



Tropical Apricot

Scientific name: *Dovyalis hebecarpa* × *D. abyssinica*

Family: Flacourtiaceae

Origin: Florida

Tropical apricot is a naturally occurring hybrid from Florida, developed in 1953 from a cross between kitembilla (*Dovyalis hebecarpa*) and Abyssinian gooseberry (*Dovyalis abyssinica*).

The plant has many of the attributes of both parents. It is also known as dovyah's hybrid or just dovyalis. The name ketcot was proposed in 1960 but was not widely adopted, as the fruit never achieved the popularity that was expected. The name tropical apricot, which has been used to describe the fruit's color and taste, is how the plant is commonly referred to in the pan-tropical areas where it grows. The dovyalis should not be confused with mamey (*Mammea americana* L.), another fruit called tropical apricot or South American apricot.

Tropical apricot is a large shrub growing to more than 25 feet tall with a width that matches its height. Its long branches are covered with 2–4-inch, deep green leaves and often with thorns. The branches bend downward, increasing the width of the plant, and are covered with numerous male, female, and perfect flowers. The fruit is thin-skinned, $\frac{3}{4}$ inch to almost 2 inches in diameter, turning from green to pale yellow-orange to red when fully ripe. Yellow-orange fruits are harvestable and will continue to ripen to red. The soft yellow-orange flesh is usually sour, with a distinctive apricot-like flavor. Some larger fruits contain one to five seeds, although most fruits are seedless.

Tropical apricot is a recent introduction to Hawai'i, although its parent, the kitembilla, (*Dovyalis hebecarpa*), was brought to the islands in the early 1920s and was used as a boundary plant to keep cattle out of sugarcane fields. Use of kitembilla fruit, often mixed with papaya or mango, was popular for jam and jelly.

Cultivars

Plants are usually identified as sour and less sour, thorny or nearly thornless. The thorns can be as long as 4–5 inches on mature trees. Seedling shrubs are highly variable in thorniness, degree of sourness of the fruit, and rate of growth. A cultivar, 'Prodigal', is available in Florida and may be available in local nurseries.

Environment

The tropical apricot is adapted to a wide range of soils and elevations from 300 to 2500 feet, and it has been known to survive frost in northern Florida. In deep soils with proper nutrition, the plants can grow more than 3 feet per year in height and width. Seedlings tested in South Kona showed significantly more growth in deeper soil (32 inches of soil) than those planted in rocky areas (13 inches of soil). Mature trees will produce some fruit year-round, with peak production in the spring rainy season and a second moderately heavy crop in the fall. Spacing of 15 feet is recommended for producing trees and 3–5 feet for hedgerows.

Horticulture

Plants should be given a complete fertilizer, such as organic 6-6-6, quarterly. Additional minor elements should be applied yearly or twice yearly if the soil pH is above 6.7. Heavy mulching during the dry season will help maintain the plants' health and appearance.

Tropical apricot requires heavy pruning, especially if maintained as a barrier hedge.

Remove branches with excessive thorns, dieback, or lateral growth to facilitate harvesting. Thirty minutes of pruning per month was sufficient for a 20-year old tree

in South Kona. Mature plants do not require as much rainfall or irrigation once established. Ten minutes of daily irrigation using a ¼-gallon/hour emitter will increase production during off-seasons. The plant will fruit in full sun or partial shade. Most of the fruits form on outer branches.

Pests and diseases

No diseases have been reported in the literature or observed on producing trees in South Kona. The fruit is susceptible to fruit fly infestation. Following the Hawai'i Area-Wide Fruit Fly Pest Management Program (HAW-FLYPM) is highly advisable, as is following good sanitation practices, such as removing fallen and infected fruits. Birds occasionally enjoy the ripe fruits but are not a major problem.

Propagation

This plant is easily propagated from cuttings or from air-layers, which will fruit in the first or second year after planting. Seedlings are often found under mature trees. Seedlings generally produce fruit in 3–4 years, but they tend to have more thorns than plants propagated from cuttings or air-layers. Grafting the tropical apricot to a kitembilla rootstock has been practiced in South Florida's commercial nurseries.

Harvesting and yield

The tropical apricot is a heavy producer. A 15-foot tall shrub can produce more than 100 pounds of fruit per year. When harvesting for fresh sales, it is advisable to place fruits directly in the vented container in which it will be sold. Care should be taken to make sure the stem end of the fruit is intact and the fruit is free of fruit fly infestation, which usually appears as a soft spot. When harvested for processing, the fruit should be processed as soon as possible after harvest, as it attracts fruit flies and continues to decay.

Postharvest quality

Once tropical apricot is harvested it should be kept chilled to prevent decay. Tests at a South Kona grocery showed the fruit held its appearance for 20 days on store shelves before signs of mold or desiccation were visible.

Packaging, pricing, and marketing

Tropical apricot can be packaged in ½-pint or 1-pint vented plastic containers for sale as fresh fruit in grocery stores and farm stands. As most produce buyers are not familiar with the fruit, smaller containers are advisable until the fruit gains a following at the market.



Immature fruit

Although the fruit has a thin skin, it holds well on store shelves. Signs in stores promoting the fruit should reflect its unique apricot-sour taste. Fresh fruits sold to hotel chefs and restaurants can be packaged in larger containers, up to 5 pounds, but fruits should not be packed in more than four or five layers in order to protect the skin. Frozen puree can be packaged in 8-cup, or smaller, freezer bags.

In 2005–06, fresh tropical apricot sold to Big Island chefs for \$3.50 a pound and was wholesaled to groceries at \$2.50 a pound. Frozen puree was sold for \$40.00 per 8-cups.

Food uses and nutrition

The fruit was a favorite of Big Island chefs and student chefs working with the 12 Trees Project. It is easily frozen for future use, either as a whole fruit or as processed puree. Chefs have created jelly, juice, salad dressing, dipping sauce, hot sauce, BBQ sauce, pickles, chutney, soup, wine, and brandy with this highly versatile fruit. The fruit is said to have great potential for development of value-added products. As fresh fruit, those who prefer a unique, sour taste enjoy it.

The fruit can be processed into a puree using a home or commercial juicer. Some chefs will process the fruit up to three times in a juicer. Different consistencies of puree are achieved when the fruit is passed through the juicer followed by the waste from the first pass.

Most jelly made with tropical fruit is based on a 1 to 1 ratio of fruit to sugar; however, with the sour tropical apricot, 60–70% sugar is usually required to make the taste more palatable. The USDA guidelines for producing jelly should be followed.

Average degrees Brix

8–12 (five samples from each of two tropical apricot plants)



Mature fruit

Nutritional value

per 100 g of edible portion of kitembilla*

Moisture	81.9–86.36 g
Protein	0.174–1.5 g
Fat	0.13–1.02 g
Carbohydrate	11.42 g
Crude fiber	1.3–1.9 g
Ash	0.56–0.63 g
Calcium	8–13.3 mg
Phosphorus	12–26.8 mg
Iron	0.45–1.41 mg
Carotene	0.125–0.356 mg
Thiamine	0.012–0.017 mg
Riboflavin	0.033–0.051 mg
Niacin	0.261–0.316 mg
Ascorbic acid	64.5–117 mg

*No nutritive studies on the tropical apricot are available. The values are compiled from various sources for the kitembilla parent of tropical apricot.

Recipes

**Tropical apricot red curry
coconut sauce**
Keola Tom

- 1 large can coconut milk
- 24 oz chicken or vegetable stock
- 3 cups tropical apricot juice
- 4½ oz fish sauce (Patis or other brand)
- 6 oz red curry paste
(start with 3 oz, then adjust to taste)
- 3 cups sugar
- Grated ginger to taste
- Grated garlic to taste
- Tamarind to taste
- 2½ T paprika

Combine the first six ingredients and stir until sugar dissolves. Add the rest of the ingredients and bring to a boil. Simmer 5–10 minutes, stirring occasionally. More paprika can be added for color and to keep curry from becoming too spicy. Yield: 5 quarts. Serve with wok-fired shrimp and scallops.

**Tropical apricot dipping sauce
for spring rolls**
Vince Mott

- 2 cups tropical apricot juice
- 50 ml (3 tablespoon + 1 teaspoon) peanut oil
- 2 dried chilies
- 3 scallions, white part with about 1 inch of green left on, finely sliced
- 1 large knob ginger, finely diced
- 2 cloves garlic
- 15 ml (1 T) Chinese shaohsing wine
- 15 ml (1T) rice wine vinegar
- 2 T sea salt
- 2 T fine sugar

Mix ingredients well.