



Molokai Native Hawaiian Beginning Farmer Program – Lessons Learned

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OVERVIEW

The Molokai Native Hawaiian Beginning Farmer Program was a three-year program whose grant period ended in August 2012. Funded by the USDA-National Institute for Food and Agriculture Beginning Farmer and Rancher Development Program (BFRDP), the program focused on native-Hawaiian homesteaders in Hoolehua, Molokai. The Hoolehua area has over 7,800 acres of Department of Hawaiian Homelands (DHHL) agricultural farm lots with access to irrigation water from the Molokai Irrigation System, managed by the State Department of Agriculture. Presently, less than 5% of the DHHL lots are being utilized for agricultural production. Lot sizes range from 1 to 35 acres, with the majority of lots at 5 and 35 acres each.



Micah Buchanan planting strawberries with parents Moku and Lori

Agricultural infrastructure in the Hoolehua area include the UH CTAHR Cooperative Extension Service Office, Hikiola Cooperative, a farm supply cooperative, Molokai Livestock Cooperative, a slaughter facility, Molokai Extension Research and Demonstration Farm, Maui Community College-Molokai Farm, USDA-Natural Resource Conservation Service (NRCS) Office, USDA NRCS Plant Materials Center, Lanikeha Community Kitchen, and the Hoolehua Homesteaders Association Tractor Service. The USDA Farm Services Agency services loans for the farm community through their Maui office.

In order to participate in this training program, applicants must be a Hawaiian Homesteader or a direct descendent of one. Applicants must have access to irrigation water, and have ½ acre of land cleared and committed to this program. An additional ½ acre was prepared for each participant to farm after the program ended. These conditions were imposed to assure that once participants completed training, they would

have access to land and water and would be the infrastructure required to continue farming.

Technical assistance and mentoring were provided by three program leaders/extension agents, including Alton Arakaki, Jennifer Hawkins, and myself. Weekly classes were held at the Extension Office in Hoolehua, and also in the field or classroom at the Molokai Research and Demonstration Farm in the Molokai Agricultural Park, and were conducted mostly by program leaders. Guest speakers were brought in from UH Manoa and also from agencies on neighbor islands. Additional training was conducted in farmer's fields, especially those from the earlier training rounds. Reference and resource materials were distributed to participants early in the program, with additional materials at each class.

Three program leaders provided one-on-one assistance to provide counseling, and walk participants through crop selection, production mapping, developing a supply list, and farm implementation. Visits to the Extension office were encouraged. A resource library was also created so participants had access to additional written resources.

One of the program leaders providing tractor services for participants, and also larger tractor service was contracted by the Hoolehua Homesteaders Association tractor service, but no grubbing would be done. Fields were inspected prior to field work to assure that no large objects or boulders were present in the field. A rental program was also put in place so participants could rent rototillers from the program. By providing this infrastructure, participants didn't need to purchase farm equipment. Eleven families participated in each of the three rounds for a total of 33 families. Some were husband and wife teams, while others also involved their children.



Three important benchmarks that each participant had to complete was the identification of a crop, development of a supply list, and creation of a production map identifying weekly actions of land prep, weeding, harvesting, cultivating, etc. Crops were limited to those that could complete a harvesting cycle in less than a year. In this way, participants could harvest many increments through the period of the training program. The production map covered an entire year, and was intended to supply a market with a set amount of produce each week. Kaunakakai retail stores were apprised of the program and produce managers assisted participants in identifying crops and amounts needed on a weekly basis. The objective was to implement their production map, and supply the market on a consistent basis.

When participants completed crop selection, the production map, and supply list, they gained access to free expendable supplies for their crop cycle. The production map was an important tool that helped participants to structure their farm activities. Although difficult for many, once they understood and developed their plan, many had a better understanding and felt more structured and organized.



Class with Scott Nikaido, UH Honey Bee Project

In addition, a sub-program ran simultaneously to educate participants in raising bees to improve pollination of crops. About 20 participants, the majority of which were participants in the beginning farmers program learned how to capture wild hives and manage bee colonies. They were provided the latest technology from the UH CTAHR Bee Program under the direction of Ethel Villalobos. One of the program leaders, Jennifer Hawkins, oversaw this program. This program was intended to address issues related to pollination and bee health, including improving pollination of crops such as cucurbits, managing bees in periods of low food and water supply, identification of alternative pollinators, identification of native and indigenous plants as pollen and food sources. These management tools could were also intended to counteract the threat of bee pests, such as the Small Bee Hive beetle, a recent introduction to Molokai. The Varroa mite has not been found on the island.

LESSONS LEARNED

Based on interviews and evaluations, the program was rated Excellent. Participants commented that they learned most from hands-on workshops. Classes utilized mostly power point, Molokai-based content in presentations to teach participants about the sciences. It was believed that a combination of the two would provide more holistic understanding of the sciences, while learn-by-doing would give them a more hands-on training. Without understanding the sciences, it was believed participants would have difficulty diagnosing and solving production problems.

Due to time restraints of the grant, and the inability to hire additional staff early on, participants had to hit the ground running, going from no farming experience to production. In hindsight, this was too overwhelming for many with so much to learn. A more prudent first step would be to have participants plant a garden, thereby facing many of the production challenges on a micro-scale, especially pests and weeds. This step would also help them to understand the time commitment involved in farming.

Mentoring was an important training piece. Participants from the first class also mentored those from the second class, and this proved to be invaluable, including visits

to their farms as class activities. Participants cultivated relationships with those from the earlier classes and sought their counsel in all aspects of farming. There was also mentoring within classes. Early adapters assisted their classmates in assignments such as developing their production map, and also help them set up their farm.

Interdependence, although common in this homestead community, was even more evident and seemed to be magnified as time went on as participants helped each other with activities outside the farm. For example, one of the participants held a graduation party for her daughter, and many of the participants donated produce and assisted her with the party.

This attribute of the program would be counter to most agricultural training programs, where independence and individual action is the goal, but this theme has continued with the creation of a cooperative composed of beginning farmers, Makakuoha Cooperative. They have identified three areas for group action, including a composting operation, farm equipment services, and processing and marketing.

Working with the Kohala Center, cooperative members have focused on a grant to secure a truck and large trailer to haul mulch from the landfill to be processed into compost in Hoolehua as their first step. A USDA Rural Business Enterprise Grant was approved in mid-June 2013 to implement the composting operation.

A shortcoming expressed by one of the participants is that the advice from program leaders weren't always consistent. This is understandable since every program leader has a different area of expertise, different professional experiences, and some advice may have run counter to another's advice. To remedy the situation, each program leader could be assigned participants that they would work with through the length of the training program. However, participants would seek a program leader in the office for advice, and for expediency, whoever was available would provide advice.

An important concept fostered by this program was empowering participants to solve problems by utilizing their reference materials. In some instances, participants would seek answers from program leaders, seeking the easy-way-out instead of seeking answers from reference materials. They would be told to go and read their reference material. This was intended to decrease dependence on program leaders and promote independence and research on the part of the new farmer.

With a very limited local market, program leaders tried to have each participant grow a different crop, first come first served, so the local market wouldn't be inundated with one crop. This may have created problems since many were interested in growing taro for example, and didn't follow through on their plan or shifted their focus. It's unsure whether this was a good strategy since it takes away from real-life situations of oversupply in a market situation.



Aukai Arre in his broccoli field.

Although the grant period has ended, this program will continue although downsized a bit. There's a great need for this program on each island as the average age of farmers increases, compared to the greater work force nation-wide. Another step in the evolution of this program is the creation of a farmer's market that only farmers can participate in. Most of the farmers markets in the state are involved in resale of products and are not sold by farmers. Benefits to the community have been diluted due to higher prices and not direct sale of fresh produce. Starting farmer's

markets in the farm community can promote new farmer efforts, establish their credibility as leaders in their community, and also increase support for agriculture there.

Crops being grown by beginning farmers include taro, eggplant, watermelon, bulb onion, butternut squash, strawberries, dragon fruit, broccoli, tilapia, lettuce, papaya, long bean, bittermelon, kabocha, banana, and others.

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