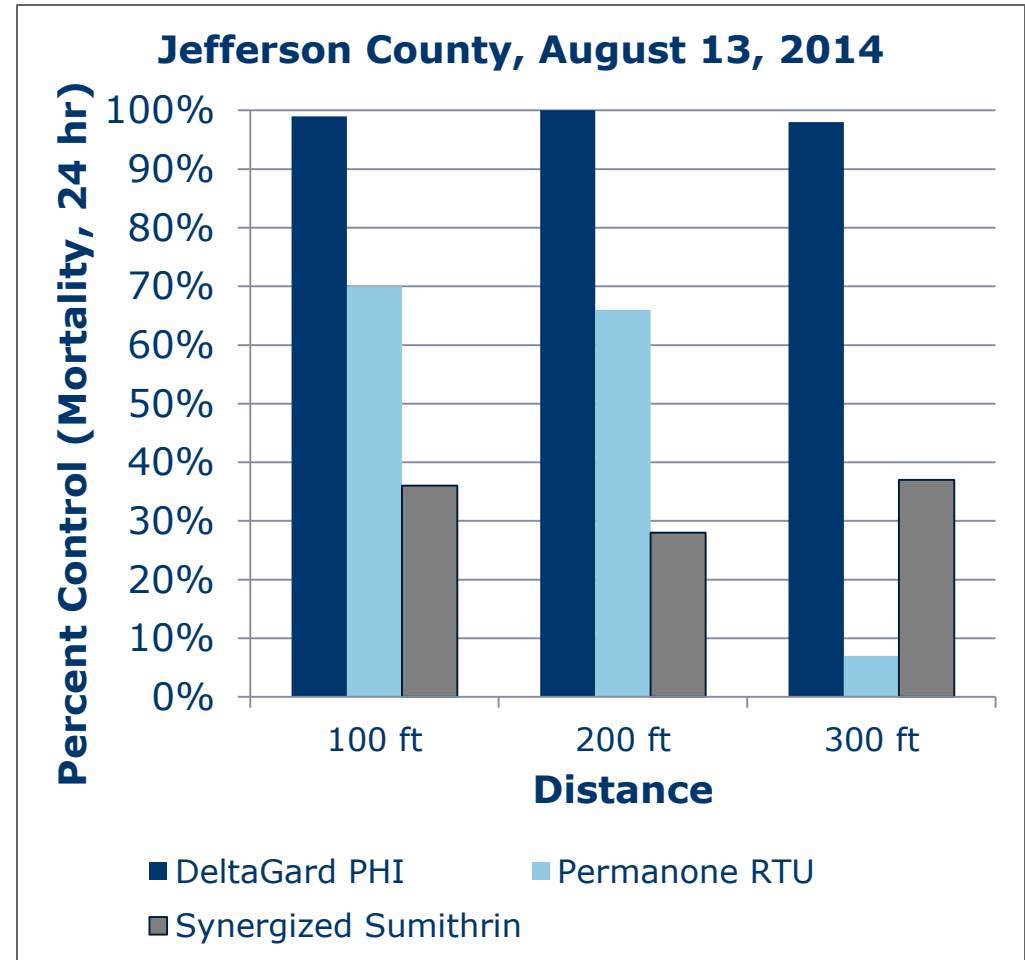
Vector Disease Control International, Mississippi

- ❑ A mixed population of field collected mosquitoes
- ❑ Species included: *Ae. japonicus*, *Cx. pipiens*, *An. quadrimaculatus*, *An. punctipennis*, *Cx. territans*, *Cx. restuans*, and *Ae. vexans*
- ❑ Application rate:
 - ❑ DeltaGard: applied at 0.00045lb ai/acre (low-rate)



Jefferson County Mosquito Abatement District, Missouri

- ❑ Documented resistant strain of *Culex quinquefasciatus*
- ❑ All applications made on the same day.
- ❑ Application rates:
 - ❑ DeltaGard: applied at 0.0089lb ai/acre (mid rate)
 - ❑ Permanone: applied at 0.0015lb ai/acre (low rate)
 - ❑ Anvil 2+2: applied at 0.036lb ai/acre



Adulicide	Application rate Active ingredient (lb ai/acre)	Application rate Tank mix (fl oz/acre)	3 mm slide Droplet size DVo.5 (µm)	3 mm slide Droplet density (drops/mm ²)	Cost (dollars/acre)
Anvil 10-10 ULV	0.0036	0.6	10.6 ± 0.9	20.3 ± 3.0	\$1.13
DeltaGard	0.00089	0.7	10.4 ± 0.1	31.6 ± 3.0	\$0.85
Duet	0.0036	1.3	8.1 ± 1.5	28.8 ± 10.1	\$2.01
Evoluer 30-30 ULV	0.0035	0.7	8.7 ± 0.6	26.3 ± 3.3	\$0.08
Evoluer 30-30 ULV	0.007	1.4	11.6 ± 0.3	54.5 ± 4.4	\$0.15
Merus 2.0	0.0025	0.7	9.0 ± 0.5	21.0 ± 0.1	\$2.46
Merus 2.0	0.008	2.5	12.9 ± 1.2	80.3 ± 24.7	\$7.88
Zenivex E20	0.0035	0.7	7.5 ± 0.4	14.5 ± 3.3	\$0.62
Zenivex E20	0.007	1.4	8.3 ± 0.4	23.2 ± 1.8	\$1.25

Table 1: Mean droplet size ± SE, mean droplet density ± SE, and cost for each ground ULV adulicide and application rate tested. The 3-mm slide DVo.5 was approximately 2 µm smaller than the 1-inch slide DVo.5. The volume median diameter (DVo.5) represents the average droplet size, where half the spray volume is in droplets larger than the DVo.5 and half in droplets smaller than the DVo.5. Most adulicide labels require ULV spray equipment to be adjusted so that the volume median diameter is less than 30 microns and 90% of the spray is contained in droplets smaller than 50 microns.

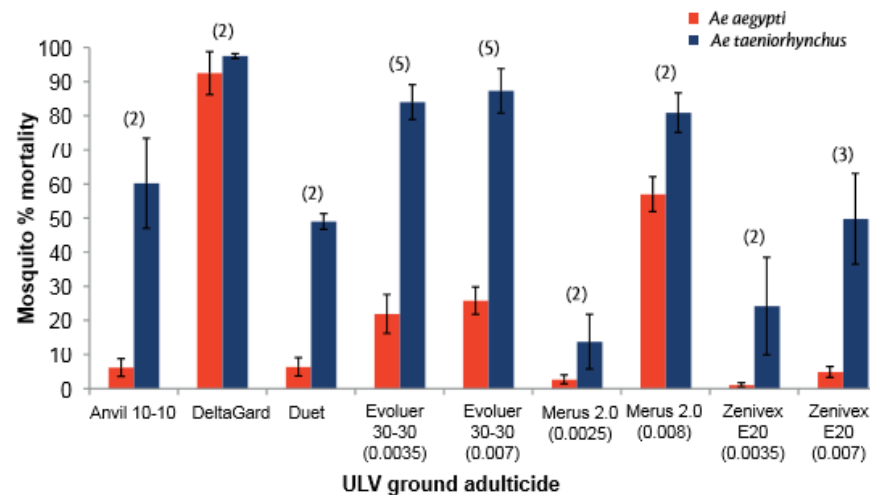


Figure 2: *Aedes aegypti* and *Ae taeniorhynchus* mean ± SE percent mortality 12 hours after application of each ground ULV adulicide tested. Numbers in parentheses above bars indicate number of trials conducted for each chemical and application rate in which wind speeds met label requirements.

ADAPCO welcome Biogents Products



New from Fourstar



New from ADAPCO Service team



Thank you for a terrific year!

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