

spotted wing drosophila



School of Biology and Cooperative Extension
University of Maine

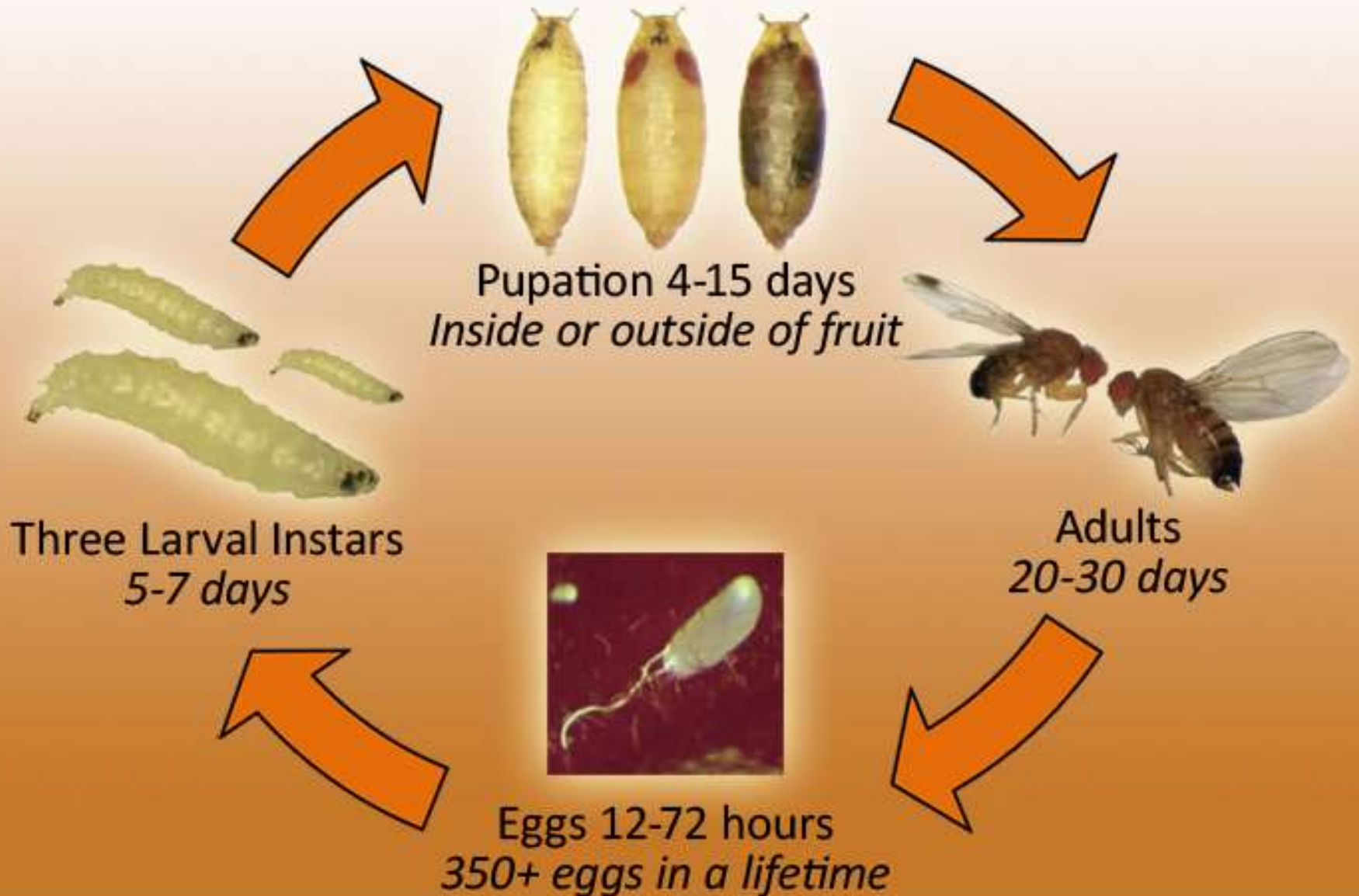
SWD invaded Maine in 2011

- SWD was FIRST detected in the Fall of 2011
- In 2012 we STARTED conducting research
 - Monitoring across Maine in raspberry, highbush blueberry and wild blueberry
 - Sampling techniques for flies and maggot infestation
 - Insecticide control
 - Action thresholds
 - Non-insecticide control
 - Trapping out
 - Exclusion via screening
 - Biological control

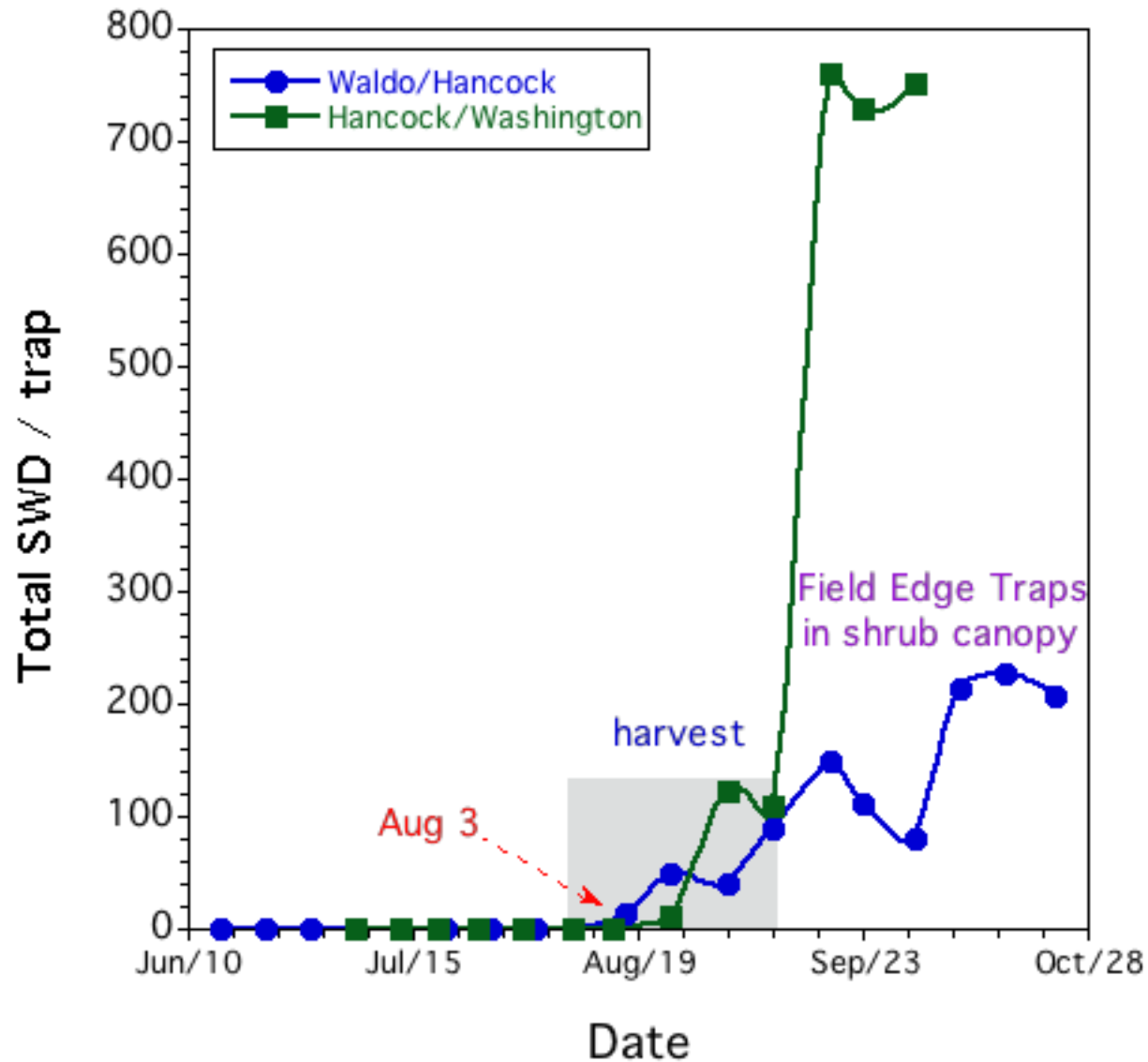


Life Cycle of the Spotted Wing Drosophila

Drosophila suzukii (Matsumura)

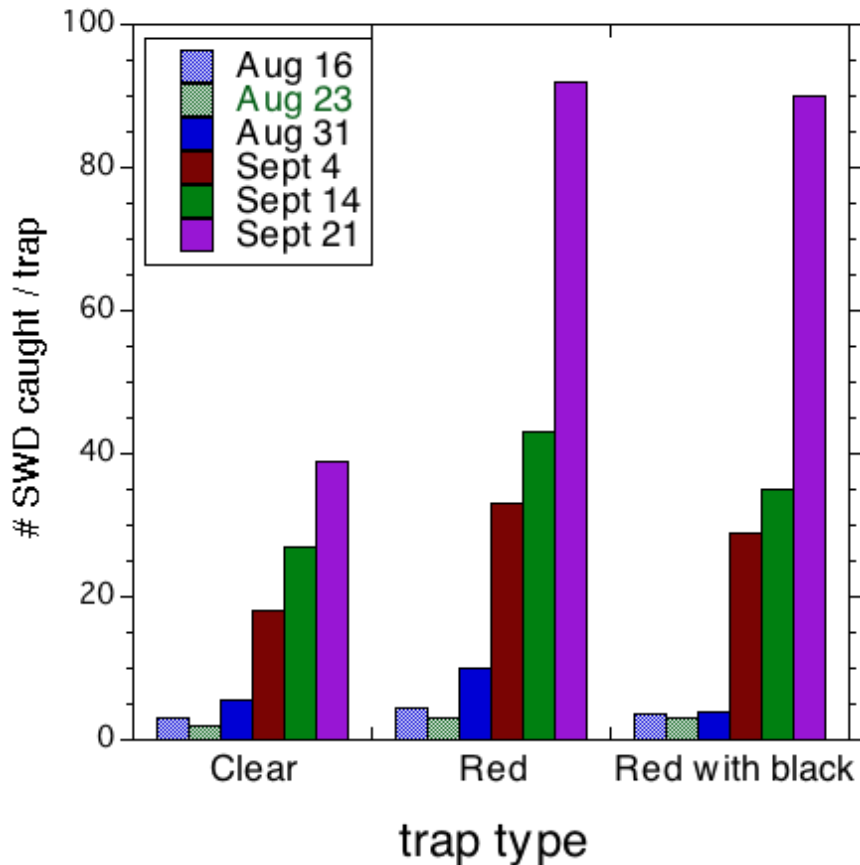


fly seasonal occurrence in Maine



monitoring populations

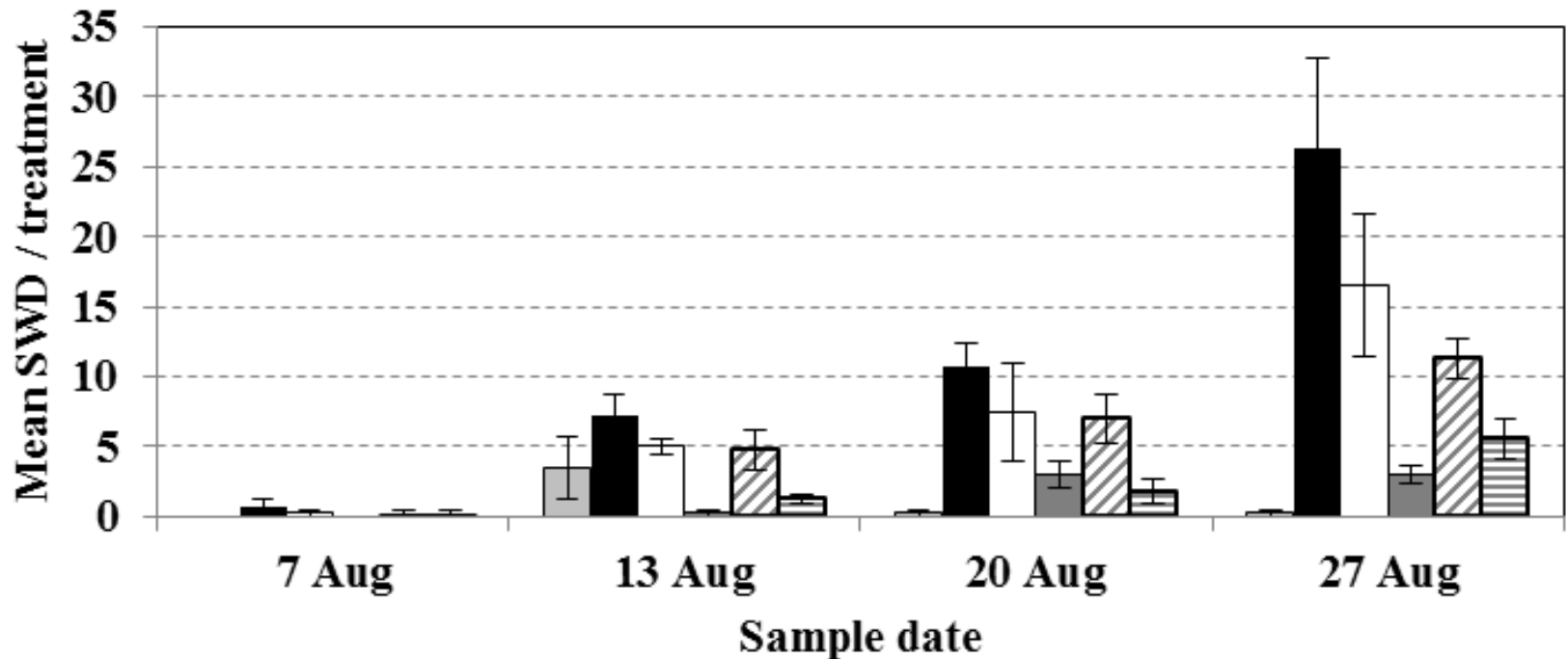
- flies
 - trap – cups
 - bait for trap - liquid



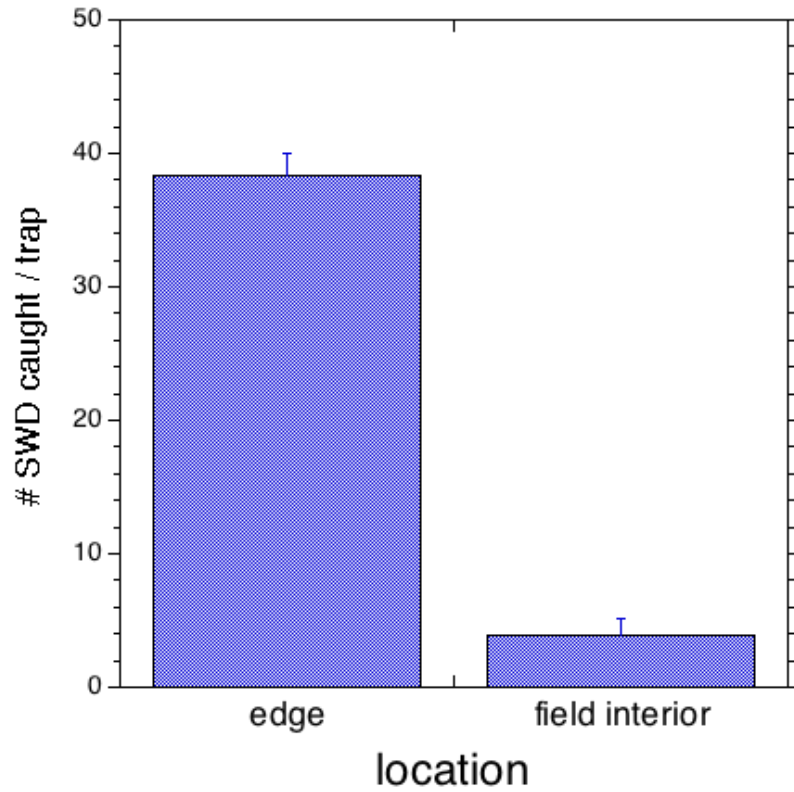
what bait?



- Apple cider vinegar *
- Fermenting bait *
- ▣ Trece lure over ACV
- Yeast/sugar ***
- DroskiDrink
- ▣ Trece lure over drowning solution



hanging traps

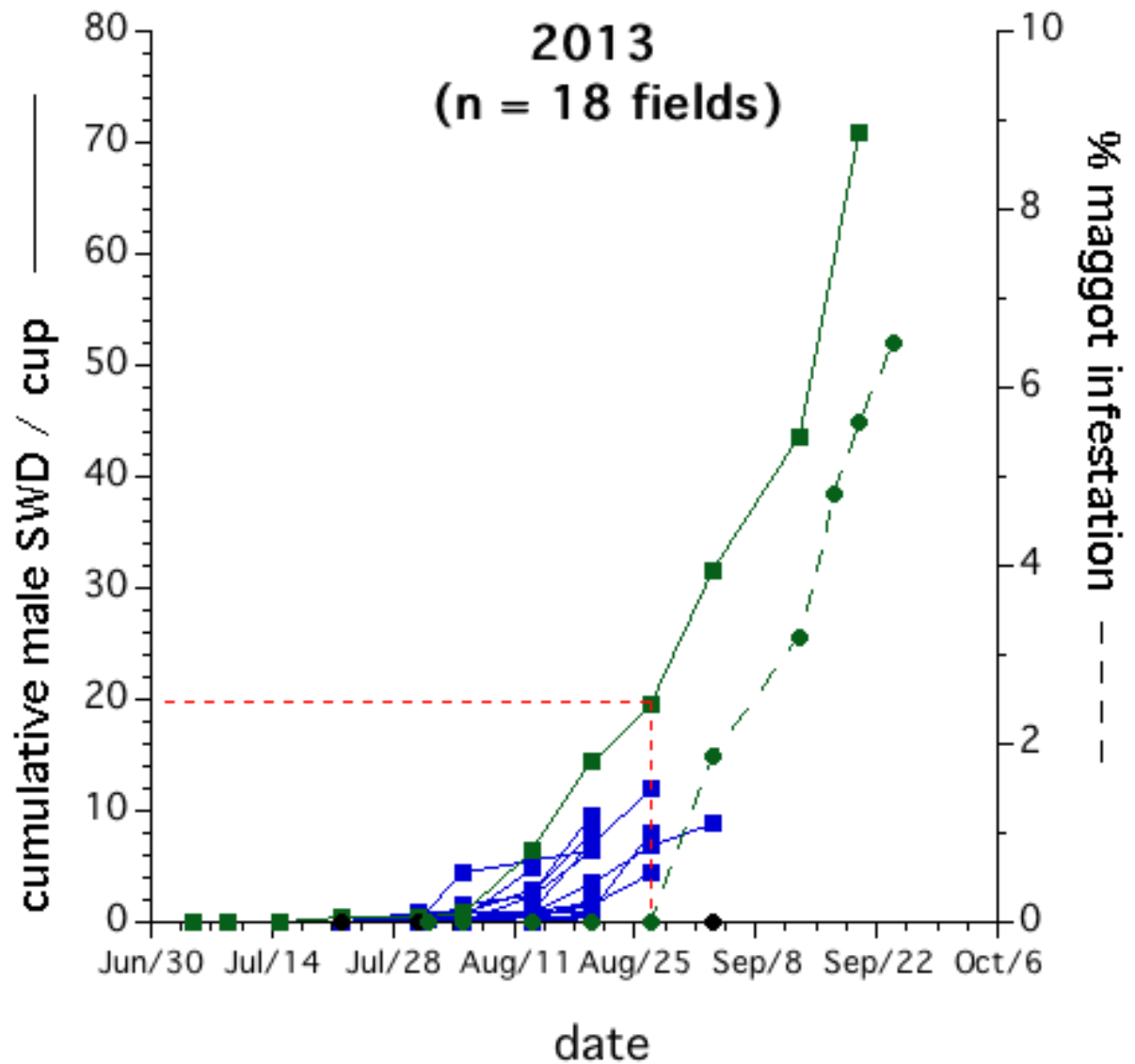


monitoring populations

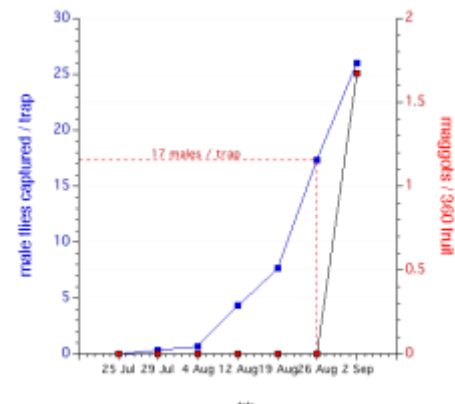
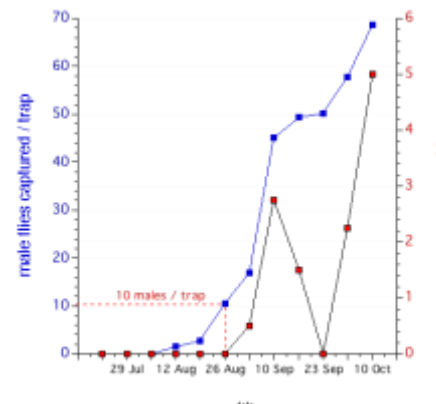
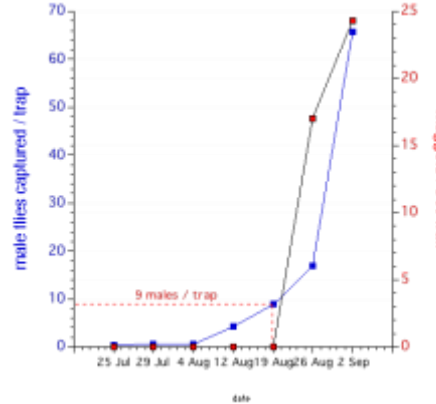
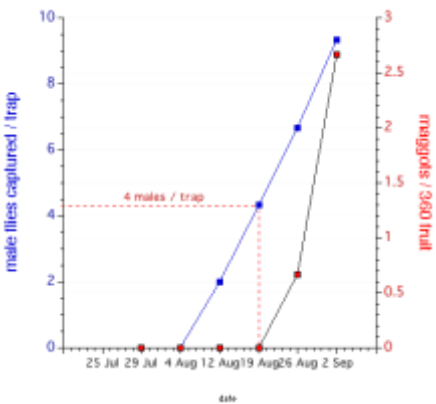
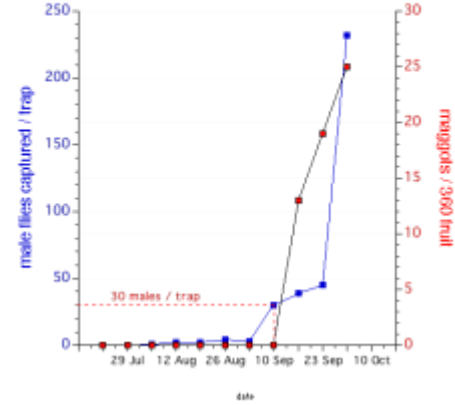
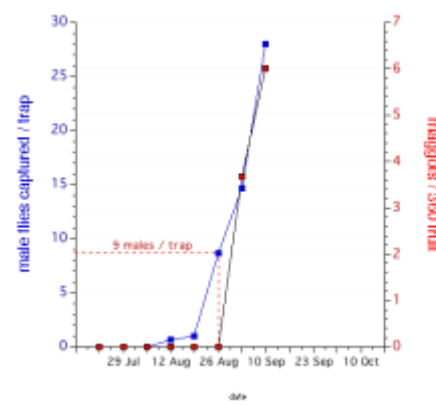
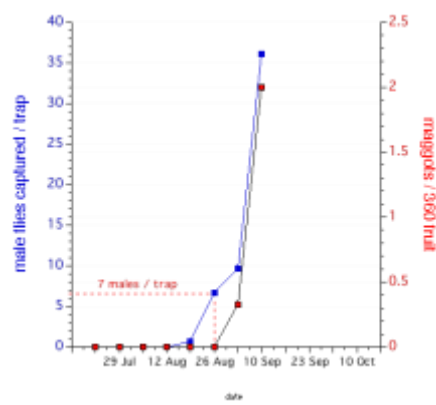
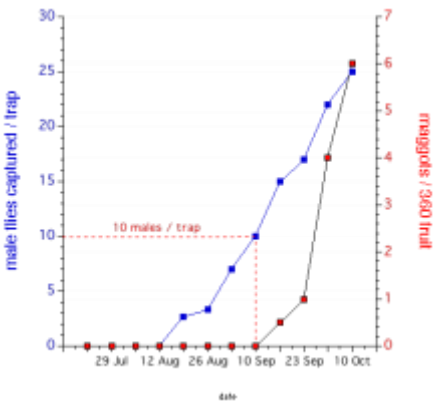
- larvae or maggots
 - infested fruit



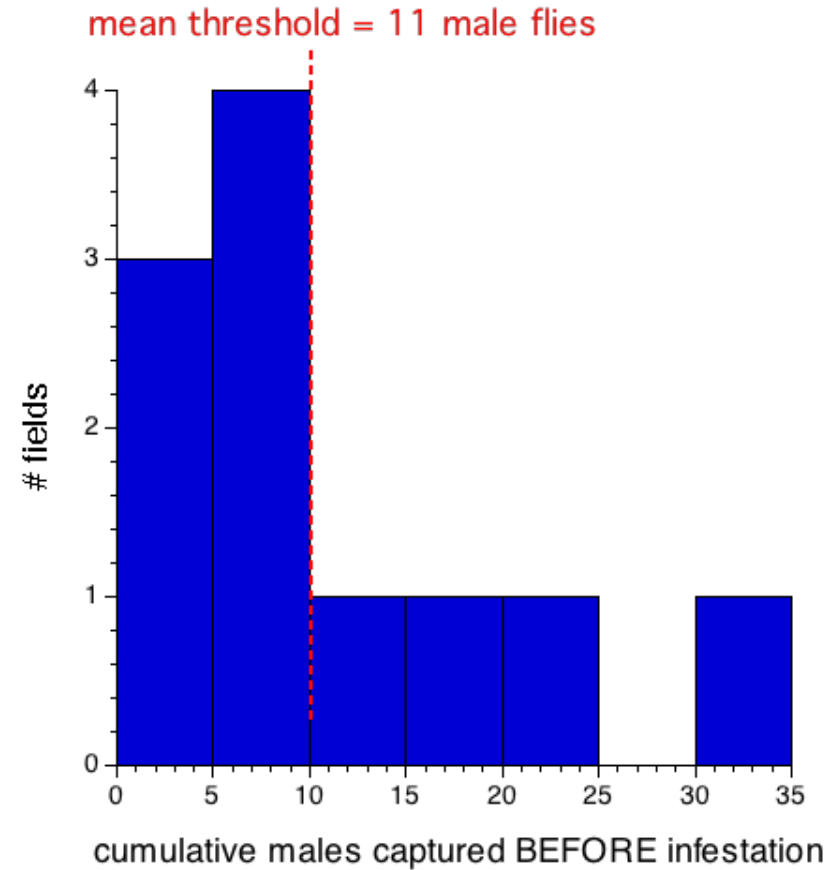
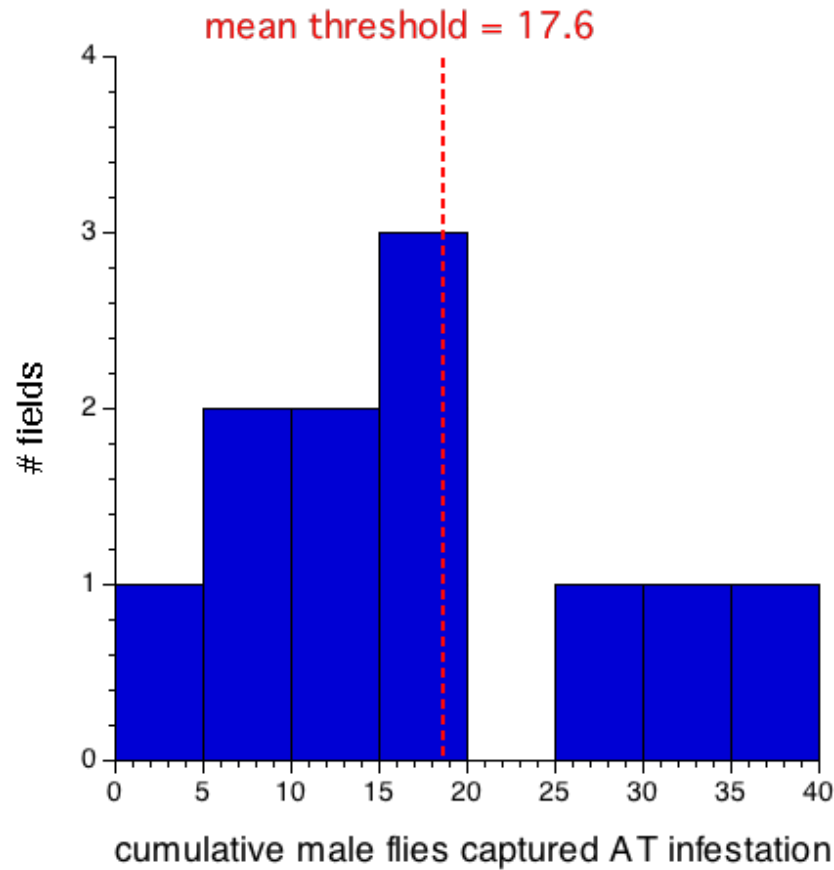
action threshold



2014 (n=15 fields)



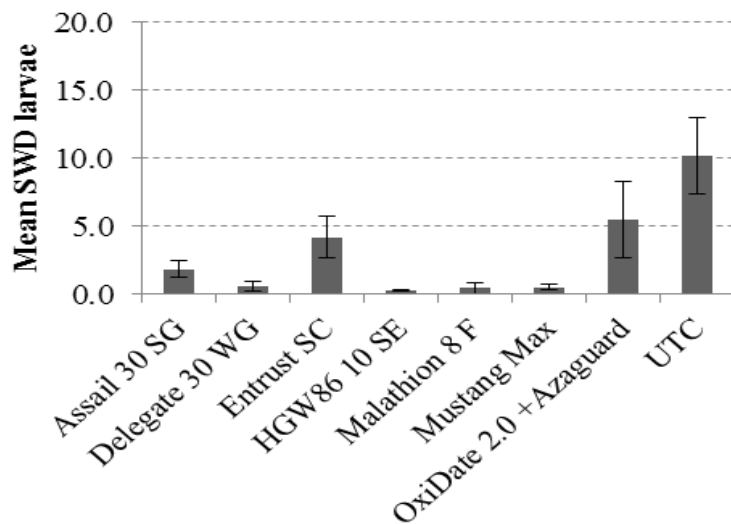
how to use a threshold ?



insecticide control of spotted wing drosophila

Trial 1: application on Sept 10

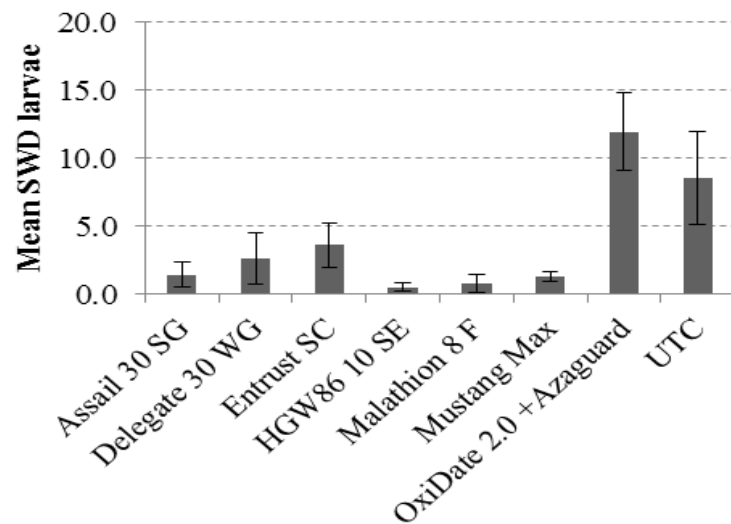
Sample 1 - 13 September



3 days
Trial 1

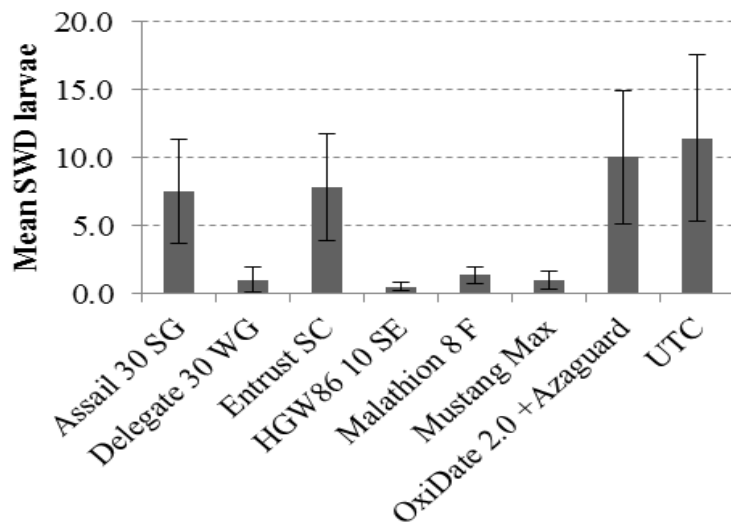
Trial 2: application on Sept 17

Sample 3 - 20 September



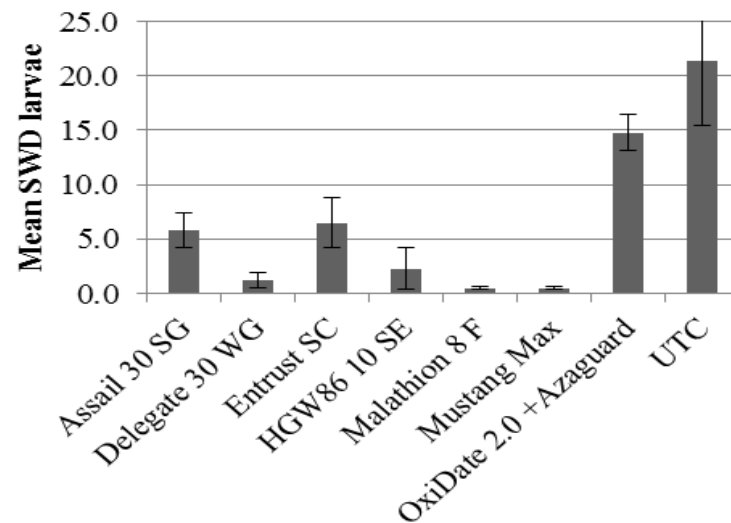
3 days
Trial 2

Sample 2 - 17 September



7 days
Trial 1

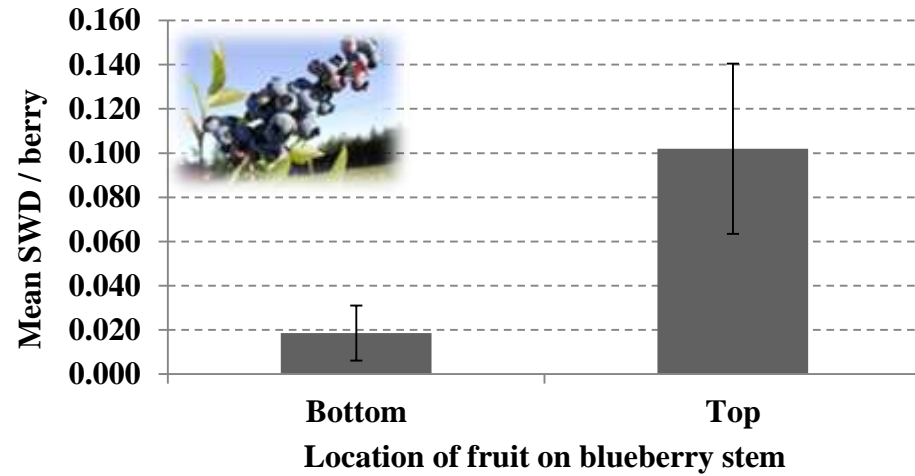
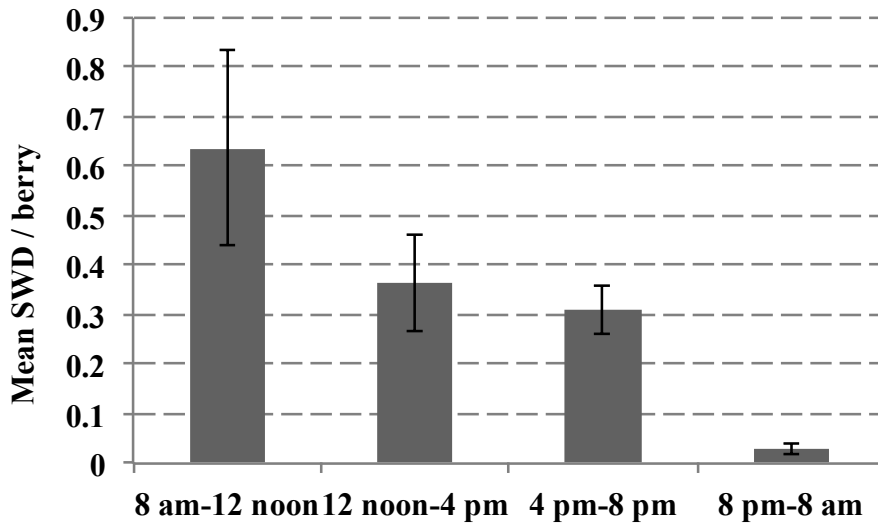
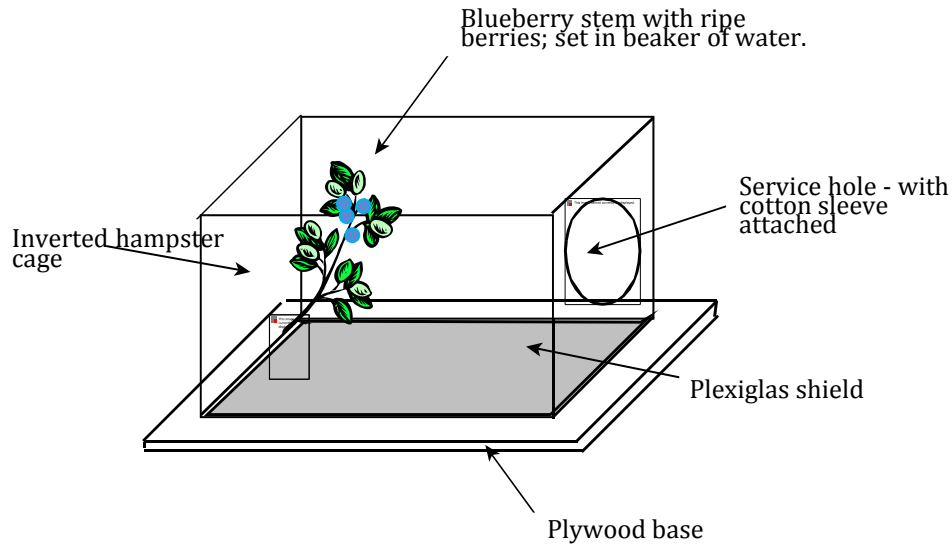
Sample 4 - 24 September



7 days
Trial 2

behavior

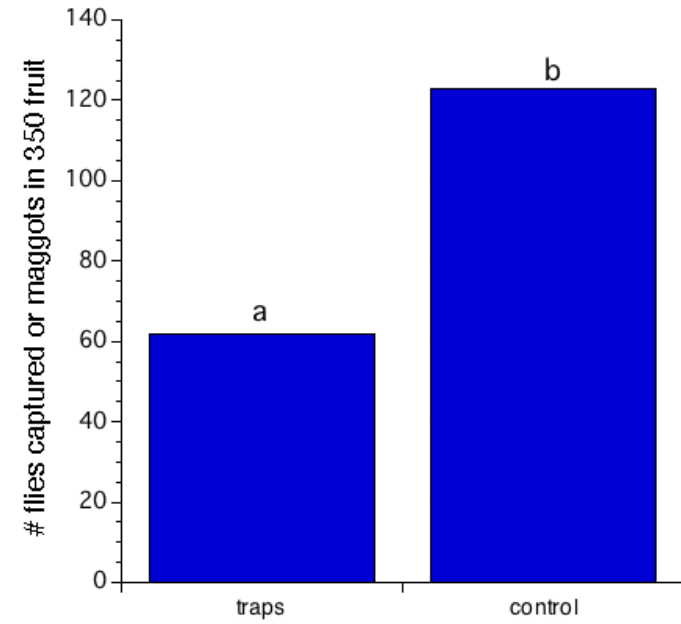
Fig. Design of a SWD oviposition box.



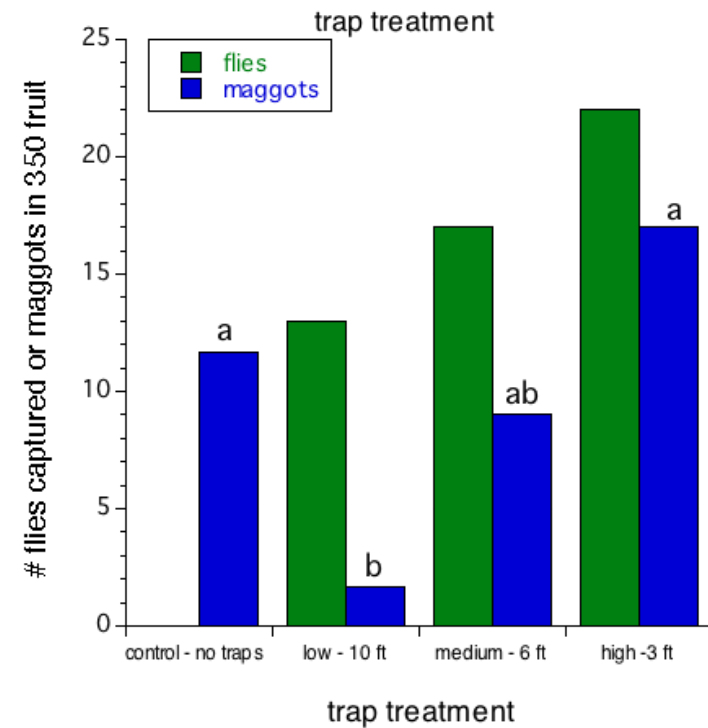
mass trapping



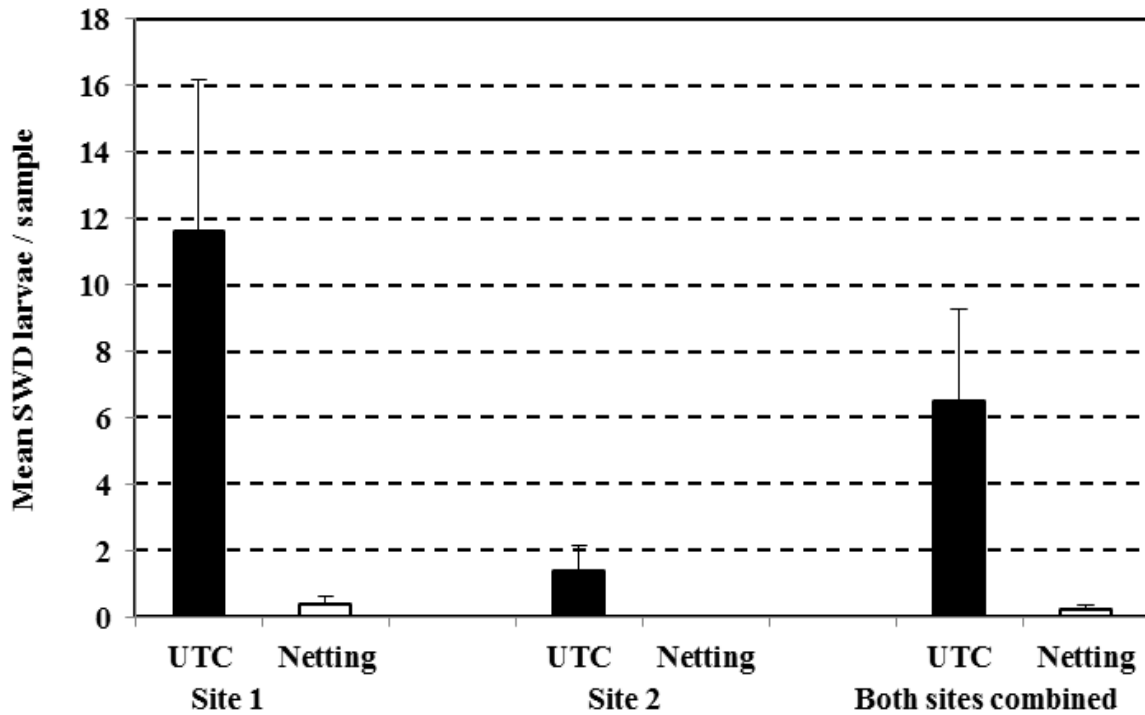
2013



2014



exclusion netting



biocontrol

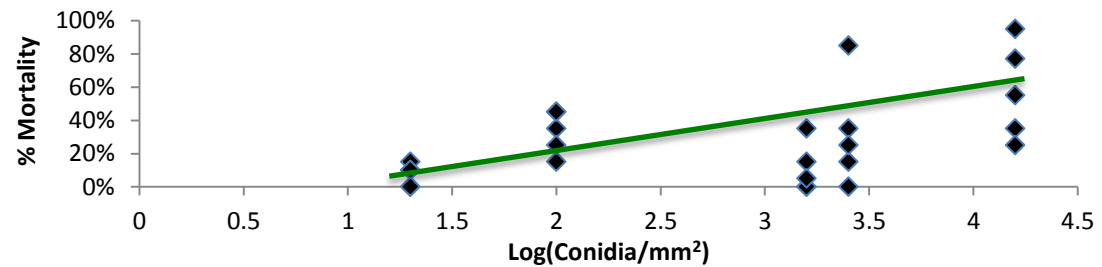


Pteromalidae



entomopathogenic fungi

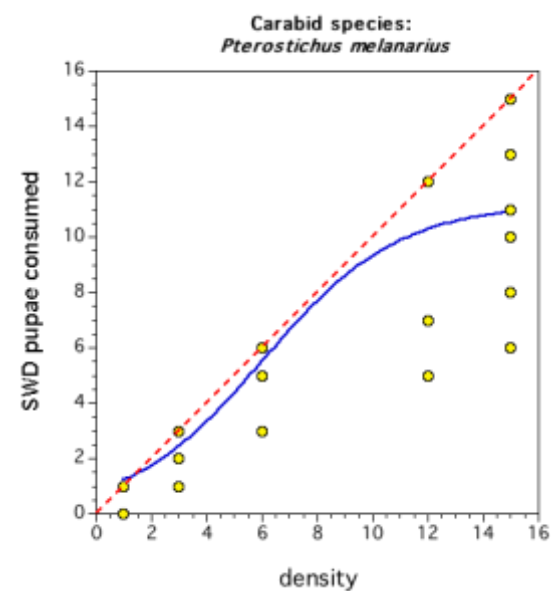
parasites in 2013, none in 2014



is anything happening in our fields?

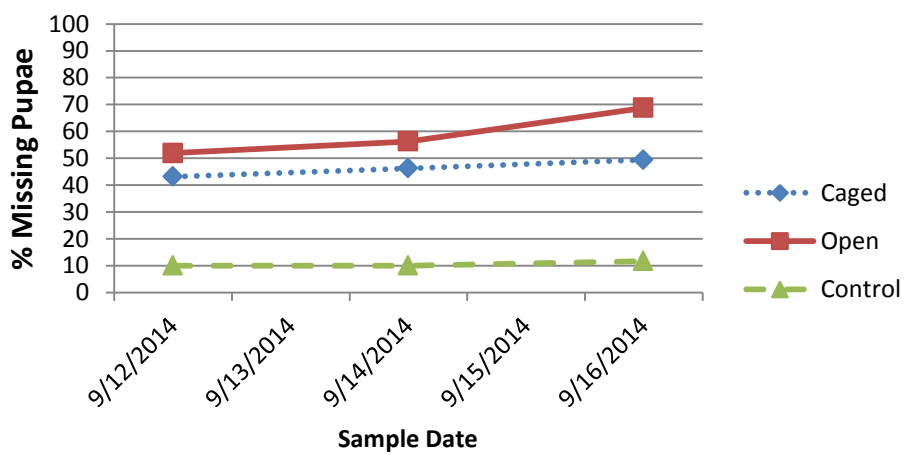


In the lab →



↙ In the field

SWD Pupation Predation Trial 1



% Missing Pupae



msj

any questions ?

