

Hawaii Backyard Poultry Management

October 2009



Chickens in Hawaii

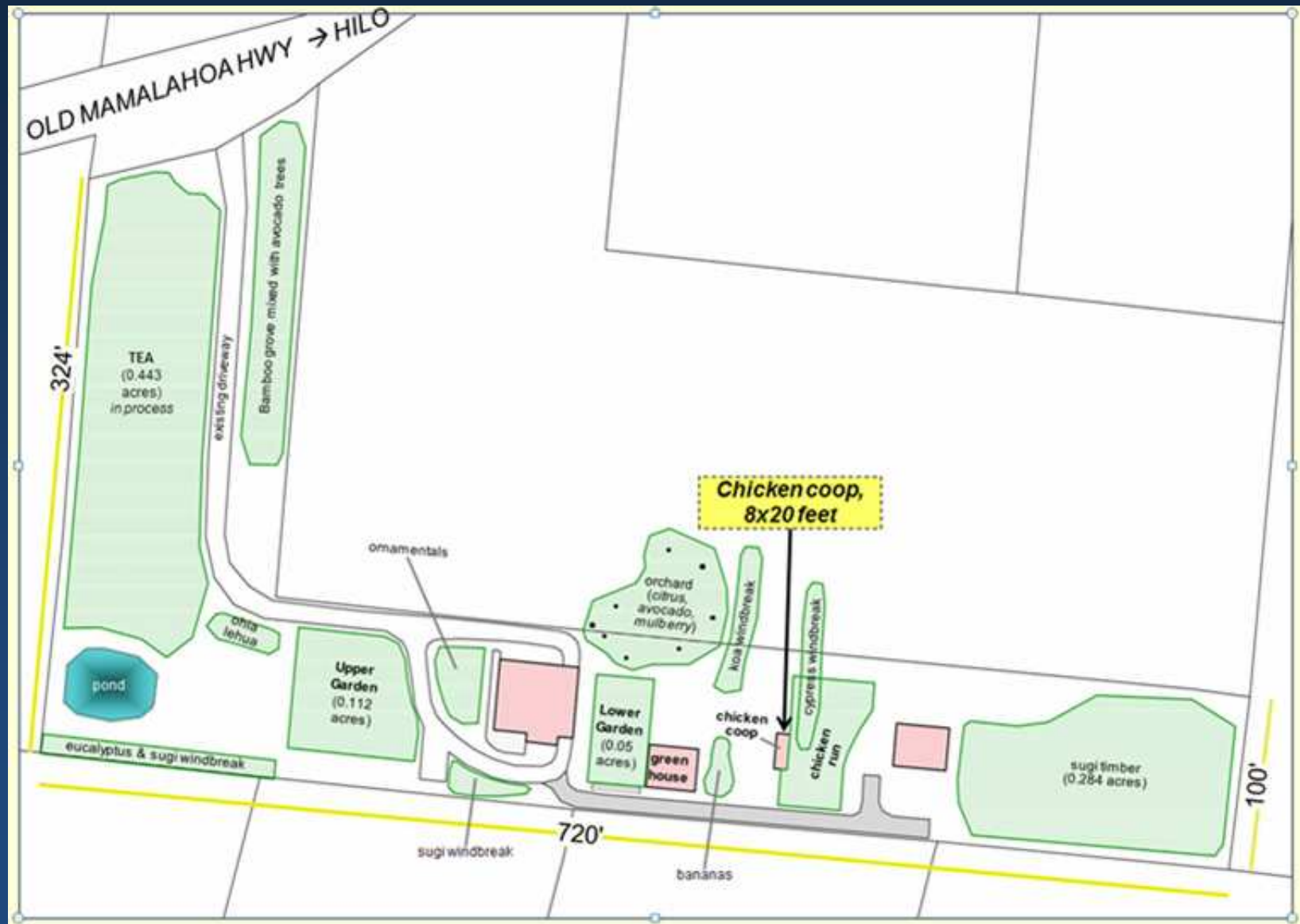
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Ahualoa Egg Farm

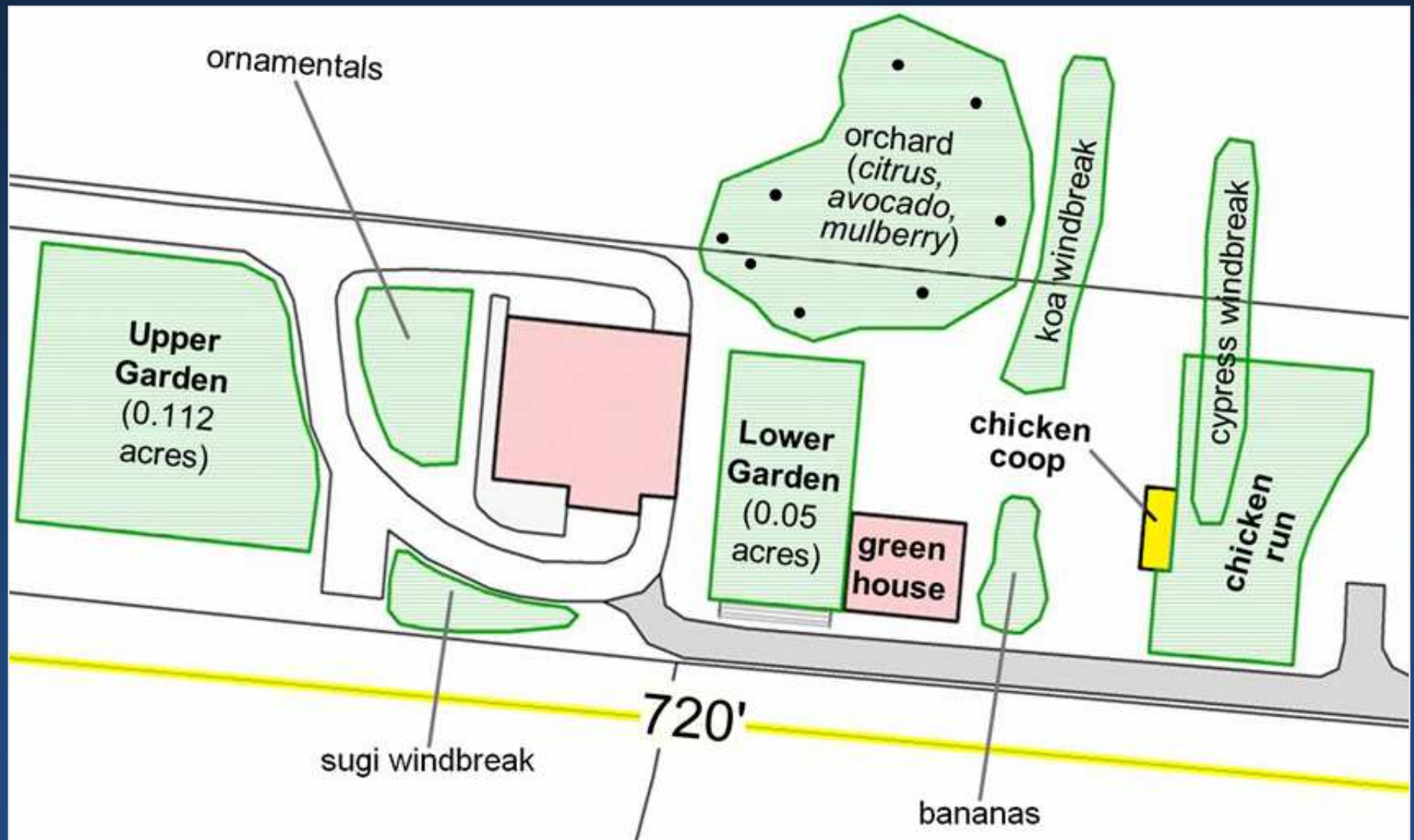
- February 2006: 50 chicks by mail from mainland
- Remaining today: 10 hens
- Free range, grass fed



Our Homestead



Our Coop & Run Area



Biosecurity

- Mongoose: chicks, eggs
- Dogs: document & report loose dogs!
- Means of enclosure
 - Totally open
 - Coop, no run
 - Coop with attached run
 - Tractor
 - In or out daily schedule
- Gardens: Fencing chickens in or out

Other Reasons for Chickens

- Low maintenance
- Pet therapy
- Pretty to look at
- Entertaining to watch
- Fertilizer & compost
- Bug terminator
- Coqui killer



baby australorp

Some of Our Hens



Buff Orpington
“Big Buff”

- Tinted brown eggs
- Super friendly & very tame
- Very cuddly
- Prone to broodiness
- Developed in UK



Barred Plymouth Rock
“Ophelia”

- Brown eggs
- Dual-purpose breed (meat & eggs)
- Friendly
- Developed in USA



Australian Orpington (Australorp)
“Barbie”

- Tinted brown eggs
- Beautiful beetle-green sheen in feathers
- Good forager
- Developed in Australia



Sex-linked Hybrid
barred rock female
crossed with Rhode
Island red male

- Prolific brown eggs
- Very independent
- Not broody
- Will not breed true

Hand Taming Chickens

- Start socializing from the first day
- Offer small clippings of grass, leafy greens
- Daily handling = ounce of prevention



day 1 (crumbles)



day 14 (comfrey)



day 29 (ti leaf)

How to Approach Chickens

DO

- ✓ Have treat in your hand (cracked corn is best)
- ✓ Greet with soft sounds or singing
- ✓ Make experience pleasant & respectful
- ✓ Maintain daily contact (dusk is best)

DON'T

- ✗ Lunge or run toward chickens (looks too much like predator)
- ✗ Scream or shout

Social Chickens



Local Stock of Chickens

Asagi Hatchery (Oahu)

808-845-4522

www.asagihatchery.com

- Leghorn & Production Browns @ \$2.45
- Cornish Rock broiler meat birds @ \$2.25
- Heritage breeds (not sexed) @ \$5 - \$10
 - order December for January 2010 ship date
 - Araucanas (Easter Eggers), Buff Orpington, Polish (top hats), bantam, variety of cochins
- Minimum two chicks per order
- Ship by island cargo (pick up at KOA or ITO) or US Express Mail



Feeding

- Local source of Organic Pride 16% lay pellets (Country Acres Feed Company, subsidiary of Purina Land o' Lakes)
 - Honokaa Feed Store (775-8103) \$35.99
 - Waimea Feed Store (885-5188) \$27.69
- 6 x 50 lbs feed per month = 300 lbs
- Free choice: 6-8 lbs per bird, per month
- Minor: grit, oyster shell, scratch, kitchen scraps

Chick Starter Crumbles compared with Lay Pellets

	Chick Starter Crumbles	17% Lay Pellets <i>never feed to baby chicks!</i>
Crude Protein	<i>not less than 20.00%</i>	not less than 17.00%
Lysine	<i>not less than 0.85%</i>	not less than 0.60%
Methionine	<i>not less than 0.30%</i>	not less than 0.25%
Crude Fat	not less than 2.50%	not less than 2.50%
Crude Fiber	not more than 4.50%	<i>not more than 7.00%</i>
Calcium	not less than 1.00%	<i>not less than 1.50%</i>
Calcium	not more than 1.50%	<i>not more than 2.00%</i>
Phosphorus	<i>not less than 0.79%</i>	not less than 0.60%
Salt	not less than 0.15%	<i>not less than 0.20%</i>
Salt	not more than 0.30%	<i>not more than 0.40%</i>

Source: Grange Cooperative Supply, Organic Chicken Feed

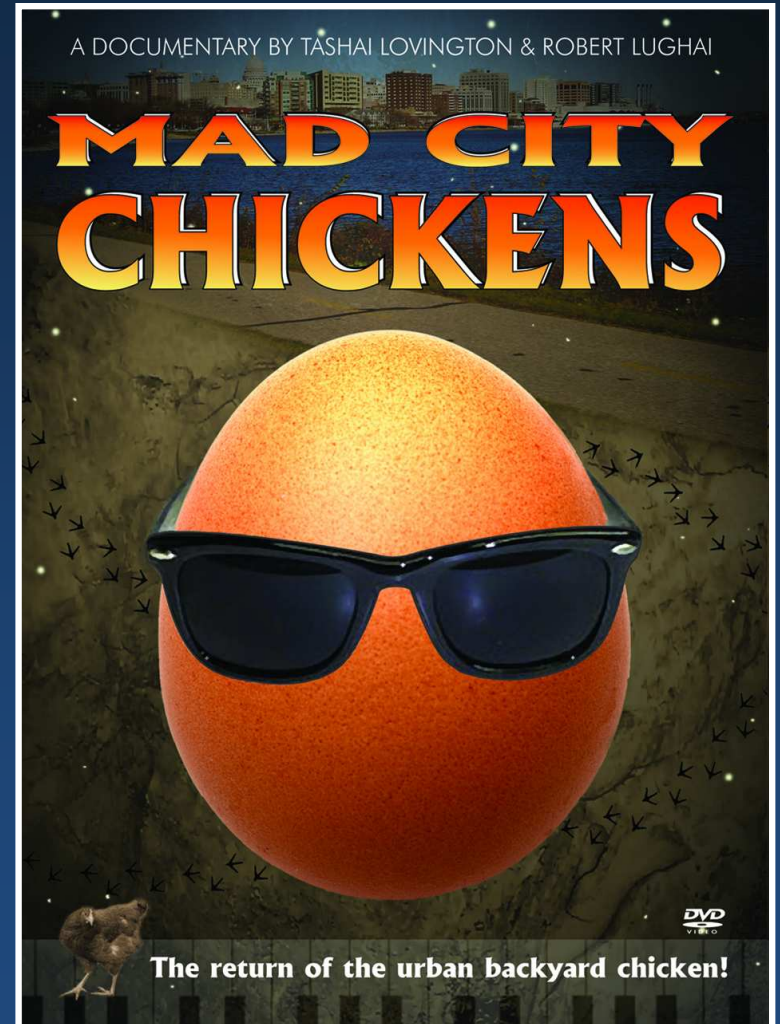
ahualoa.net/chickens

Backyard chicken movement

NEXT TUESDAY

feature length documentary “Mad City Chickens”

- In Hawaii, there are a few subdivisions with no-livestock rules, but generally everywhere else chicken is allowed
- North America, Europe: have access to cheap, conventional grain-based feed – not here
- Forage and household waste are great for micro flocks (worldwide) but does not scale up



Hawaii: Cost of Importing

Typical cost of a 50 lb. bag of chicken feed:

- Mainland, conventional \$10 - \$12
- Big Island, conventional \$16 - \$18
- Mainland, organic \$23 - \$27
- **Big Island, organic \$28 - \$36**
- In 2008, we imported organic feed \$33 (\$22 feed + \$11 shipping)

That's just the *financial cost*, not the *ecological cost*
Local* can be **greener** than *Mainland Organic

Big Island Chickens Today

- Small scale broiler production
 - Shane & Christie Fox of Fox Farms (Papaaloa)
- All large egg farms have shut down
- Last to go: Davenport's HFEEF: 40,000 hens
- Very small operations
 - Gaia's Farm (Captain Cook)
 - Kona Hawk Farm (Honaunau)
 - Us, Donna, Grady (Honokaa area)
 - Eko (Waimea area)
 - Eric Cox and others (Puna)
- Basic economics: import feed vs. import eggs

Costs: Economic & Ecological

- Shipping feed from the mainland vs. shipping eggs
- Example: 45 birds, 300 lbs. feed, 30 eggs/day, 75 dozen, 110 lbs. Eggs
- 3 shipping containers of feed vs. 1 of eggs
- Money: 3x shipping
- Environment: ?x carbon footprint
- Solution: local feed

Grain

- Normal chicken feed is chiefly *grains* – corn, wheat, oats, etc.
- Almost *no grains* grown in the state of Hawaii
- land cost
- soil
- water, fungus
- daylight
- terrain
- infrastructure
- does not scale down efficiently



Corn

- UH CTAHR, Jim Brewbaker, 2003:

"Field corn production for silage or grain in Hawaii has been limited by lack of suitable land, presence of tropical plant diseases, and poor market conditions. [...] Hawaii's corn farmers have expenses for land, water, transportation, and equipment that are an order of magnitude above those of the Corn Belt. Tropical weeds, insects, pheasants, feral pigs, take their toll."

Wheat

- Certain saddle regions of the island
- Maui, 1840s
- Big Island: North Kohala, Waimea, South Point
- Story: Sugar company in Na'alehu, 1970s, melons and wheat, 7 acres success, 100 acres disaster



Photo credit: FreeFoto.com

Alternatives?

- Grass (pasturing)
- Sorghum
- Amaranth
- Legumes (pigeon peas...)
- Chayote (leaves & tubers)
- Tubers (taro, potatoes...)
- Azolla
- Coconuts, papaya, other tropical fruits
- Restaurant wastes, agricultural byproducts



Sorghum

- “fifth most important cereal crop in the world”
- hundreds of varieties
- wider range of climates than other grains – potential for Hawaii



Sorghum

- On our farm: “apache red”, cover crop & harvested by hand, our chickens will eat it
- To research: other varieties



Legumes

- Fava beans
 - Low yields, irrigation, soils
- Pigeon pea
 - Does not ripen all at once; labor of hand-harvesting and shelling



Others...

- Tubers: Taro, Potato, Sweet Potato
 - labor, cooking
- Amaranth
 - threshing, very small grain
- Coconuts
 - elevation, land, labor
- Papaya
 - elevation, land, rainfall
- Crops and ideas from developing nations
 - *Croton megalocarpus*, the poultry-feed tree
 - Grubs/larvae, cassava, plantain, melon pulp, other legumes...

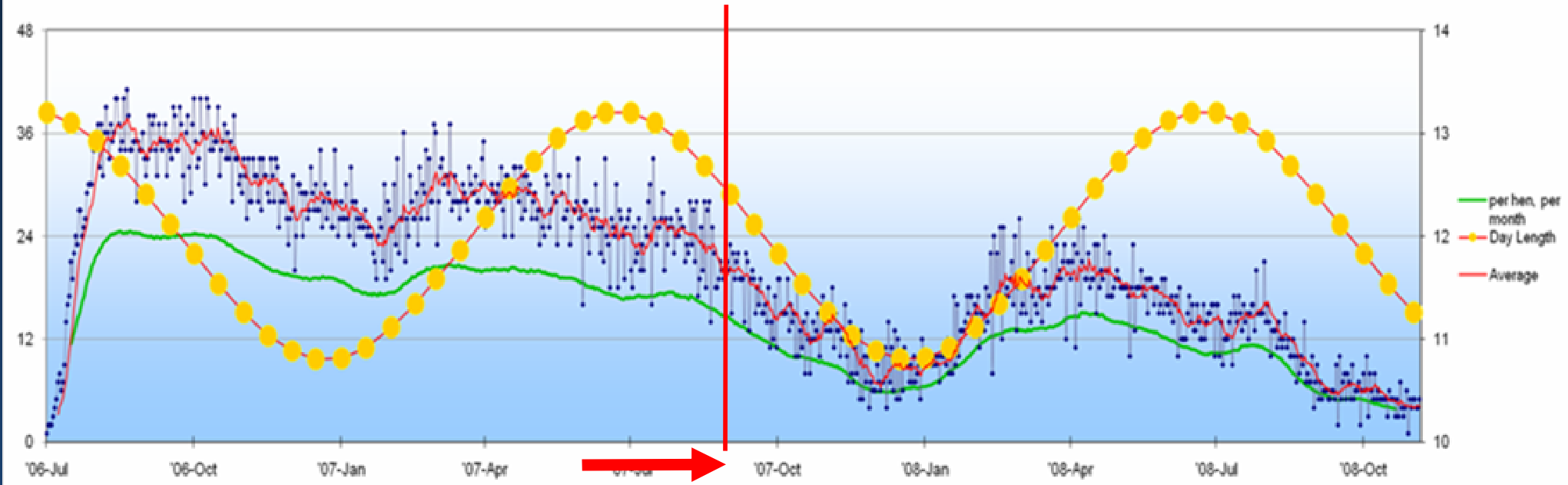


Azolla

- Aquatic fern
- Symbiosis with nitrogen-fixing algae
- Doubles in size in 2-3 days
- Good nutrition (high protein)
- Used in India, dry flakes as 25% of conventional feed
- Our farm: chickens will (*sorta*) eat it fresh
- To research: larger growing ponds?



Egg Output



**Replacement age:
19 month old chickens
14 months of lay
September 2007**

Processing poultry

HOW TO BUTCHER A CHICKEN

THIS TUTORIAL IN BLOG FORMAT TELLS (AND SHOWS) YOU HOW TO SKILLFULLY BUTCHER A CHICKEN IN TEN EASY STEPS. YOUR INSTRUCTOR IS HERRICK KIMBALL, INVENTOR OF THE WORLD FAMOUS WHIZBANG CHICKEN PLUCKER.

Step 2: Remove The Feet

With your dead, bled, scalded, and freshly plucked chicken in hand, I suggest the first thing you do is give it a good rinsing off, as shown in the following two pictures. This is where the makeshift sink with running water (discussed in Step 1) comes in real handy.



BACKYARD-BUTCHERED CHICKENS



Ready For The Freezer

DOWN-TO-EARTH INSPIRATION & HOW-TO INFORMATION...

Whirbang Books Online Catalog

butcherachicken.blogspot.com

Processing poultry

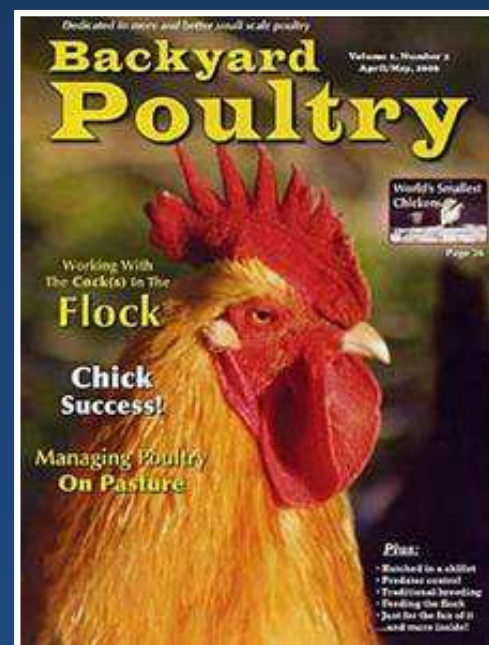
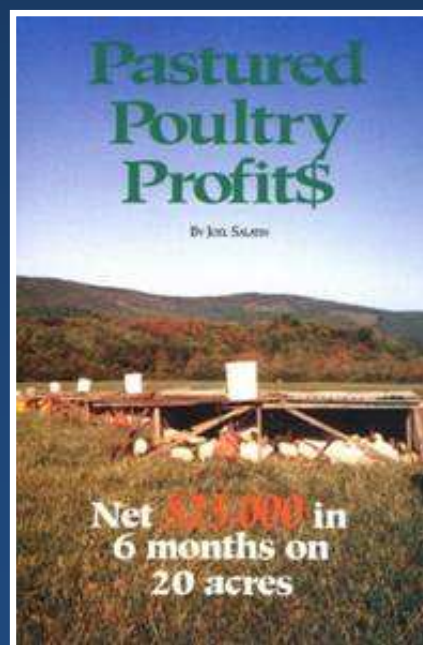
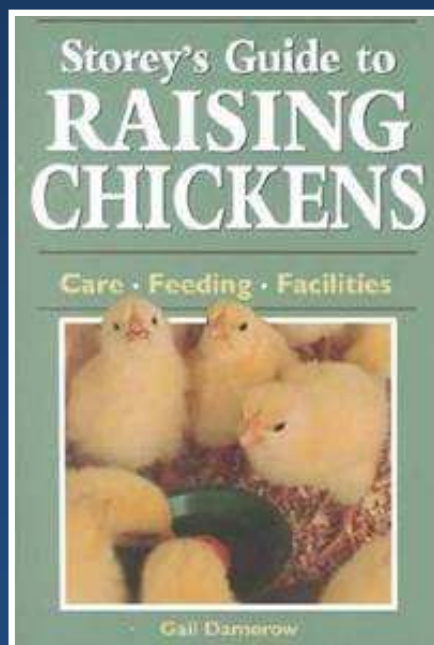


- You know where your meat comes from!



More resources

- CTAHR (College of Tropical Agriculture and Human Resources)
<http://www.ctahr.hawaii.edu/ctahr2001/PIO/FreePubs.asp>
- Storey's Guide to Raising Chickens (Gail Damerow)
- Pastured Poultry Profits (Joel Salatin)
- Backyard Poultry Magazine backyardpoultrymag.com



The Big Picture

- How to feed chickens = how to feed humans
- After fossil fuels, what can be the sustainable agronomic base for our island?
- What role would chickens have in a sustainable, agrarian society?
- Is it responsible to raise chickens with today's practices?



Ben Discoe

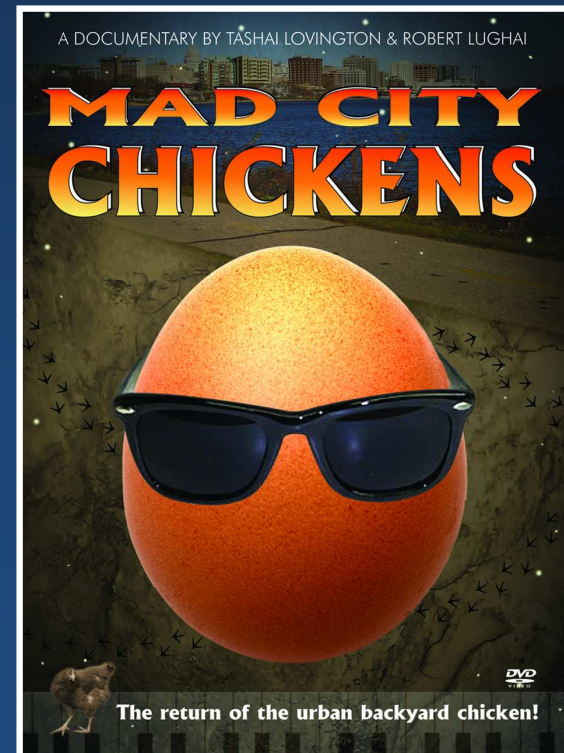
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NEXT TUESDAY
feature length
documentary



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