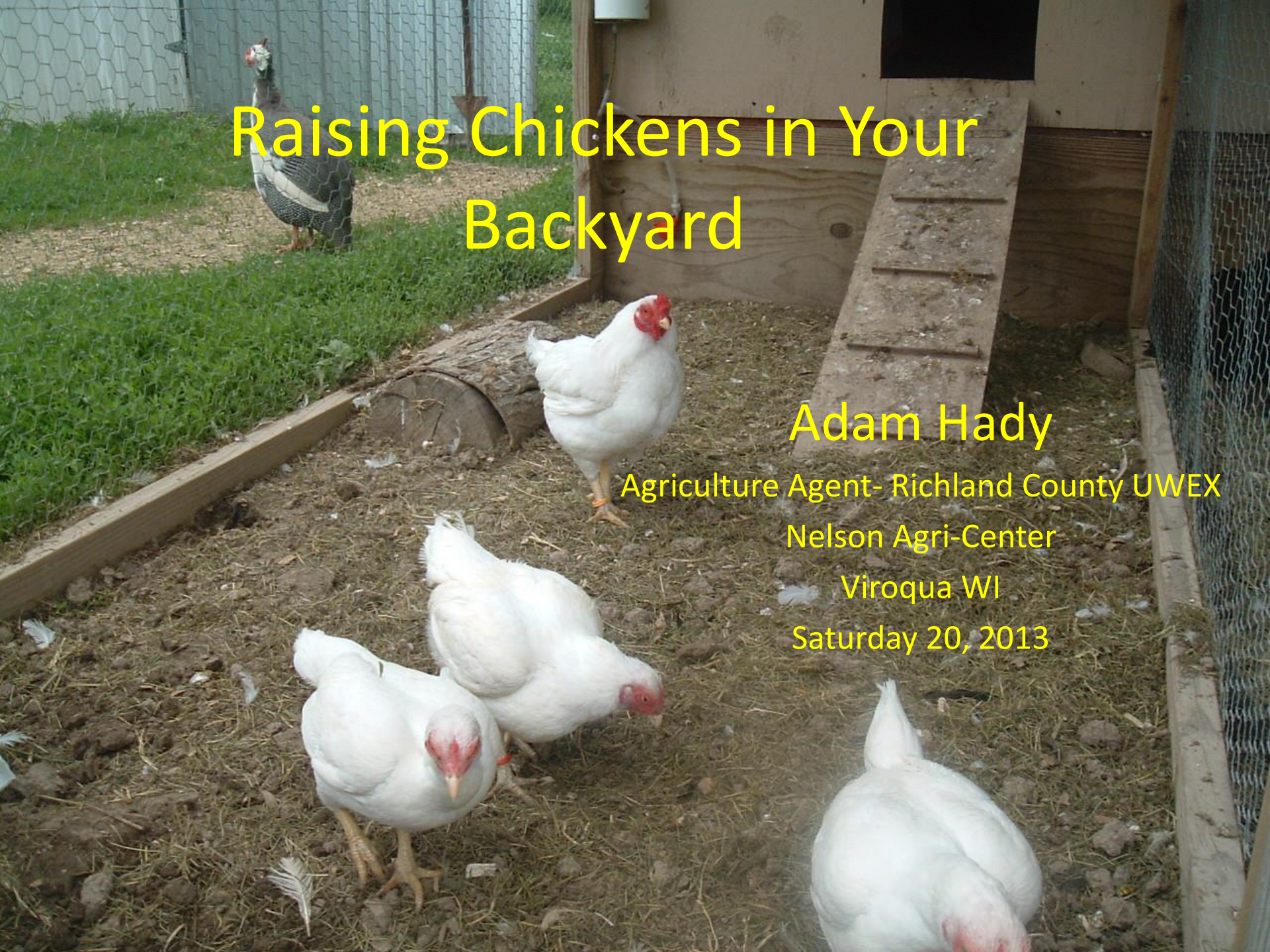
Raising Chickens in Your Backyard



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Agriculture Agent- Richland County UWEX
Nelson Agri-Center
Viroqua WI
Saturday 20, 2013

Disclaimer

This presentation contains trade names and products from private companies- these are for educational purposes only and are in no way an endorsement by UWEX

Topics

- Selection of Chickens (5-13)
- Housing & Equipment (14-29)
  - Winter considerations (17-29)
- Starting Chicks (30-35)
- Poultry Nutrition Basics (36-46)
- Pasturing Poultry (47-59)
- General Poultry Health (60-70)
- Layers and Eggs (71-78)
- Meat Birds (79-82)

Benefits to raising chickens

Eggs

Meat

Pleasure

Selecting the Right Chicken for You

SO Many Where To Start

- American Poultry Association

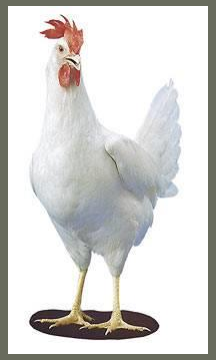
About 55 Breeds of Standard Chickens

About 65 Breeds of Bantam Chickens

Many other breeds that are not recognized

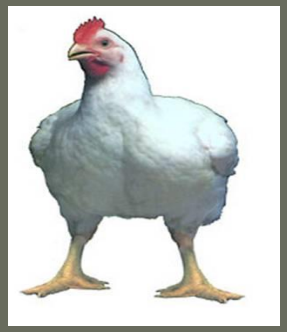
Selecting A Breed: What type of chicken do you want ?

Layer type



Dual Purpose

Meat type



Ornamental

What size ???

- Standard Chickens vs Bantam Chickens

Both chickens are 2 year old hens top is a standard dark Cornish bottom is a bantam dark Cornish

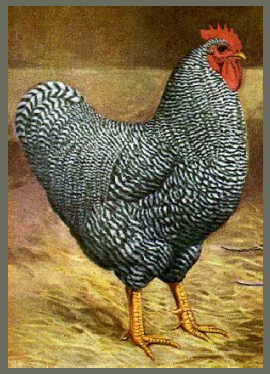
Note: all standard chickens have a bantam but not all bantams have a standard

What Color?

What Pattern?

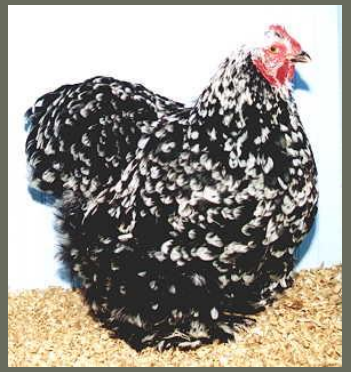
Spangled

Columbian



Barred

Mottled



Laced

Any “Funky LooK?”

What Type of Comb?

Single

Pea

Rose

V-Comb

Cushion

Buttercup

Strawberry

Sources of Birds

- Hatcheries
  - Large quantities
  - Sell day olds
  - Breed type may be lacking
- Breeders
  - Breed type better
  - May be able to buy smaller quantities and older birds
  - Cost more
- Swaps, auctions, etc.
  - Inexpensive,
  - Purchase mature birds
  - Health could be an issue

Housing & Equipment

Housing

Key Factors:

- **Clean and dry**
- **Adequately ventilated and draft free**
- **Provides the proper space**
- **Provides protection**

Chicken Types	Requirements Square Feet
Layer type Pullets	1.5
Layer type Adults	2
Broiler type	2-3

Equipment

Feeding System

Watering System

Laying/Breeding/Ornamentals
- Nest Boxes – 1sq. ft/ 4 layers
- Roost – 8”/ bird
- Supplemental light – 14-16 hrs.

Brooding/ Chicks
- Supplemental Heat – 250 watt bulb/ 50 chicks
- Brooder Guard

Age (Weeks)	Water Space (in)	Feed Space (in)
0-4	.25	1
4-8	.5	2
8-16	1	3
16+	1	4

Winter considerations

- Birds themselves
- Adjustments to feed
- Equipment
- Litter
- Insulation
- Heat

Winter slides provided by Ron Kean UWEX Poultry Specialist

The Birds

- Health
  - Get rid of parasites (internal and external)
  - May want to consider culling unthrifty, "free boarders"

- Age of birds
  - Plan ahead so you don't have late chicks
  - Very old birds may have more problems

OTHER THINGS TO CONSIDER

- Feed
  - Balanced ration should be good
  - Extra cracked corn or scratch grain
    - Adds extra energy for heat
    - Don't overdo it
- Water
  - Very important
  - Typically drink twice as much as feed (by weight)
  - Need heaters or multiple trips each day

WATERERS

- Rubber pans (if not using heater)

WATERERS

- Rubber pans (if not using heater)
- Heater methods
  - Base heaters
  - Light bulb over top
  - Submersible heater

LITTER

- Deep litter is good (6-12 inches is good)
  - Start it before cold sets in
  - Insulates floor
  - May compost some

- Need to keep it dry
  - Keeps diseases down
  - Decreases ammonia production
  - Hard-packed litter loses advantages
  - Damp and cold are not a good combination

GOOD

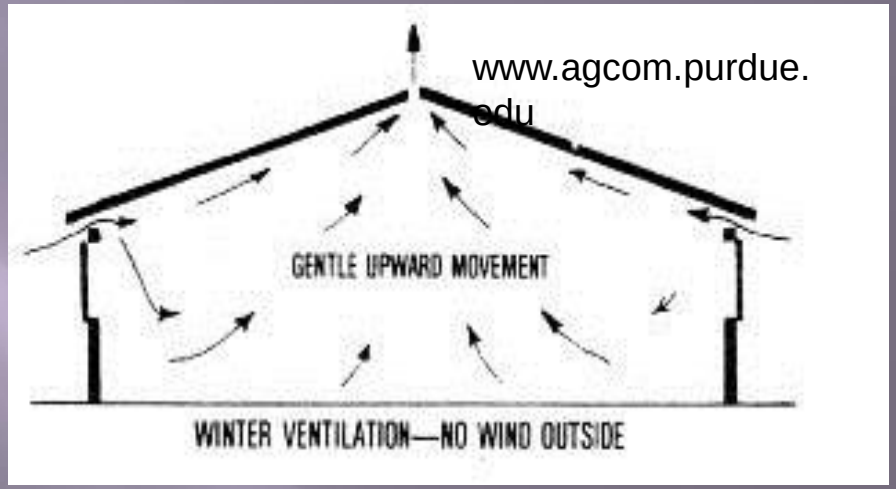
NOT SO GOOD

INSULATION

- Good for summer and winter
- Walls and ceiling if possible
- Inaccessible to birds
  - Cover it with plastic, plywood, etc.
  - Make it something they won't eat

VENTILATION

- Balancing act
  - Keep heat in
  - Move gases out
    - Water vapor
    - Ammonia from waste
    - CO_2



- Natural ventilation
  - Warm air rises so vents on top allow air out
  - Cooler fresh air enters through inlets
  - Need temperature difference (or wind) to make it work

VENTILATION

- In extreme cold
  - Don't want draft blowing on birds
    - Baffle in front of inlet
    - May want to put cloth in front of inlet
  - Don't want to lose too much heat

HEAT

- Using bird's body heat is easiest
- Have a few thousand hens and this won't be a problem!!
- Try to confine birds to a small area
  - Covered roost area
    - "Community nest" situation
    - Insulate this
    - Rodents may be a problem
    - May need to clean fairly often
- Use a heater

ADDITIONAL HEAT

- Most important is to keep it safe
  - Keep birds from contacting it
  - Keep litter from contacting it
  - Try to limit dust buildup
  - Watch out for exhaust gases

MORE ON ADDITIONAL HEAT

- Lights (i.e., heat lamps) will affect egg production
- Doesn't need to be "toasty" warm
- Balancing act with ventilation again
- May have to give up optimal conditions to keep birds warm

Starting Chicks

STARTING CHICKS

Probably more than necessary

Nice setup, with comfortable chicks

Slides From PPT by Ron Kean UWEX Poultry Specialist

STARTING CHICKS

LIGHTS

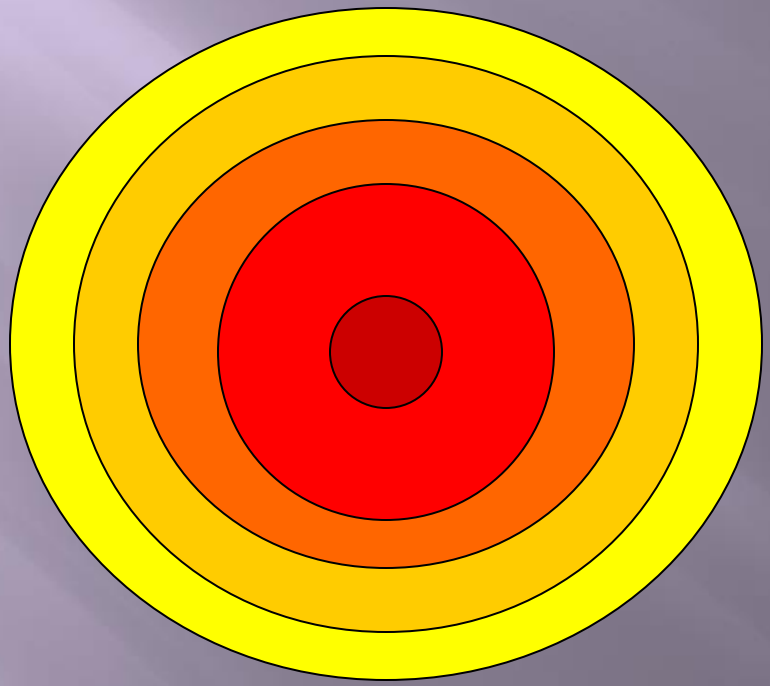
- 24 hours per day of light is okay
- Some will use 23 L:1 D
- Lights don't need to be very bright
- Can get by with natural light
  - May take longer to reach market weight

STARTING CHICKS

AIR

- Temperature
  - Maybe slightly cooler than other chicks
    - Start at 90° and decrease 5° per week
  - Temperature gradient is best
  - No drafts

TEMPERATURE GRADIENT



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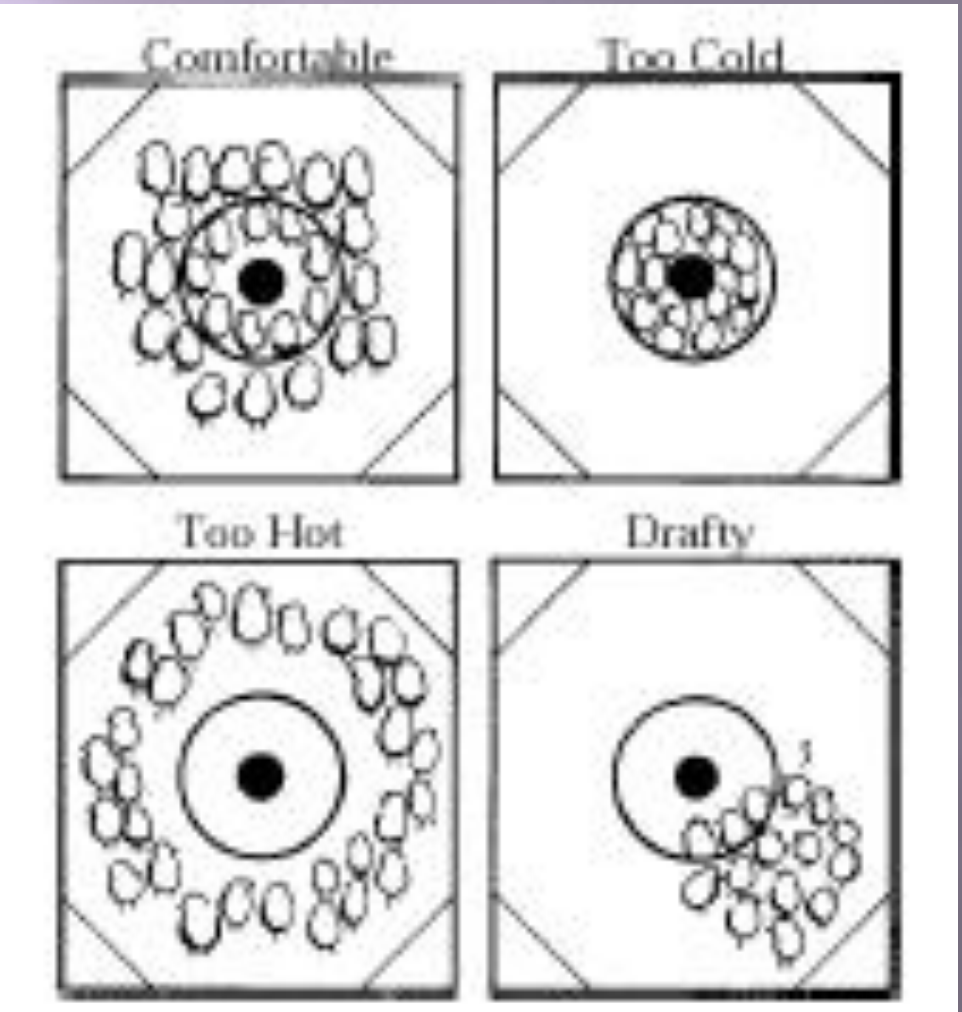
STARTING CHICKS



eesc.orst.edu

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Poultry Nutrition

What do they Need?

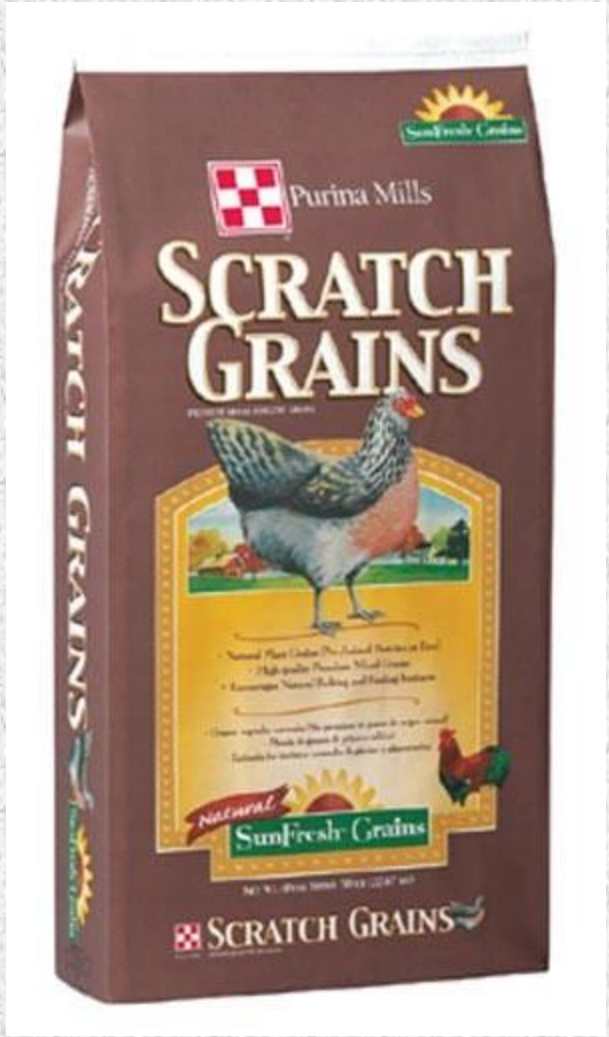
- Factors that affect nutritional need
  - Breed and Strain
  - Age
  - Sex
  - Rate of Growth & Production
  - Health
  - Environment

Feeding

- Keys to poultry diets
  - **Amino Acid balance** is more important than % protein
  - Feed is **balanced on energy** needs of the birds in Kcal ME/ lb
  - **Water** is very important, there is a direct relationship between water and food consumption.

Forms of Feed

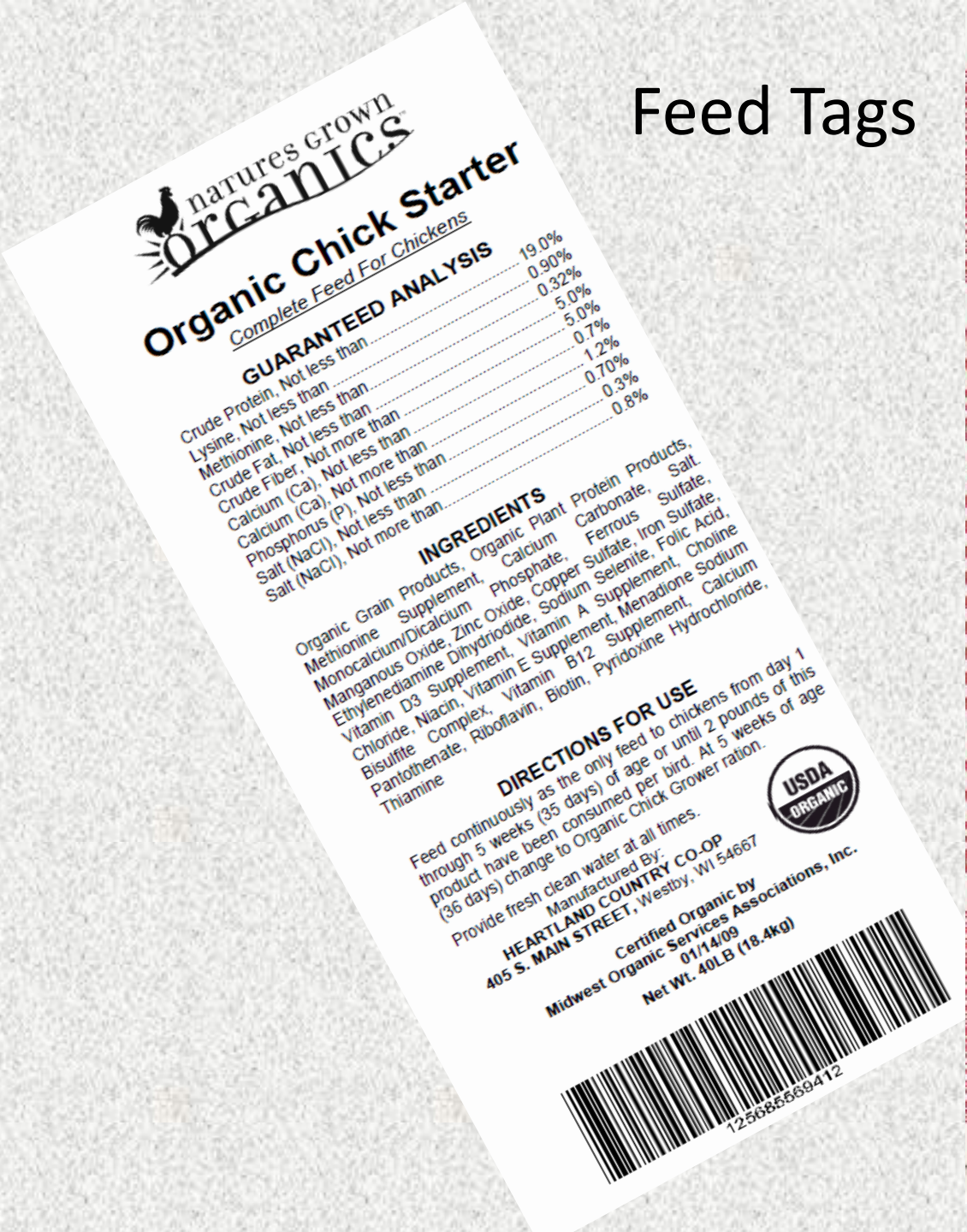
- Mix & Grinds
- Crumble
- Pellet



Commercial Rations

- Each Company Brand has their own program.
- Basics
  - Starter or Starter Grower
    - Chicken Starter 18-22% Protein
    - Game Bird Starter 24-28%Protien
  - Grower/ Finisher
    - Usually 18-22%
  - Layer
    - 15-20%

Feed Tags


natures grown organics
Organic Chick Starter
Complete Feed For Chickens
GUARANTEED ANALYSIS
Crude Protein, Not less than 19.0%
Lysine, Not less than 0.90%
Methionine, Not less than 0.32%
Crude Fat, Not less than 5.0%
Crude Fiber, Not more than 5.0%
Calcium (Ca), Not less than 0.7%
Calcium (Ca), Not more than 1.2%
Phosphorus (P), Not less than 0.70%
Salt (NaCl), Not less than 0.3%
Salt (NaCl), Not more than 0.8%
INGREDIENTS
Organic Grain Products, Organic Plant Protein Products, Methionine Supplement, Calcium Carbonate, Salt, Monocalcium/Dicalcium Phosphate, Ferrous Sulfate, Manganous Oxide, Zinc Oxide, Copper Sulfate, Iron Sulfate, Ethylenediamine Dihydriodide, Sodium Selenite, Folic Acid, Vitamin D3 Supplement, Vitamin A Supplement, Choline Chloride, Niacin, Vitamin E Supplement, Menadione Sodium Bisulfite Complex, Vitamin B12 Supplement, Calcium Pantothenate, Riboflavin, Biotin, Pyridoxine Hydrochloride, Thiamine
DIRECTIONS FOR USE
Feed continuously as the only feed to chickens from day 1 through 5 weeks (35 days) of age or until 2 pounds of this product have been consumed per bird. At 5 weeks of age (36 days) change to Organic Chick Grower ration.
Provide fresh clean water at all times.
USDA ORGANIC
Manufactured By:
HEARTLAND COUNTRY CO-OP
405 S. MAIN STREET, Westby, WI 54667
Certified Organic by
Midwest Organic Services Associations, Inc.
01/14/09
Net Wt. 40LB (18.4kg)
12568556941 2


NET WEIGHT SHOWN ON BAG and/or INVOICE
TAKE TIME
OBSERVE LABEL DIRECTIONS
Purina® Game Bird®
BRAND
STARTENA BMD 50
MEDICATED
Starting Ration For Pheasants
Increase Rate Of Gain And Improved Feed Efficiency.
Caution: Use Only As Directed On Reverse Side.
Active Drug Ingredients:
Bacitracin Methylene Disalicylate 50.0g/t
GUARANTEED ANALYSIS
Crude protein (Min)..... 30.0000%
Lysine (Min)..... 1.5000%
Methionine (Min)..... .5000%
Crude fat (Min)..... 2.5000%
Crude fiber (Max)..... 6.5000%
Calcium (Ca) (Min)..... 1.0000%
Calcium (Ca) (Max)..... 1.5000%
Phosphorus (P) (Min)..... 0.5000%
Salt (NaCl) (Min)..... 0.2500%
Salt (NaCl) (Max)..... 0.7500%
INGREDIENTS:
Plant protein products, processed grain by-products,grain products, animal protein products, dicalcium phosphate, monocalcium phosphate, calcium carbonate, animal fat preserved with ethoxyquin, salt, methionine supplement, choline chloride, thiamine, biotin, ascorbic acid, riboflavin supplement, pyridoxine hydrochloride, calcium pantothenate, niacin supplement, vitamin E supplement, soybean oil, menadione dimethylpyrimidinol bisulfite, (source of vitamin K), vitamin B-12 supplement, vitamin a supplement, folic acid, l-lysine, vitamin D3 supplement, manganous oxide, zinc oxide, copper sulfate, calcium iodate, sodium selenite.
RUMINANT MEAT AND BONE MEAL FREE
06AK G 5422–
(Continued – See Reverse Side)
PURINA MILLS, LLC P.O. Box 66812
St. Louis, MO 63166–6812
E1 CODE: 0005400
PURINA® GAME BIRD® STARTENA
0427300019977 0427300019977

Mixing your own feeds

- There are many different ways to mix feeds or have your own feed made
  - Concentrates and Mineral/Vitamin Mixes are important in mixing the home ration

Examples

Various Poultry Feed Formulations & Nutrient Content Using Prince Poultry Concentrate

	18%	17%	16%	15%	14%
Poultry Concentrate	725	650	575	500	450
Corn	1275	1350	1425	1500	1550
NUTRIENT CONTENT*					
Crude Protein (min) %	18	17	16	15	14
Lysine (min) %	0.95	0.89	0.80	0.73	0.68
Methionine (min) %	0.45	0.43	0.40	0.37	0.35
Crude Fat (min) %	3.2	3.2	3.2	3.2	3.3
Crude Fiber (max) %	2.4	2.4	2.4	2.3	2.2
Calcium %	2.4	2.2	2.0	1.7	1.6
Phosphorus %	0.8	0.7	0.6	0.60	0.56
Salt %	0.52	0.47	0.41	0.36	0.32
Selenium (ppm)	0.435	0.39	0.345	0.30	0.27

**Nutrient values are based upon generally accepted values.*
Actual nutrient content will vary with actual content of various ingredients used.

Various Poultry Feed Formulations & Nutrient Content Using Prince Poultry Base Mix

	21% Chick Starter	18% Chick Starter	17% Layer	16% Layer	23% Broiler Starter	20% Broiler Grower	18% Broiler Finisher
Base Mix	75	60	50	50	75	65	60
SMB 48	675	560	505	455	720	630	525
Corn	1230	1360	1250	1335	1145	1290	1400
Calcium Carbonate	15	15	189	154	4	9	9
Salt	5	5	6	6	6	6	6
Fishmeal	---	---	---	---	50	---	---
NUTRIENT CONTENT*							
Crude Protein (min) %	21	19	17	16	23	20	18
Lysine (min) %	1.1	1.0	0.9	0.8	1.3	1.1	0.9
Methionine (min) %	0.5	0.45	0.4	0.4	0.5	0.5	0.5
Crude Fat (min) %	2.5	2.6	2.4	2.5	2.6	2.5	2.7
Crude Fiber (min) %	2.2	2.1	1.9	2.0	2.2	2.2	2.2
Calcium %	1.2	1.0	4.2	3.5	1.2	1.0	0.9
Phosphorus %	0.8	0.7	0.6	0.6	0.9	0.7	0.7
Salt %	0.24	0.24	0.29	0.29	0.30	0.30	0.29
Selenium (ppm)	0.30	0.24	0.20	0.20	0.30	0.26	0.24

**Nutrient values are based upon generally accepted values. Actual nutrient content will vary with actual content of various ingredients used.*

Source: Prince Feeds

http://www.prince-corp.com/products/ag/Poultry%20Feed%20Guide.pdf

The Extras

- **Grit** – basically stone (mostly a granite product) added to the feed to aid in the grinding of feed in the gizzard
- **Scratch**- a mixture of grains, corn, wheat, milo, etc. These mixes are large particles and have a medium to coarse grind
- **Calcium** – can be added to layer diets, added larger particle size, typically in the form of oyster shells, limestone

The Extras

- **Table Scraps**:
  - Used as a treat and not a replacement of regular poultry feeds
  - Typically leaf and green is a good rule of thumb
  - Meat scraps can be feed in small amounts
  - Caution on spices and salt, could have negative impact on production

The Extras

- **Medicated vs. Non-Medicated feeds**
  - Dependant on markets
  - Usually only a coccidiostat and feed with the starter rations.

Pasturing Poultry

Common Systems

- **The “Chicken Tractor” Method**
- **Day Range System**
- **Other Systems**

“Chicken Tractor” Method

- Movable pen system
  - Common for meat bird production
  - Floorless pens that are moved once or twice daily

Day Range

- Semi-permanent housing
- Fenced in area “Yard”
- Moved weekly or bi-weekly
- Common for both layers and meat type birds

Other methods

- Yarding/Ranging
- Free Ranging
- “All Over”

Poultry and Forage Utilization

Who is the best forager ?

Geese – are the only ones that gain a majority of their diet from pasture

Turkeys/Ducks/Chickens – there are reports that chickens can receive 30% of their diet from pasture, however this number is actually believed to be less than 10%

Poultry Pastures

- Pastures should remain short 3”- 4”
- Good mixture of legumes and grasses
- Tolerant to traffic
- Sod vs. bunch grass

Pasture Mixes

- **Not many recommendations**
  - **Cornell University 1940**
    - **Kentucky Bluegrass**
    - **Canada Bluegrass**
    - **Rough-stalked Meadow Grass**
    - **Timothy**
    - **Rye Grass**
    - **White Clover**

Pasture Mixes

- Common reports of small grain such as oats and rye
- Alfalfa
- Birds Foot Trefoil
- From many accounts diversification is very important

Can I save feed $ on Pasture?

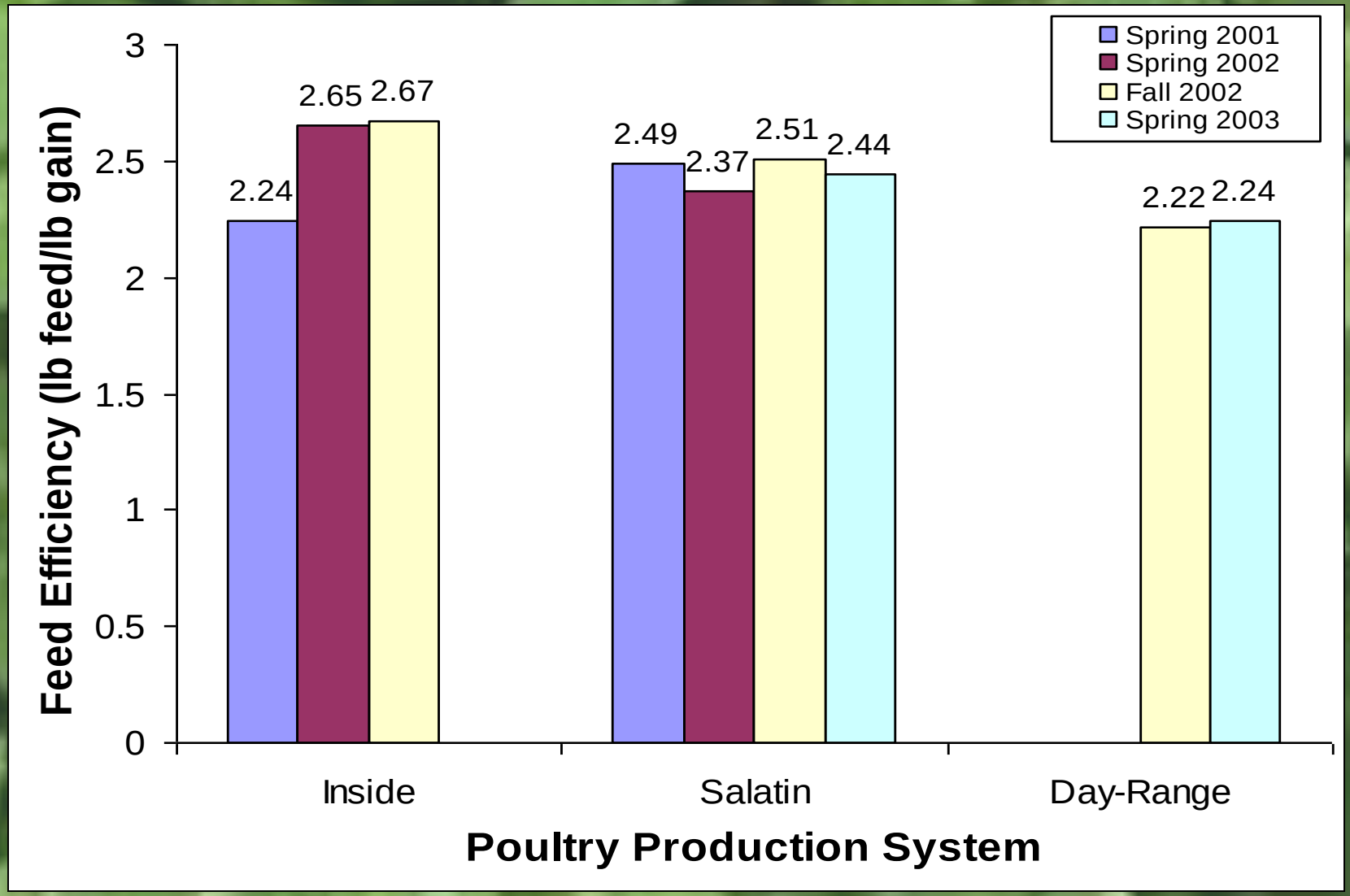
- Study from Truman State University
  - Feed Efficiency of Pasture Poultry Systems

    Michael Siepel, et.al.

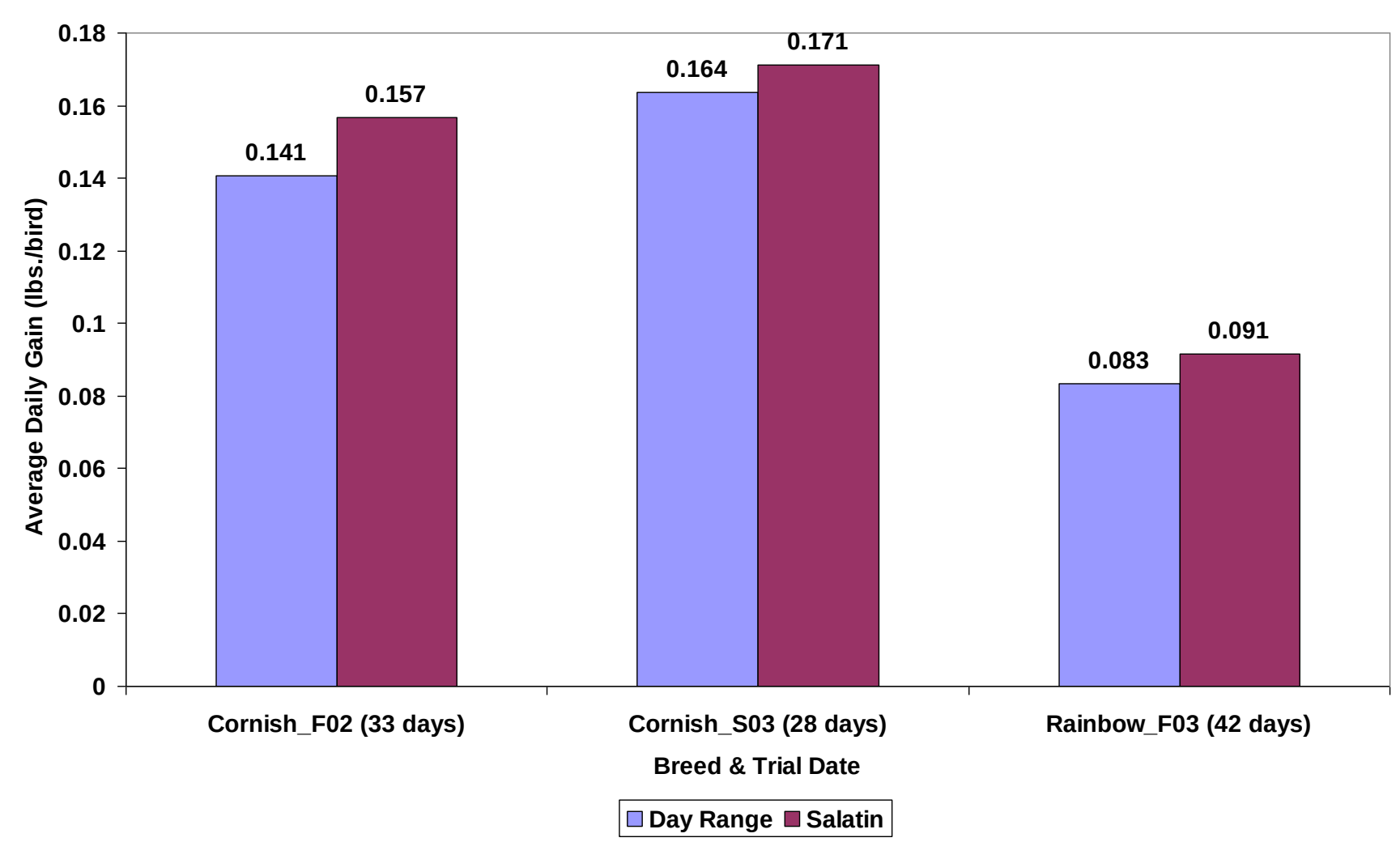
  - Undergraduate Project

  - Looked at weight gain and feed efficiencies in three production systems

Feed Efficiency: Comparison Across Trials



Comparison of Average Daily Gain: Cornish-Rock vs. Rainbow Free Range



Note: ADG evaluated for the entire period the Cornish were on pasture and for the comparable 6 week period that the Rainbow were on pasture

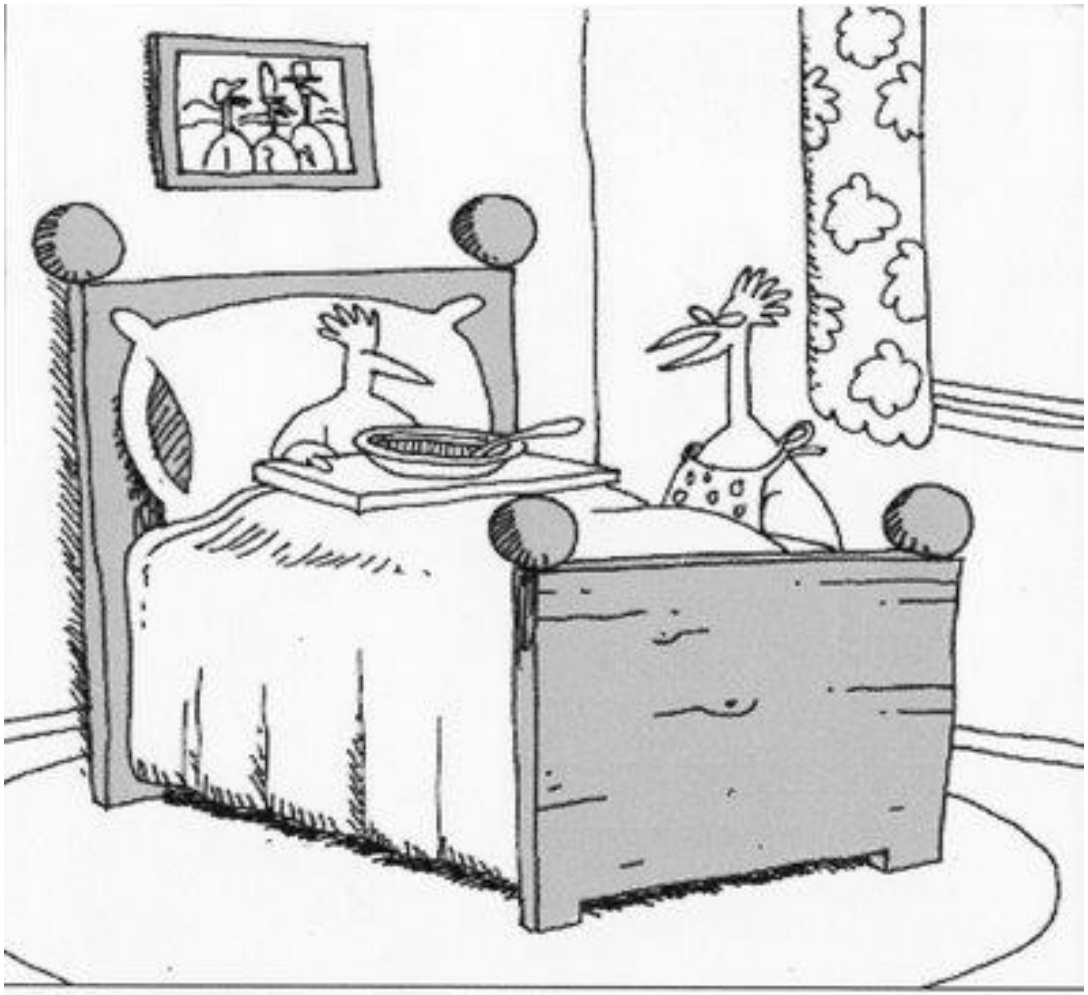
Is it profitable ?

Annual gross and net returns per bird from pastured poultry, 1997 and 1998, four farms

	Farm A		Farm B		Farm C		Farm D	
	1997	**1998**	**1997**	**1998**	**1997**	**1998**	**1997**	**1998**
Gross return	$6.70	$8.47	$6.38	$3.80	$12.00	$5.61	$9.36	$7.05
Net return	$3.81	$3.64	-$0.05	-$2.82	$2.39	$1.33	$7.05	$4.08
# Birds sold	2,898	2,100	633	420	1,110	2,174	700	986

Source: CIAS Research Brief #57 – Raising Poultry on Pasture

General Poultry Health



"Quit complaining. For one thing, chicken soup is good for a cold. For another, it's nobody we know."

Concerns about disease

bird to human

- Salmonellosis
  - *Salmonella enteritidis* or SE can be contracted by eating undercooked eggs or contamination from raw meat. The disease in very rare occasions can occur though fecal contamination.
- Influenza
  - In other countries there have been reports of Influenza infecting people from birds. In the US we have had the specific subtype of the virus that affects humans
- Histoplasmosis
  - Respiratory disease in humans caused by a soil fungus, can grow in buildup or in piles of old poultry manure and pigeon droppings.

Respiratory Diseases

There are many causes and is very common

Signs:

- Coughing
- Sneezing
- Discharge from the eyes and nostrils

Respiratory Diseases

- Causes:
  - Viruses
  - Bacteria
  - Parasites (such as the gapeworm)
  - High ammonia levels

Respiratory Diseases

- Vectors:
  - Other Chickens
  - Rodents
  - Manure
  - Dust

Non-Respiratory Diseases

- Merek's Disease
  - Chickens 12-25 weeks old
  - Mereks is a type of avian cancer that affects the nervous system, causes lameness and paralysis
  - Mereks is a virus spread in the air on dust and dander
  - No treatment, vaccine is available

Non-Respiratory Diseases

- Egg Drop Syndrome
  - Affects chickens,
  - Causes thin to no shelled eggs, and reduced egg production
  - Transmitted through the chick.
  - No treatment, molting of the flock to restore egg production

Non-Respiratory Diseases

- Pullorum
  - Chickens and turkeys
  - Death of chicks at 5-7 days old. Droopiness, weakness, pasted vent with white diarrhea
  - Transmitted through the egg.
  - Diseased birds are to be eradicated by law

Other Concerns

- Mites

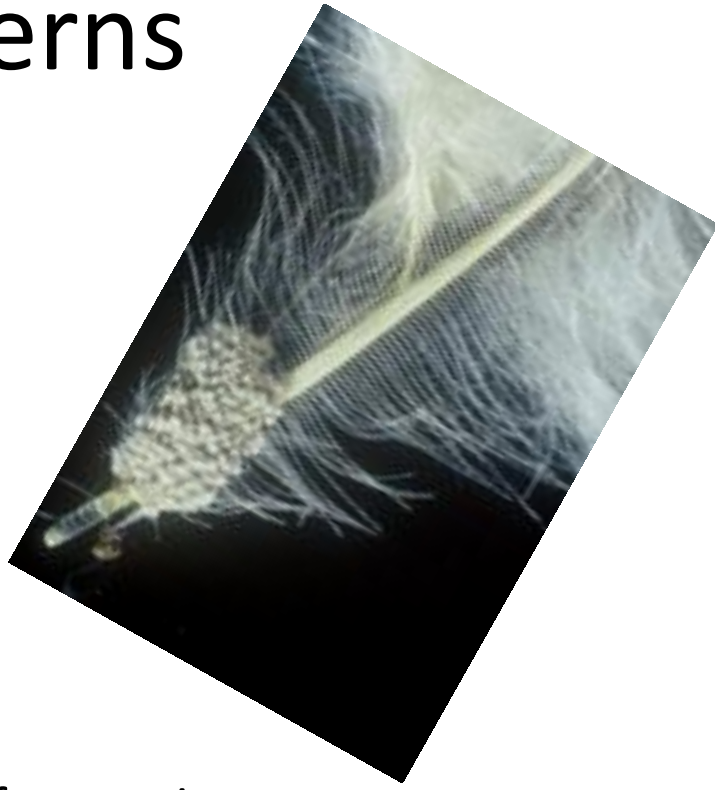
  Size: 1 millimeter in diameter

  Color: Dark Reddish Black

  Egg Color & Location:
  White to off-white along the feather shaft

  Mites live on the host and in the environmen
  – Decreased Food Intake
  – Decreased Egg Production
  – Decreased Weight Gain
  – Increased Susceptibility to Other Disease

Other Concerns



- Lice

  Size: 2-3 millimeters long

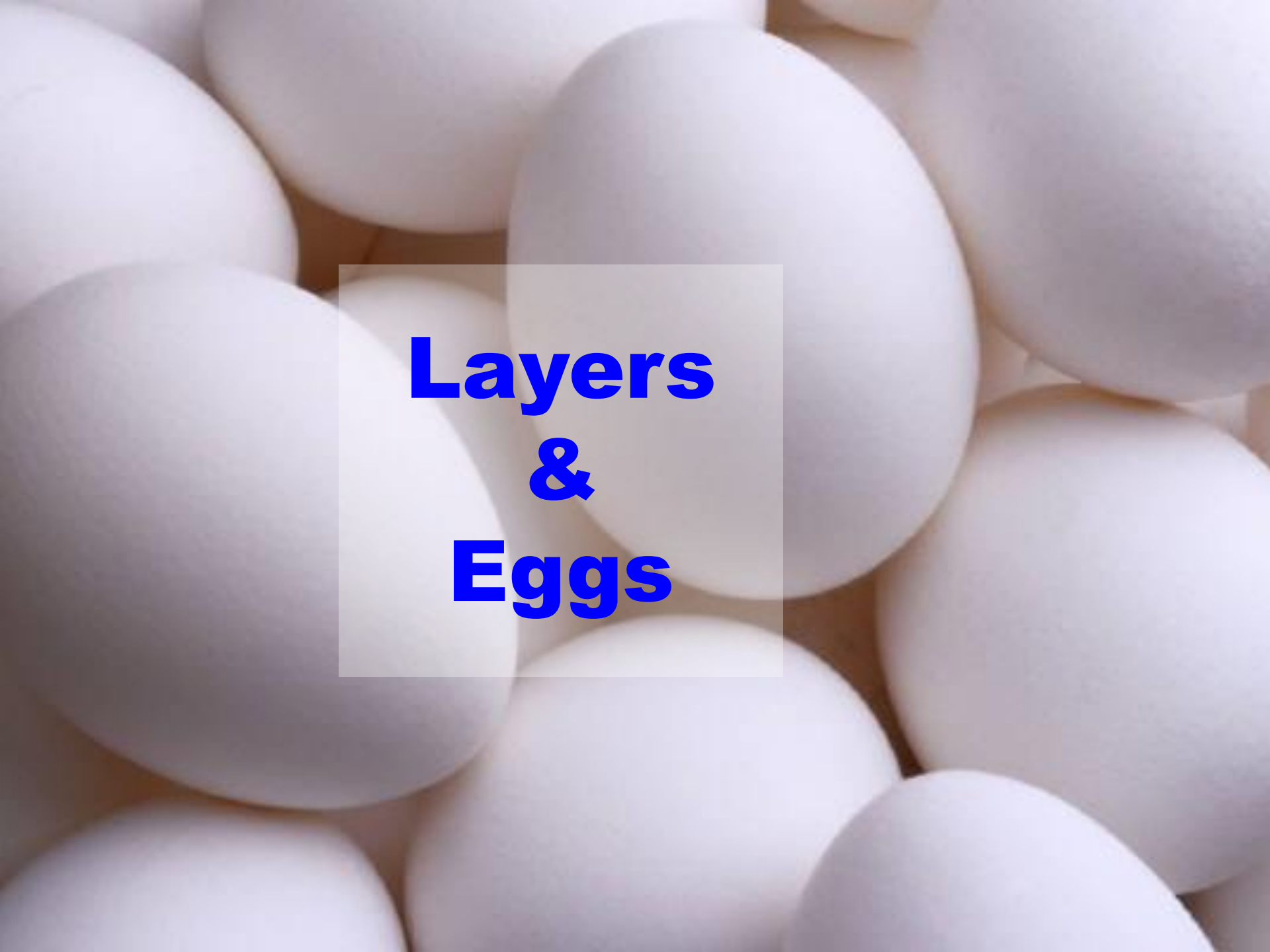
  Color: Light Brown

  Egg Color & Location:
  White and at the base of the feather

  Lice only live on the host, and appear to be fast moving.
  - Decreased Food Intake
  - Decreased Egg Production
  - Decreased Weight Gain
  - Increased Susceptibility to Other Diseases

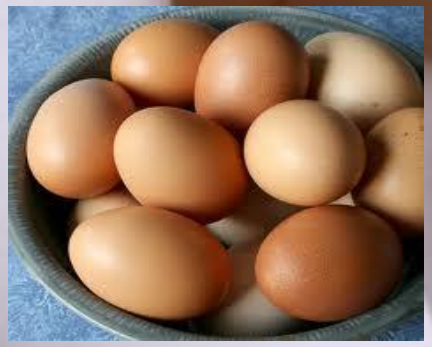
Six Steps To Biosecurity

1. Keep Your Distance
2. Keep It Clean
3. Don’t Haul Disease Home
4. Don’t Borrow Disease
5. Be Informed
6. Report Sick Birds


Layers
&
Eggs

Special Considerations: Layers

Color



Size & Shape

The Laying Hen

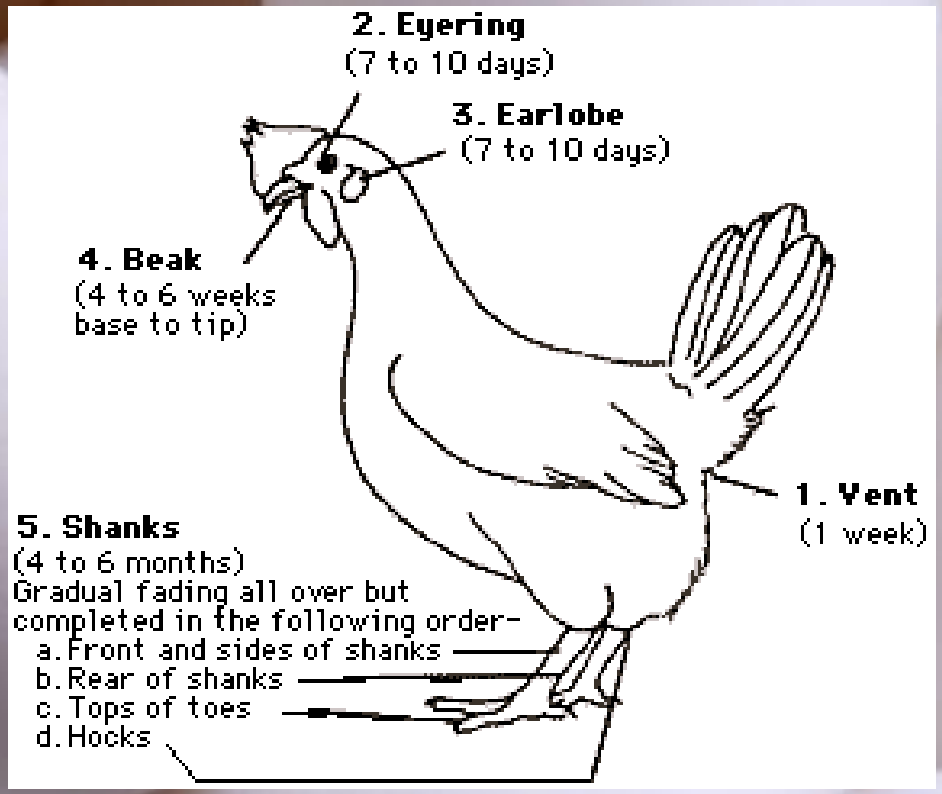
- **Smaller Framed**
- **Angular in appearance**
- **Want her to be healthy and vigorous**

Hen in Production

- **In Production**
  - **Comb and Wattles**
    - **Large**
    - **Bright red**
    - **Waxy**
  - **Pubic Bones are flexible**
  - **Vent large and moist**
  - **Abdomen full and pliable**

- **Out of Production**
  - **Comb and wattles**
    - **Small**
    - **Pale**
    - **Shriveled**
  - **Pubic bones are ridged and close together**
  - **Vent is small and dry**

Pigment Bleaching

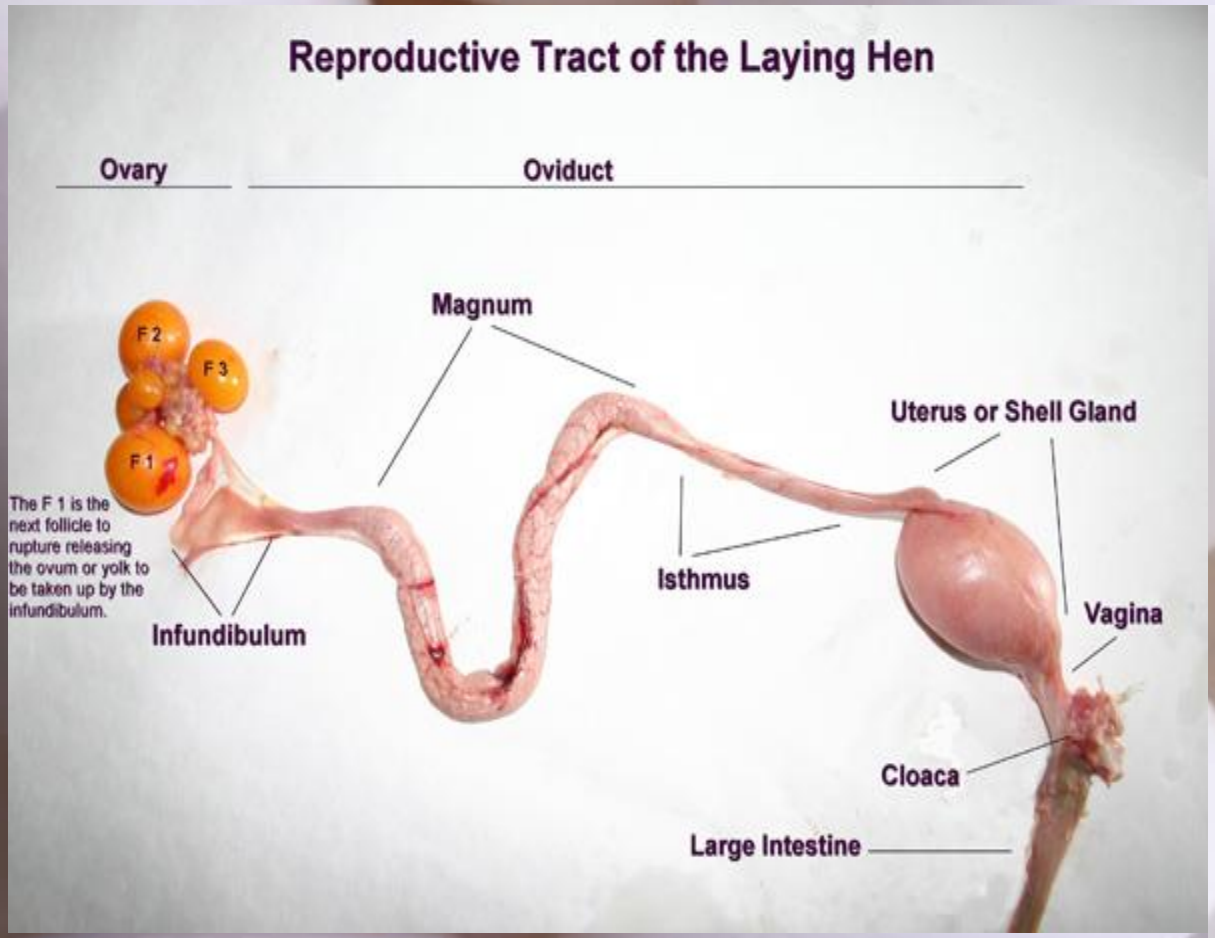


Picture from UMN - http://www.extension.umn.edu/distribution/livestocksystems/DI1182.html

Lighting

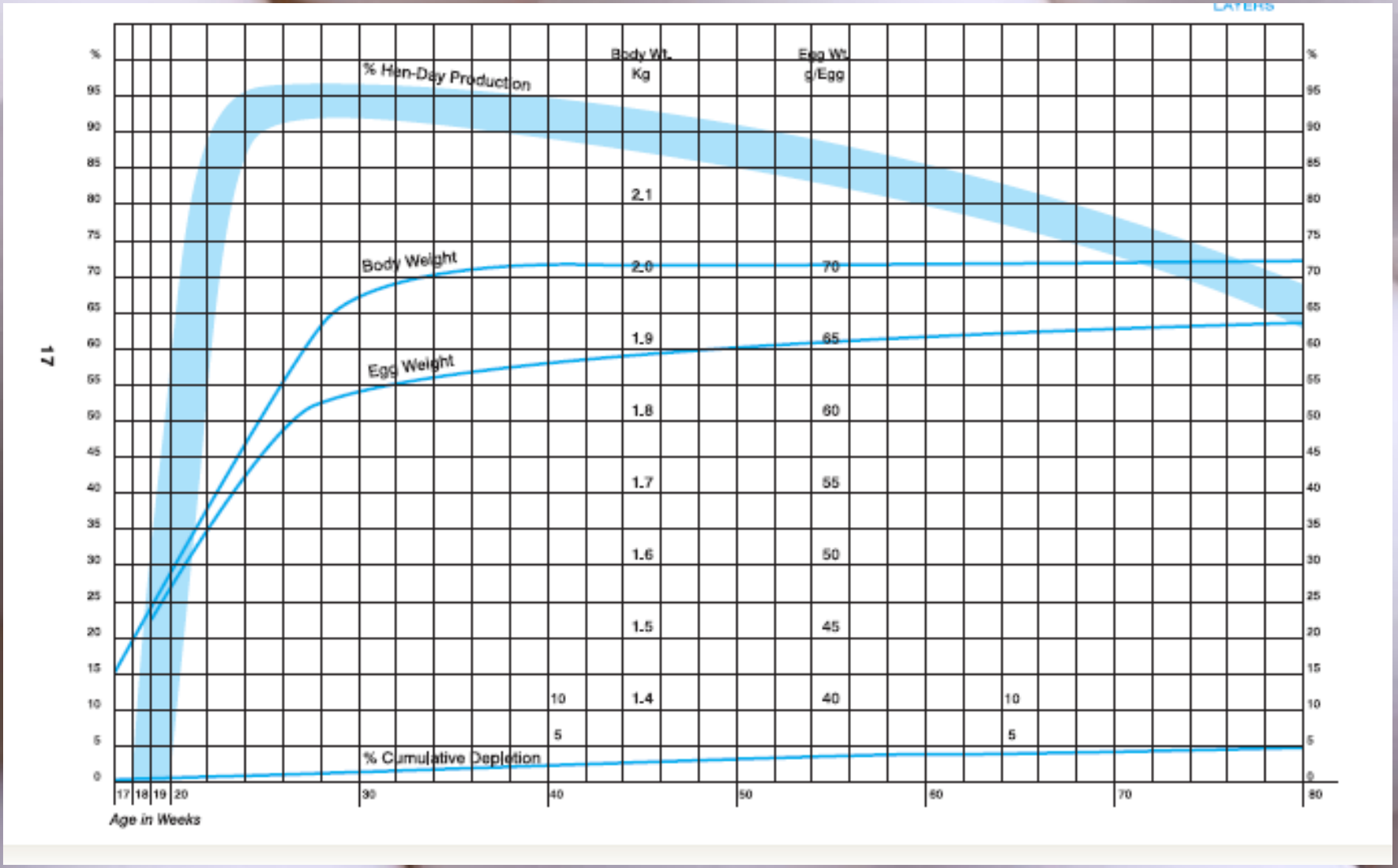
- **Long day breeders**
  - **min length of time needed to be effective is 13 hours and after 17 no benefit with 16 hours being the best.**
- **Light intensity of 1 foot-candle**

Egg Production



- **Infundibulim - Picks up the yolk after it is released (fertilization) 15 min**
- **Magnum - thick thin albumen and chalaza 3 hours**
- **Isthmus - adds the membrane layers 1 ¼ hours**
- **Uterus- adds the shell 21 hours**
- **Holding area until the egg passes**

Egg Production Chart




Market Birds

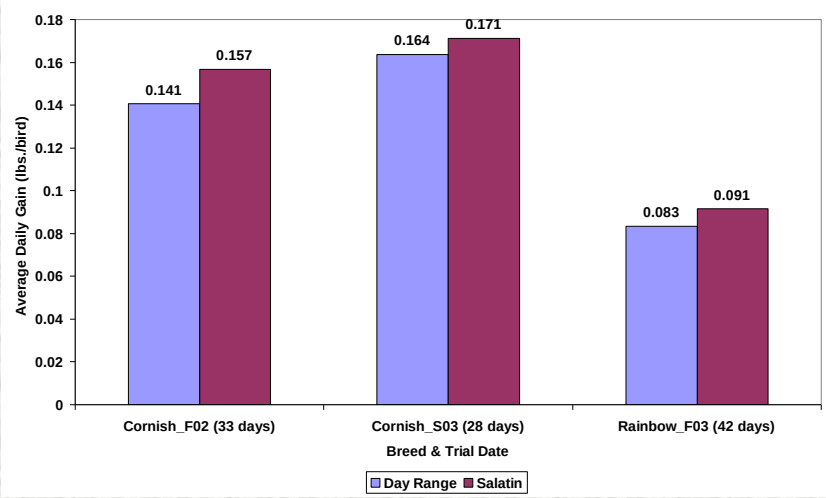
Special Considerations: Meat birds

Shape of Carcass

Commercial Broiler

Dual Purpose Breeds

Growth Rate



Taste & Texture

Sale Of Poultry Products

Poultry Requirements

(farm-raised chickens, ducks, geese, guinea hens, squab, turkeys)

Less than 1000 birds per year

d from the producer's premises	Sold at a farmers market	Sold to retail establishments
ds are healthy ducer can slaughter and sell birds ithout inspection or a license ducer maintains custody of irds until sold ds can only be sold directly o the consumer ds are labeled "not inspected," ave the name and address of roducer, and net weight	All birds must be slaughtered and processed at a meat licensed facility Birds are labeled "not inspected," and have the name and address of producer, and net weight A mobile retail food license is required to sell birds at farmers markets, and local ordinances may also apply	Birds are processed at a licensed meat establishment Bird-by-bird inspection is required Birds are fully labeled In addition, the producer must be registered as a meat distributor

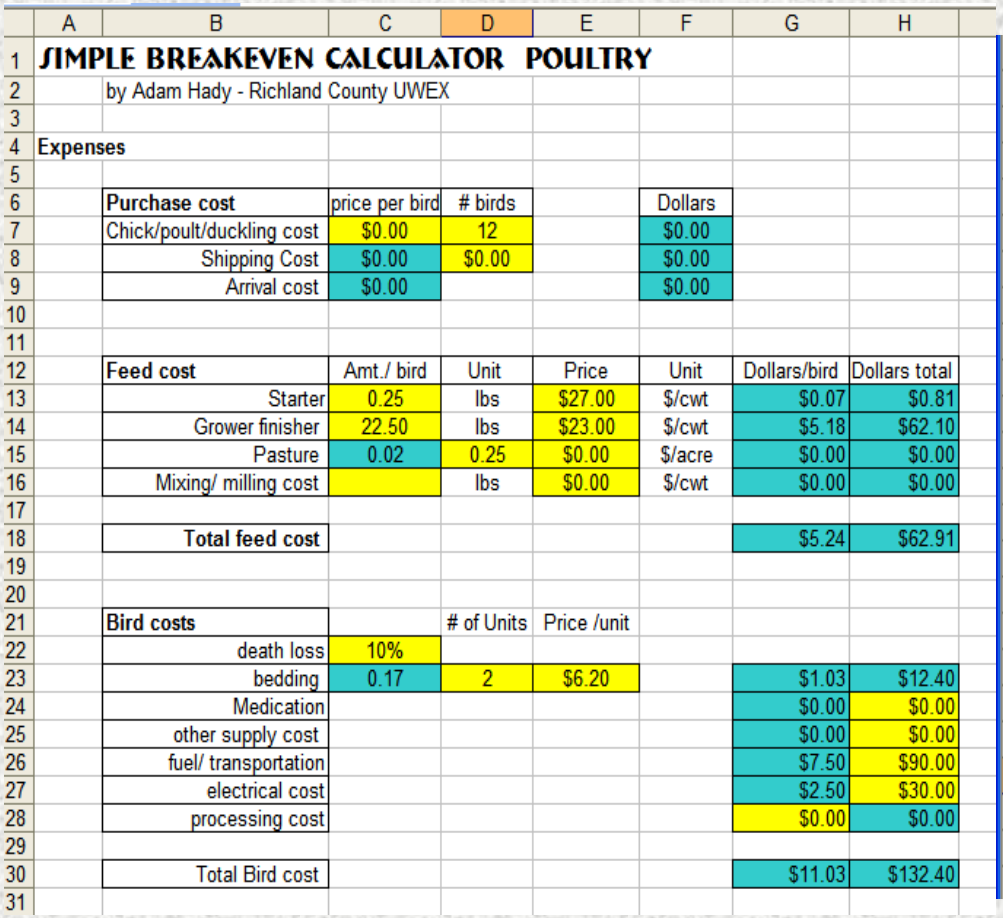
More than 1000 birds per year

d from the producer's premises	Sold at a farmers market	Sold to retail establishments
d-by-bird inspection required at a tate or USDA licensed facility ds are fully labeled ducer must have a retail food stablishment license	Same requirements as at left Local ordinances may apply at farmers markets	Same requirements as at left In addition, the producer must be registered as a meat distributor

NOTE: If the product is sold over state lines, the processing facility must be under USDA inspection.

Copied from "Direct Marketing Meat" UWEX Publication 2003

Determining Your Price



	A	B	C	D	E	F	G	H
1		**SIMPLE BREAKEVEN CALCULATOR POULTRY**						
2		by Adam Hady - Richland County UWEX						
3								
4	**Expenses**							
5								
6		**Purchase cost**	price per bird	# birds		Dollars		
7		Chick/poult/duckling cost	$0.00	12		$0.00		
8		Shipping Cost	$0.00	$0.00		$0.00		
9		Arrival cost	$0.00			$0.00		
10								
11								
12		**Feed cost**	Amt./ bird	Unit	Price	Unit	Dollars/bird	Dollars total
13		Starter	0.25	lbs	$27.00	$/cwt	$0.07	$0.81
14		Grower finisher	22.50	lbs	$23.00	$/cwt	$5.18	$62.10
15		Pasture	0.02	0.25	$0.00	$/acre	$0.00	$0.00
16		Mixing/ milling cost		lbs	$0.00	$/cwt	$0.00	$0.00
17								
18		**Total feed cost**					$5.24	$62.91
19								
20								
21		**Bird costs**		# of Units	Price /unit			
22		death loss	10%					
23		bedding	0.17	2	$6.20		$1.03	$12.40
24		Medication					$0.00	$0.00
25		other supply cost					$0.00	$0.00
26		fuel/ transportation					$7.50	$90.00
27		electrical cost					$2.50	$30.00
28		processing cost					$0.00	$0.00
29								
30		Total Bird cost					$11.03	$132.40
31								

31								
32		Fixed Cost						
33		Annual building cost					$4.17	50
34		Annual equipment cost					$1.67	20
35								
36		Total Fixed Cost					$5.83	70
37				min /day	Wage	Days		
38		Estimated Labor	0.34	5	$0.00	49	$0.00	$0.00
39								
40								
41					Total Cost		$22.11	$265.31
42								
43				Estimated Live wt of the Bird (lbs)	8.2			
44							lb	bird
45					Breakeven Sale price/		$4.28	$24.57
46								
47	Income							
48								
49				pounds	per bird			
50		Birds Sold		61.992	11			
51		Asking Price		$5.00	$28.00			
52		Gross Income		$309.96	$302.40			
53		Net Profit		$44.65	$37.09			
54								

http://richland.uwex.edu/ag/documents/Poultrybreakevencalculator.xls

Sample: Breakeven Calculator

Poultry Resources

- UWEX Poultry Educational Resources: http://www.uwex.edu/ces/animalscience/poultry/resources.cfm
- Richland County UWEX Poultry: http://Richland.uwex.edu/ag/Poultrylinks.html
- *Guide to Raising Healthy Chickens* (A3858-01): learningstore.uwex.edu
- *Producing Poultry on Pasture (A3908-03):* learningstore.uwex.edu
- *Pasture Poultry Ark* (A3908-02): learningstore.uwex.edu
- University of Kentucky Small and Backyard Flocks: www.ca.uky.edu/smallflocks/
- North Carolina Extension Small Flock Management Resources: http://www.ces.ncsu.edu/depts/poulsci/tech_manuals/small_flock_resources.html
- Mad City Chickens: http://www.madcitychickens.com/
- Urban Chickens: http://urbanchickens.org/

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Questions???