Oahu Melon Fly Update
R. Pandey

The population monitoring of fruit flies in central Oahu has shown some interesting patterns. Fruit fly activities in these areas are presented in Figures 1 to 4.

Kapolei
At Kapolei, melons are grown once a year and the field is kept fallow between the crop cycles. A lack of suitable hosts for a long period helped suppress fruit fly populations from August 2002 to February 2003 (Figure 1). Then, the fly population began to rise in mid-March and reached its peak in June. Crop harvesting at this site began in March and continued until the end of April. The crops were harvested before the fly population reached the peak and crop damage was negligible. A closer look at farm data reveals that fly populations began to build up in the areas where the crop was harvested; populations start to decline two months after harvest.

Lower Kunia
From pre-plant to harvest, the fly population was negligible during the growing season (Figure 2). This suppression was achieved due to the long-term fallow practiced in these fields. Again, fruit fly populations increased following harvest. In these areas, the melon fields are separated by large natural vegetation of non-host plants. This allows for minimal crop infestation and decreased effect adjacent crops.

The population trends in Lower Kunia were similar to those in Kapolei- population dramatically increased following harvest and then declined within the next two months. Stations located in the fields where the crop is not yet harvested have a very low fly catch.
Upper Kunia
The average fly population in upper Kunia sites was at a moderate level (Figure 3). Most of the sites registered very low melon fly catch per trap day. Other sites where fly population was high during the past winter season has also begun to decline.

Ewa
The average melon fly population at this site was maintained at a moderate level. A closer look at the various fruit fly monitoring stations again showed similar population trends as those at Kapolei and Lower Kunia: fly population buildup following crop harvest and a population decline within two months thereafter.

The Ewa farm has one of the most diversified cropping systems. Though fields receive more than one crop per year, they mostly receive only one 'melon fly host' crop. However, at least one melon fly host crop is always planted within the farm and the fields of various melons/squash in close proximity.

Fly produced in one field may or may not affect the crops being grown in an adjacent field, depending on how far the plantings are located. One of the melon crops had a severe fruit fly infestation in the past month. This field was located close to a field where another melon crop was harvested about two months prior. Melon flies that bred in the previous crop are deemed responsible. Other fields within the farm are registering a very low fruit fly infestation. The grower has adopted plantings of Sudax-grass as fruit fly roosting border in the melon fields where GF-120 is applied weekly. We recommend that the grower maintain the sudax border and spray GF-120 for two months after melon harvest.