COOPERATIVE EXTENSION
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Saving UH CTAHR's Eggplant Seeds

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Long eggplant (*Solanum melongena*) cultivars are preferred by many Hawaii's growers and consumers. Eggplant is a fruiting vegetable that excels in well-drained soil and warm weather. It can be grown year-round in Hawaii on commercial farms and is well suited for the backyard garden.

Saving seeds from CTAHR's self-pollinated varieties such as Molokai, Waimanalo, Nitta, Hamasaki, Poamoho Dark Long, etc. can be done by commercial and backyard producers to keep these lines in productivity for years to come.

Eggplant have hermaphrodite flowers (male and female parts on the same flower). Therefore, fruit can be self-pollinated. They can also be pollinated by insects. To avoid cross pollination between eggplant cultivars, Michigan State University recommends a minimum distance of 1,300 feet between eggplant cultivars. Bags can also be used during the flowering stage to minimize cross pollination by insects from nearby eggplant cultivars.

Selection of plants for seeds should take into account the desired horticultural characteristics of the crop such as fruit color, plant vigor, fruit quality, shape, size, firmness, etc. Inbreeding depression can reduce the productivity of eggplant cultivars when seeds are selected from a small population of plants. Therefore, aim to take seeds from several plants versus just one or two.

Seed Saving:
Eggplants are harvested for their seeds when the fruit has reached maturity (**Photo 1**). UH CTAHR purple flesh eggplant fruits often turn yellow and dull in appearance as they reach seed maturity. Fruits with signs of *Phomopsis*, or other plant diseases should be avoided. Seeds are typically found at the blossom or lower end of the fruit (**Photo 2**). Literature suggest that seed germination is improved if eggplant seeds undergo a fermentation process to remove the mucilage that surrounds the seeds (Rahman et al. 2015).

Photo 1 (left). Long purple eggplant turns yellow and dull as seeds mature. **Photo 2** (right). Seeds are typically found at the blossom end of the fruit.

The flesh of the eggplant with the mature seeds can be placed into a glass jar for a several days to ferment and breakdown (**Photo 3 & 4**). The skin of the flesh can be discarded. Avoid leaving the jar in the direct sun or exposing it to extreme heat. After a few days, water can be added to the glass jar.

Photo 3 & 4. Eggplant placed into a glass jar and allowed to ferment and break down for a few days.

The pulp of the fruit and mucilage around the seed should break off through the wet fermentation and washing process (**Photo 5**). Decant the pulp of the fruit with multiple washes with clean tap water, leaving the viable seeds on the bottom of the jar (**Photo 6**). The viable seeds should fall to the bottom of the glass jar.

Dry the seeds in an area with good ventilation to remove residual water. Store the seeds in a cool and dry area for future plantings (**Photo 7 & 8**). A simple germination test can be conducted to assess the viability of seeds (**Photo 9**). Place ten seeds into a moist, not overly saturated, paper towel. Keep the paper towel moist for a few days and assess the percentage of seed germination.


Photo 5 (left). Fermentation process of UH eggplant seeds in a glass Mason jar. **Photo 6** (right). Viable seeds drop to the bottom of the glass jar. Mucilage and fruit flesh are washed away from the viable seed.


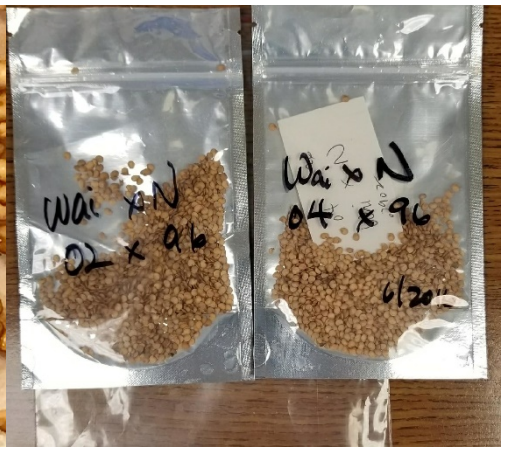

Photo 7 (left). Seeds drying after the fermentation process. **Photo 8** (right). Seeds stored with parental information and hybridization date.


Photo 9 (left). A simple germination test can be conducted to assess the viability of seeds. **Photo 10** (right). The ultimate measure of success will be seed purity and uniformity of the variety for generations to come.

References:

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