USDA, ARS, Daniel K. Inouye U.S. PBARC, Tropical Fruit & Nut Germplasm Repository, Hilo, HI
W-6 Report for June 21, 2017
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Dr. Peter Boches is the new curator of the Tropical Fruit & Nut Germplasm Repository in Hilo, HI. Dr. Boches started on September 6, 2016 replacing Dr. Francis Zee who retired on January 11, 2014. Dr Zee started the Hilo repository and served as curator for 28 years.

At the Hilo repository, we maintain 13 designated clonal germplasm collections with 1022 accessions representing 61 genus and 145 species in 33 acres of fields, greenhouses and a tissue culture laboratory. We have thirty-five accessions of papaya (twenty-six accessions planted in Hilo, eight in Paauilo, one in Lalamilo) planted for seed regeneration. There were 286 papaya trees field planted. We harvested and stored 1369 grams of papaya seed from field planting and 156 grams from greenhouse Vasconcellea, removed 853 grams old seed from refrigerators and updated our inventory. We are working with scientist at the Center for Agricultural Resources Research Fort Collins, CO to store papaya seeds in cryogenic storage.

As a backup to the field and greenhouse collections, pineapple (8), breadfruit (16), ginger (3), macadamia (4), and guava (3) accessions were initiated into tissue culture. The protocol to cryopreserve the pineapple (Ananas) collection has been successfully developed by our ARS collaborators at the Center for Agricultural Resources Research, Fort Collins, Colorado. Plantlets are being grown and virus tested in Hilo before sending for cryopreservation.

We also continue to serve as a backup for the ARS germplasm repositories in Miami, Florida, and Mayaguez, Puerto Rico. This year, seven new accessions of avocado were introduced to Hilo from Miami, Florida, through Fort Detrick, Maryland, after scions were tested for both Avocado Sun Blotch Viroid and Laurel Wilt disease in Miami, Fort Detrick and Hilo. Once cleared through the self-imposed quarantine, avocado accessions are maintained as duplicate plantings in the greenhouse in two gallon pots and in the field. This new protocol reduces the pot size from twenty to two gallon, therefore forty-eight accessions were grafted onto rootstock in the smaller pots. To date, seventy avocado accessions have been backed-up from the Miami collection to protect from Laurel Wilt Disease. Additional local avocado varieties have also been planted in the field as a source of rootstock material.