

Update on miticide Compatibility with *N.* *californicus* & *P. persimilis*

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Predatory Mites

- Are incorporated in IPM programs for strawberry
- Some can be found occurring naturally
 - *Neoseiulus californicus*



- Commercially reared & released
 - *Phytoseiulus persimilis*, *N. californicus*,
N. fallacis, *Amblyseius andersoni*
- Release rates depend on species, pest pressure, crop



- Incorporation requires knowledge & understanding of interactions with crop management practices
 - They are living breathing organisms
 - Safeguarding can conserve populations
 - Environment can affect control efficacy
 - Temperature, humidity, prey & other food sources, crop type, pesticides



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Methods

- Leaf (1" disc) dip at the label rate & allowed to dry
- Treated leaf placed inside a petri dish with wet filter paper
 - Filter paper moistened daily



Methods

- 7 adult *P. persimilis* are placed onto the leaf (♀ & ♂'s)
- > 35 TSSM motiles & eggs placed on the leaf for food
 - TSSM replenished every day



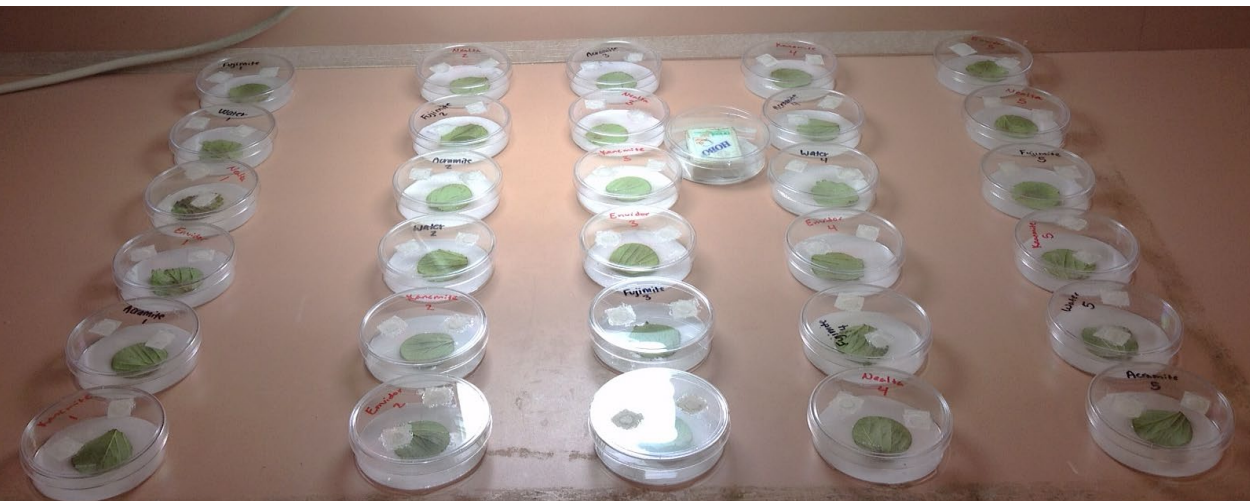
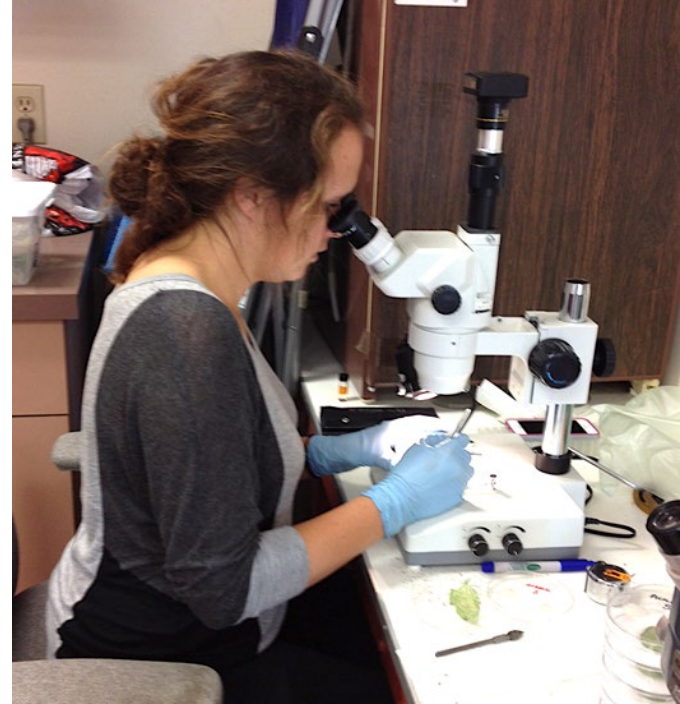
Lab Conditions

Temp: 82.4 °F \pm 1 °F

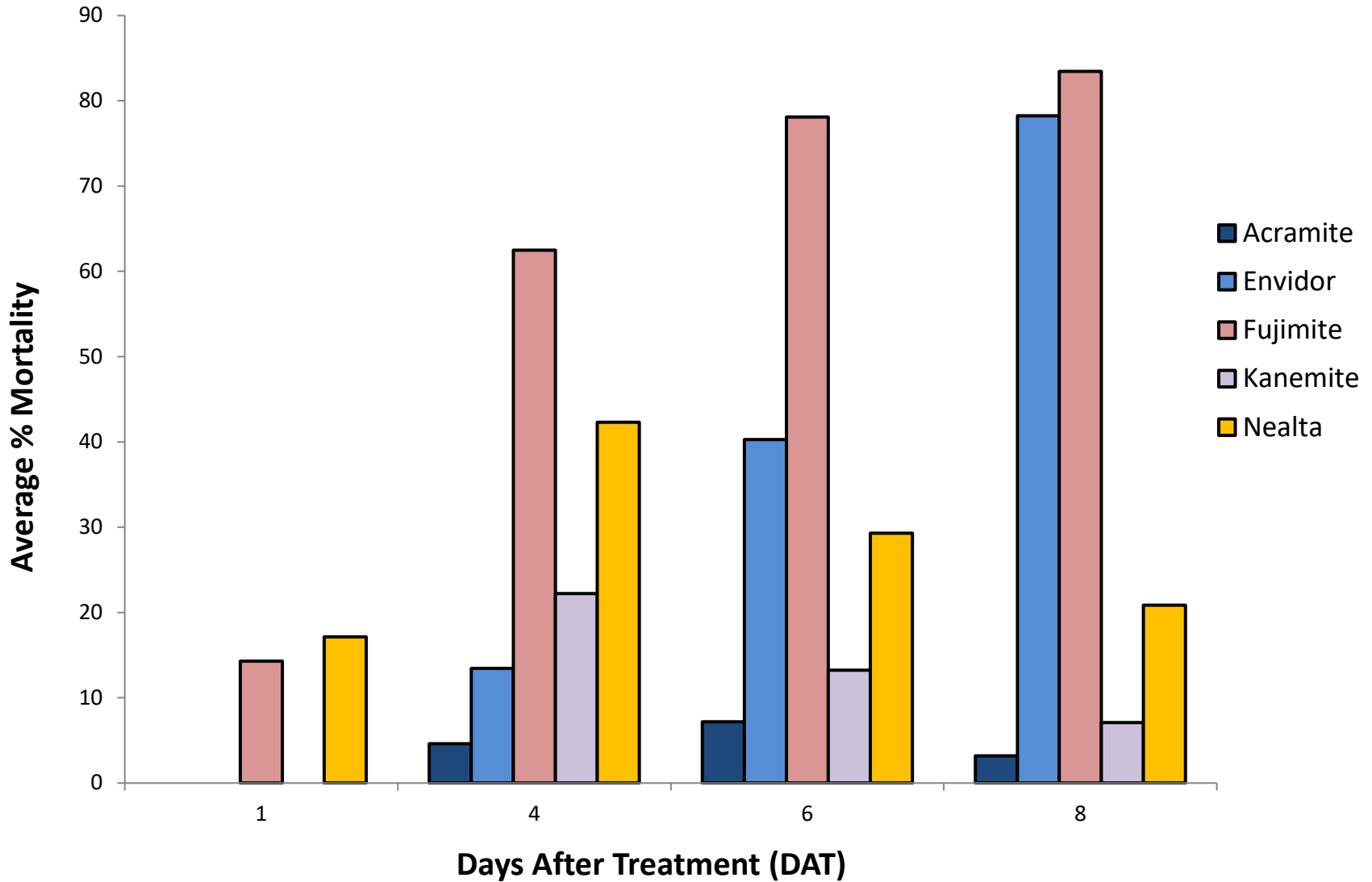
% RH : 60-65%

16:8 hr (L:D)

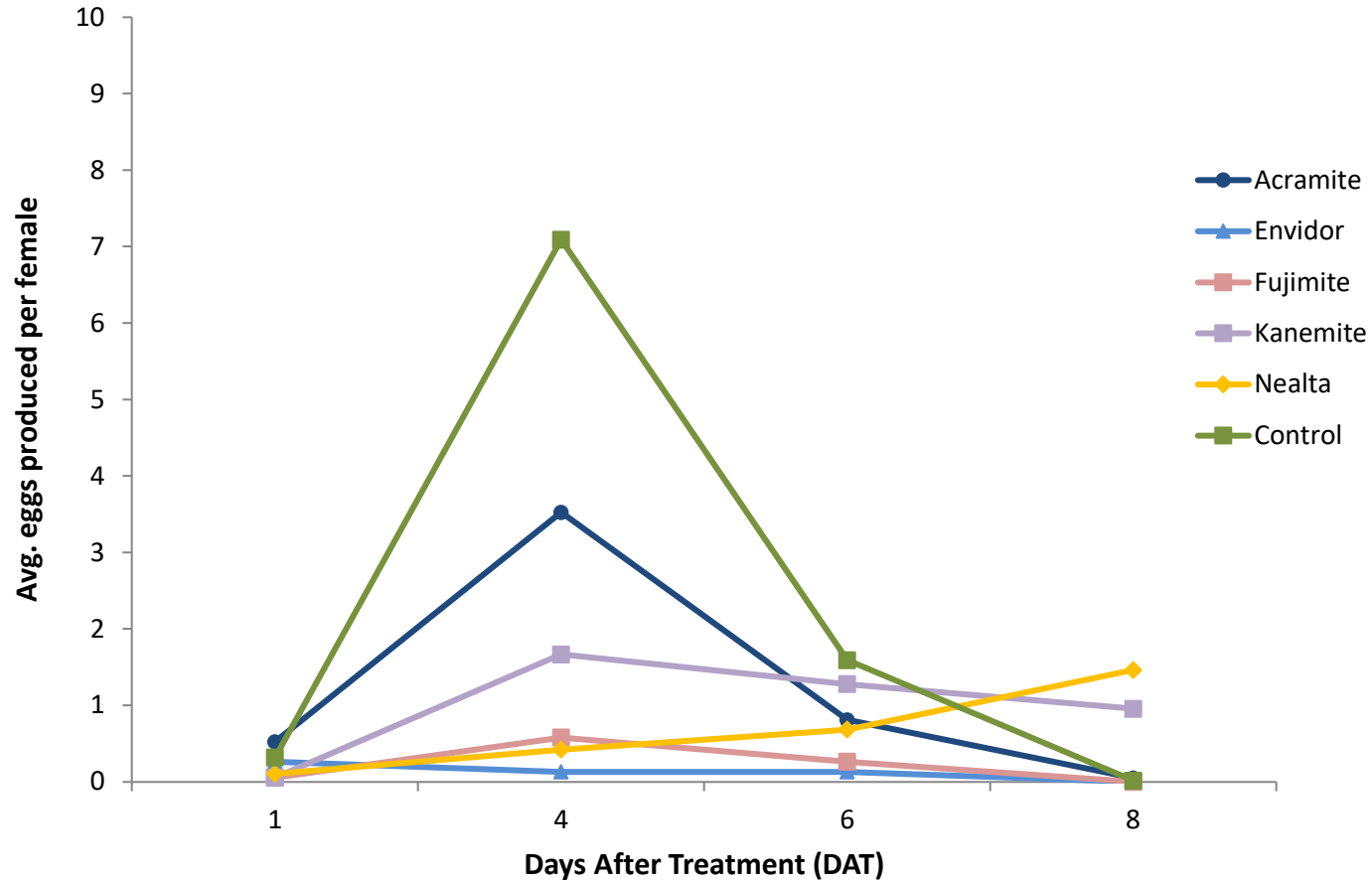
RCBD on benchtop, 5 reps



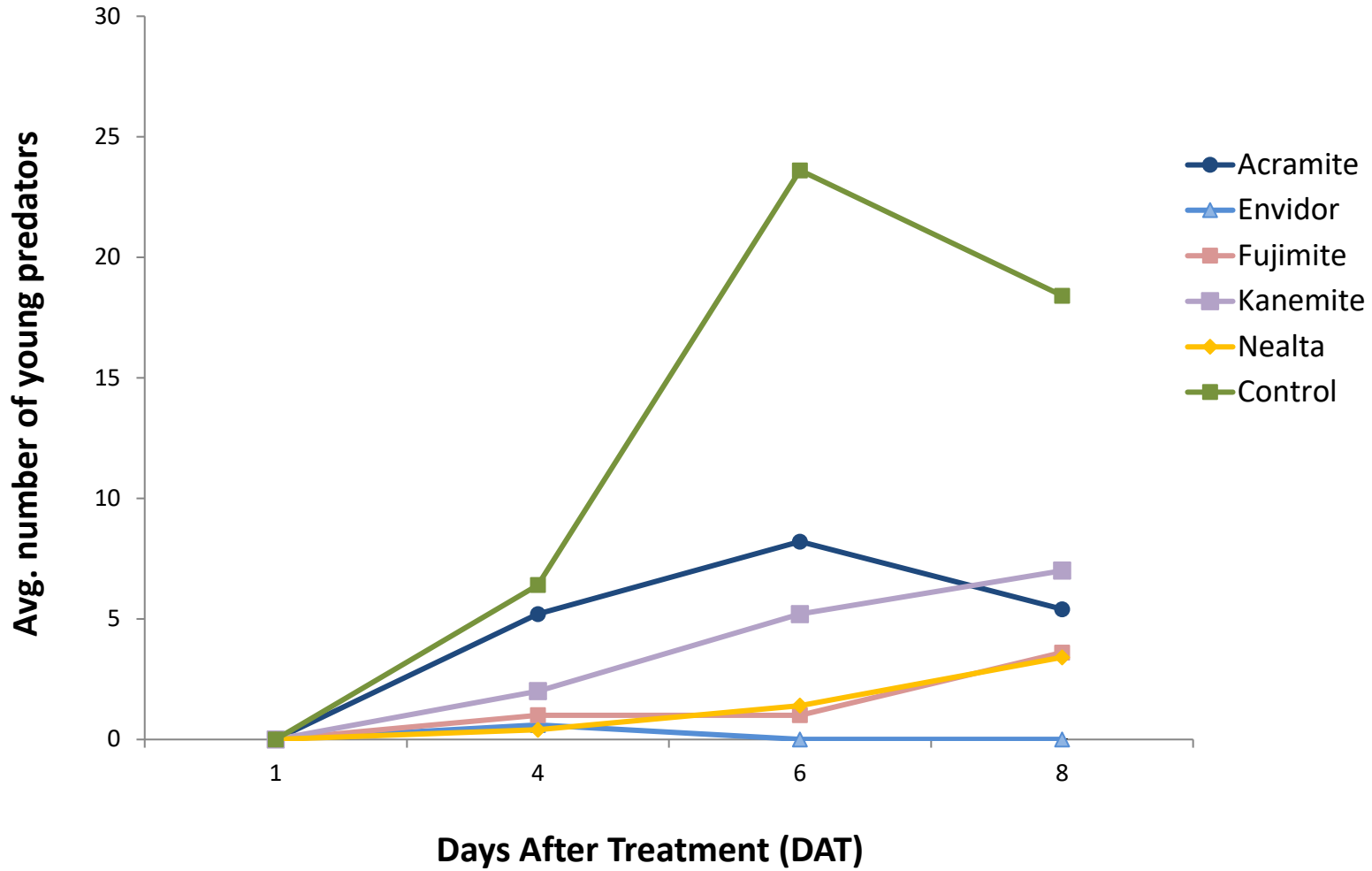
Corrected Percent Mortality (*P. persimilis*)



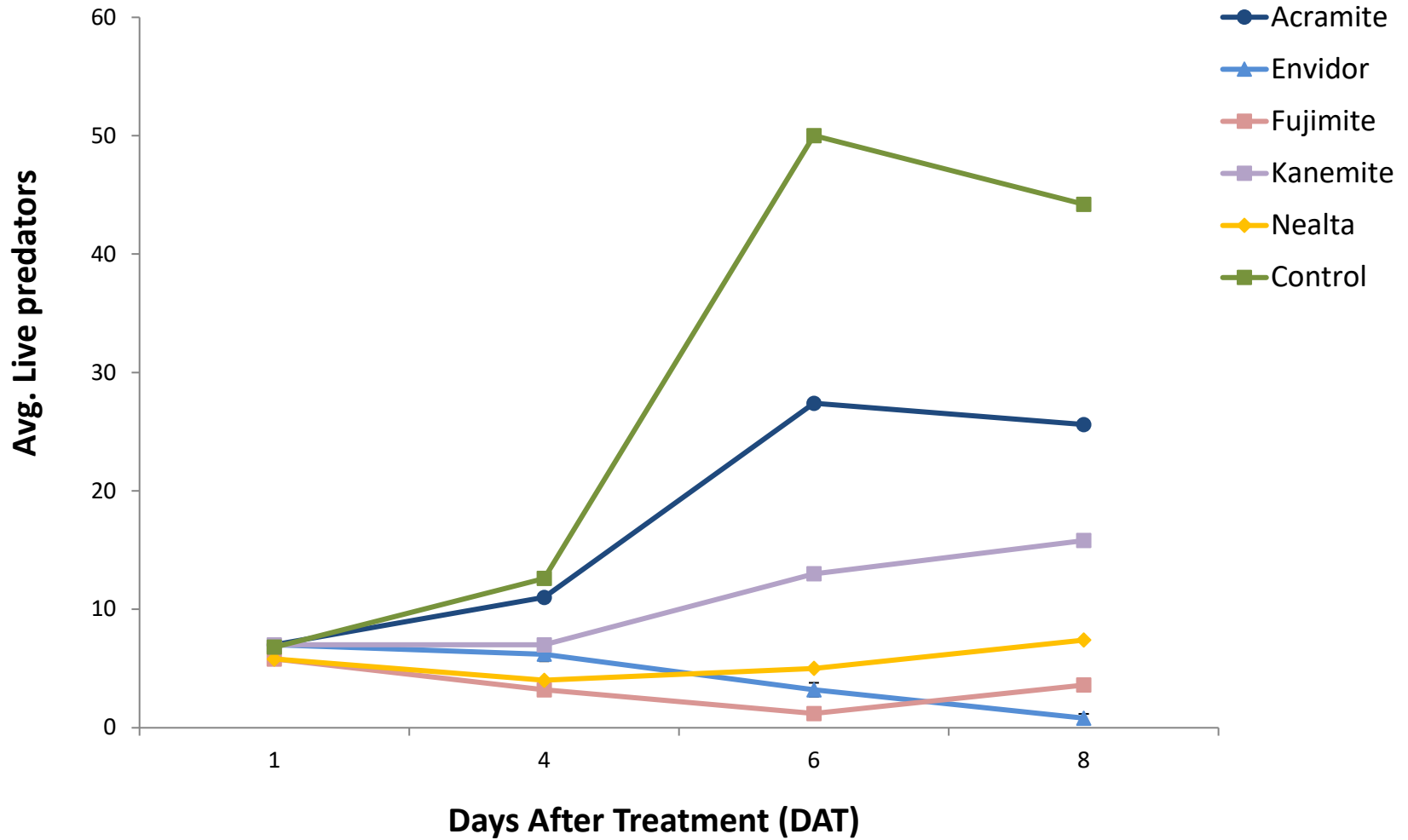
Fecundity (# eggs produced)



Fertility (# young produced)



Total live predators



Guidelines

Harsh on *P. persimilis*:

Fujimite & Envidor

"Soft" on *P. persimilis*:

Nealta

"Softer" on *P. persimilis*:

Acramite & Kanemite

Methods

- Bean leaf dip at the label rate & allowed to dry
- Treated leaf placed inside a petri dish with wet filter paper
 - Filter paper moistened daily



Methods

- 7 adult *N. californicus* are placed onto the leaf (♀ & ♂'s)
- >35 Pacific spider mite motiles & eggs placed on the leaf for food
 - Spider mites replenished every day, old/dead taken off



Lab Conditions

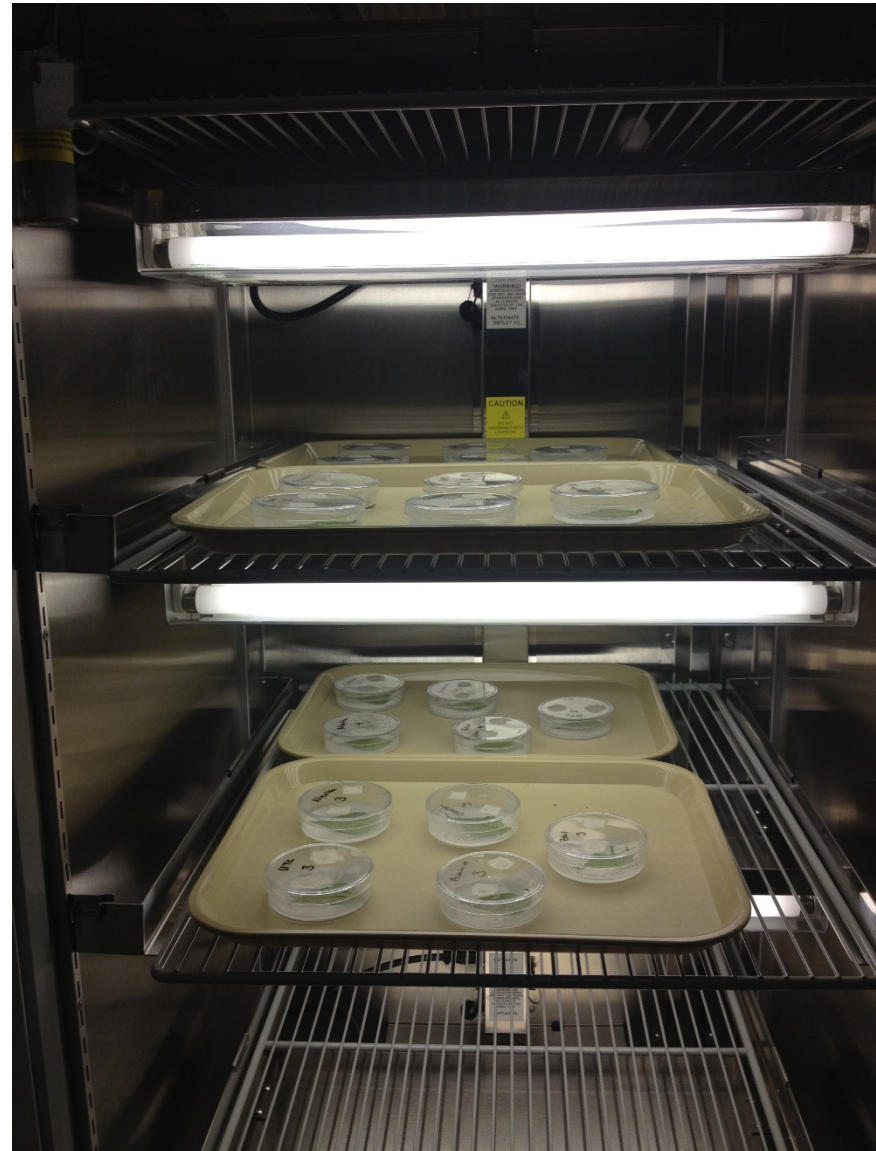
Temp: 80 °F \pm 1 °F

% RH : 60-65%

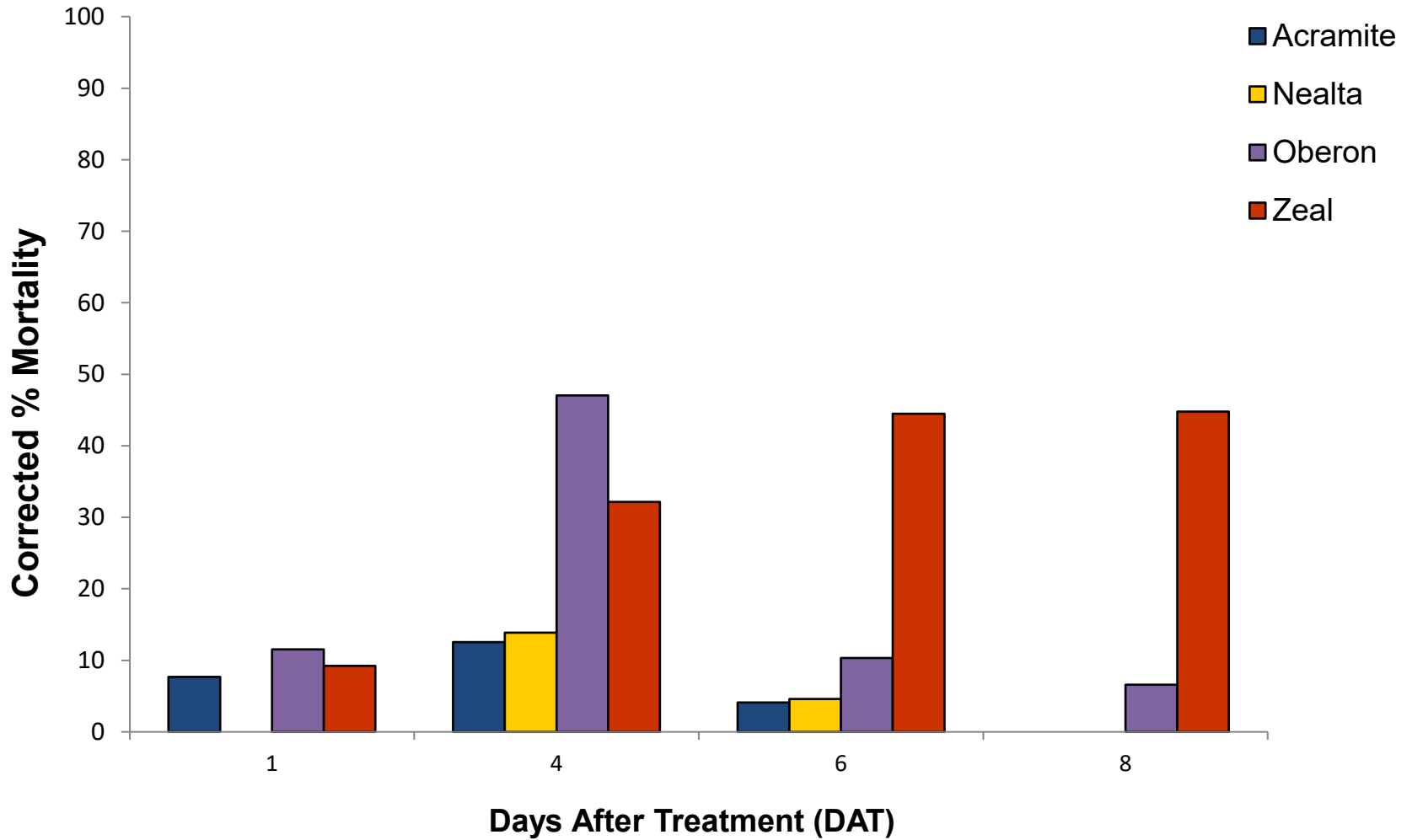
16:8 hr (L:D)

RCBD in Envir. Chamber

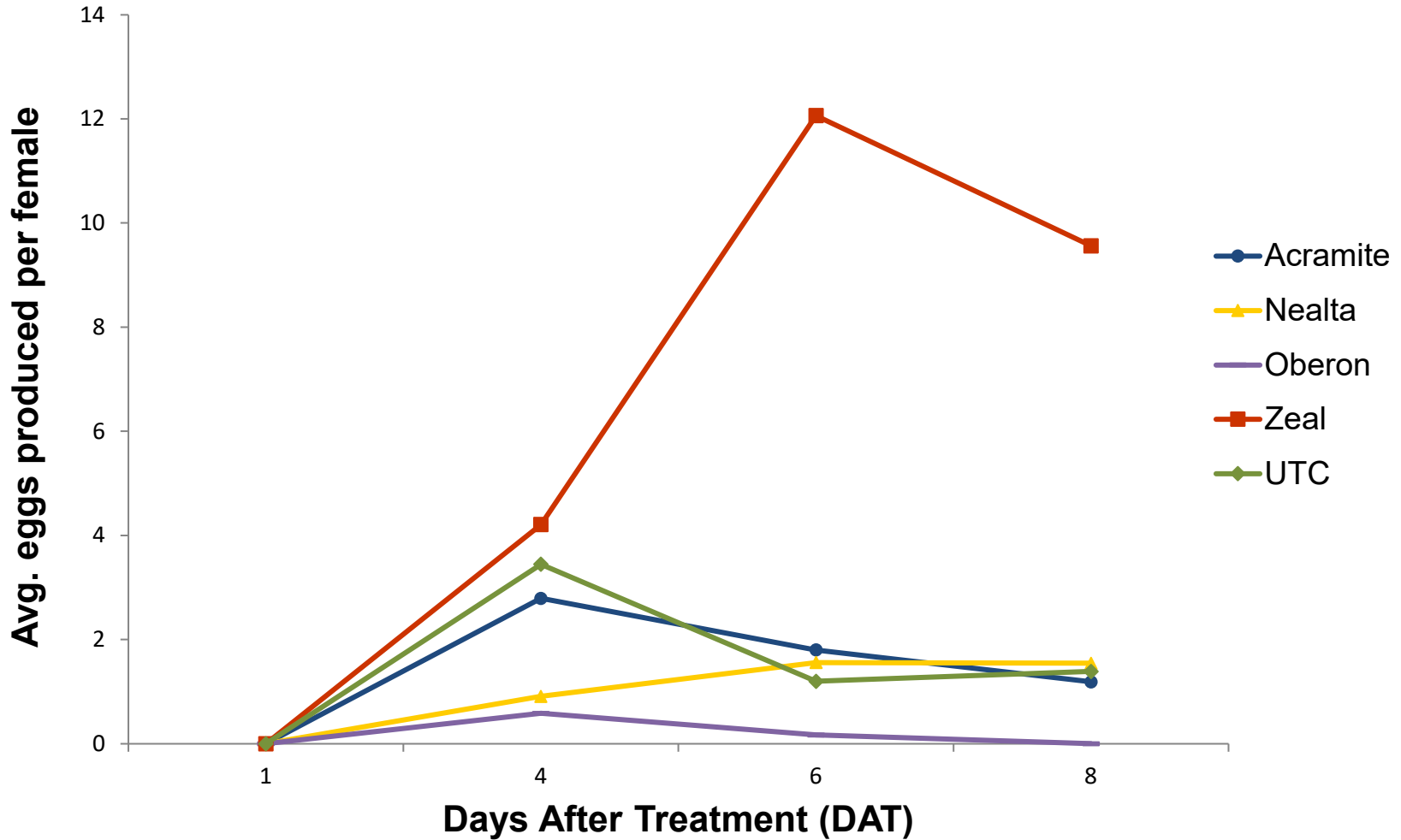
4 Reps



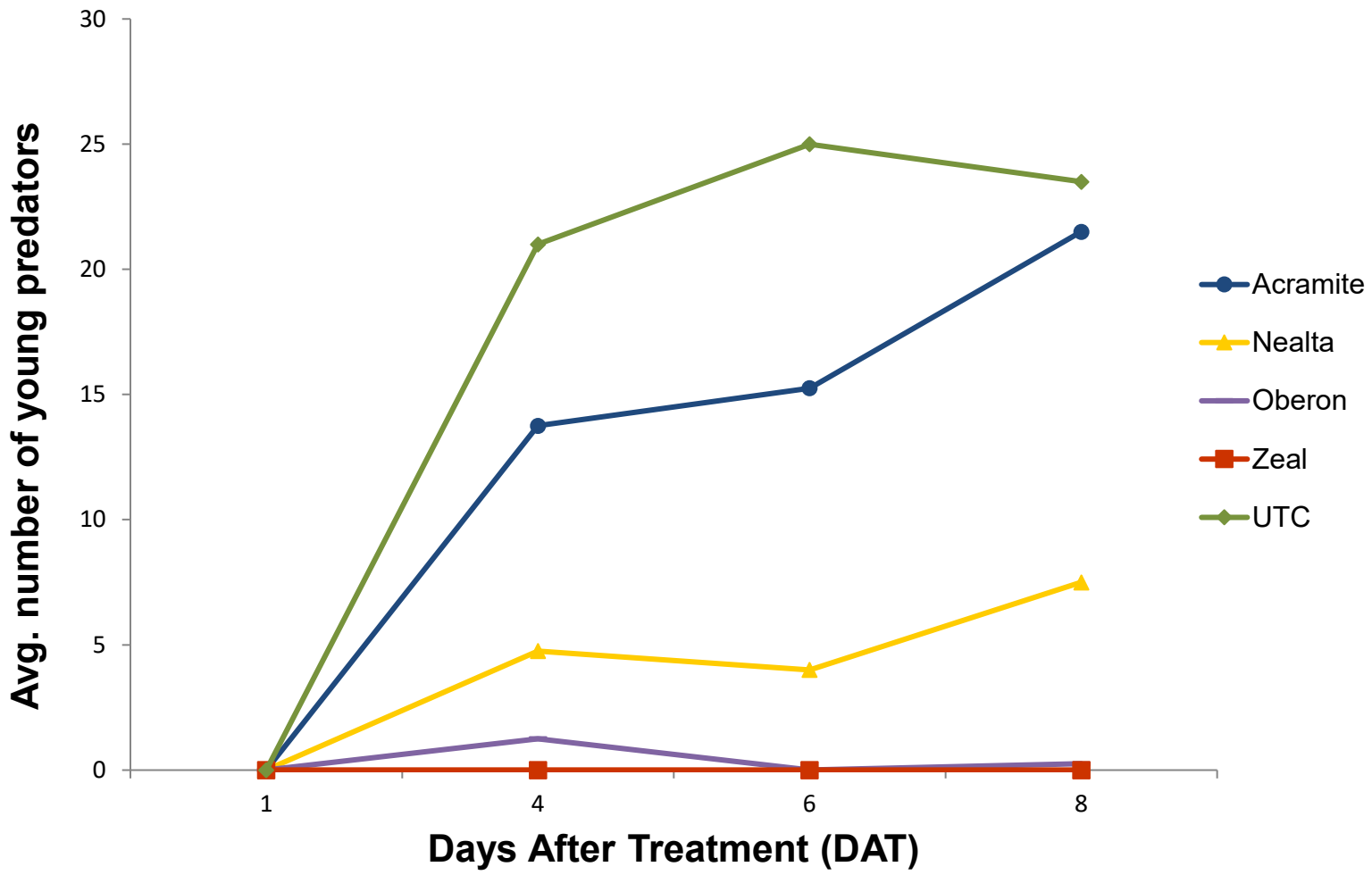
Corrected Percent Mortality (*N. californicus*)



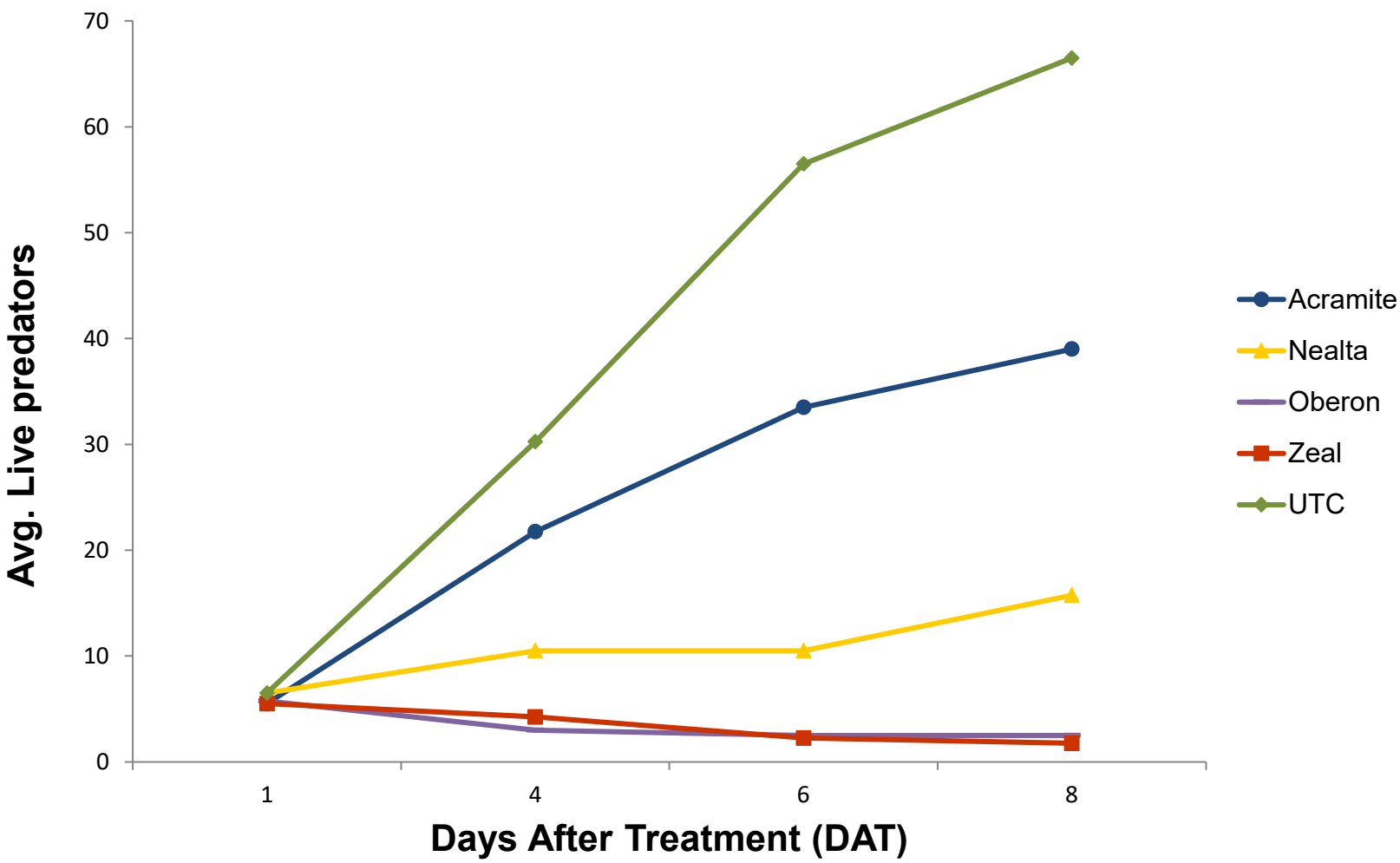
Fecundity (# eggs produced)



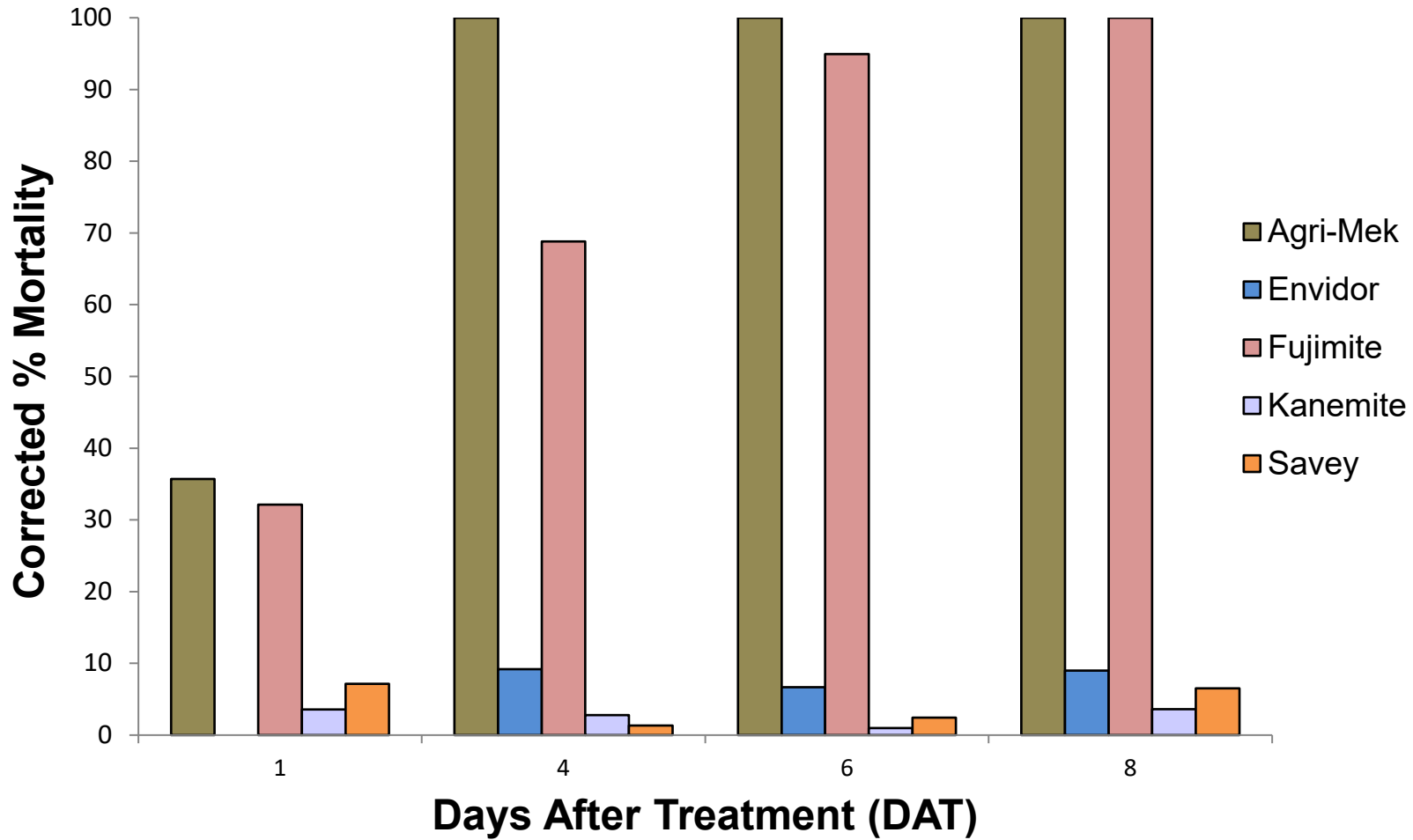
Fertility (# young produced)



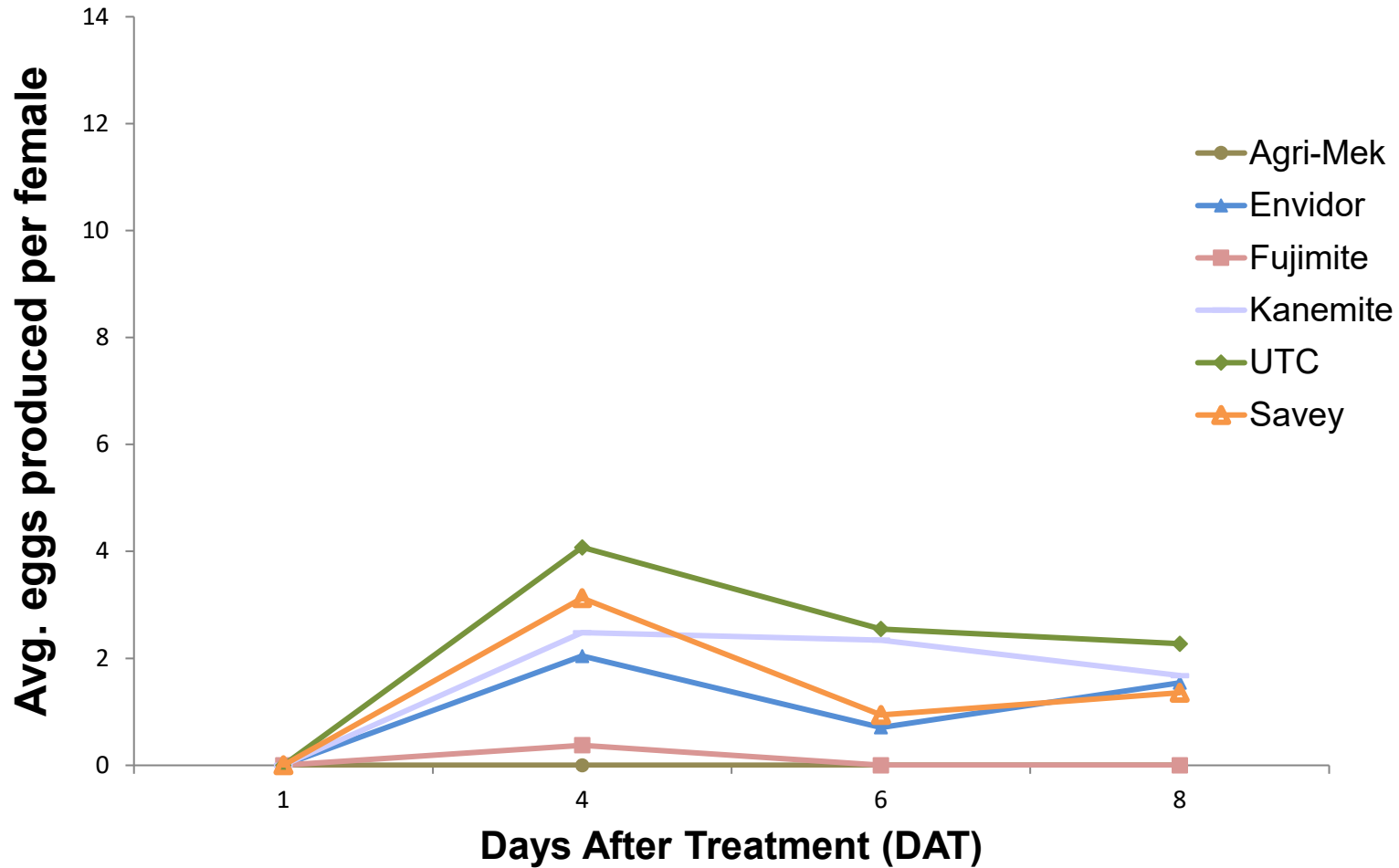
Number of live predators



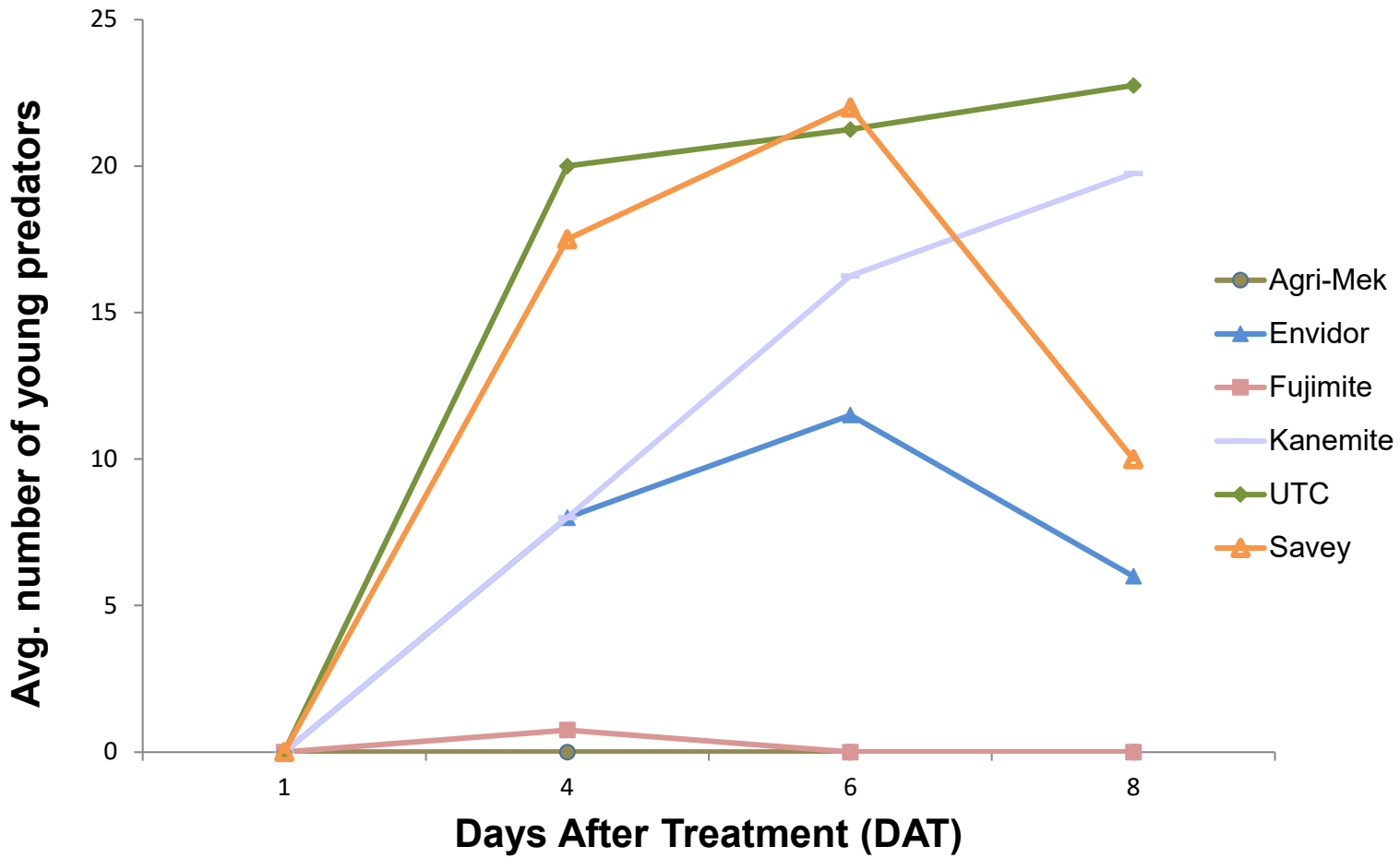
Corrected Percent Mortality (*N. californicus*)



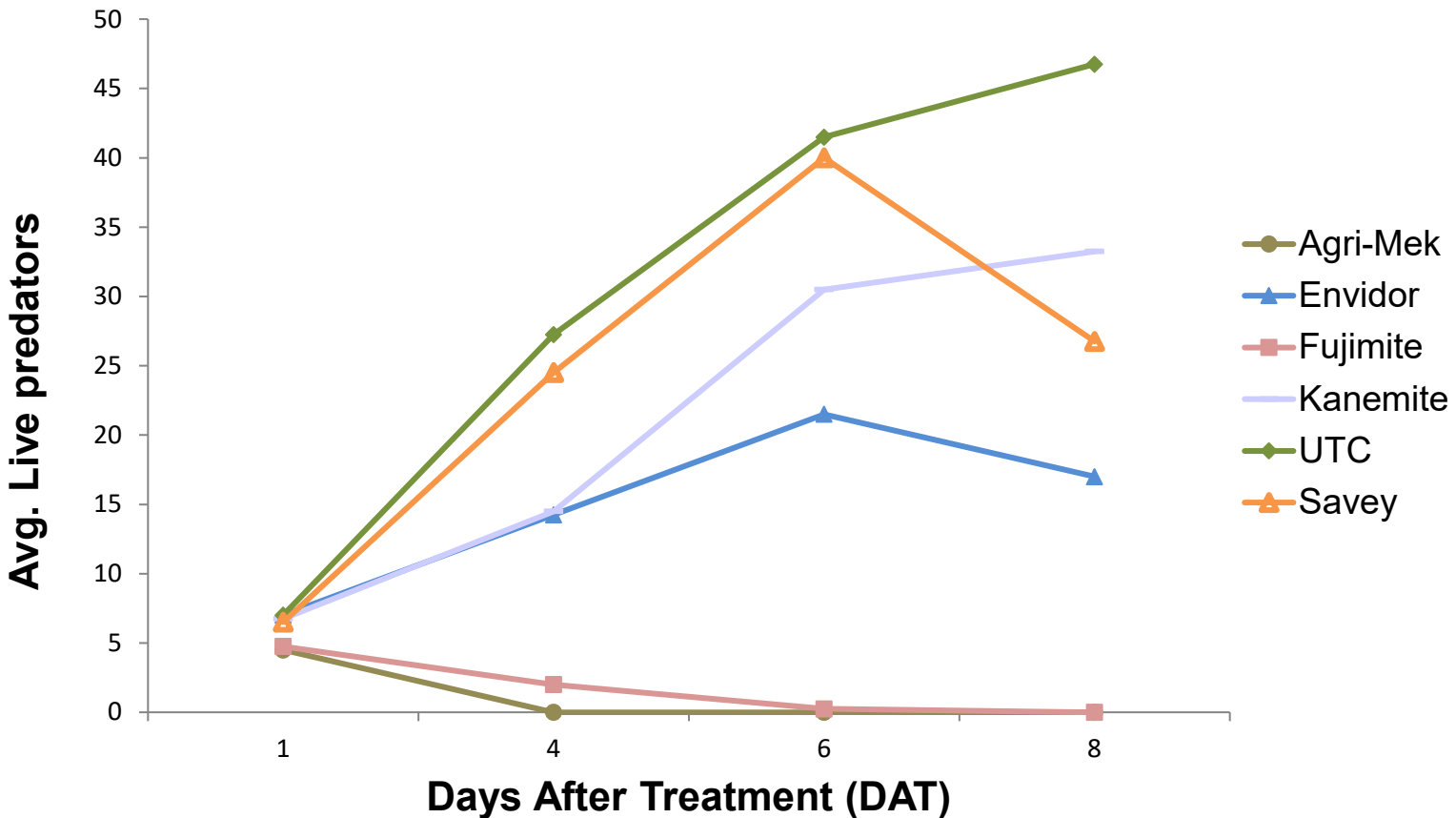
Fecundity (# eggs produced)



Fertility (# young produced)



Number of live predators



Guidelines

Harsh on *N. californicus*:

Zeal, Oberon, Fujimite, Agri-Mek

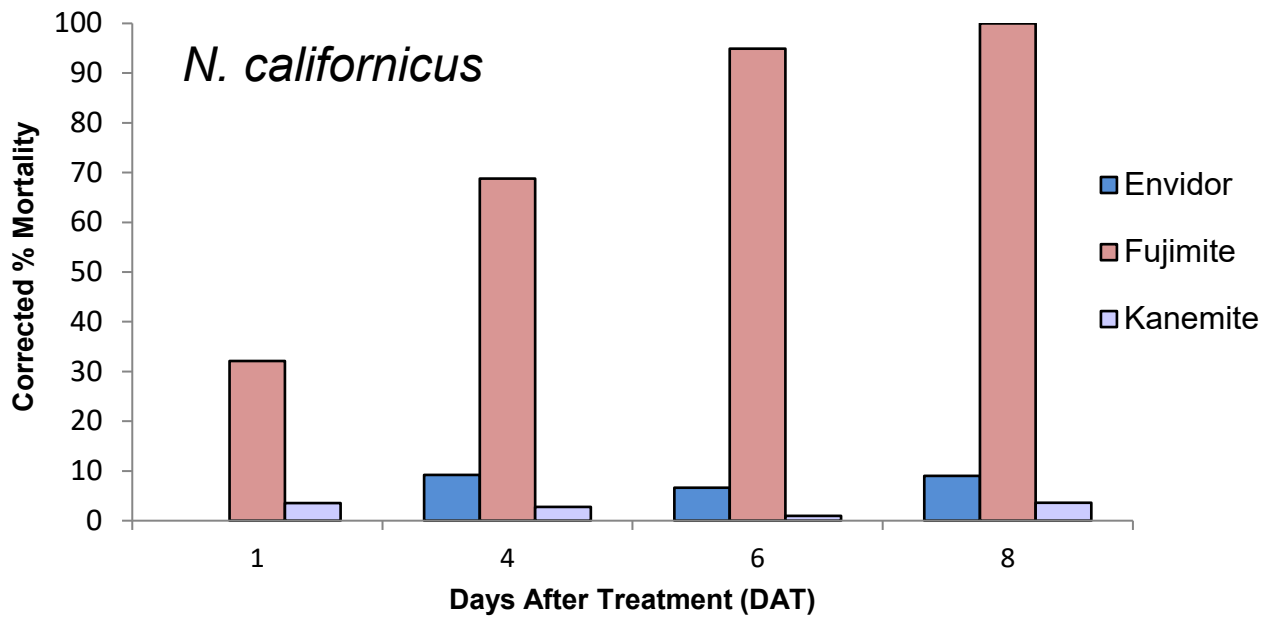
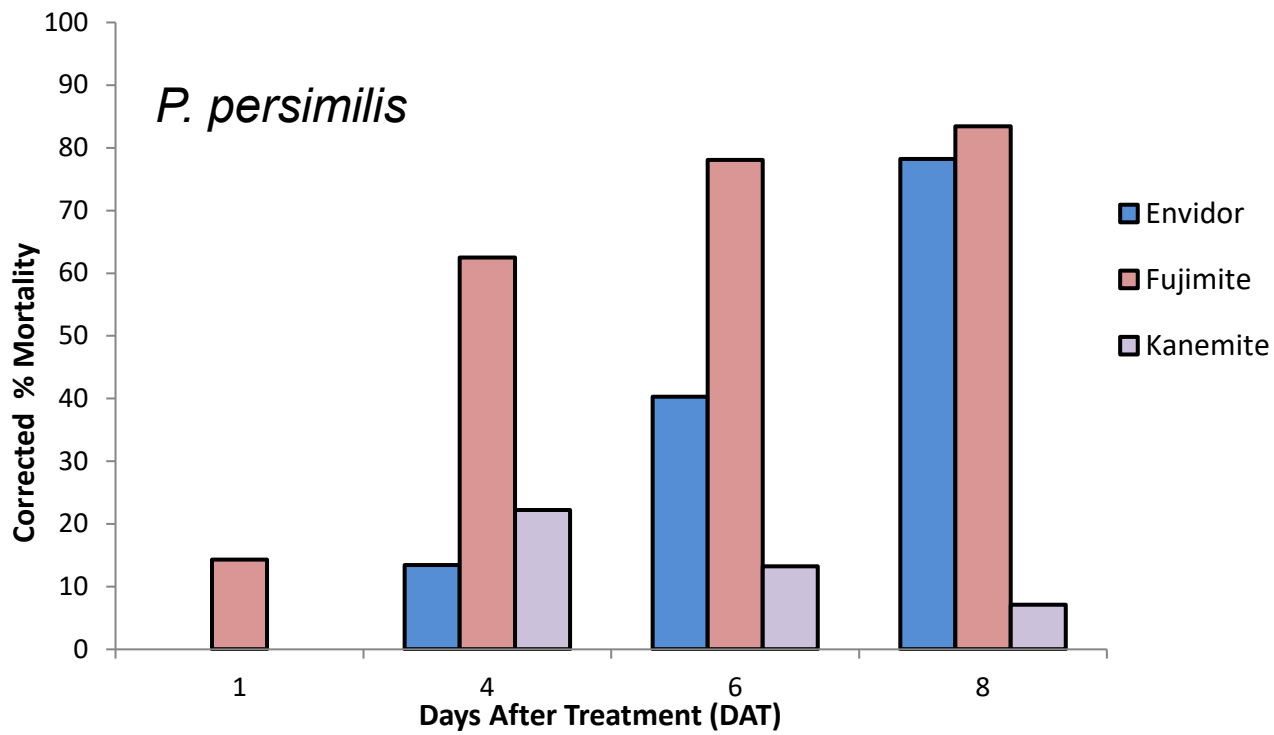
"So-So" on *N. californicus*:

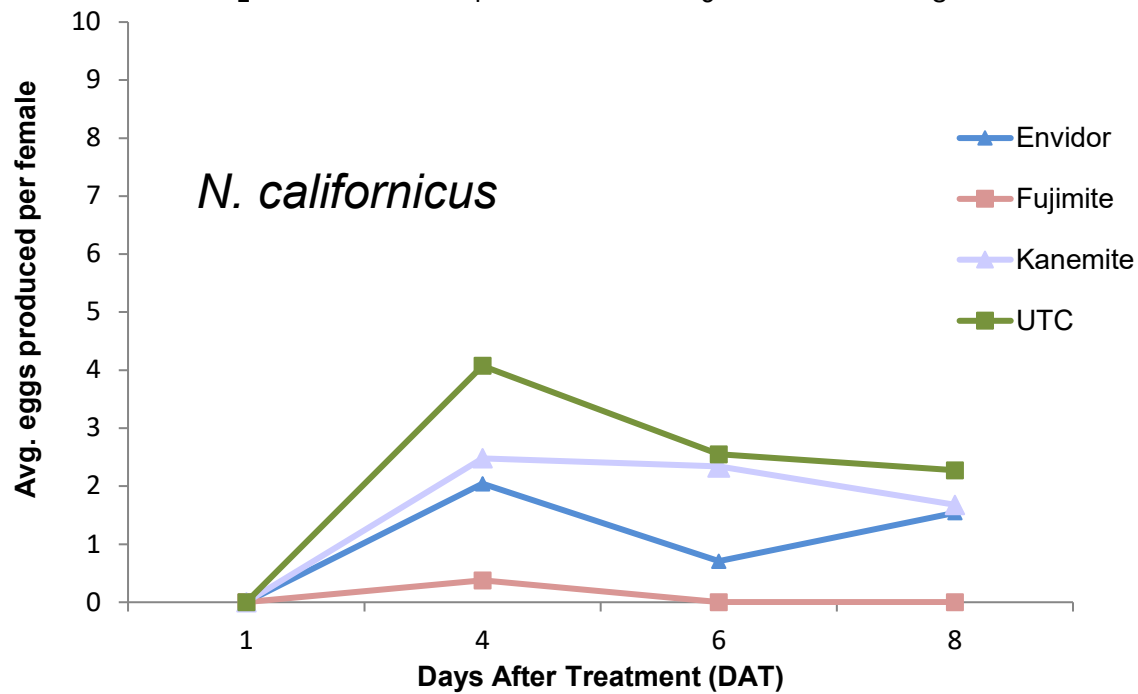
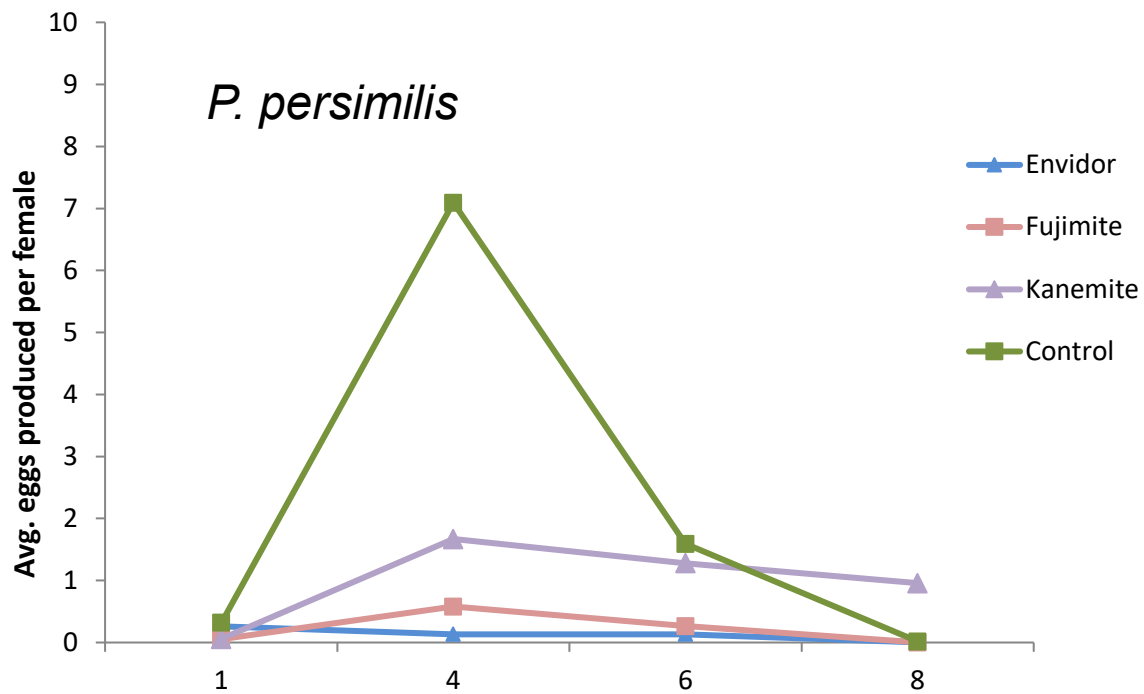
Kanemite, Envidor, Nealta

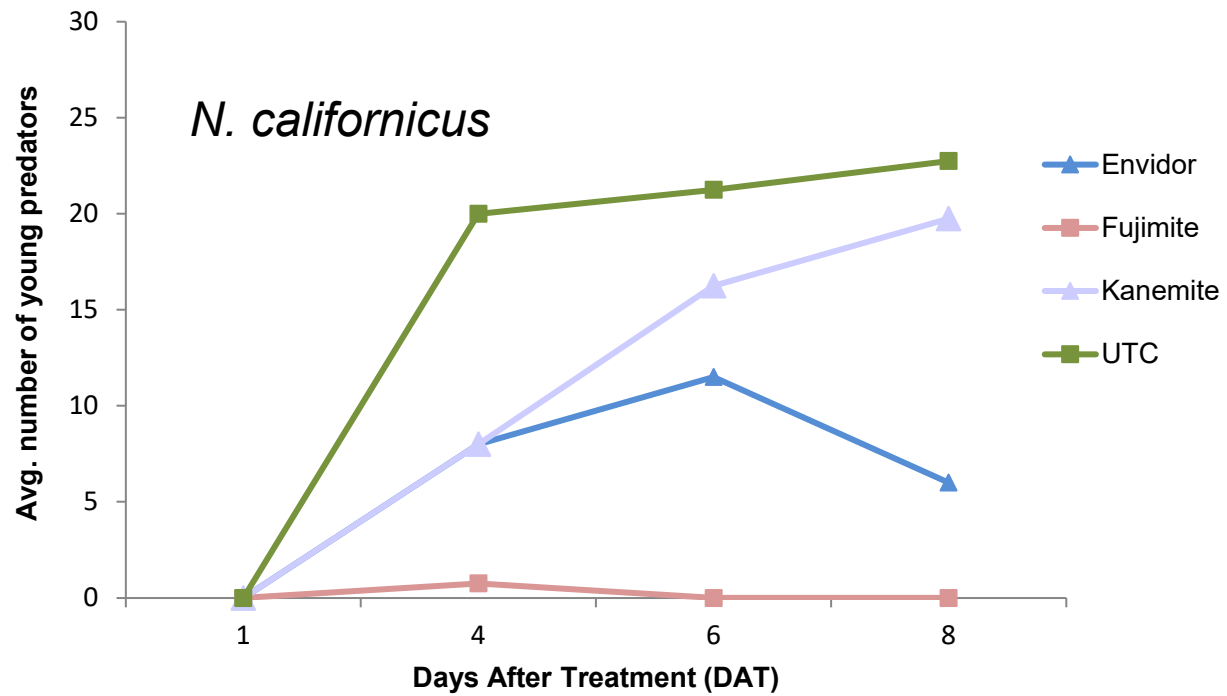
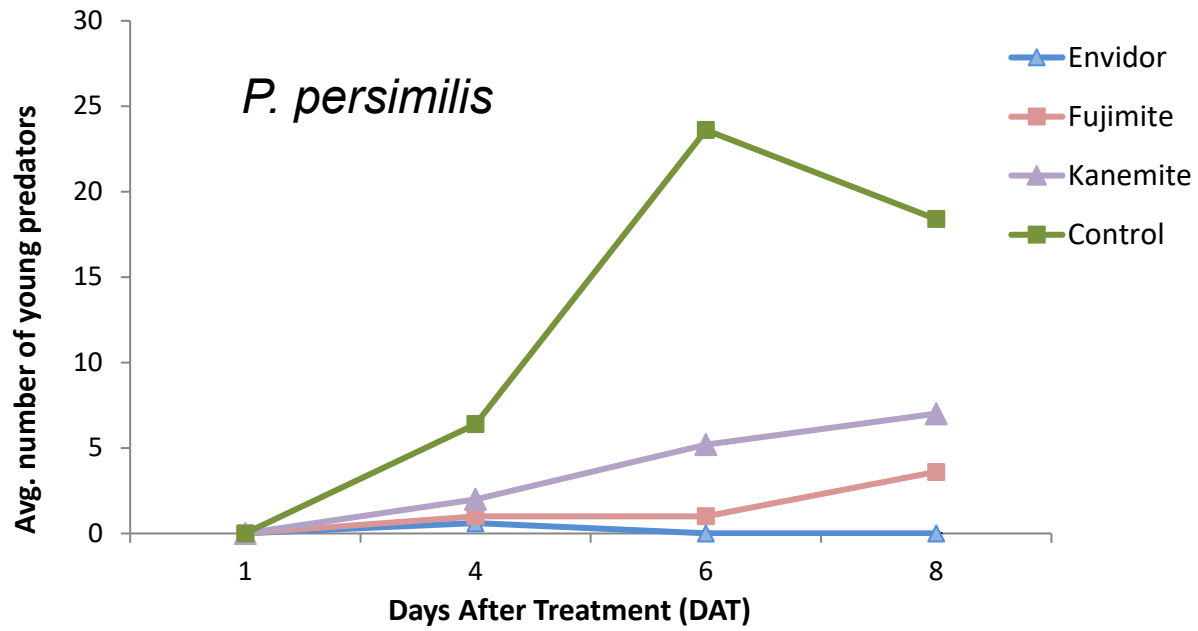
"Softer" on *N. californicus* :

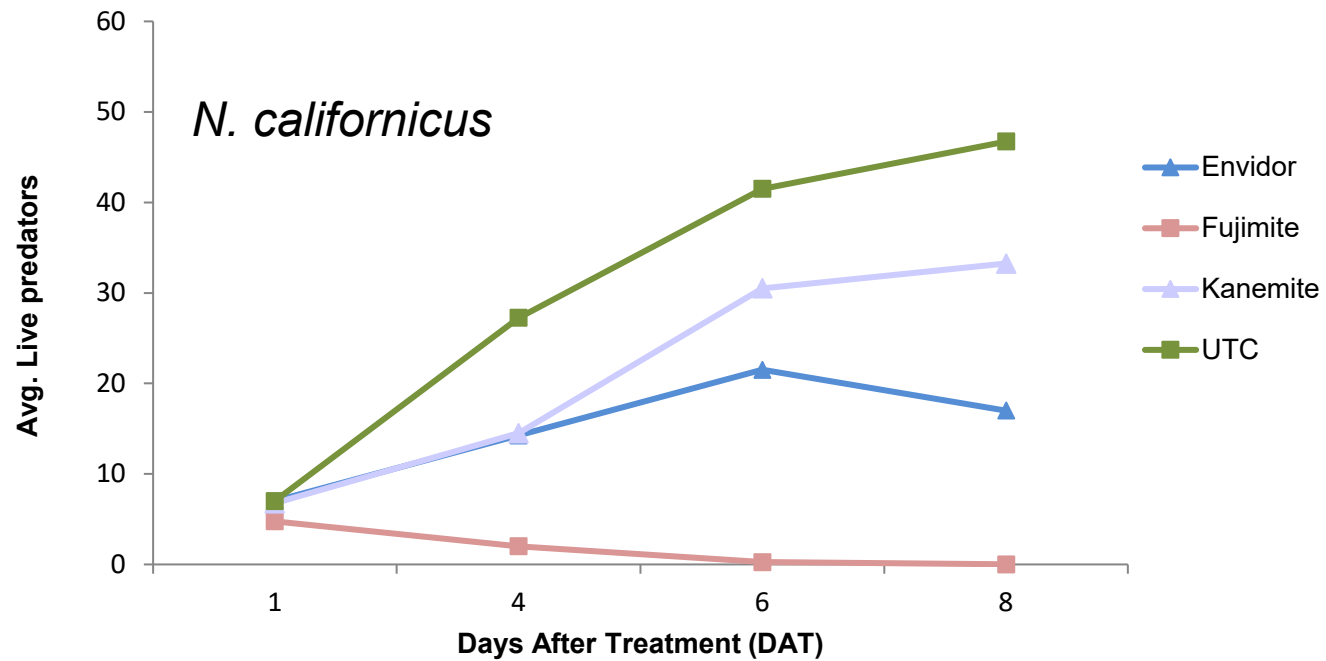
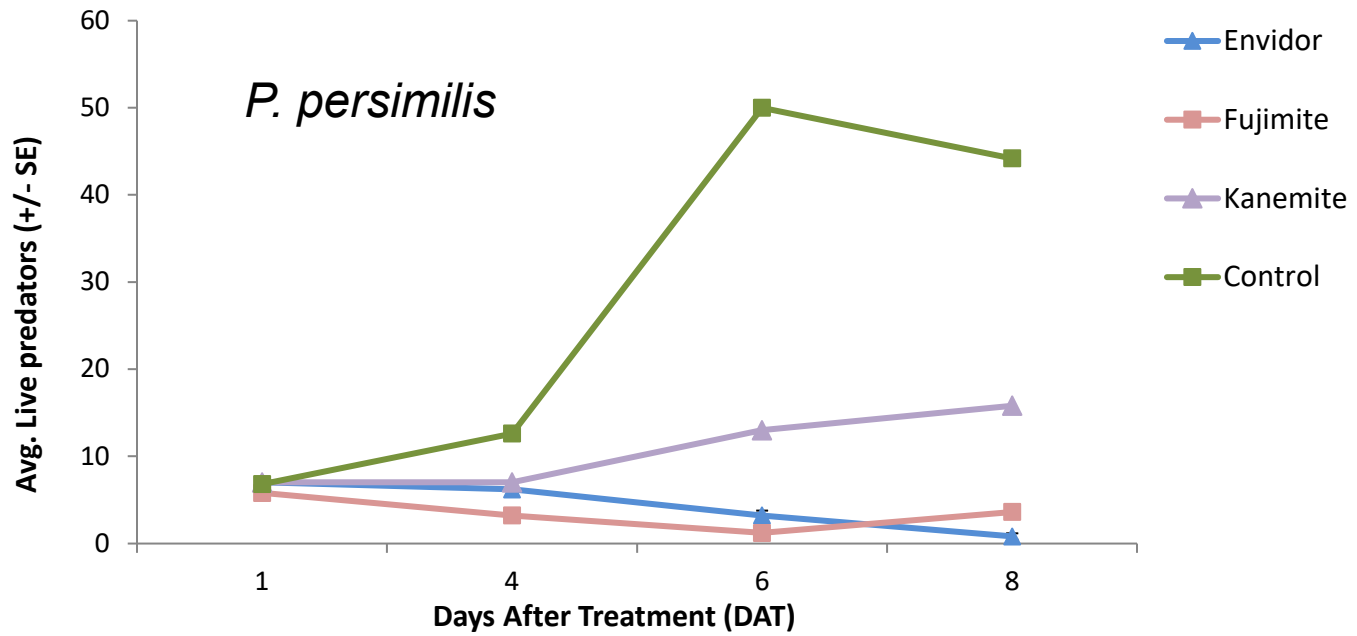
Acramite, Savey

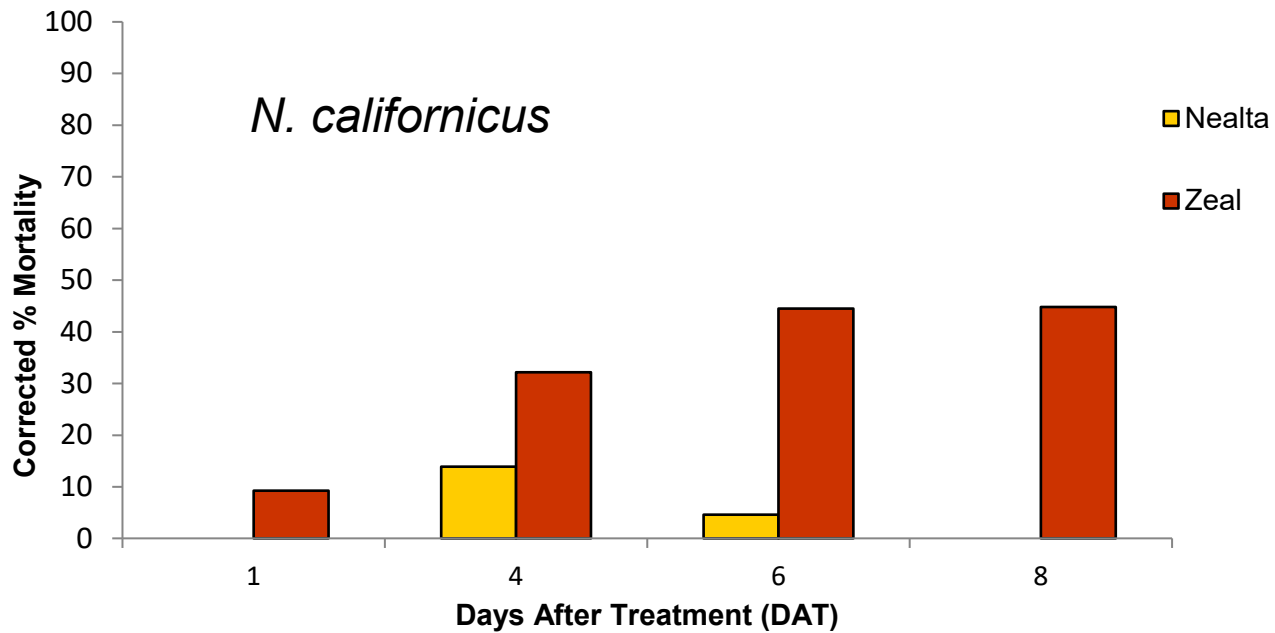
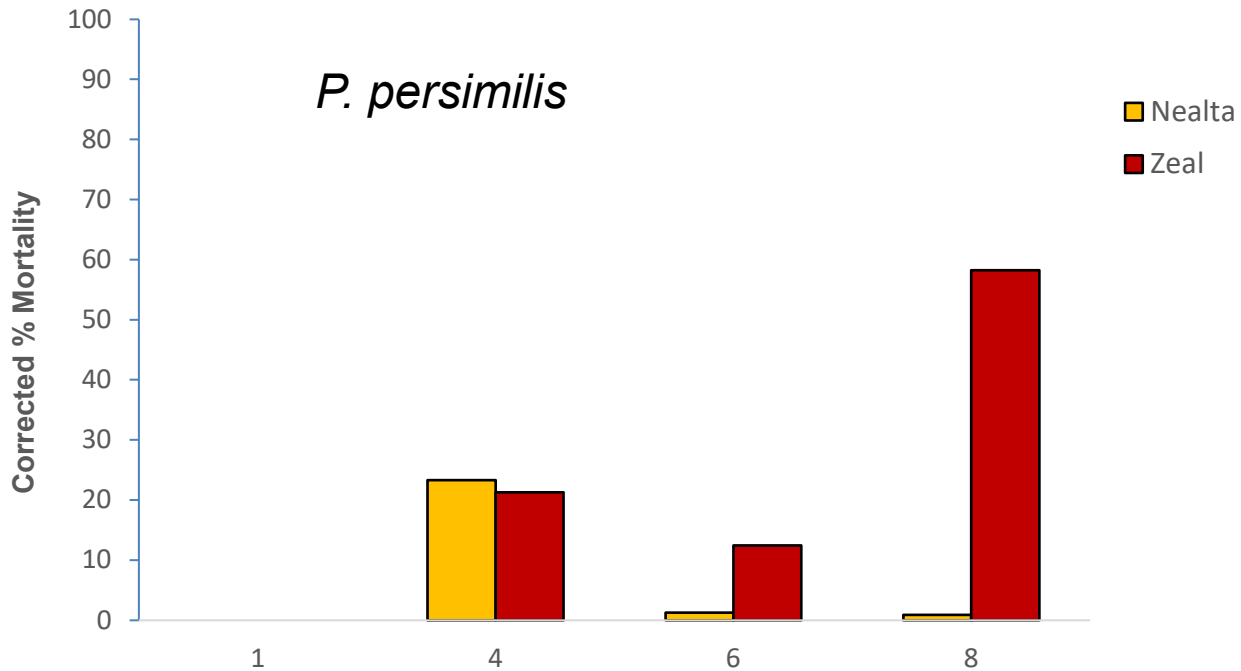
Comparing results between
the 2 mites

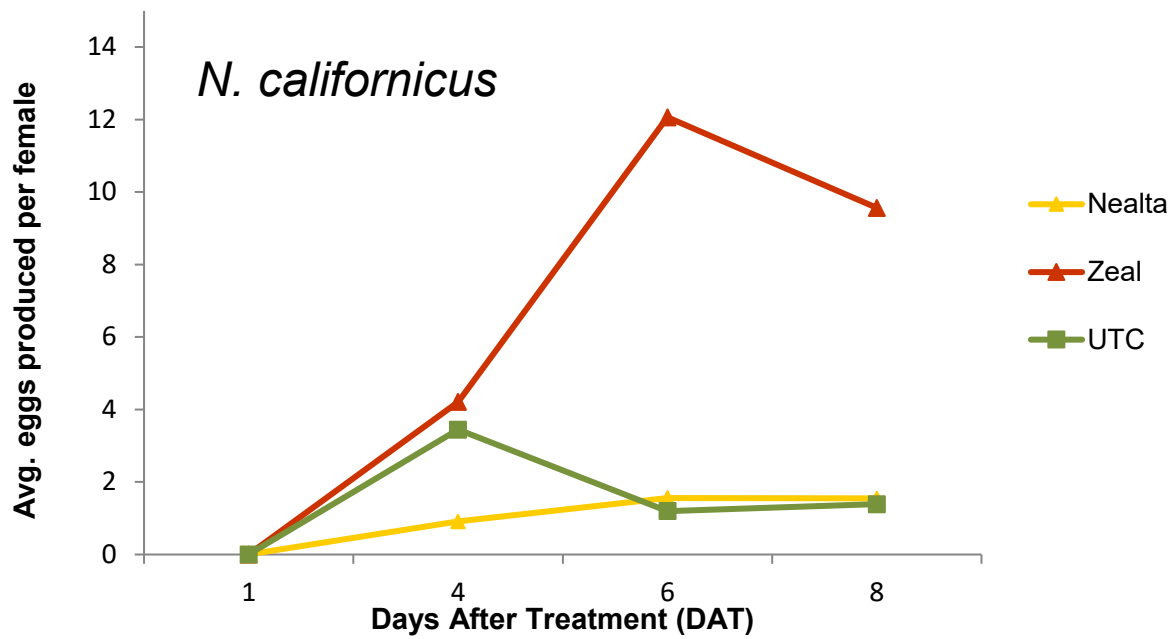
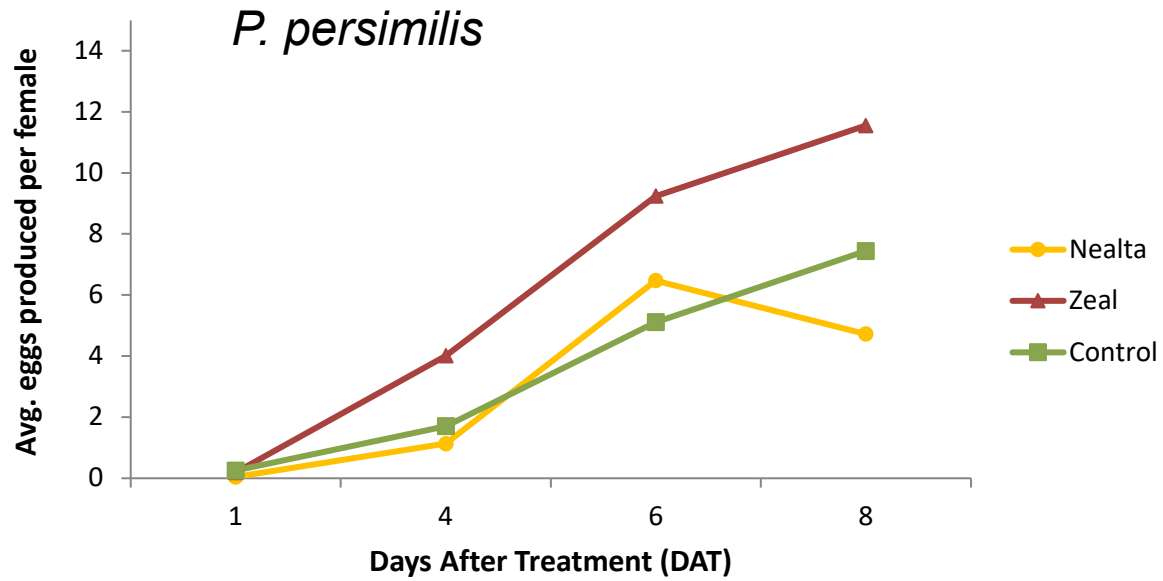


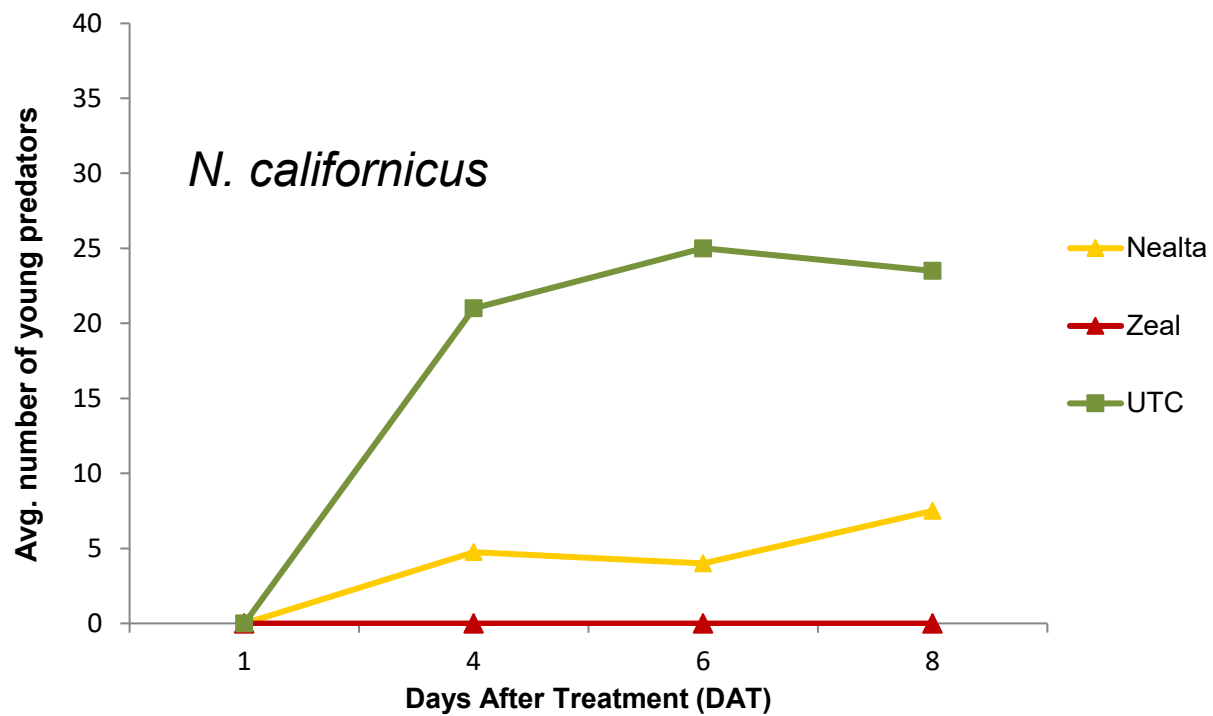
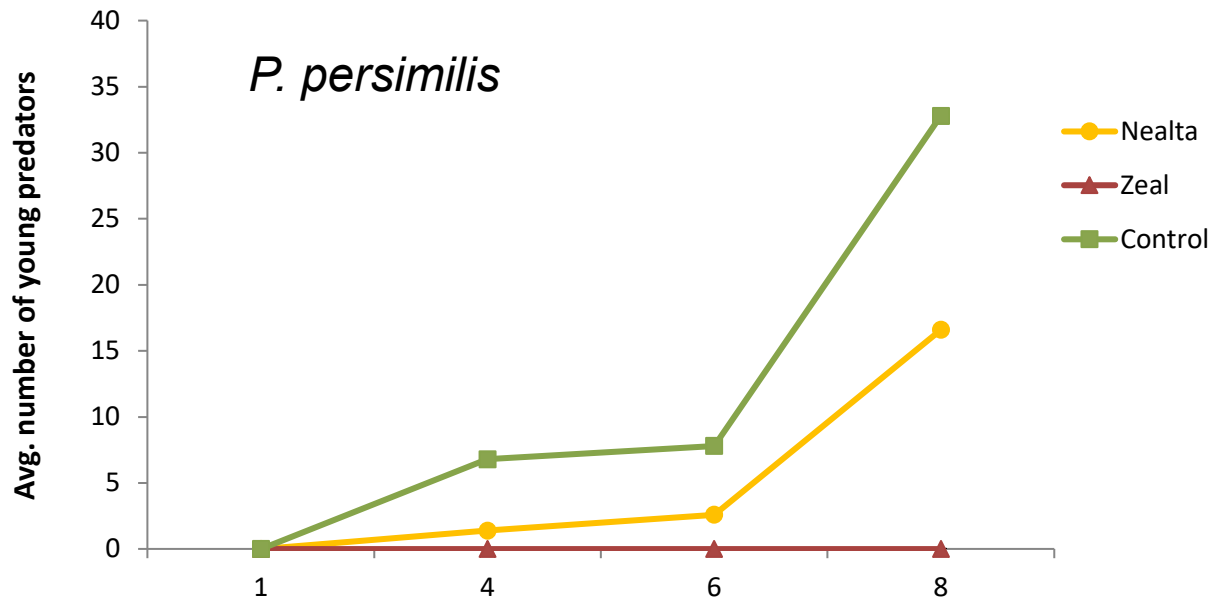


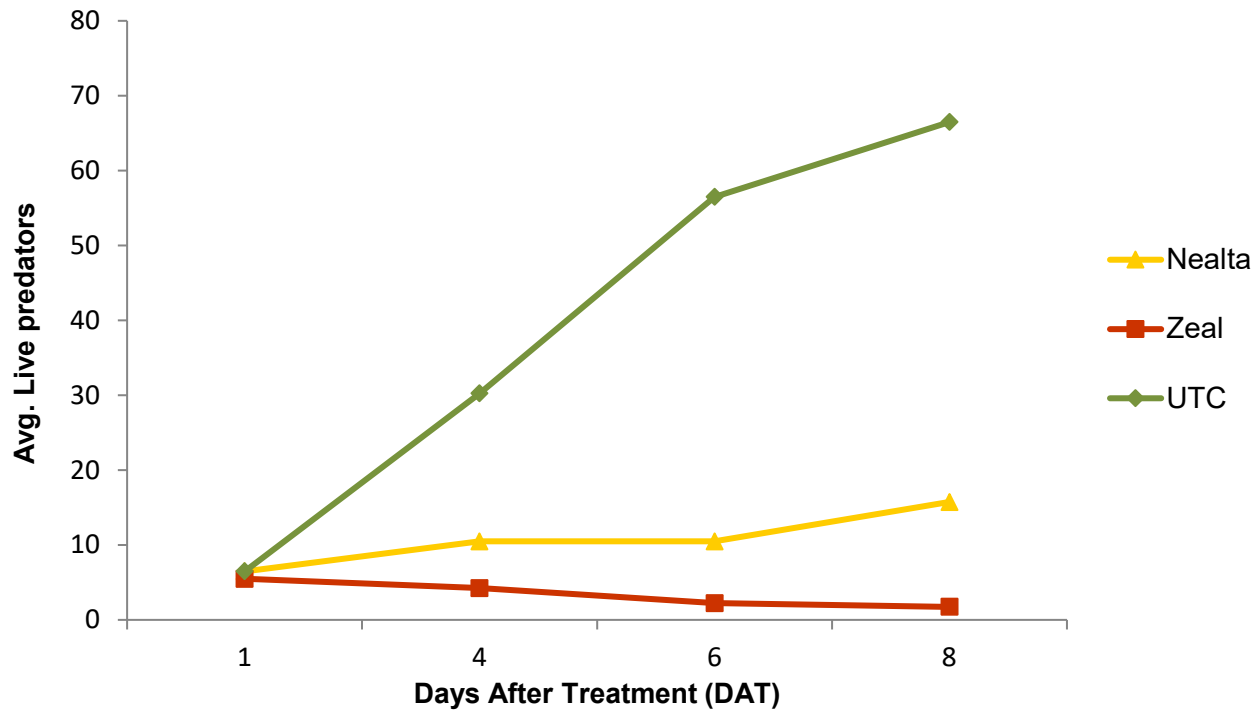
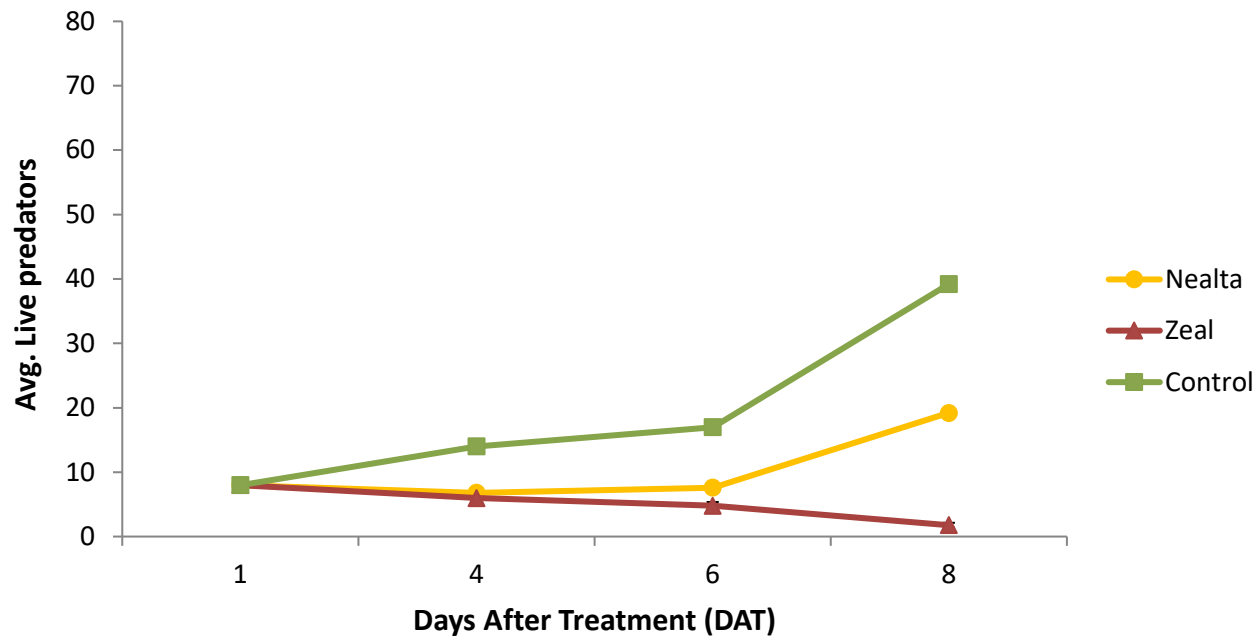












Acknowledgements

Darin Allred (Arysta LifeSciences)
Associates Insectary
Kate Walker (BASF)
Bioline Agrosiences