Melon Fly Suppression: Oahu Update
R. Pandey

Melon fly is the prime suppression target of the Central Oahu vegetable farms. Both large and small farms are involved in producing several types of melons and squash prone to melon fly attack in this region. The most important melon fly host crops grown in the large farms include watermelons, cantaloupe and honeydew melon raised from March to November. On a smaller scale, zucchini and kabocha pumpkins are grown all the year round. The smaller farms focus their production on cucumber, bitter melon, winter squash, long squash, zucchini and sequa.

Wild castor plants and seed corn crops grown in the farm were used as GF-120 bait sprayed sites during 2002. Because the farm observed corn fallow period during August, there were few bait spray sites and fly population went out of control (Figure 1). In 2003, sudex (a sorghum-sudan hybrid) grass was planted as windbreak and used as bait spray sites, which was plowed along with the crop residue until June 2003 leading to the unavailability of bait spray sites after crop harvest. Continued...
A melon crop transplanted next to the field where a previous melon crop was harvested two months prior received very high fruit fly damage. It was because the melon fly population that bred on the leftover melons in the previous melon crop field migrated (as the old field lacked the roosting host: sudex was plowed with the crop residue) to new melon crop field and attacked the developing fruit.

Farmers were advised to retain sudex when incorporating the crop residue after harvest and continue GF-120 bait spray for 6-8 weeks beyond crop harvest, which was found to be the key tactic in suppressing flies. Following this practice, the melon fly population started declining in August and was maintained at very low level through September and most of October (Figure 1) (fly population had gone out of control during this time in 2002). Fruit infestation due to melon fly also declined to less than 1%.

After the final harvest of most of the melon crops and with the onset of the winter rain and lack of border in some of the zucchini and long squash fields GF-120 bait spray was discontinued. As a result, fly population picked up in November. Though GF-120 bait application resumed in December, unusually high winter rain hindered the bait application. Additionally, poor germination of sudex in some of the early melon fields mired the melon fly suppression. Melon fly is expected to decline during the main melon-growing season as sudex has been well-established in the rest of the melon fields where GF-120 is being applied each week.

In small farms, most of the melon crops are grown on trellis. This permits easy fruit harvest during the season but makes it more difficult to eliminate the crop residue at the end of the season. Field sanitation is often times overdue where melon flies can easily breed. Male annihilation and GF-120 bait spraying were the prime tactic adopted by these farms. Weekly bait application of GF-120 since May 2003 led to the decline in melon fly population in July through October. The fly population surged in November with the onset of rainy season (Figure 2). The winter rain not only disrupted the bait application, but also washed the bait off the border plants as soon as it was applied. The farmers are looking forward to a better cucumber and bittermelon crop season with the onset of drier weather. They have also planted sudex border trap crop around their cucumber and bitter melon crops where GF-120 bait could be applied.

In the summary, both small and large farmers are benefiting from the HAWFLYPM program due to their increased level of knowledge towards fruit fly biology and behavior. They are more confident than ever on fruit fly suppression tactics.

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Oahu Community Education
C. Kuo

In April, Aloun Farms’ Annual Corn Maze was open to the public. On weekdays, busloads of lucky schoolchildren had the opportunity to learn about Hawaii agriculture and local produce, pick corn, and wander through the maze. Some even got the chance to experience fruit flies, as the Oahu HAW-FLYPM team were on hand to talk about and demonstrate the fruit fly lifecycle and discuss the negative impact fruit flies have on our state. These pests affect all of us, and we’re trying to get everyone involved!

Our program is fortunate to have retired entomologist Victor Tanimoto as one of our “Fruit Fly Trainers.” He and HAW-FLYPM Extension Agents hold monthly workshops at the Pearl City Urban Garden Center. One of our very first community cooperators, Victor has been reaching out to Oahu gardeners and helping them with their fruit fly troubles. Victor has a flair for hands-on fruit fly identification and suppression demonstration with the workshop attendees and is a valuable asset to our program.

HAW-FLYPM recommends:
Sanitation
Pick up fruits from the ground and properly dispose of them by drowning, burying with a wire mesh on top or bagging it for trash pickup.

Mass Trapping
Full implementation of monitoring traps during fruit season and trapping on alternate crop hosts during off-season.

GF-120 Sprays
Application at 7 to 10 day intervals on labeled crops for continued suppression.

The effort of everyone in the community provides area-wide suppression control for all to benefit: to be able to eat pristine fruit, generate income, and to feel the joy of sharing fruit with family and friends.

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