

Raising Chickens
In A
Food Forest
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Growing With Integrity, Eating With Intention
OEFFA
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What is a Food Forest?

- *To construct a productive forest system we assemble plants and animals in "guilds" that create a functionally harmonic effect. Harmonic effects are those that, by putting two or more elements together, will result in benefits not produced by themselves alone, higher production, reduced pest or predator problems or maintenance of soil fertility. Every plant and animal in a guild has a function.*

Food Forest, cont'd.

- *The main element in a guild will be supported by plant(s) or animal(s) serving the functions of, at least, available nutrient fertilizer, soil building or pest control. Choosing elements for guild associates is done mainly through observation of naturally occurring plant and animal associates and then through trial and error based on these assemblies.*

– Larry

Santoyo

Chicken is the main element

- What does a chicken need?
- What does a chicken do?

Chicken Heritage

- Lineage – Jungle Fowl of SE Asia
- Environment – Forest / Field edge, thickets, groves, scrublands, from rainforest to drylands
 - Trees (overstory, understory)
 - Open areas, covered areas
 - Shrubs, bushes, forbs, grasses
 - Forest soil
 - Seeds, nuts, fruit, grasses, leaves

Functional Analysis of a Chicken

Inputs/ Needs

- Supplied food (balanced chicken feed)
- Foraged food (grass, insects, worms, grubs, microbes, seeds, fruit, nuts, mice, feathers, poop, etc)
- Water
- Heat / Cold
- Light / Dark
- Oxygen

Functional Analysis of a Chicken, cont'd.

Outputs / Actions

- Poop
- Feathers
- Fly / run (mobile)
- Scratch
- Peck
- Distribute

*Food forest must support the chicken inputs and
utilize the chicken outputs*

- Under – soil, roots, soil life, scratch
- Around – grasses, seeds, insects, ground fruit, mammalian 'fruit' (poop), climate control, shelter
- Above – tree fruit, berries, leaves, shade, climate control, shelter from aerial and ground predators

Food Forest Components

- Hugelkultur piles / compost piles
- “Blaze of Growth” grass & forbs – young growing grass and plants
- Mature grass & forbs
- Understory trees & shrubs
- Overstory trees
- Plantings
- Water & feed*

Hugelkultur Piles

Soil

Compost

Leaves / hay / grass clippings

Bracken / branches

Large pieces deadwood

- Scratch
- Worms / bugs
- Chickens distribute / mix layers
- Chicken poop adds N

“Blaze-of-Growth” Plants

- Growing green plants in a rapid growth state
- Leaves are at their most nutritious and palatable
- Little to no shelter
- Little to no climate control

Mature Grass & Forbs

- Leaves less nutritious / palatable
- Increased climate control – better environment for insects
- Increased sheltering for chickens
- Flowering – insectary
- Pollination - seed production

Understory Trees & Shrubs

Fruits and Berries

- Apple
- Pear
- Peach
- Mulberry
- Wild Raspberry

groundfall and parasite control

Overstory Trees

- Locusts – nitrogen fixing, early nectar for honey, dappled shade, some climate control
- Maples – lots of carbon (leaves and deadfall), sap, heavy shade, strong climate control

Plantings

Tomatoes and squash planted into hugelkultur piles

- High yield for little effort
- Pests attracted to plants = chicken food
- Grazable alternative when grass is dormant

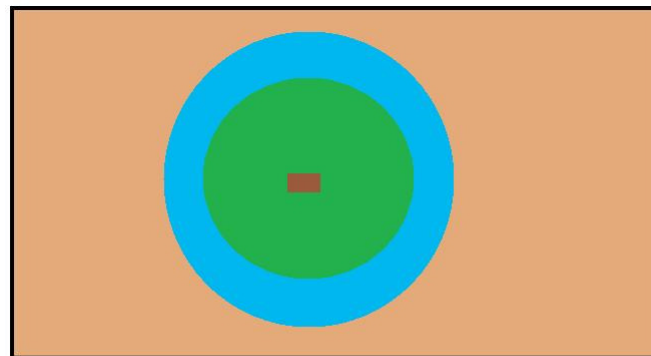
Water and Feed

- Water and feed used to direct chickens to different areas
- Not entirely successful – plastic netting used to restrict access to hugelkultur piles

Forage and Movement Patterns

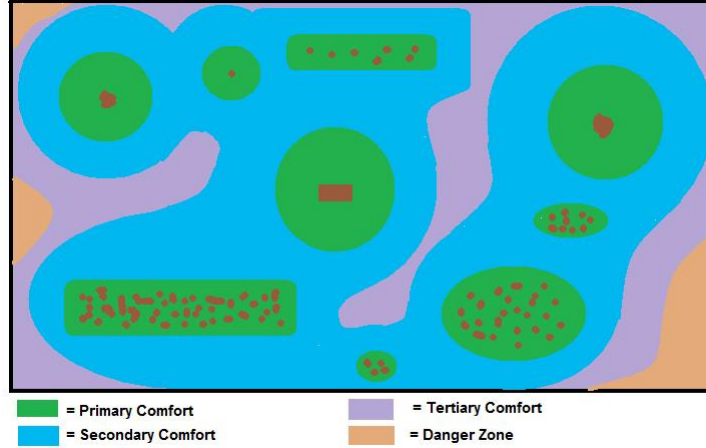
- Environment determines movement patterns
- Movement patterns determine foraging effectiveness

Static Movement Pattern



- = Primary Comfort Zone
- = Secondary Comfort Zone
- = House / Shelter
- = Danger Zone

Dynamic Movement Pattern



Chicken Heritage - Needs and Actions

Shelter from ground predators	Perch high
Shelter from aerial predators	Take cover
Stay dry	Perch low
Relief from light	Take cover
Relief from excessive heat	Enter forest
Warm up	Enter open area
Escape aggressive birds	Perch higher

Definition - Medium and Slow Growth Poultry

- Classification determined by rate of growth
 - Medium Growth Poultry (MGP)– takes 10 weeks for 5# live weight (pastured)
 - Slow Growth Poultry (SGP)- takes 12 weeks for 5# live weight (pastured)
 - In contrast, a Cornish Rock Cross (CXC) takes 6 weeks (optimal) or 7-8 weeks (pastured)

Sources for Medium Growth Poultry

- Breed: K-22
- Genetics: Pureline Inside (860-889-1933)
 - <http://purelineinside.com/>
- Hatchery: Moyers Chicks (Quakertown, PA, 215-536-3155)
 - <http://www.moyerschicks.com>
- Good delivery to SW Ohio
- *Very popular with the New York City live market*

Sources for Slow Growth Poultry(1)

- Breed: Freedom Ranger stock
- Genetics: Hubbard Color Differentiated Growth (?)
 - <http://www.hubbardbreeders.com/>
- Hatchery: MT-DI Hatchery (Altoona, PA, 814-942-7024)
 - mtdifarm@atlanticbb.net

Sources for Slow Growth Poultry(2)

- Breed: Colored Range Broilers
- Genetics: Hubbard Color Differentiated Growth
 - <http://www.hubbardbreeders.com/>
- Hatchery: J.M. Hatchery (New Holland, PA, 717-354-5950)
 - <http://www.jmhatchery.com/index.php>
- Good delivery to SW Ohio

Organic Poultry Processing in Ohio

- King and Sons, Bradford, OH
– 937-448-2448

Organic Poultry Feed in Ohio

- OEFFA Good Earth Guide
– <http://www.oeffa.org/search-geg.php>