



Spotted-wing Drosophila Management on Post-harvest Fruit Waste

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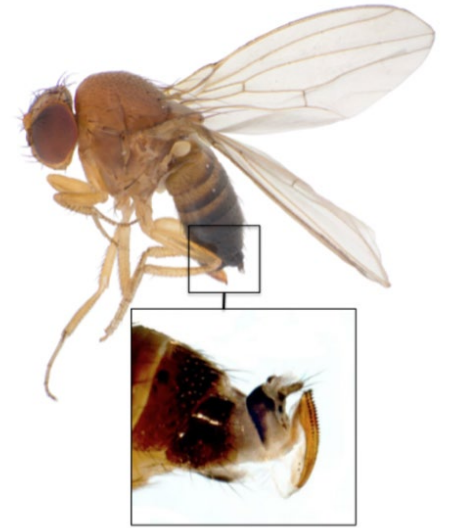
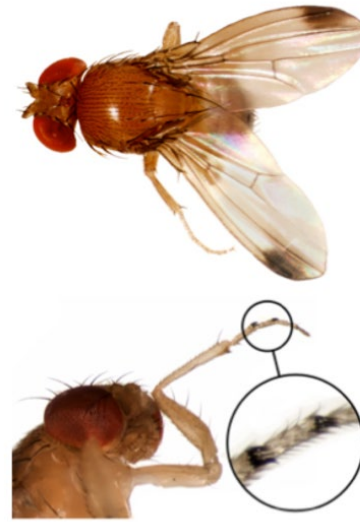
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Spotted-Wing Drosophila (SWD)

- Invasive species
- Polyphagus
- Migratory
- \$\$\$\$ Damage....



Berry Blog, UGA





WHY DOES THIS MATTER?

- 16-36% of fruit crops lost each year
- Fruit waste is typically dumped along field margins

WHAT WE COULD DO....

- SOLARIZATION
- BURIAL
- CRUSHING?***

WHAT WE KNOW...

- SWD will use decomposing fruit as reproductive habitat, including fruits which aren't targeted while healthy¹
- Adding 20% organic chicken manure (by volume) will shut down the reproduction of SWD in apple pomace²



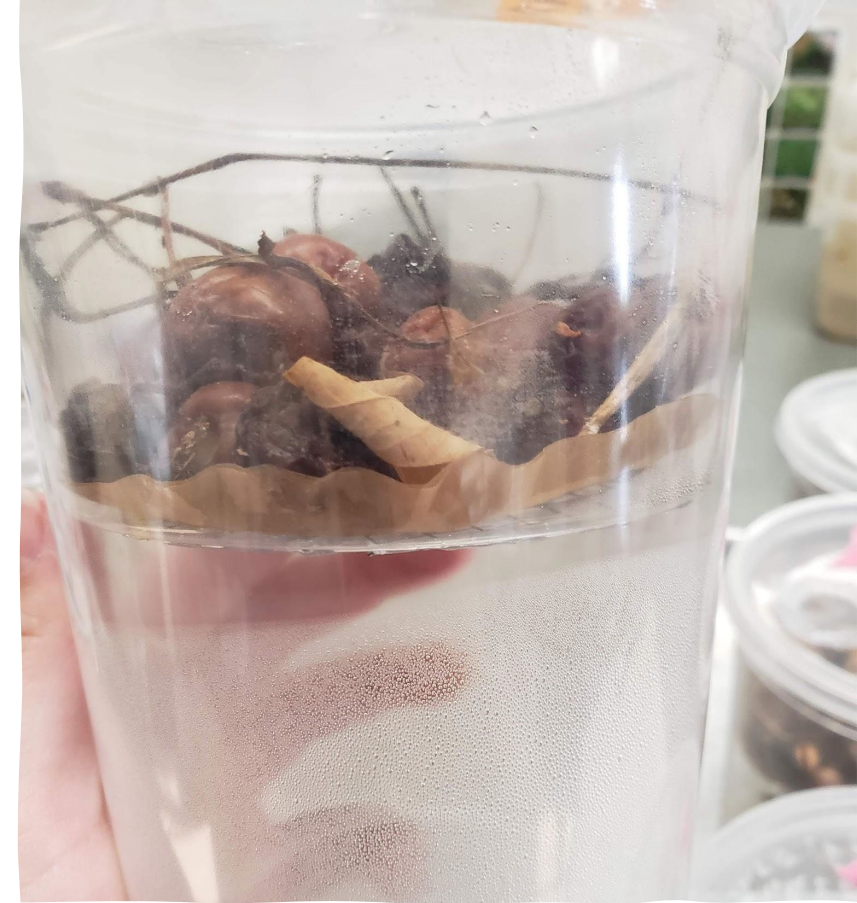
OUR GOAL

**IF MANURE ADDTION BY VOLUME OR CRUSHING
CAN DETER SWD INFESTATION IN SMALLER
TRIALS, WILL WE FIND THE SAME RESULTS ON A
FARM SCALE**

The Experiment...

- 7 sites (reps) (each pile 3.38 ft³ ~140/150lbs)
- Sweet or tart cherries as available Treatments:
 1. control (just cherries)
 2. 15% organic chicken manure and 85% cherries
 3. 25% organic chicken manure and 75% cherries
 4. Crushed cherries



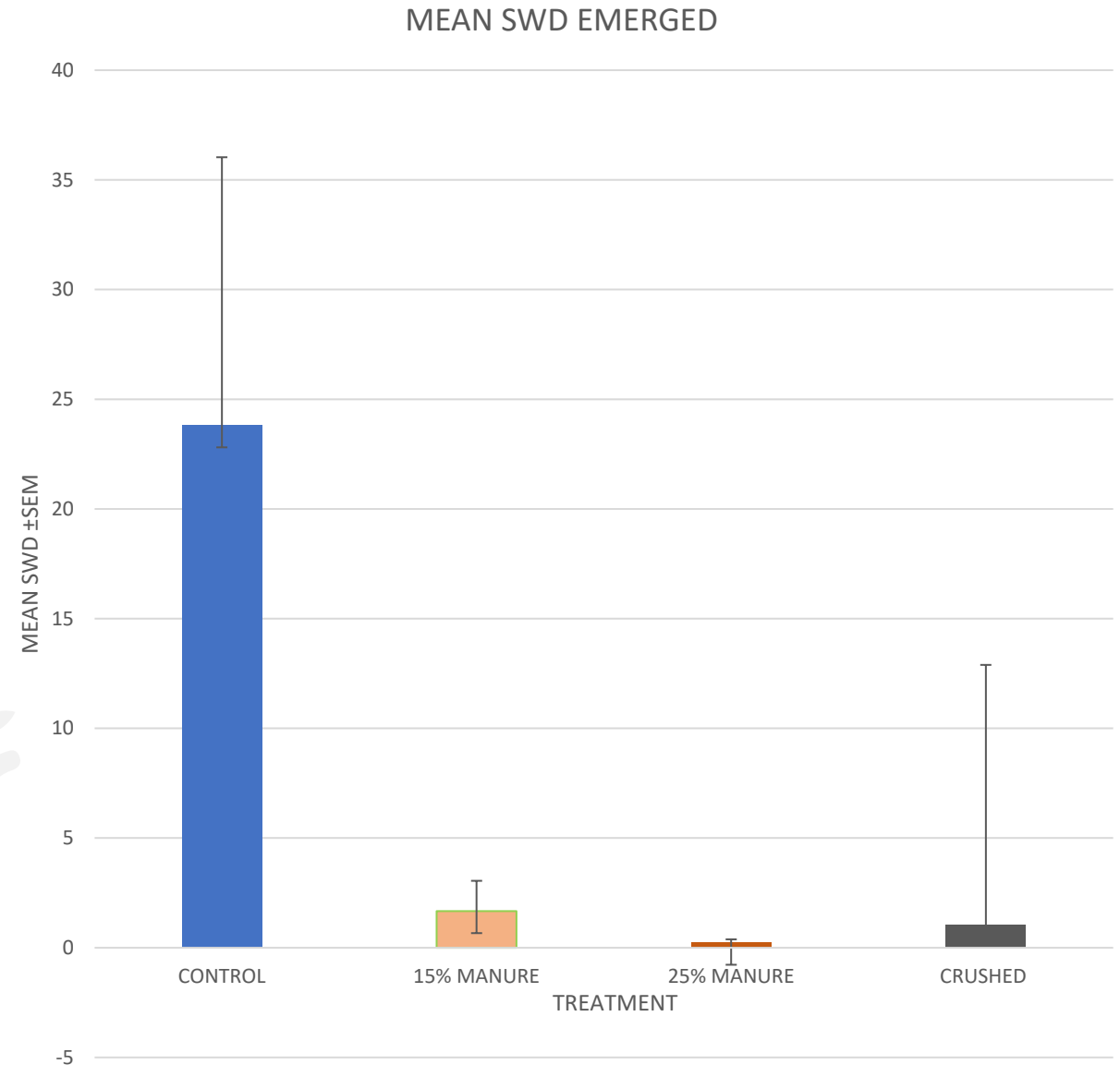


Sampled Via:

- Tents vacuum sampled twice weekly
- Sub samples
- 3 yeast cup traps placed around piles

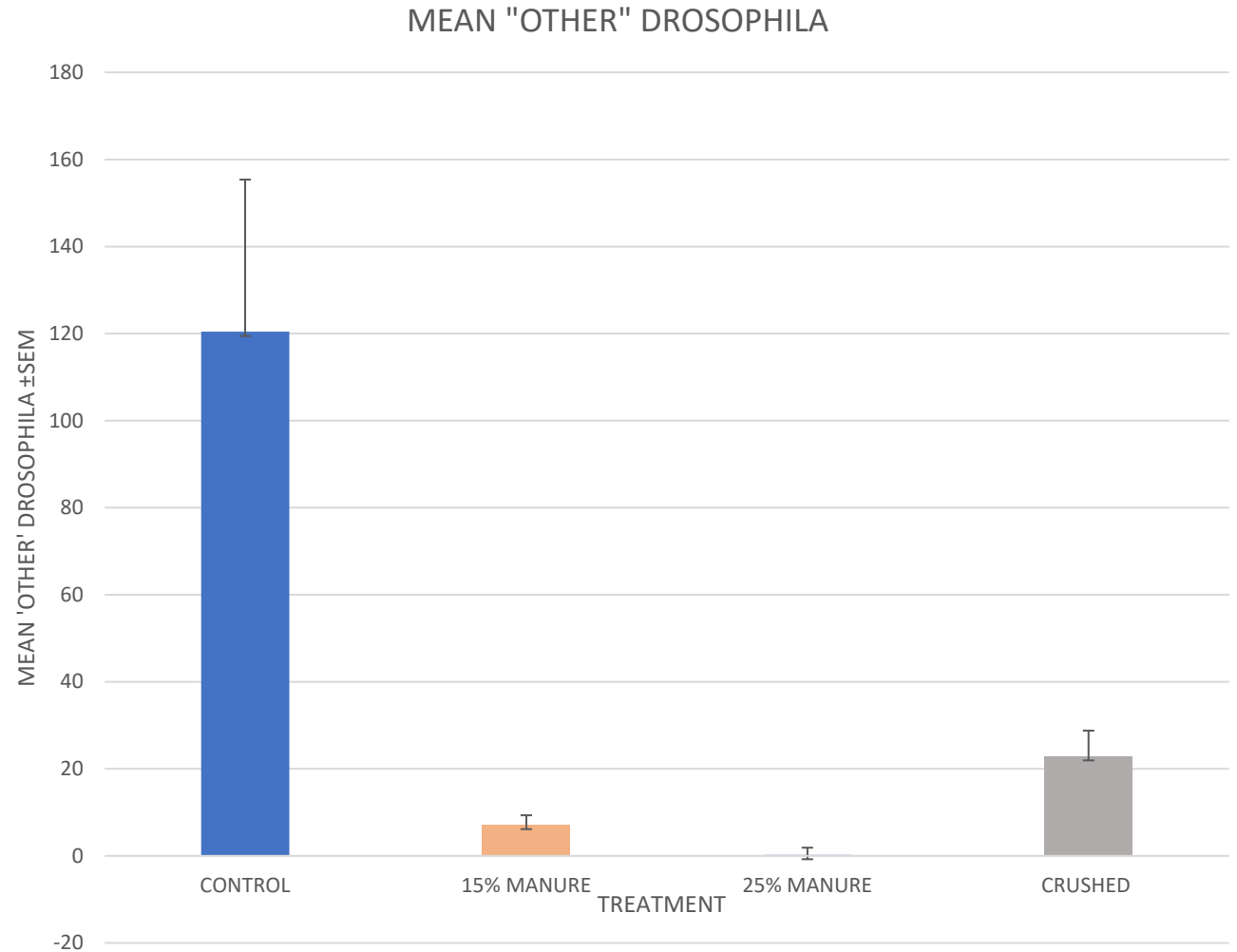
RESULTS (SWD)

- THERE ARE DIFFERENCES BETWEEN TREATMENTS BUT ONLY WITHIN ONE DAY
- FURTHER ANALYSIS NECESSARY



RESULTS (OTHER DROSOPHILA)

- CONTROL IS DIF FROM OTHER TREATMENTS
- TREATMENTS ARE NOT DIF FROM EACH OTHER





CONTINUED RESEARCH

- ANALYSIS FOR CUP TRAPS
- REPLICATED IN JULY 2022 WITH SOME ADJUSTMENTS
- SAMPLES STILL BEING ANALYZED
- LAB WORK- NITROGEN



Sources

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Questions....?

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Project **GREEN**