

Evan Ryan

Plant Aloha Class

11/2 Soil Building and Care

Founder: Pono Grown Farm Center, Author: Hawaii Home Gardens Book

Agroforestry- principles of permaculture- IPM

conceptual model

System integrates multi use perennials to benefit everything

Offers an efficient use of resources to obtain needs

Agroforestry vs. single tree in ground with grass around it...

Mulch and utilization of space to restore soil, suppress grasses...tropical 75% of nutrients above ground...shading soil increases biological activity by 30 percent..

Dynamic, ecologically based- provides natural resources

How to create a diverse set of outputs from your system and for your system?

Design for stacking in time-

Mature tree spacings considering long term (50 years)

Tall Canopy trees-Lychee, Mango, Jackfruit, Bread Fruit

Move back in time and fill gaps

medium term fruit trees and Nitrogen fixers- Gliricidia, Acacia, Pomegranite, Persimmon, Starfruit....

Small fruiting and leguminous trees- citrus, banana, acerola

Shrub- pigeon pea, coffee, sugar cane,

intercrop systems in between...

Herbaceous, tubers and ground covers- Lemongrass, Vetiver, cassava, amaranth, fennel, dill, Pumpkin

Ground Cover- Nasturtium, edible hibiscus,

Roots- Sweet potato, comfrey, Jacon

Vines- lilikoi, chayote

Palms- Peach and coco, date palms

Our guilds- cover ground in 18 months, 5-7 years until fruit tree canopy, high water use 3-5 years

Fruit trees, nfts- sesbania, gliricidia, pigeon pea, dwarf pointsiana, banana, plantain, begonia, fennel dill, jacon, turmeric, ginger, sweet potato, squash, chayote, lilikoi, nasturtium, daikon comfrey, lemon grass,

pineapple, taro, green tea, hibiscus,

35 foot circles

Principles-design principles

Yield is unlimited-based on imagination and creativity

Diversity is key- offers well rounded diet and nutrition for body and soil, crop failure backups, insectarys, synergistic relationships between plants, food, fiber fuel, medicine... don't put all your eggs in one basket

Focus Locally- think global, act local-local resources,

Work within nature- let nature do the work

Small scale intensive- start small, learning curve, transitional process

Stacking—vertically (plants) and stacking functions—minimum two uses

Accelerating succession of evolution—recreating a forest, use gaps in the meantime

Guiding- of trees understory and foragers
Do it once-thoughtful observation=reduced labor

What are we discussing in this workshop—how to grow healthy fruit trees, tree planting, feeding, pruning, watering important, creating the home for the tree most important, holistic system

How to create a diverse set of outputs from your system and for your system.