



Chicken University

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Denali Dreams Farm

Naturally Raised Brown Eggs

From free range chickens treated with TLC*

No hormones or antibiotics used



* TLC – Tender Loving Care

Why Keep Chickens?

- The positives:
 - egg and meat production
 - better tasting eggs
 - world's best fertilizer
 - potentially healthier food
 - it's a great learning experience
 - chicken's social lives are interesting!*



Why Keep Chickens?

- The negatives:
 - probably more expensive
 - they need daily care
 - odors
 - roosters get up early
 - potential for disease
 - bears, wolves, dogs all love chicken!



What kind of Chickens?

- What is the purpose of your flock?
 - Egg production
 - Meat production
 - Winning a fair with an exotic?




Arctic Chickens

- Not all breeds do well in Alaska
- Good egg producers (200 eggs/yr):
 - Rhode Island Reds
 - Barred Plymouth Rocks
 - New Hampshires
 - Chanteclers



Expect pullets (young hens) to begin laying at 5-6 months of age

Arctic Chickens

Good Egg Layers



Rhode Island Red Barred Plymouth Rock New Hampshire Red Buff Chantecler

Arctic Chickens

- **Good meat producers** (150 eggs/yr.):
 - Plymouth Rock/Cornish Rock crosses
 - Jersey Black Giant



Cornish Cross



Jersey Black Giant

Where do I get birds?

- Craigslist.com (farm+garden section)
- Feed stores
- Classified adds
- Bulletin boards
- Catalogs
- Raise from chicks
- Hatch your own eggs



Basic Equipment



Heated Waterer



Brooder



Heat Lamp



Shelter



Water Heater



Feeder

Chicken Coops

Small Coop



Chicken Coops

Chicken "Coupe"



Chicken Coops

Chicken Playhouse



Chicken Coops

Chicken Tractor



Chicken Coops

Standard coop in construction. Would house five birds in subarctic climate without heat (1m x 1.5m)



Chicken Coops

Horse Stall with composting "deep litter method"



Chicken Coops

Chicken coops should be designed for:

- Protection
- Warmth
- Good ventilation
- Ease of cleaning



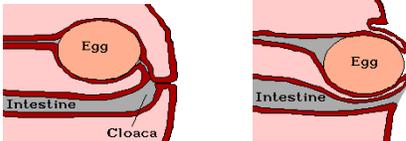
Getting Hens to Lay

- Provide nesting box for every four hens
- 15-17 hours of light stimulates laying
- Provide oyster shell (or feed egg shells)



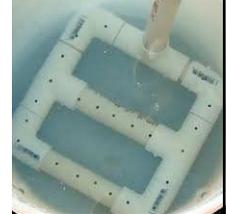
Laying biology

- The “vent” is used for reproduction and evacuation
- The “cloaca” is where the intestine, oviduct and ureters come together



Washing eggs

- Should eggs be washed? Yes!!
 - Wash at 33 c degrees
 - Use unscented dishwasher soap
 - Sanitize with 1 tblsp bleach 4 liters hot water



Incubating eggs

- Buy or build your own incubator
- Test the incubator for at least 48 hours
- Forced air incubators are best
- Consider an automatic egg turner



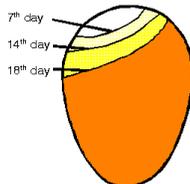
Incubating eggs

- Write date on egg when you place it in the incubator...trust me on this!
- Eggs hatch in 21 days (+/- 1 or 2 days)
- Incubate at 100° (102° for still air incubators)
- 50% humidity days 1-18, 70-80% thereafter
- Turn eggs 3 times daily
- Stop turning on day 18



Importance of proper humidity

- Too much humidity and the chick will drown at hatching
- Too little and the chick will dehydrate

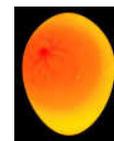


Fertility and Candling

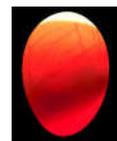
- Expect 50-75% hatch rate
- Uniformly colored egg shells can be candled
- Candle on day 3 and again on day 9



Candling



Day 3



Day 9

Caring for your new chicks

- Leave in incubator until dry
- Don't be in a hurry to water or feed
- Newborn chicks can survive 3 days without food or water



Brooding Chicks

- Start chicks at 32 degrees celsius
- Do not place chicks on smooth surface



Brooding Chicks

- Lower temperature 2 degrees each week
- Chicks require 25 square cm space each
- Allow 30 square cm/bird first 8 weeks
- Allow 1 m square thereafter
- Do not allow wet spots to occur



Sexing Chicks: wing sexing



Sexing Chicks: vent sexing



Nutrition: chicks

- Feed medicated chick crumbles
- Cleanliness is crucial
- Put marbles in waterer to keep chicks dry



Nutrition: adults

- Mash, crumbles and pellets
- 16% vs. 20% protein
- Grit for digestion
- Oyster shell for calcium



Nutrition: fat hens aren't happy hens

- Chick starter: .5-1.4 kg per chick for first six weeks



Nutrition: fat hens aren't happy hens

- Pullet grower: 5.5-6 kg per pullet for approximately 14 weeks



Nutrition: fat hens aren't happy hens

- Layer feed: .8-1 kg per hen per week



Nutrition: adults

- Reducing food scratching



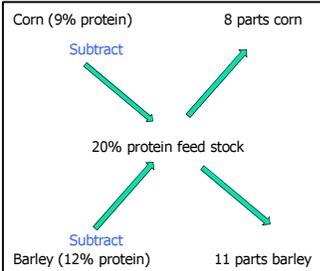
Nutrition: making your own feed

- Birds need protein, vitamins & minerals
 - 18-20% protein
 - Minerals: zinc, copper, iodine, magnesium, calcium, sodium, iron, phosphorus, potassium, manganese
 - Vitamins B12, E, A, K, thiamine, niacin, pyridoxine, riboflavin, pantothenic acid, biotin, choline, folacin

Buy a commercial vitamin and mineral supplement!!

Nutrition: making your own feed

Dairyman's square



- In the center write % protein feed goal
- In the left corners write two feed stocks and % protein
- Subtract diagonally
- The result is the parts of each feedstock needed for a 20% protein feed: **8 parts corn and 11 parts barley**

Importance of water

- Clean cool or warm water



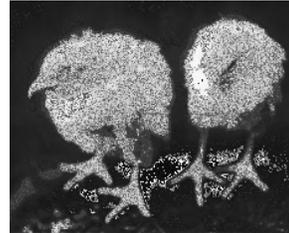
Disease and parasites

- Coccidiosis
 - Digestive tract disease in chickens
 - Characterized by loose droppings and "tired" birds
 - Younger birds more susceptible
 - Cleanliness is key
 - Keep litter dry
 - Feed chicks medicated crumbles
 - Waterer medicines available

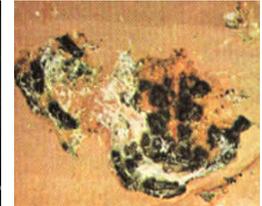


Disease and parasites

- Coccidiosis



Birds will look dirty and unkempt

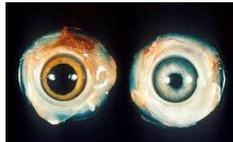


Runny/loose droppings resulting from coccidiosis

Disease and parasites

- Marek's disease: herpes virus
 - Paralysis of neck, legs and/or wings
 - Grey iris or irregular pupil
 - Vision impairment
 - Feather follicle raised and roughened

Buy vaccinated chicks or vaccinate your own!



Disease and parasites

- Other diseases:
 - Fowl Cholera
 - Bronchitis
 - Newcastle Disease (green diarrhea)
 - Fowl Pox (skin lesions)



Fowl Pox



Fowl Cholera

Birds that are to be exhibited at fairs/shows should be vaccinated

Disease and parasites

- Pasting of chicks
 - Vent area becomes impacted with manure
 - More common with hen hatched/brooded chicks
 - Clean with warm water
 - Mineral oil can be used in severe cases



Disease and parasites

- Mites and lice
 - Small parasites in feathers or scales
 - Inspect underneath wings and vent area
 - Common in free range birds
 - Use insecticidal dusts (Sevin, Malathion)



Disease and parasites

- Impacted eggs
 - Potentially life threatening
 - Mineral oil probe with finger
 - See a vet



How long have you had this fear of crossing roads?

Disease and parasites

- Prolapsed vent
 - Can occur after laying large egg
 - Push back in with finger
 - Apply hemorrhoid cream



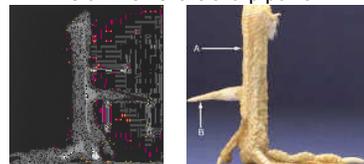
Molting

- Molting is like “changing tires”
- Hens stop laying during the molt
- Molting is usually triggered by shorter days and cold temps



Rooster Spurs

- Do not cut off!
- File or Dremel the sharp point



(A) Tarsometatarsal bone
 (B) Calcar (spur) protruding from bone
 (C) Keratinized horny layer that can be filed

Cold weather and chickens

- Insulate sides and especially roofs of coops
- Protect from wind
- Eliminate drafts but maintain ventilation (ammonia build up)



Cold weather and chickens

- Use flat perches so body heats feet
- Use heat lamps and waterer heaters
- Rub combs and wattles with Vaseline



Cold weather and chickens

- Use flat perches so body heats feet



Cold weather and chickens

- Use heat lamps
- Heated waterer



Cold weather and chickens

- Rub combs and wattles with Vaseline



Chicken Behavior/Psychology

- Play with your chicks
- Dominance behavior hens/roosters
- Keep different age birds apart
- Feather pecking
 - Brood with red lamps
 - Don't overcrowd



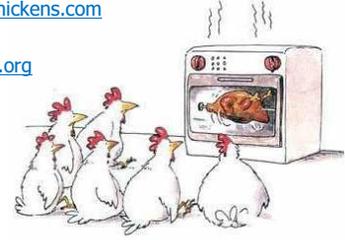
Chicken Behavior/Psychology

- Egg pecking
 - Give a calcium supplement
 - Feed milk
 - Red pepper an egg
 - Redesign nest box



Chicken Resources

- www.backyardchickens.com
- <http://extension.org>



REALITY-TV

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