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Why Do You Need My Rotten Fruit?
Fruit collection is the perhaps the best indicator of area wide fruit fly suppression success. Why is that? First, fruit collection provides us with a reliable layout of fruit fly population and infestation concentrations within an area. Secondly, fruit collection enables us to get a better idea of preferred host within an area. Take Figure 2 to your right. A snap shot of fruit collection in the upper Northwest area of the Kamuela Grid demonstrates the wide diversity of fruit fly host in this area.

By obtaining a better understanding of preferred hosts in the area and its phenology we can increase fruit fly suppression efforts by targeting specific regions within a general area.

What In The World Do You Do With It All?
On a weekly basis, a variety of fruit and vegetables are collected from the HAW-FLYPM grid region. Samples are tagged and held for a period of two weeks. Fruit fly pupae and larvae are placed in sand cups and emergence data is collected and stored in the HAW-FLYPM database. From November 2000 to the present, approximately one ton or 11,763 samples were collected and processed from Kamuela. Melon fly infestation rates from collected samples show a noticeable decrease since the start of the HAW-FLYPM program.

In addition, fruit collection efforts have revealed a variety of potential host in the area. Figure 3 shows a variety of fruit samples present in Waimea and the species of fruit flies that are primarily attracted to them. It is important to note, melon flies appear to be highly attracted to mormordica or wild bittermelon, followed by pumpkin and zucchini type crops. On the other hand, the Mediterranean fruit fly is loosing the battle for hosts to Oriental fruit fly (Figure 4). Fruit collection data like this helps us plan our suppression strategies. For example, Med fly is now our next target species for suppression beginning this month.