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IBMA

INTERNATIONAL BIOCONTROL MANUFACTURERS ASSOCIATION

PREV-AM

&

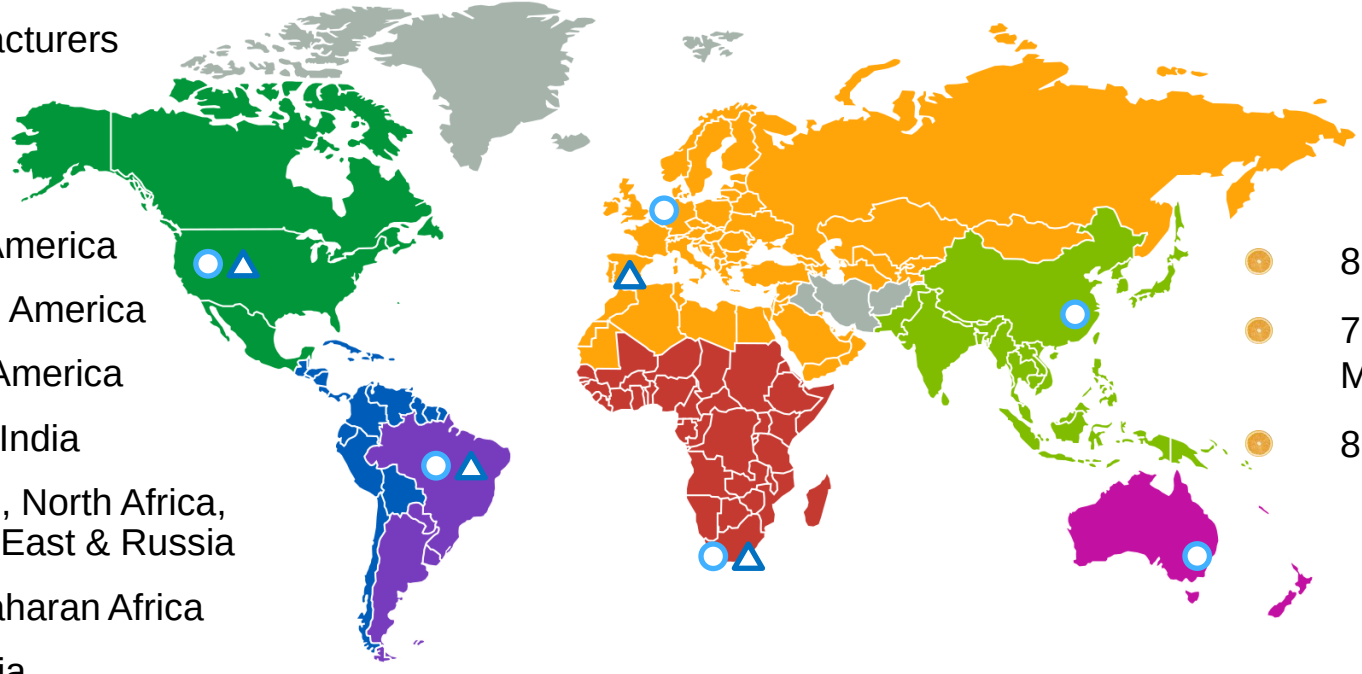
Drosophila suzukii

Carol Pullen

General Manager EU

ORO AGRI today

- Regional Offices
- Manufacturers



- North America
- Central America
- South America
- Asia & India
- Europe, North Africa, Middle East & Russia
- Sub-Saharan Africa
- Australia

- 87 countries
- 7 Regional Managers
- 80 employees

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PREV-AM

AGROW AWARDS 2014 SHORTLISTED

- Registered Insecticide, Fungicide (and Miticide) all-in-one (depends on country)
- Broad spectrum contact action
- Fast knockdown (<24 hrs)
- Used on most crops
- Early, mid or late season applications
- Low REI and no PHI
- Alternate mode of action for resistance management
- No residual activity – predator and bee friendly

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PREV-AM Current registrations

- USA (2003)
- South Africa and Namibia (2004)
- France (2010 Indoor & 2012 Outdoor)
- Morocco (2009)
- Tunisia (2007)
- Egypt (2012)
- Kenya (2012)
- Belgium (2013)
- Jordan (2013)
- Kuwait (2013)
- Many pending registrations (extending Countries, crops and pests)

More than 500+ independent studies

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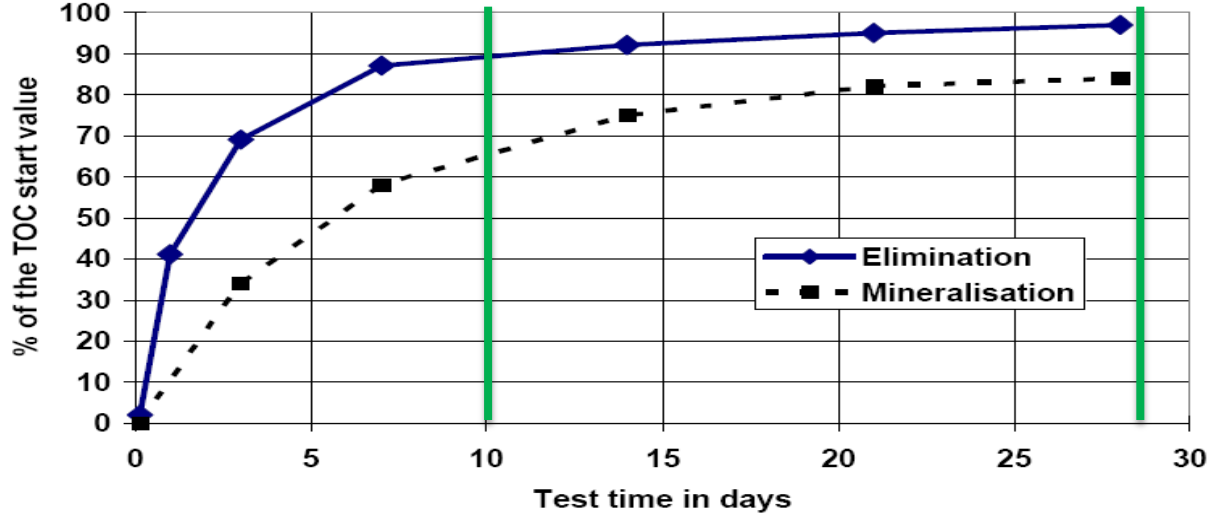
PREV-AM Environmental safety

Bio-elimination and bio-degradation:

EMPA, Switzerland by the OECD 302 B with determination of mineralization, EMPA Standard operation procedure (SOP 720): 4 L batch.



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PREV-AM as Insecticide / Miticide

- Aphids
- Mites
- Mealybug
- Whitefly
- Lepidoptera
- Scale
- Thrips
- Soft-Body Insects or stages

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PREV-AM as Fungicide

- Powdery Mildew
- Botrytis
- Rusts
- Foliar Blights
- Downy Mildew

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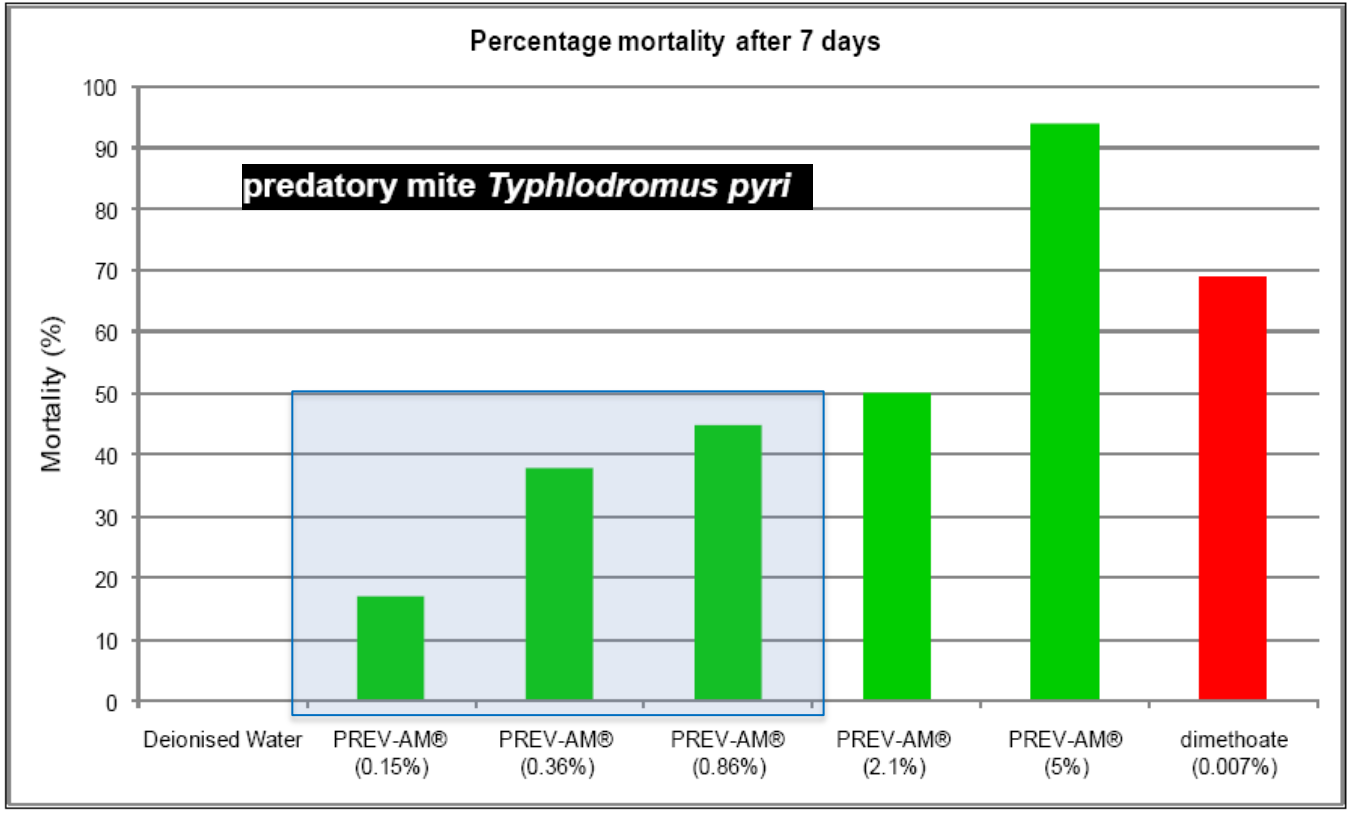
PREV-AM Predatory mite *Typhlodromus pyri*



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PREV-AM Mode of action

- Contact control desiccant disrupts & dries:
  - the ***exoskeleton of insects and mites*** &
  - the ***protective Phospholipid layer*** of fungi
- Provides immediate knockdown within minutes to 24 hours
- Inherent surfactant properties optimizes spreading and penetration

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PREV-AM

Spotted Wing Drosophila Lab Study

TDB 545

IMPORTANT NOTICE: Data provided in this technical document is for information purposes only. Application rate recommendation for this product to be confirmed on in-country label.

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Trial Details

Target:	spotted wing drosophila (*Drosophila suzukii*)
Crop:	Lab Study
Location:	Gainesville, FL, USA
Researchers:	S. Brennan and Dr O. Liburd, University of Florida
Trial Date:	May 2013

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Lab Situation

The spotted wing drosophila (SWD) is a fruit fly that **affects soft-skinned fruits, such as strawberry, blackberry, raspberry and blueberry**. Current control methods consist of frequent spray applications of pesticides to control the adult fly.

The purpose of this study was to evaluate the efficacy of **PREV-AM**, an **ECOCERT** approved insecticide, on spotted wing drosophila adult mortality.

The bioassay chamber consisted of a 500 ml sized mason fitted with mesh under the screw top ring. Five male and 5 female flies were placed in each jar before treatment was applied. Each treatment was applied with a single-action Paasche airbrush. After treatment, a 30 ml container with a feeding wick was filled with 1 molar of sugar water to feed the flies.

Flies were reared in an environmental chamber at the Univ. of Florida, Small Fruit and Vegetable IPM (SFVIPM) laboratory in Gainesville, Florida.

Adults were observed for survival by checking the chamber post-application at various intervals.

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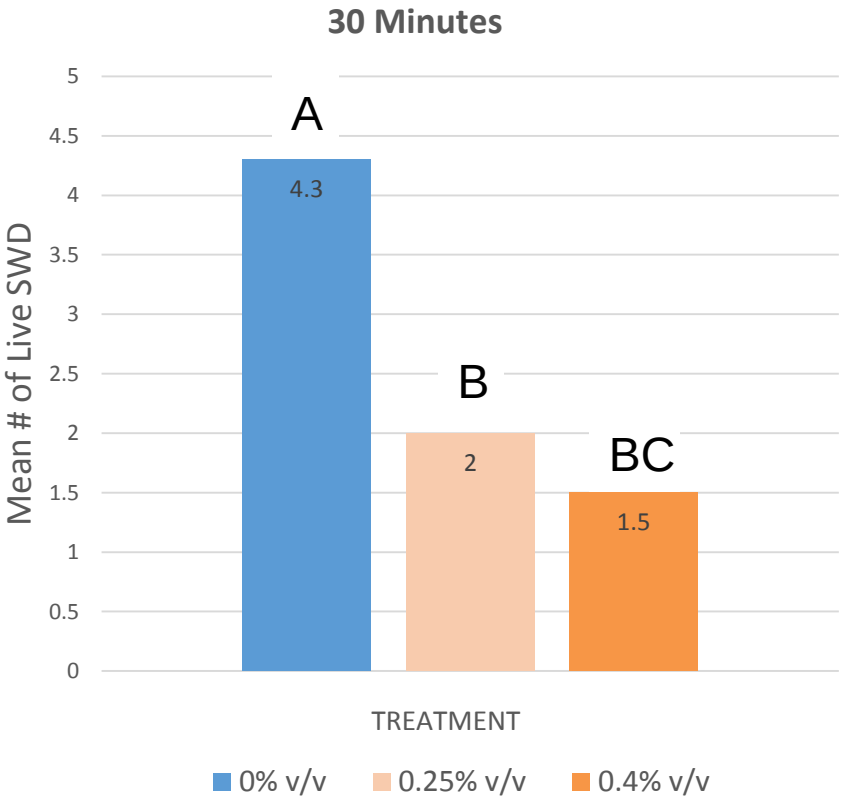
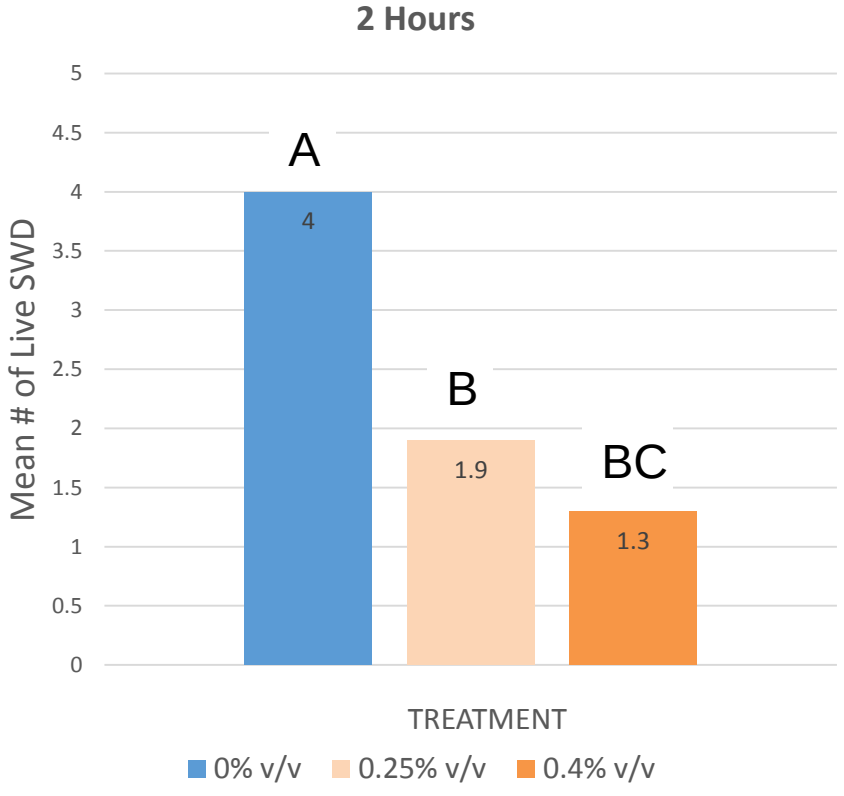
Results over 2 hours





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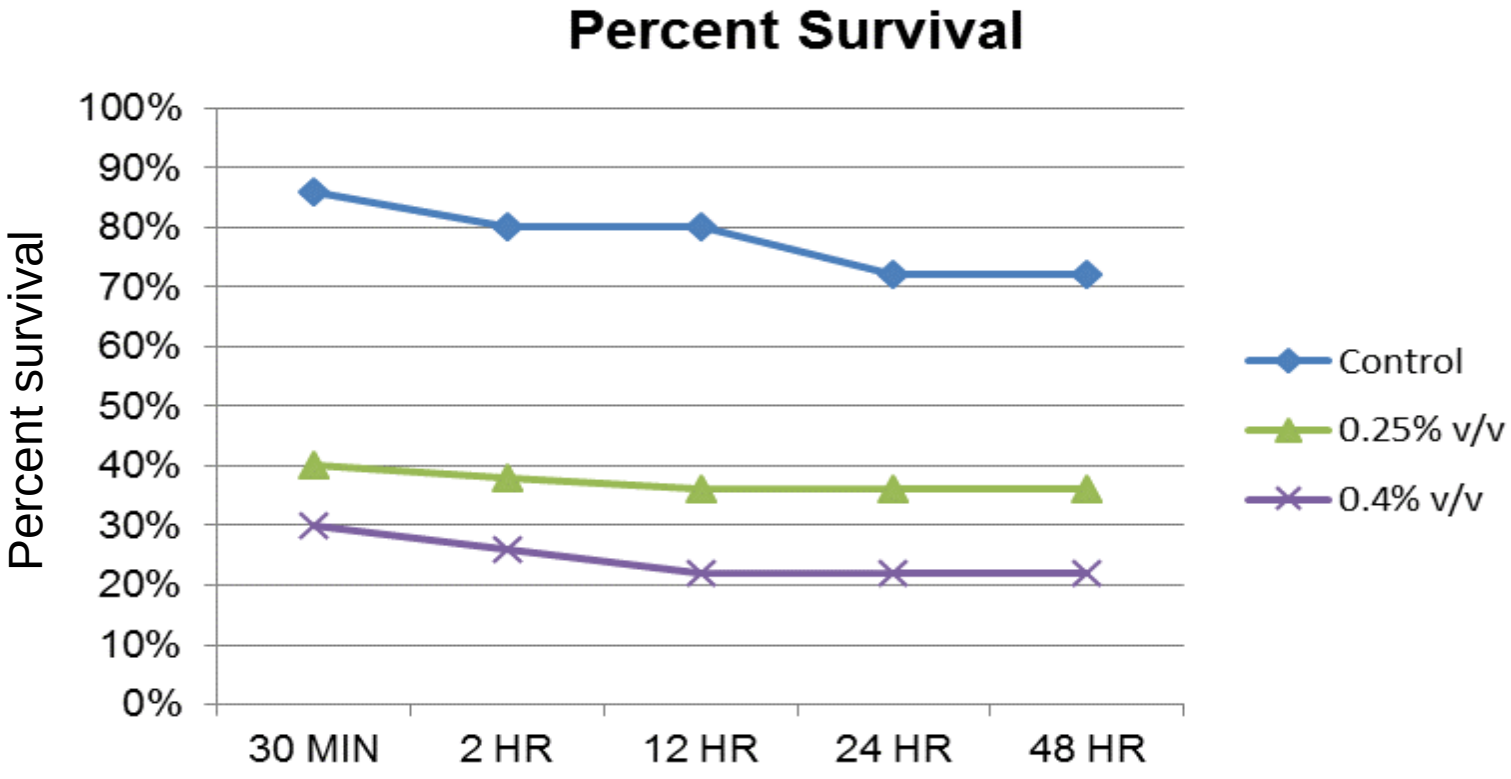
Results over 2 days



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Study Results

- At 30 minutes post-treatment, the 0.25% v/v and 0.4% v/v **PREV-AM** treatment already showed statistically less surviving flies than the untreated control.

- This figure did not significantly change over the 2, 12, 24 and 48 hour periods, indicating that **maximum control was achieved in 30 minutes.**

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IPM Suggested Use

- Due to broad spectrum effect, whether applying **PREV-AM** as stand alone fungicide, insecticide or miticide or in tank mixtures with such products, the population of SWD will be continuously reduced with every application offering better control throughout the season.
- Resistance potential is very low due to physical mode of action and **PREV-AM** is often used with traditional chemistries as alternate MOA for resistance management.
- Using **PREV-AM** with traditional chemistries will provide immediate knockdown protection while traditional chemistries take effect.
- **PREV-AM** has moderate to low impact on bees and beneficials.

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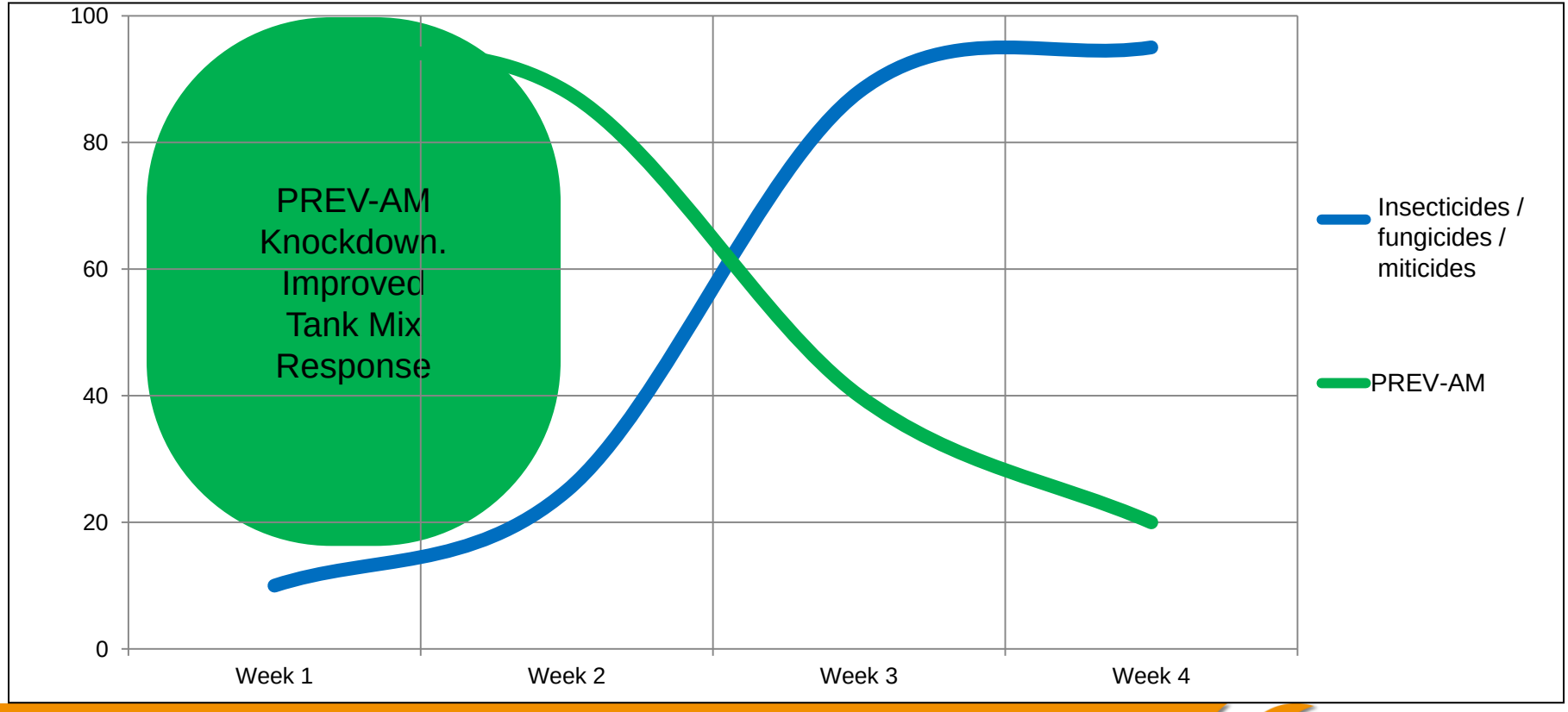
PREV-AM as tank mix partner



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Conclusions

- **PREV-AM** as part of an existing spray program will increase efficacy for control of Drosophila Suzuki while reducing resistance potential.
- Frequency of application is key to continuously reduce population – especially during the soft body stages.
- Further studies currently underway.

Application rate recommendation for this product to be confirmed on in-country label

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