

Introduction

Drosophila suzukii is a pest native to Asia. It came to the USA in 2008-2010 and has caused a significant amount of damage to the blueberry industry (Asplen et al., 2015). Unlike other Drosophilas, *Drosophila suzukii* lay their eggs in ripe fruit (Asplen et al., 2015). My project was specifically done on blueberries but *Drosophila suzukii* also attacks cherries, nectarines, plums and grapes.

Research Question

Is the new TRECE lure more effective at capturing *Drosophila suzukii* compared to the original Scentry lure?

Materials

- 4 Scentry Jar traps
- 4 Trece Jar traps
- 8 Trece lures
- 4 scentry lures
- 8 red sticky traps
- Soapy water



Process

- There are 4 rows and 4 treatments per row. The treatments consist of: scentry jar with lure, trece jar with lure, red sticky trap with lure, and an unbaited red sticky trap.
- Each treatment is separated by 2 bushes and randomly displaced.
- The jars are filled with a soapy liquid at the bottom that is used to kill the insects that are trapped.
- Each week, the soapy water is replaced in the jars and the red sticky traps are collected and replaced.
- Each week the treatments are rotated along their individual rows to ensure randomness.
- Every three weeks, the lures are replaced.
- For each sample, the female SWD and male SWD are separated and counted. Then all the other SWD are counted for.
- Other predatory insects are counted for, such as, parasitoids, carabids, hoverflies, and minute parrot bugs.



Scentry Jar with lure (Treatment 3)



Red sticky trap with lure (Treatment 2)



Trece Jar with Lure (Treatment 1)



Unbaited Red Sticky trap (Treatment 4)

BLOCK 1		BLOCK 2		BLOCK 3		BLOCK 4	
T1	x	T3	x	T2	X	T4	X
X	x	x	X	x	X	x	X
X	X	x	X	x	X	x	X
T2	X	T4	X	T3	X	T1	X
X	X	x	X	x	X	x	X
X	X	x	X	x	X	x	X
T3	X	T1	X	T4	X	T2	X
X	X	x	X	x	X	x	X
X	X	x	X	x	X	x	X
T4	x	T2	X	T1	x	T3	X

Takeaways

I will be continuing this research project until the blueberry season is over, which should be until late May or early June. So far, the older model (scentry jars) have been attracting more general drosophila, but the new Trece jars are capturing more specifically SWD.

References

- Asplen, M., Anfora, G., Biondi, A., Choi, D., Chu, D., Daane, K., . . . Desneux, N. (2015, July 29). Invasion biology of Spotted wing Drosophila (*DROSOPHILA suzukii*): A global perspective and future priorities. Retrieved April 19, 2021, from <https://link.springer.com/article/10.1007/s10340-015-0681-z>
- Horejsi, L. (1970, January 01). The influence of time of day and Insecticide application on the abundance of Spotted Winged drosophila, *Drosophila suzukii*, in Michigan. Retrieved April 19, 2021, from <https://cache.kzoo.edu/handle/10920/30928>
- Lee, J., Bruck, D., Curry, H., Edwards, D., Haviland, D., Steenwyk, R., & Yorgey, B. (2011, June 27). The susceptibility of small fruits and cherries to THE Spotted-wing drosophila, *Drosophila suzukii*. Retrieved April 19, 2021, from <https://onlinelibrary.wiley.com/doi/abs/10.1002/ps.2225>
- Lee, J., Bruck, D., Drees, A., Ioriatti, C., Vogt, H., & Baufeld, P. (2011, October 12). In focus: Spotted Wing drosophila, *Drosophila suzukii*, across Perspectives. Retrieved April 19, 2021, from <https://onlinelibrary.wiley.com/doi/abs/10.1002/ps.2271>

