

Plant Aloha <http://hawaiiansanctuary.com/plantaloha>

Thursday, August 24, 2017

Wade Bauer of [Malama Aina Permaculture](#) facilitating



How to Grow a Complete Diet with Permaculture Principles:

Tropical Subsistence Gardening. 24 part class series

Spices: Turmeric, Ginger, Black Pepper, Vanilla, etc. part 20 of 24

Acknowledgements: A special thanks to Hawaiian Sanctuary, County of Hawaii Research and Development and all others involved to make these classes a reality! We are still looking for support to complete and enhance this amazing FREE program. <http://hawaiiansanctuary.com/donate>

Introduction: These spices are grown in Hawaii, there are many others that may be able to be grown here.

Turmeric

Anatomy: Herb 2-5 ft tall and wide, yellow-orange rhizome (root)

Niche in a Food Forest: sun to shade, prefers rich soil, deep mulch.

Varieties: Orange, white, blue and black varieties exist, orange is most common, some are more medicinal.

Propagation: from central "mother" rhizome or 1-2" pieces of rhizome, plant a 2-4 in deep, mulch heavily

Harvest: dig up rhizomes when leaves and stems turn brown and dieback

Usage: teas, curries, dressings, etc. heating with oil and black pepper enhances curcumin bioavailability.

Ginger

Anatomy: close relative of ginger, leaves split instead of solid. 1-4 ft tall and wide.

Niche in a Food Forest: full sun to part shade.

Varieties: Yellow ginger is most common other varieties exist, Galangal is a Thai ginger and more aggressive

Propagation: from 2" sections of rhizome, allow to heal over 1 day before planting.

Harvest: like turmeric, can be harvested early for pickling etc. milder with short shelf-life.

Usage: Teas, curries, stir-fries, etc. digestive aid, medicinal, versatile and widely used, spicy + pungent

Cardamom

Anatomy: ginger family, 5-8ft tall and wide, seeds are part used and grow in pods on short stems near the ground.

Niche in a Food Forest: part to deep shade, can be grown under the canopies of many larger fruit trees

Varieties: at least several varieties exist on island, including black,

Propagation: usually from sections of rhizome but can be grown from seed but takes much much longer

Harvest: when pods are mature, then dry the pods and seal airtight to store. Keeps best in pods till use.

Usage: to flavor chai tea, desserts and savory dishes

Vanilla

Anatomy: epiphytic climbing orchid vine, can grow hundreds of feet long, aerial roots cling to tree trunks.

Niche in a Food Forest: part to full shade, can be grown on many fruit trees without harm, cacao is often used

Varieties: the most common is Tahitian Vanilla in Hawaii.

Propagation: from sections of vine, ideally at least a couple ft long. Can be grown from shorter sections in pots

Harvest: needs hand pollination. When beans start to turn color pick, blanch, drain and wrap for 24-28 hrs to "sweat", drying - lay beans in sun on for 1 hr, then wrap in cloth in sun 2 hrs, then take inside, repeat for 6-8 days

Usage: very popular for flavoring desserts. Bean can impart flavor to alcohol or honey, or scrape interior to use.

Black Pepper

Anatomy: climbing vine, clings to tree trunks with aerial roots as vanilla, seeds are part used

Niche in a Food Forest: can be grown on fruit trees, including coconut, or trellis

Varieties: black pepper most common variety grown here.

Propagation: usually from sections of vine 6” or longer, lateral vines reportedly produce bush like plant.

Harvest: can be used young + green. prolific, everbearing, Berries can be picked green, pink or red and dried to turn black.

Usage: Adds flavor to savory dishes, hugely popular worldwide.

Cinnamon *Cinnamomum zeylanicum* (true cinnamon) *Cinnamomum cassia*(often sold as cinnamon)

Anatomy: tree to 30 ft tall. Usually coppiced as bush,(cut back occasionally). Bark and leaves can be used.

Niche in a Food Forest: overstory, or as a coppice between larger trees.

Varieties: coumarin may cause liver damage in large amounts, much higher concentration in cassia cinnamon.

Propagation: from seed, cuttings, air layer, true cinnamon (Ceylon Cinnamon) is harder from cuttings.

Harvest: Bark is harvested from trunk, or stripped from branches at least 2 years old.

Usage: used to flavor drinks and sweet and savory dishes, aromatic, sweet,

Nutmeg and Mace

Anatomy: Tree to 30 ft tall, pod opens to reveal seed when ripe, red fleshy veins on seed is dried to be “mace”

Propagation: from seed/graft, begin fruiting 7-9 yrs, male and female separate trees” dioecious” 50% 50% from seed, ideally grafted, but sometimes there is the occurrence of male and female flowers on the same tree .

Varieties: true nutmeg, some unrelated species are used similarly.

Harvest: pick when pods open, or slightly before, mace veins are scraped off the nutmeg seed, both are dried Dried gradually in sun 6-8 weeks, kernel inside hard shell will shrink and rattle, then crack open.

Usage: in sweet/savory dishes, often with cinnamon, clove and allspice. Husk can be sliced thin and candied.

Allspice

Anatomy: Tree 30-60 ft, can be tall or shorter and scrubby. Male and female trees(dioecious) or hermaphrodite.

Niche in a Food Forest: Can be overstory tree, over coffee or other shade crops.

Varieties: One variety *Pimenta dioica*. **Propagation:** soak overnight to remove pulp from mature seed, let dry, plant immediately, short seed viability. Can be somewhat invasive in places, naturalized in Kauai and Maui.

Harvest: whole seeds when green then sun dry. **Usage:** for flavoring caribbean jerk, curries, sweet dishes, contains eugenol, leaves can be used fresh but when dried lose flavor, wood can be used to smoke meats.

Clove

Anatomy: Tree to 36 ft,

Niche in a Food Forest: kit cast dense shade, can be overstory **Varieties:** one variety here?

Propagation: from seed, clean purple fruit off the seed before planting for best results.

Harvest: Flower buds are the part usually used picked before opening and dried.

Usage: for flavoring a variety of dishes, highest concentration of eugenol, highly medicinal used as a painkiller for toothache, highly concentrated, dilute accordingly

Hot Chili

Anatomy: upright bush to 8ft tall and 6ft wide,

Niche in a Food Forest: full sun to partial shade, can live many years

Varieties: Many varieties exist, most common is Hawaiian Chili Pepper here.

Propagation: from seed or cuttings, may cross with nearby peppers.

Harvest: when red, can be dried

Usage: extremely spicy, use to flavor and add heat to savory dishes, chili pepper water, hot sauce, etc.

Next Class: Thursday Aug. 31th **Perennial Culinary Herbs**

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