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UNIVERSITY OF CALIFORNIA RIVERSIDE

# Development of IPM Programs for Peppers



**California Pepper  
Commission  
2025-26**

# Overview

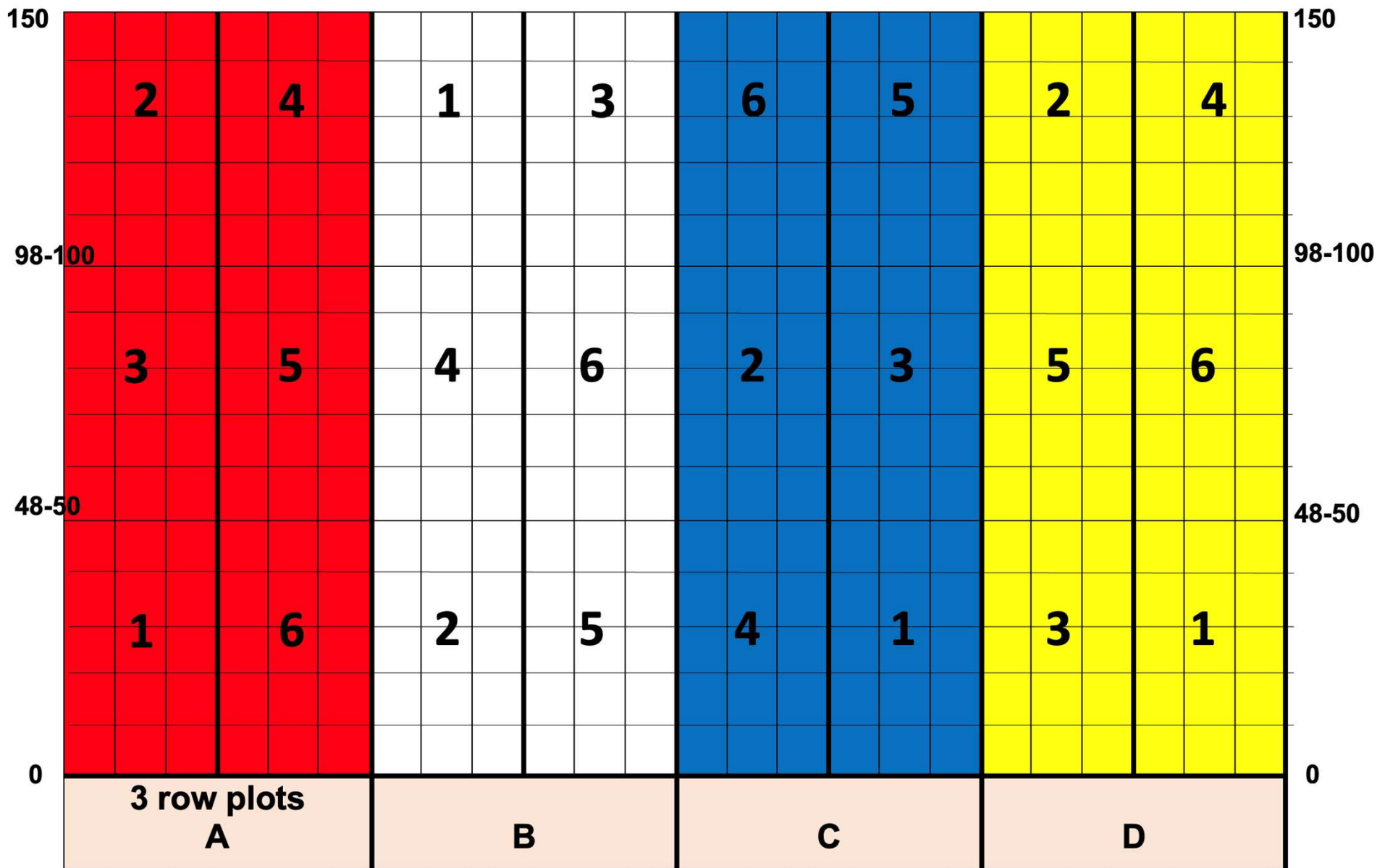
- **Structure of insecticide field trials**
- **Last years results**
- **Proposal-Commercial Field Trial with Incipio**
- **Future studies**

# Field Trials 2025

- **Field trial at UCR AgOps**
  - Chemical screening field trial
  - Test new chemistries
  - Test IPM rotations for future use in a grower IPM program



# Field Design



# **Chemical Field Trial**

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## **\* Chemical Screening test**

- Untreated control**
- PureCrop1 treatment (applied 6X)**
- chemical standard rotation**

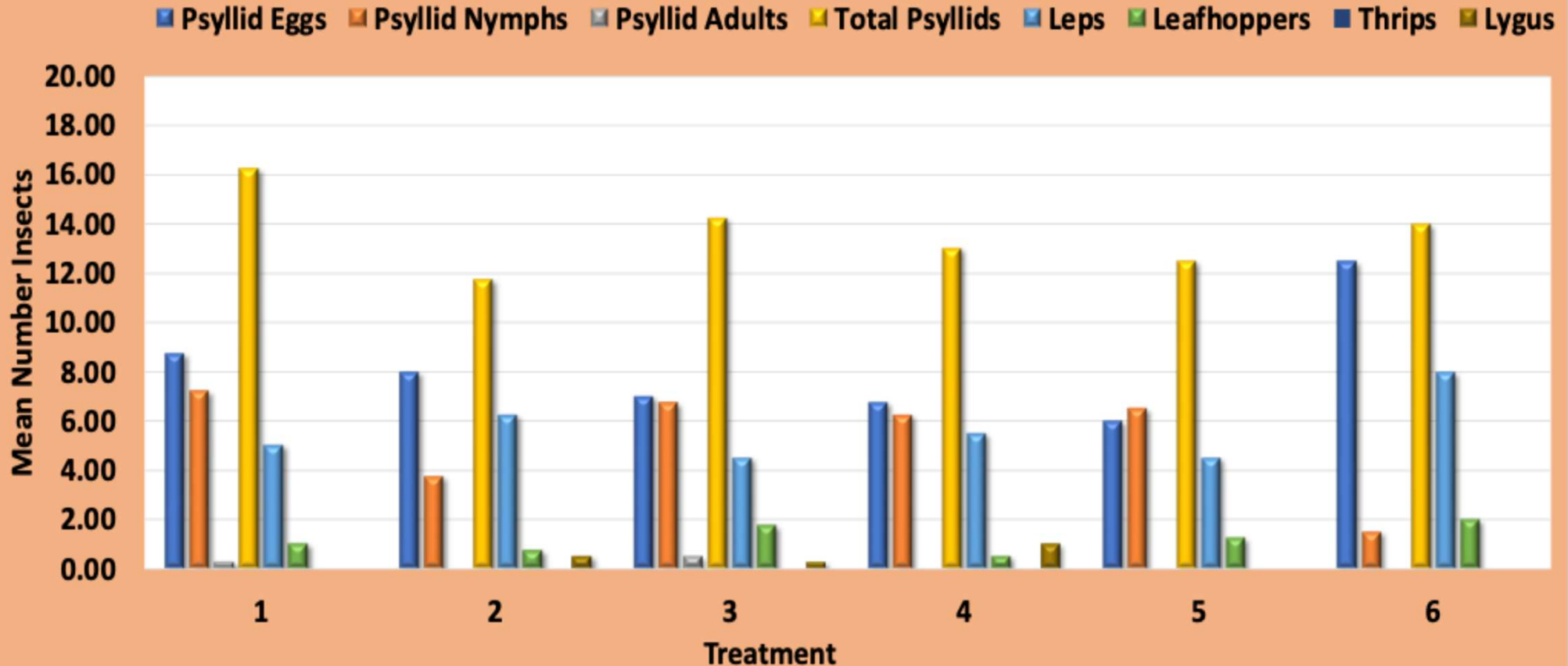
## **\* IPM Trials**

- 1 standard treatment rotation**
- 2 organic treatment rotations**
- sprayed as needed**

# Trial Treatments

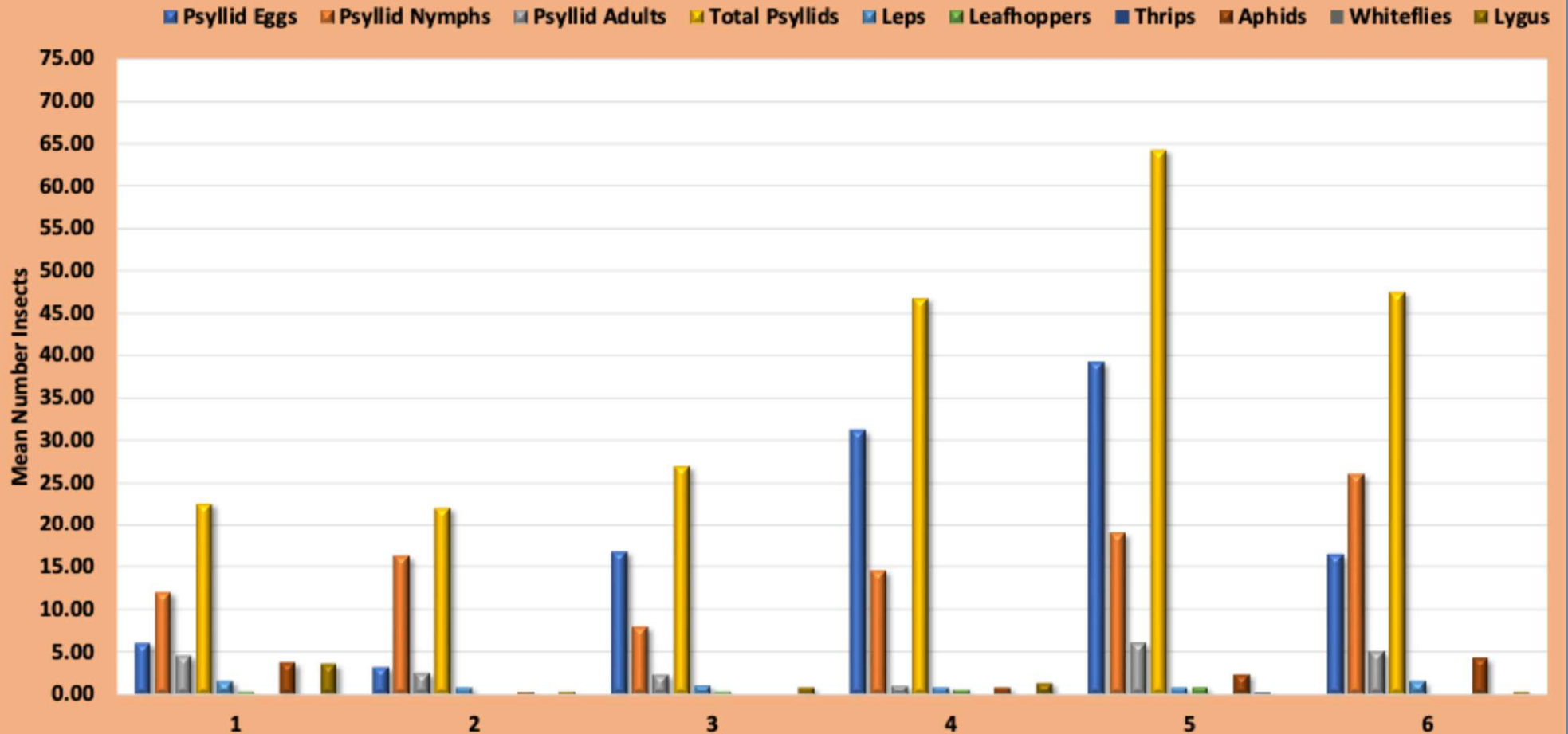
Treatment	Compound	Rate	Application Dates	Company
1	Non-treated	-	-	-
2	IPM Intrepid 2F Radiant SC Sivanto Prime Dyne-amic	10.0 oz 7.0 oz 14 oz 0.125%	6/20, 6/27, 7/3, 7/18, 8/1	Corteva Corteva Bayer Helena
3	Organic IPM Pyganic 5.0EC Trilogy EC Entrust SC	15.0 oz 64.0 oz 8.0 oz	6/20, 6/27, 7/3, 7/18, 7/25, 8/1	MGK Certis Corteva
4	Organic PureCrop1	1%	6/20, 6/27, 7/3, 7/18, 7/25, 8/1	West Coast AG
5	Organic Pyganic 5.0EC Venerate Dipel DF Oroboost	15 oz 128 oz 1 lb 0.125%	6/20, 6/27, 7/3, 7/18, 7/25, 8/1	MGK ProFarm Valent Oro-Agri
6	Chemical Standard Asana XL Dyne-amic	9 oz 0.125%	6/20, 6/27, 7/3, 7/18, 7/25, 8/1	FMC Helena

# Pepper Field Insect Counts



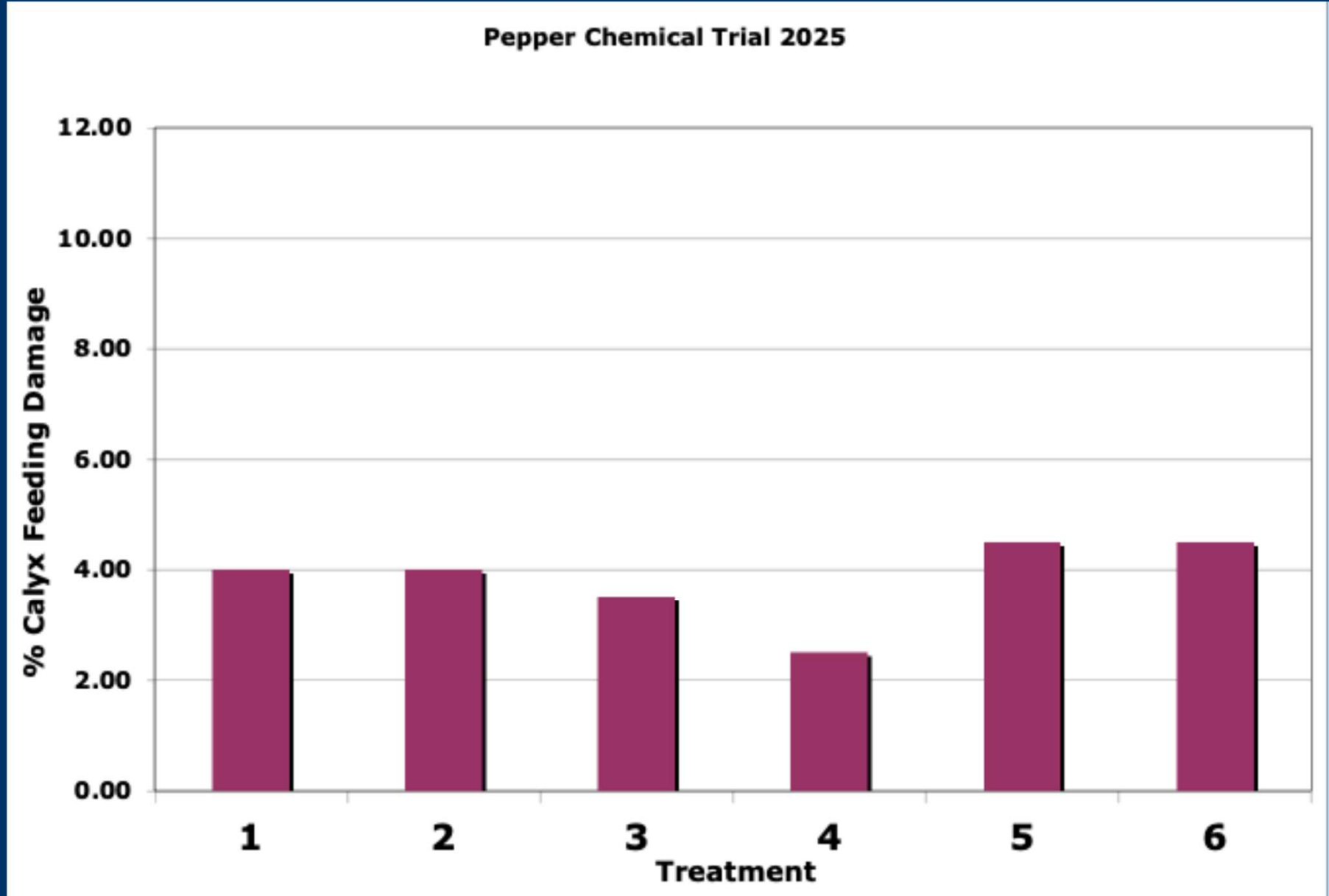
- 1-Untreated Control
- 2-Intrepid, Radiant, Sivanto Prime
- 3-Pyganic, Trilogy, Entrust
- 4-PureCrop1
- 5-Pyganic, Venerate, Dipel
- 6-Asana XL

# Pepper Field Insect Counts



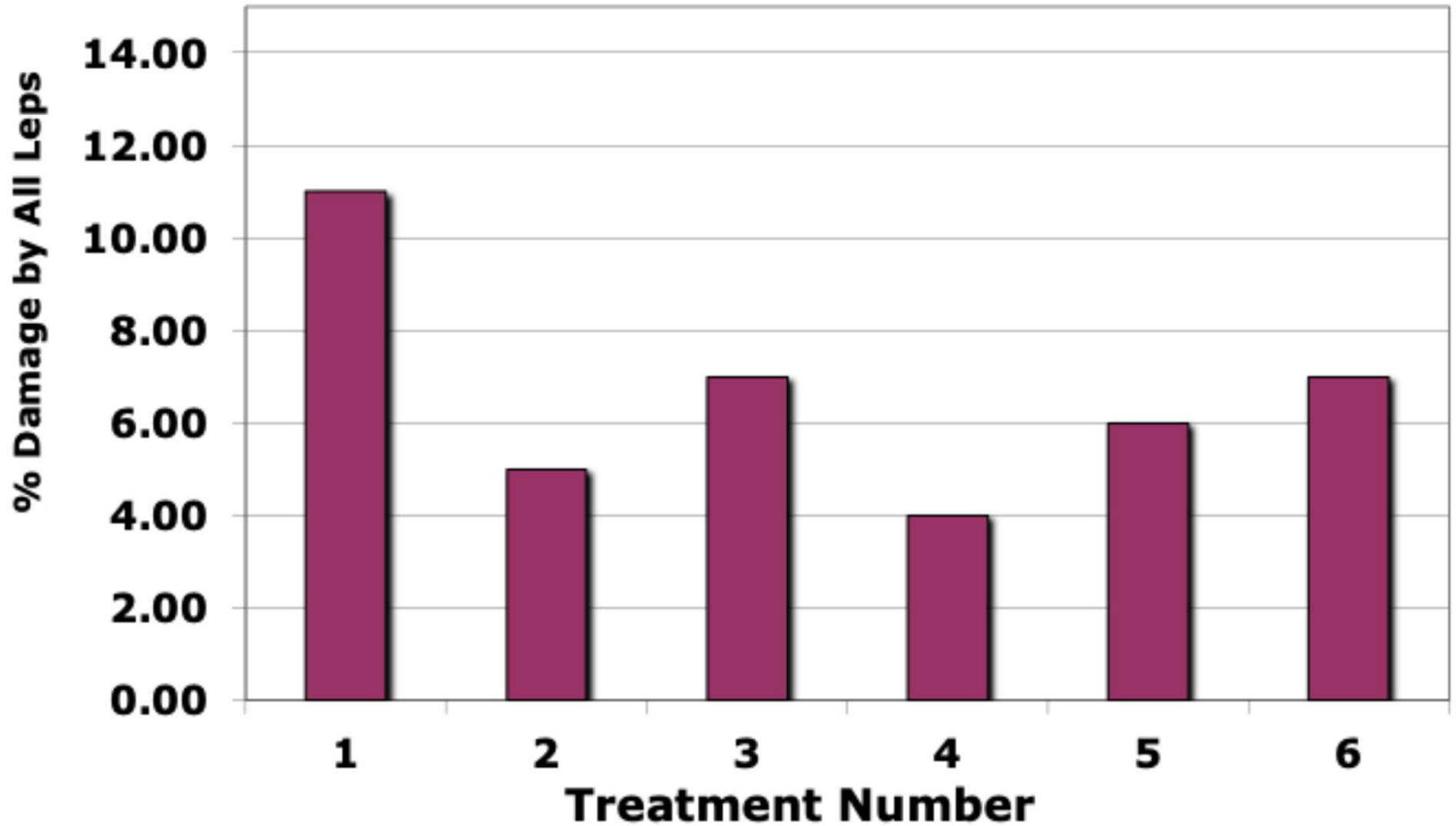
**1-Untreated Control**  
**2-Intrepid, Radiant, Sivanto Prime**  
**3-Pyganic, Trilogy, Entrust**  
**4-PureCrop1**  
**5-Pyganic, Venerate, Dipel**  
**6-Asana XL**

# Calyx Feeding Damage



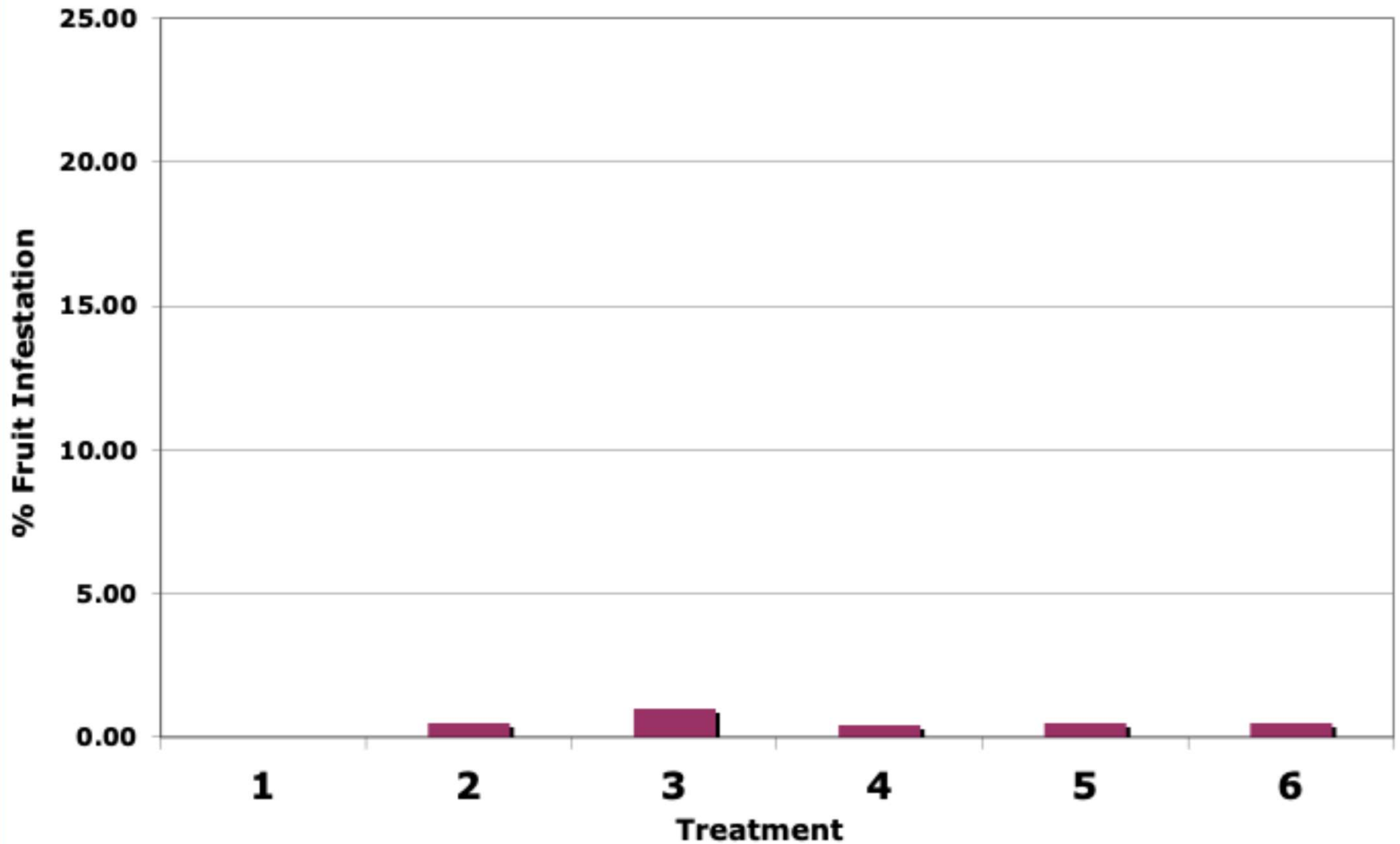
# Worm Damage

Pepper Chemical Trial 2025



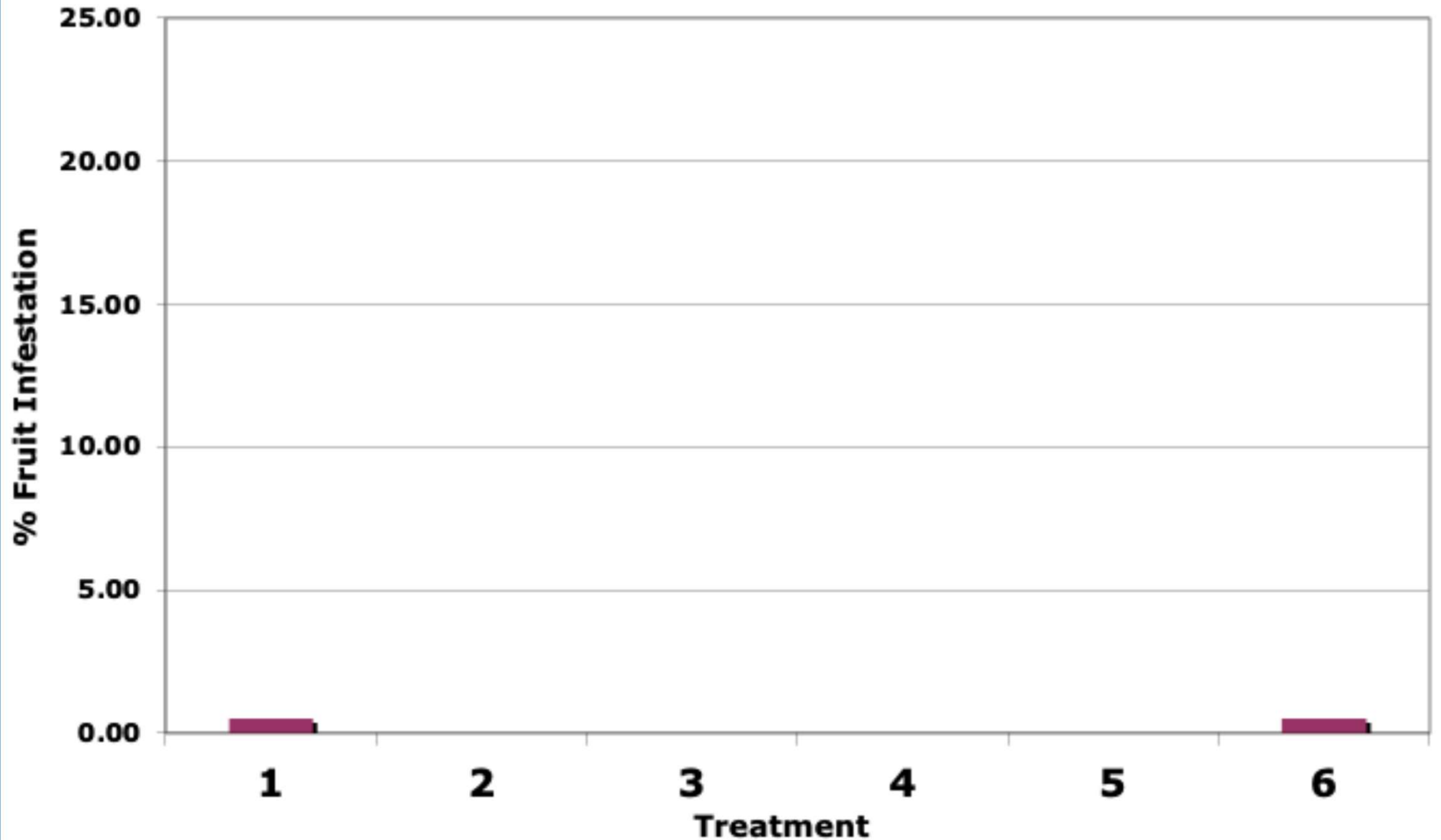
# Spider Mite Damage

Pepper Chemical Trial 2025 -Mites



# Aphid Damage

Pepper Chemical Trial 2025 -Aphids



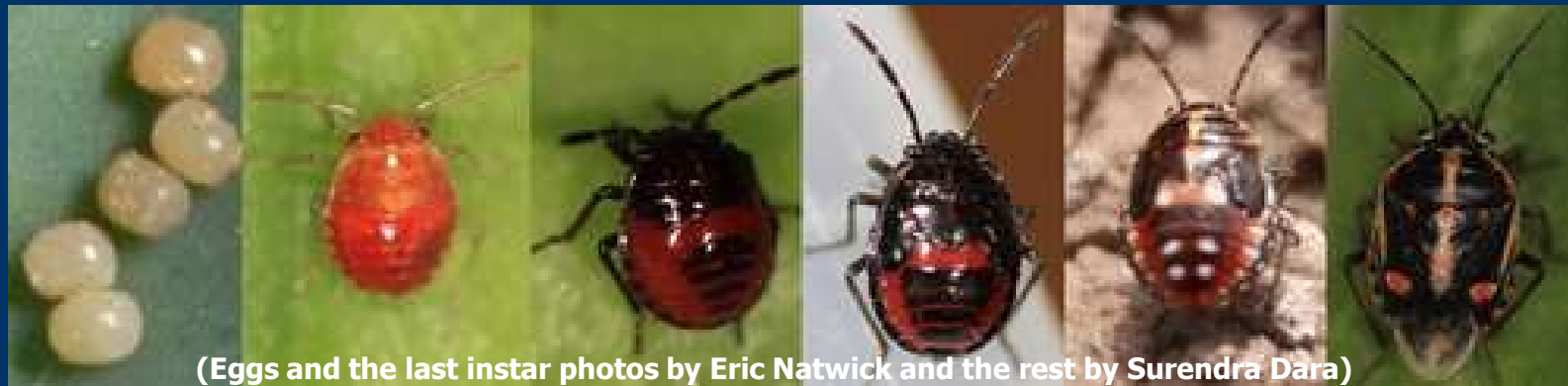
# Bagrada Bug



(Photo by Greg Kund)



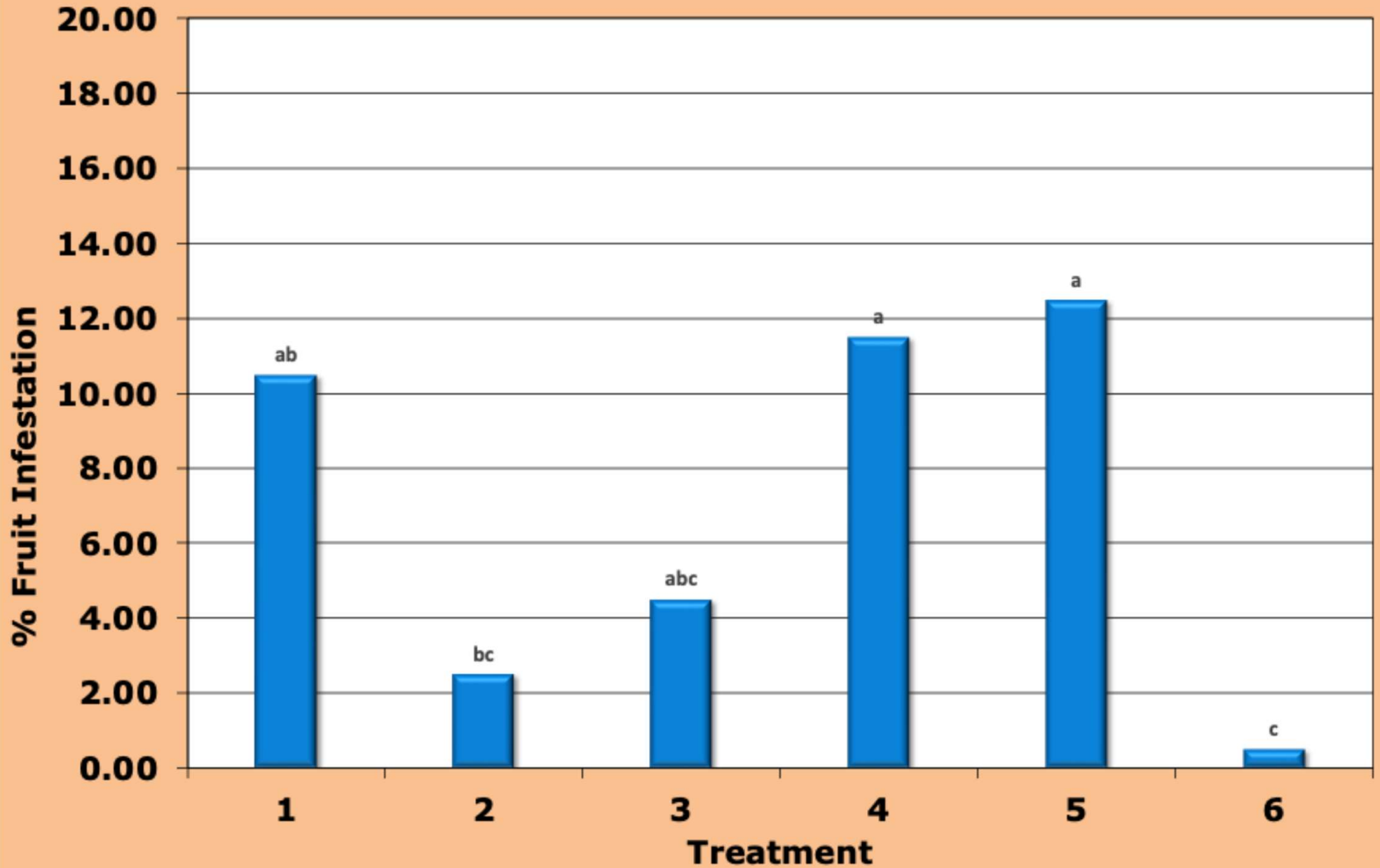
(Photo by Greg Kund)



(Eggs and the last instar photos by Eric Natwick and the rest by Surendra Dara)

Adult size 1/4"

# Bagrada Bug Damage



# Newer Materials

- **Sequoia (sulfoxaflor) Corteva**  
**Not registered in CA**
- **Sefina (afidopyropen) BASF**
- **Beleaf (FMC)**
- **Minecto Pro (Syngenta)**
- **Sivanto Prime (Bayer)**
- **Incipio 5.1 oz/Ac (Syngenta)**  
**Plinazolin/isocycloseram**  
**Registered with EPA not CA**

# Commercial Field Trial

- **Test Incipio in a commercial standard IPM program targeting pepper weevil, worms, mites, leafminer, and thrips**
- **Compare standard program to the same program with Incipio used 2X**
- **Insect field counts, harvest assessments, and yield data**

# Future studies

## **New materials to test:**

- **Proprietary Insecticides—  
(Incipio/Plinazolin-Syngenta)  
Targeting pepper weevils**

- **Replacement of neonicotinoids**

- **OMRI organic treatments**

**Develop and evaluate IPM programs**

# Acknowledgments

**John Fujii – Gardena Nursery**

**Jose Padilla – UCR AgOps**

**Andy White – White Seeds**

**California Pepper Commission**

