



ORGANIC INSECTICIDE FOR SPOTTED WING DROSOPHILA

## EFFICACY ON SPOTTED WING DROSOPHILA (SWD) (*DROSOPHILA SUZUKII*) POPULATIONS IN BLACKBERRY

### TRIAL GOAL:

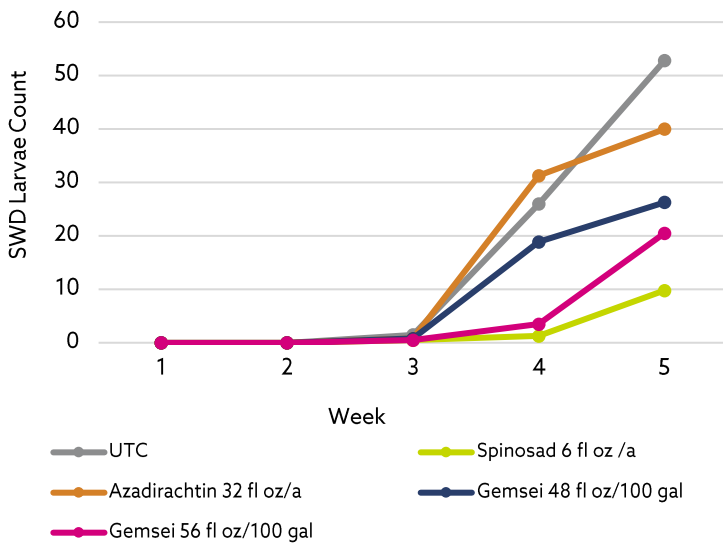
Evaluate the efficacy of Gemsei™ at two different rates for SWD control in blackberry under field conditions, in comparison with two industry standards.

### TRIAL PROTOCOL:

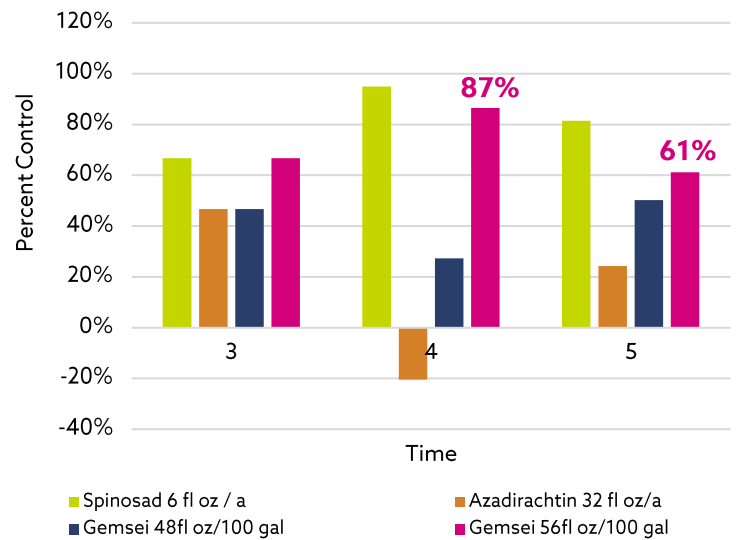
LOCATION: Eltopia, WASHINGTON • CROP: Blackberry • PERIOD: July 19 – August 23, 2021 • DESIGN: Random complete block with four replicates • SPRAY VOLUME: 55 gallons / acre • PLOT SIZE: 12ft x 18ft • TREATMENT RATES: Two rates of Gemsei at 48 fl. oz./100 gal. and 56 fl. oz./100 gal. of water | Industry standard 1 (A.I: Spinosad Group 5 insecticides) at 6 fl. oz./acre | Industry standard 2 (A.I: Azadirachtin 32 fl. oz./acre | Untreated Control (UTC): Water • Spray pH: 6.5 • APPLICATION: Five foliar spray applications, 7-day intervals • APPLICATION TYPE: CO<sub>2</sub> pressurized over-the-row sprayer • COUNT: SWD larvae count in 20 randomly selected berries per plot chosen and soaked in saltwater for 30 minutes prior to examination.

NOTE: The SWD populations increased dramatically and became very high over the course of the trial in the untreated control; higher than would be expected to occur in a commercial field.

SWD LARVAE COUNT IN BLACKBERRY



PERCENT CONTROL SWD LARVAE IN BLACKBERRY



- A CLEAR DOSE-RESPONSE WAS OBSERVED FOR GEMSEI AS THE HIGHER RATE, CONSISTENTLY PROVIDED BETTER CONTROL THAN THE LOWER RATE THROUGHOUT THE STUDY
- GEMSEI AT 56 FL.OZ/100 GAL. WAS ABLE TO SIGNIFICANTLY PROVIDE 87% SUPPRESSION OF THE SWD LARVAE POPULATION AFTER 4 WEEKS
- GEMSEI PERFORMED AS WELL AS THE INDUSTRY STANDARD SPINOSAD AND SIGNIFICANTLY BETTER THAN AZADIRACHTIN IN SUPPRESSION OF SWD LARVAE



**NO PHYTOTOXICITY WAS OBSERVED FROM ANY TREATMENTS AT ANY POINT IN THE TRIAL**



### Top features & benefits

- Broad-spectrum control
- Superior content of the active compound in the garlic oil (DAPs) compared to other garlic-based insecticides
- No adjuvant required | Stable formulation
- No sensory impact on the harvested crop

### Active ingredient

- Garlic oil.....6.00%

### Multiple modes of action

- Contact effect: Desiccation
- Olfactory effect: Antifeedant, adult mating disruption, and anti-oviposition
- Strong repellency

### Target pests controlled

- Lepidopteran pests
- Small, soft-bodied insects

### Directions for use

Shake well before use

Must be diluted in water before application

- Recommended rates: 32-64 fl. oz./100 gallon of water per acre
- pH: 6 - 6.5
- Method: Spray application with commonly-used ground application equipment
- Spray volume: Min. of 30 gallons of total spray volume per acre
- Frequency of application: 5-7 days interval

### CREATING A SUCCESSFUL IPM PROGRAM USING GEMSEI™:

**MULTIPLE MODES OF ACTION** – Gemsei has multiple effects on insects, reducing the likelihood of resistance and increasing the number of times the product can safely be applied in a season

**ROTATION IS KEY** – To prevent insecticide resistance building up in SWD populations, be sure to avoid constant use of the same chemical or active ingredient

**VERSATILE COMPATIBILITY** - Use in combination with other active ingredients to maximize efficacy

**APPLICATION TIMING** – Apply up to the day of harvest due to a 0-day preharvest interval

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