Big Island Report
L.M. Klungness

**Beyond the grids:** There are now 135 signed cooperators on the Big Island, and we are currently in the process of mapping their properties (map, right). This map does not show all the cooperators within Waimea target area nor any of the cooperators in the Kohala target area. These are mainly the new cooperators that have been included since we expanded the outreach to the whole island. Most of these farms and gardens are small, but there are a few large orchards. Experience with long term cooperators like Sydney Andrade and Terry Weaver indicate that fly control is possible with a judicious program of trapping, baiting and sanitation. Some who have joined more recently are already reporting success in their own efforts to control flies outside of a larger control area.

**Invitation:** We are coming up on the Third Annual meeting of the Hawaii Fruit Fly Area Wide Pest Management Program, which is to be held on the 26th to 28th of April. The meeting will be held on Oahu in the Waikiki beach area. As we did last year, we hope to enlist the growers to attend the meeting and exchange information with the program director, Dr. Robert Faust, plus other Washington DC and West Coast USDA Staff. Your input is one of the measures of the success of the program. As in previous years, the USDA will pay per diem, lodging and airfare to the participating growers. If you are interested in attending the meeting, you should contact Beth Robards at brobards@pbarc.ars.usda.gov or 808-959-4306, cell 808-937-1652, FAX 808-959-5470 as soon as possible. Travel vouchers have to be processed for each participant, so lead time is essential.

**To sanitize or not to sanitize:** There is still a debate about whether sanitation is an essential component of the HAW-FLYPM program. There are different definitions of what is sanitation. In one area a grower might till his crop twice after harvest and continue applying GF120 for a month or more to kill the flies coming out of the tilled ground. Another grower might carefully remove every piece of damaged fruit from his field and bag it, or bury it, or put it in an augmentorium. The latter growers, over the course of the program, have trapped 20,064 melon flies in their augmentoria. Two farms account for 17,383 of those flies being prevented from damaging crop (see graph, next page).
We are currently circulating a survey to the growers who have had augmentoria on their property. We want to find out to what extent they used the augmentoria or other sanitation methods, and whether they consider sanitation critical to their success. Please respond if you are one of these growers. If you have not received the survey form, contact me at 808-959-4325 or mklungness@pbarc.ars.usda.gov.

North Kohala Update

H. Revis

The North Kohala Area-Wide Pest Management Program for suppression of fruit flies within local communities has begun. We conducted a survey of the numbers and types of pest fruit flies, host plants and parasitoids found on 45 residential properties. This area represents the oldest geological area of the Big Island and includes the quaint towns of Hawi and Kapaa, as well as the breath-taking valleys of Pololu and Waipio. Deep gulches naturally divide the North Kohala region into different neighborhoods and our program built upon the natural landscape by grouping homeowners into 8 different zones. All four of the pest fruit flies were trapped in North Kohala during our 6-month survey; however, the Medfly was rare with captures of only 0.0005 flies per trap per day. The Oriental fruit fly was found in greatest abundance across all zones. Areas of high fruit fly abundance were not isolated within a single zone (see Table 1). Fruit fly numbers did not consistently correlate with high numbers of host plants on residential properties.

We have begun to transition from monitoring into a technology transfer phase in North Kohala. As we empower the homeowners within this region, teaching the tools that allow for successful fruit fly suppression, we suggest that homeowners place male lure traps loaded with Methyl Eugenol and Cue-lure even if common host plants are not within their vicinity. Second, we suggest that homeowners practice ground sanitation of culled and rotten fruit. Finally, we recommend the use of protein baits in the high fruit fly density areas of Kapaa, Halaula, Makalapa, and Niulii. The parasitoids *Biosterus arisanus* and *Diachasmimorpha longicaudata* were both reared from fruit collected within North Kohala indicating healthy populations of these beneficial wasps (Table 1). The area-wide staff in Hilo and Waimea will continue to monitor both fly and parasitoid populations in the region, collecting fruit and monitoring traps located in undeveloped lands within a grid system.

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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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Table 1 - Fruit flies captured in the North Kohala Region
Per Trap Per Day (All Zones Combined)

<table>
<thead>
<tr>
<th>Zone</th>
<th>Melon Fly</th>
<th>Malaysian FF</th>
<th>Oriental FF</th>
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<tr>
<td>1</td>
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<tr>
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</table>

Fruit Emergence-March 2003, All Zones Combined

Parasitoid Species | Arthropod per gram of fruit
---|---
Biosterus arisanus | 0.00014
Psyttalia fletcheri | 0
Psyttalia incisi | 0
Diachasmimorpha kraussii | 0
Diachasmimorpha longicaudata | 0.000019
Diachasmimorpha tryoni | 0
Opius vandenboschi | 0

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Around the Corner: Kohala HAW-FLYPM Workshop

Mark your calendar! The HAW-FLYPM team is coming to Kapaau on the Big Island for another informative workshop!

Here’s the info:
Saturday, February 28, 2004
10:00 am
Intergenerational Center in Kapaau

Please join us to learn about fruit fly suppression techniques! All are welcome, whether you are already a HAW-FLYPM cooperator or have just heard about our program. Tell your neighbors!