



EXTENSION

Backyard Chickens & Eggs

**OK Farmers Market & Agritourism
2020 Conference & Expo**

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Area Extension Livestock Specialist, Enid**

Backyard Chickens & Eggs



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- 1. Poultry Nutrition**
- 2. Internal/External Parasites**
- 3. Housing/Equipment**
- 4. Best Practices**
- 5. OK Regulations for Egg & Meat Sale**
- 6. Urban Considerations**

Digging Into Poultry Nutrition



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Digestive Systems



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The Basic Needs of Life

- Proteins
- Carbohydrates
 - Fat
- Vitamins
- Minerals
- Water



The Right Diet for the Right Bird

- Feed correct feed based on age and goal of production
 - Layers, Broilers, young, and mature
- NEVER feed Scratch as a complete ration



Chick Starter/Grower

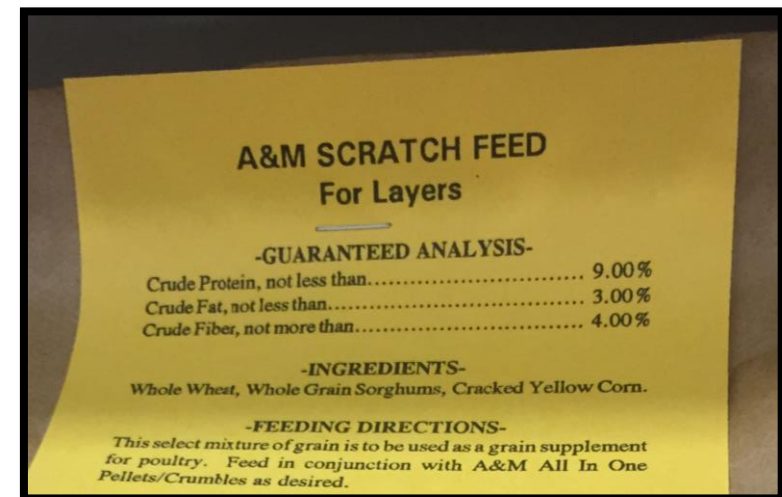
Protein	17%
Lysine, not less than	0.85%
Methionine, not less than	0.40%
Crude Fat, not less than	4.0%
Crude Fiber, no more than	6.0%
Calcium	0.70-1.2%
Phosphorus, not less than	0.40%
Salt, not more than	0.90%

Laying Hen Mash

Protein	15-18%
Lysine, not less than	0.65%
Methionine, not less than	0.40%
Crude Fat, not less than	4.0%
Crude Fiber, no more than	6.0%
Calcium	3.5-4.0%
Phosphorus, not less than	0.65%
Salt, not more than	0.60%

Scratch

Protein	9%
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Limit Extras!



Scratch

- Mix of corn, milo, oats, wheat

Kitchen Waste

- Vegetable and fruit peelings/scrap
- Bread
- Exceptions

Plant waste

- Lawn clippings
- Recent herbicide/pesticide history

Stage of Production = Varied Requirements



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Internal Parasites



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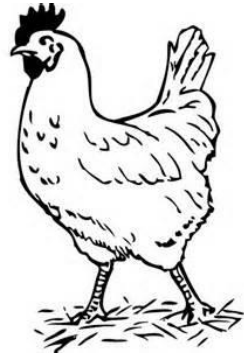
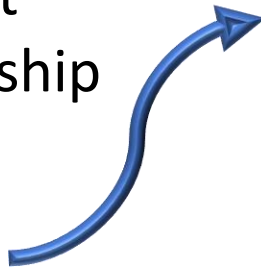




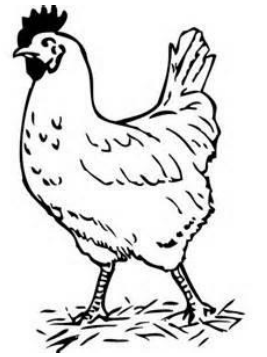
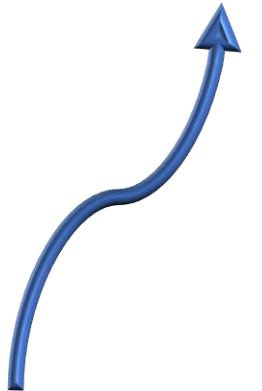
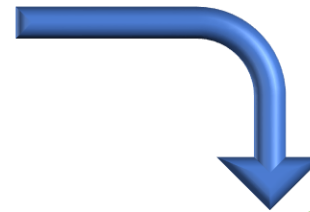
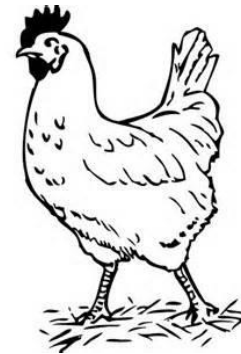
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Parasite Relationship to Host

Direct
Relationship



Indirect
Relationship



Clinical Signs of Internal Parasites

1. Poor appetite
2. Diarrhea
3. Weight Loss
4. Rough Feathers
5. Anemia (Pale)
6. Weakness
7. Depression



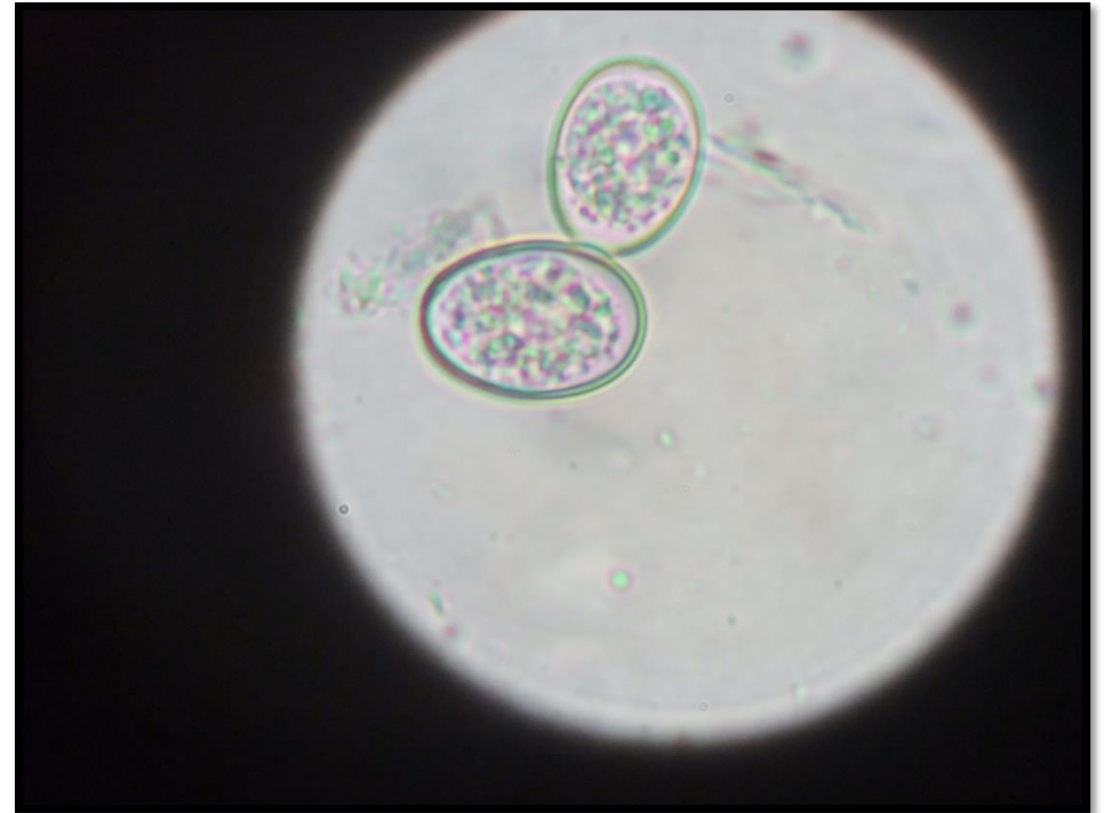
What can manure tell you?

- Dark black droppings
 - Indicates bleeding early on in the digestive tract b/c blood has been digested
- Bright red/red droppings
 - Indicates bleeding as issue in lower tract



Internal Parasites: The Diagnosis

- Fecal exam
 - Fecal flotation
 - Direct fecal smear
 - Presence of eggs = adult parasites inside the bird
- Post Mortem examination
- Accuracy of Treatment Options Improved



Supportive Care

Prevention, Prevention, PREVENTION!

- Environmental modifications

- Dry bedding
- Clean waters and feeders

1. Remove feces/dirt
2. Clean with soap
3. Disinfect
4. allow dry time



- Management
- Quarantine
- Water/Feed Location
- Resistant poultry breeds?



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External Parasites

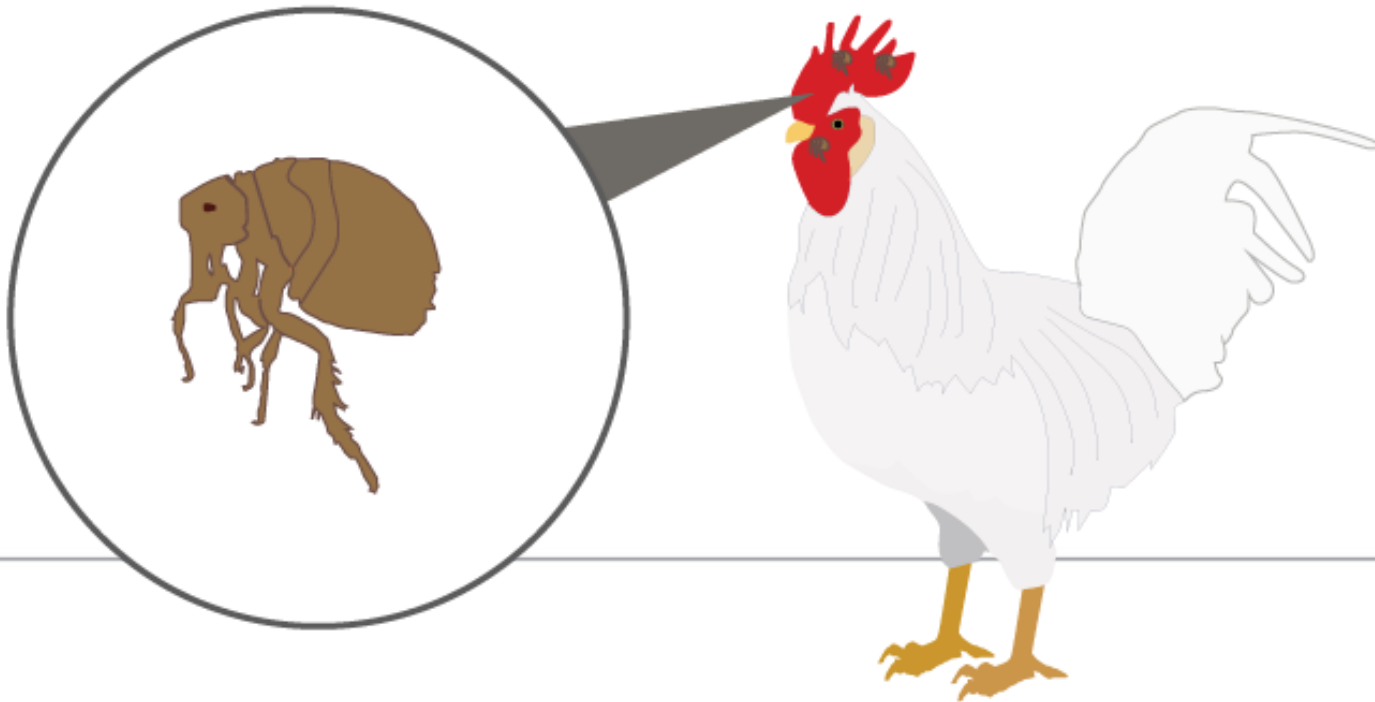


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Sticktight Fleas

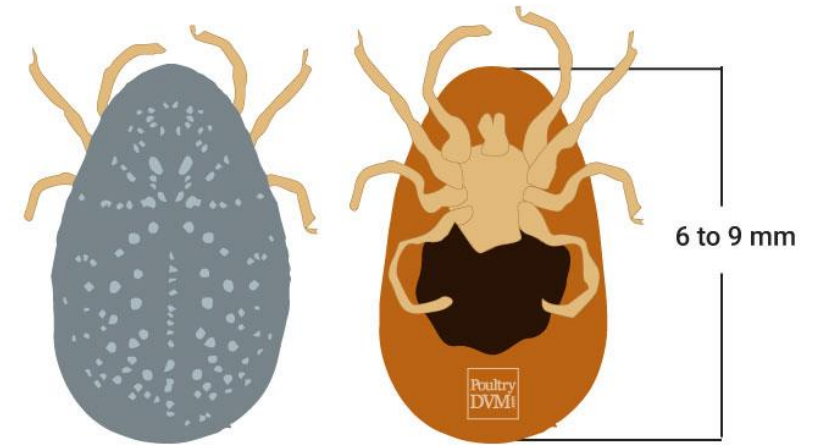
- Found on the skin around the eyes, comb, face, and wattles
- Blood feeders
- Immature stages of flea – in soil and bedding
- Affect sick, old, and young birds



Fowl Tick/Blue Bug

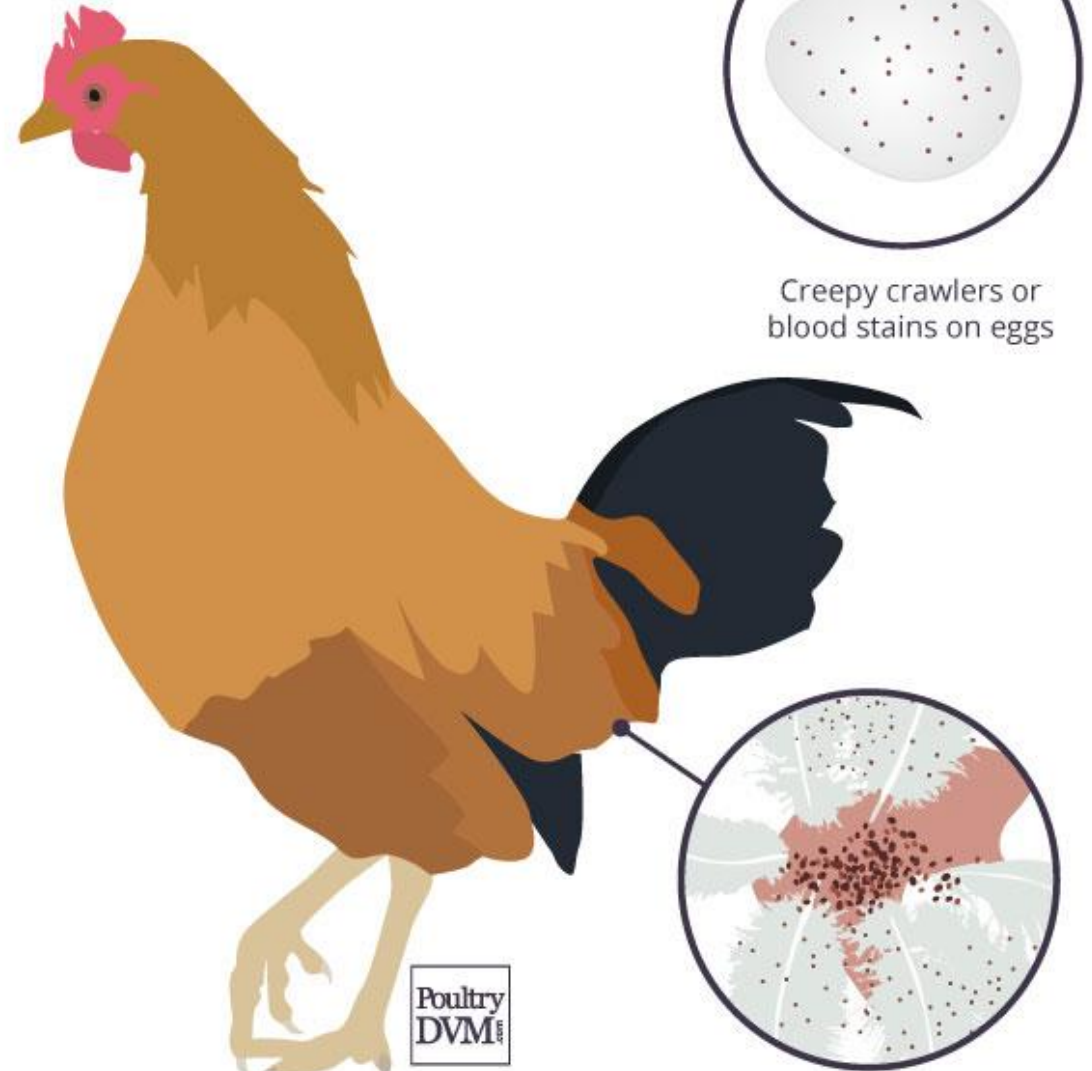
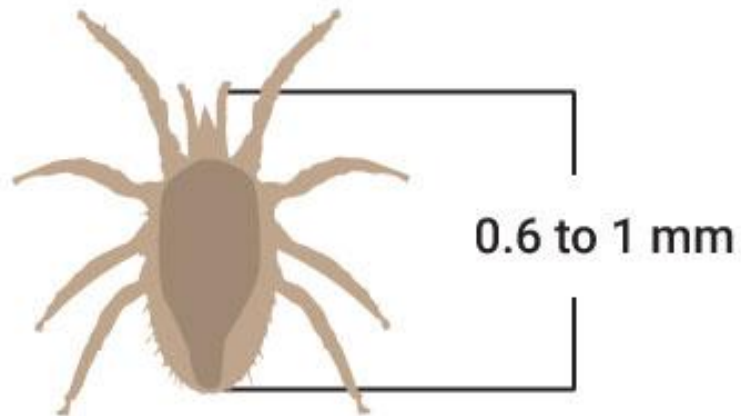


- Feed on blood, spread disease, anemia, weakness, and weight loss
- Adult ticks feed only on birds at night
- Tick larvae stay on bird to feed during the day



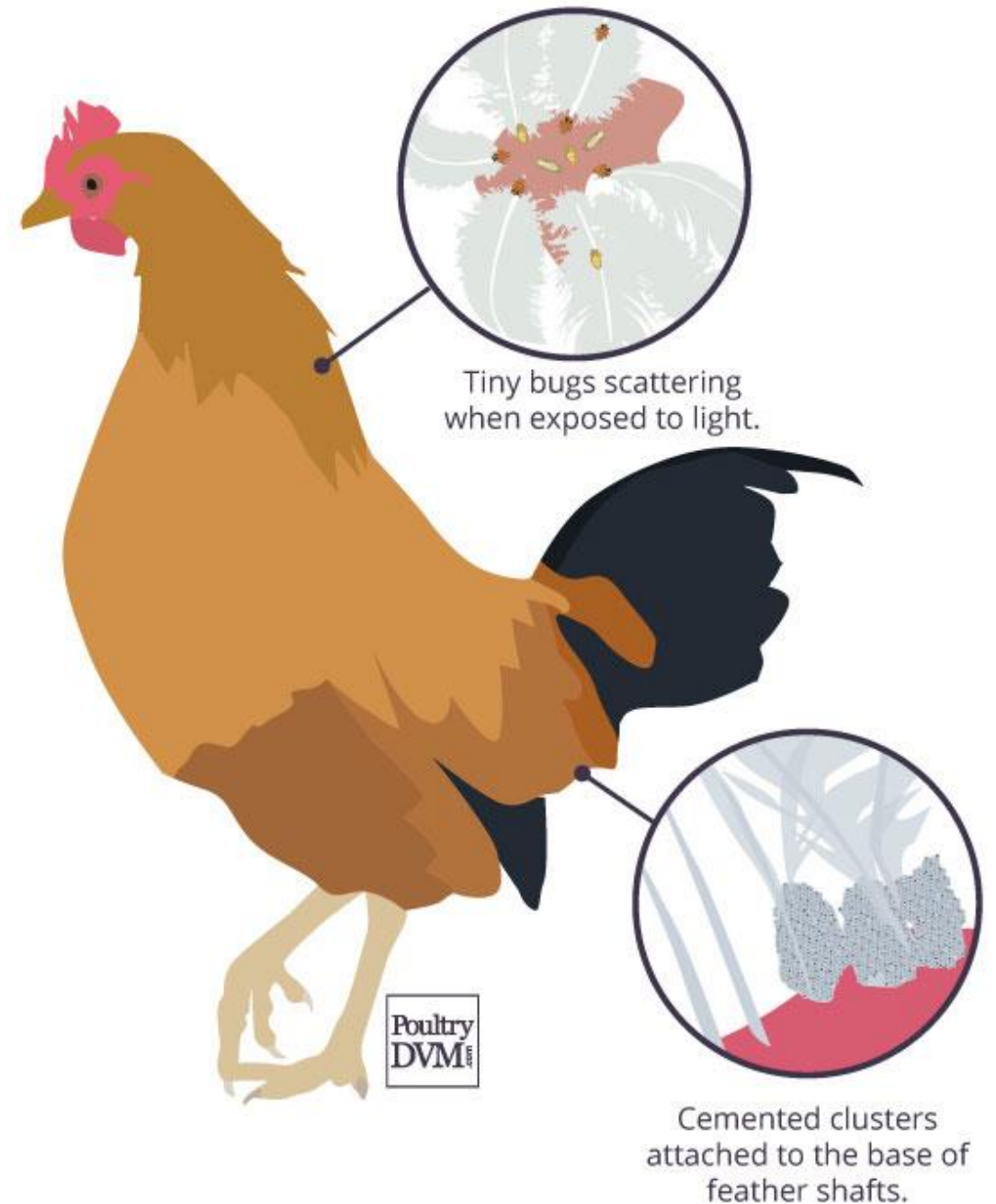
Northern Fowl Mite

- Weakness, anemia, decrease in egg production, reduced feed intake
- Reside in vent area of bird but also in coop



Poultry Lice

- Eggs are visible on feather shaft near base
 - Severe skin irritation occurs from lice feeding on dry skin scales, feathers, and scabs
 - Birds will appear stressed and in poor health
-



Treatment of Bird & Control in House

Bird

- Cleanse
 - 1.5 L Water/ 1-2 drops mild dishwashing soap
- Treatment
 - Petroleum Jelly – Fleas
- Pesticide – Vet/OSU Extension office can guide you on appropriate treatment

House

- High pressure water to cracks and crevices
- Hot water
- Appropriate Pesticide



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External Parasite Control

Prevention, Prevention, PREVENTION!

- Cleanliness
- Minimize wild bird and rodent contact with poultry
- Quarantine
- Biosecurity



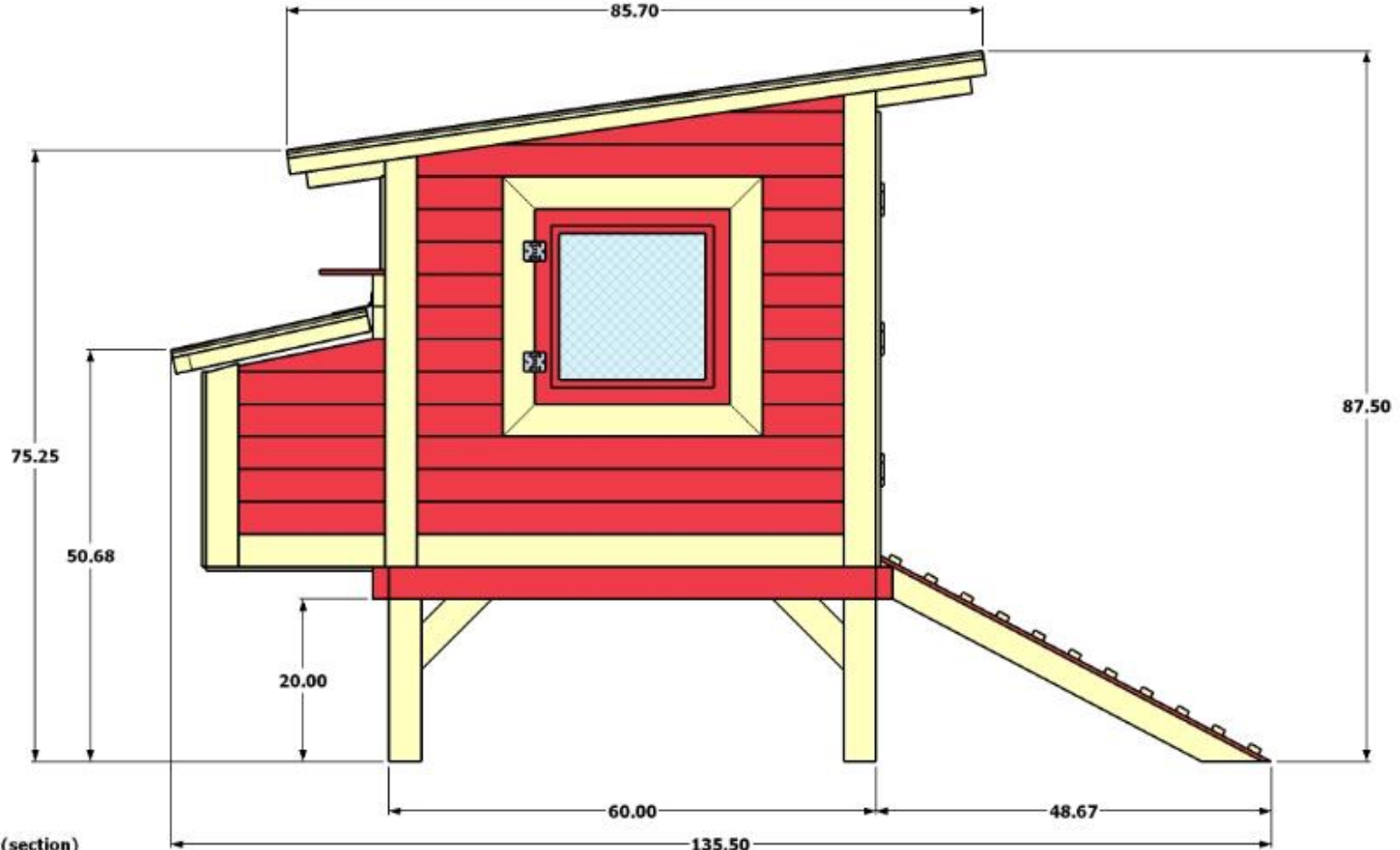
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Housing & Equipment



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a: 4x4 (section)
 b: 2x4 (section)
 c: 2x2 (section)
 d: 0.5x4 (section)
 e: wooden sheet thickness 0.5
 Units: Inches (decimal format)

<http://homegardenplans.blogspot.com/>



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Adequate Space



Small Breeds

In House:

1-1.5 sq. feet/bird

In Run:

4-6 sq. feet/bird

Large Breeds

In House:

2-3 sq. feet/bird

In Run:

8-10 sq. feet/bird

Feeding Space

2-4 inches per adult bird

Drinkers

Low capacity - 1 Gallon drinkers
12-15 adults (cool weather)
12 adults (warm weather)
Best to provide additional
drinkers as a buffer

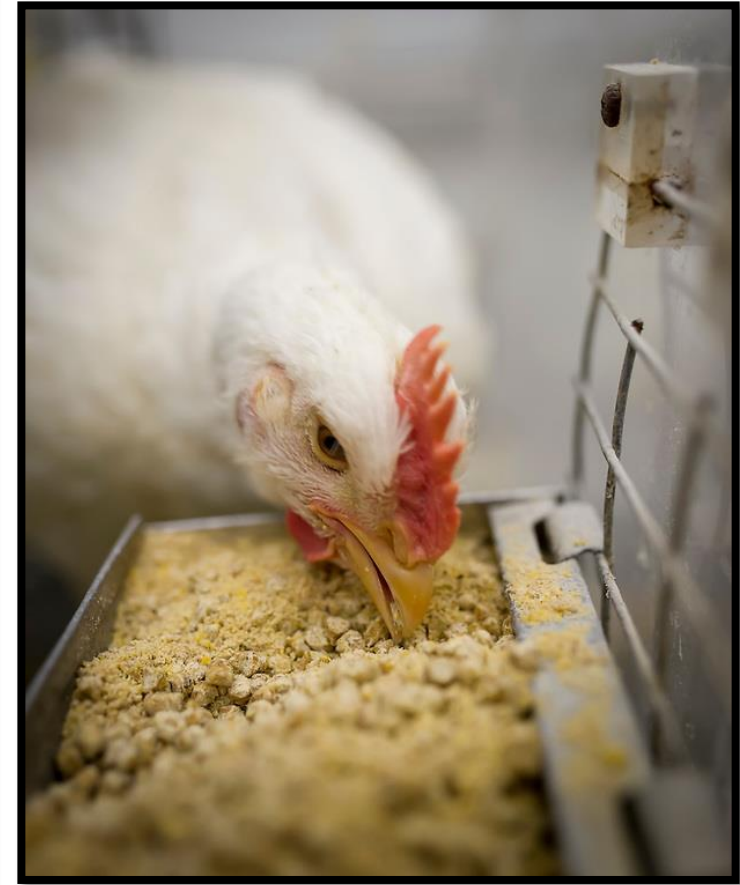
Space Allotment Drinkers & Feeders





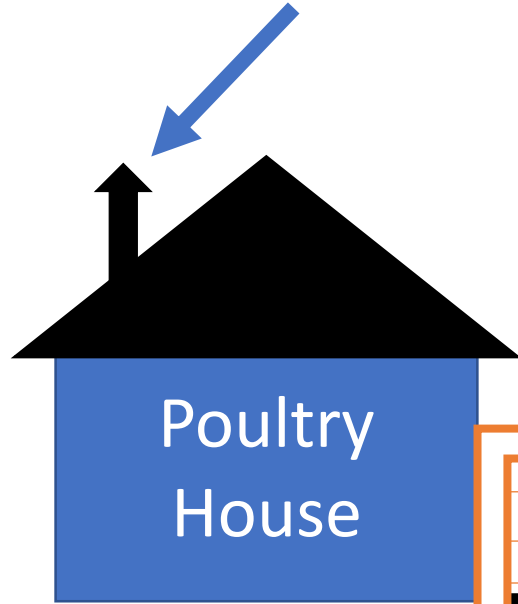
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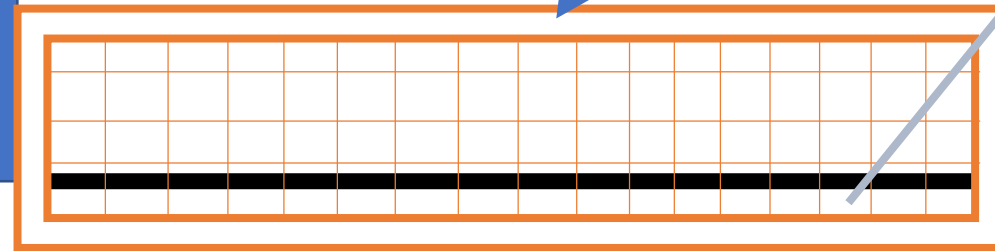
Don't forget the Ventilation



Fencing or netting should also be placed on top of the run



Choose fencing with holes smaller than ½ in.



Fencing should be buried 12 in. below ground level





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Interested in Selling Eggs or Fresh Meat?

Oklahoma Rules & Regulations



Oklahoma Egg Law

No License Required:

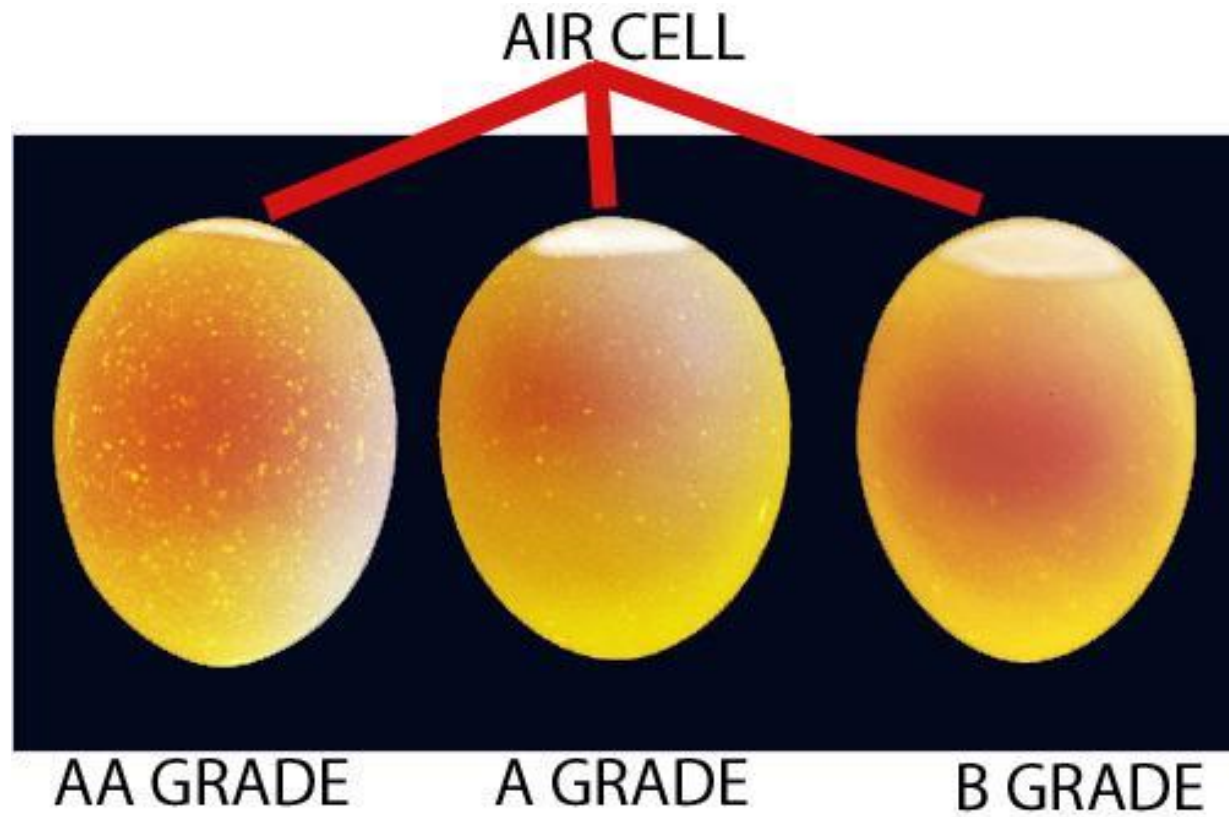
- Oklahoma Producer of eggs shall sell ungraded eggs from hens managed on their own farm - No Fee
- Sale may be made directly to consumers directly from the farm they were raised
- Ungraded eggs may not be sold at other outlets
- Required to remain in compliance with all guidelines in Title 2 Article 10 of Poultry and Poultry Products

Egg License Required:

- Sale of eggs off farm (grocery stores, restaurants etc.) - \$50/year



Egg Grades



Slaughter and Sale of Poultry Products

Option 1: Custom Exempt Plant

- No facility inspection required
- No retail sale allowed
- Sale of orders made directly to consumer without third party intervention
- Poultry raised by producers on their own farm
- Yearly slaughter allotment: <250 turkeys or 1000 chickens
- Must complete Certification of Registration and submit to Oklahoma Food Division for approval



Slaughter and Sale of Poultry Products

Option 2: State Inspected Slaughter Facility

- Compliant for Retail Sale
 - Refer to guidelines in Title 35 Chapter 37 Subchapter 5 Poultry Products Inspection
 - Requirements:
 1. Application sent to Oklahoma Food Safety Division for approval
 2. Slaughter facilities must be compliant with guidelines set by Oklahoma Food Safety Division
 3. State Inspector must be present during slaughter and facility must abide by Oklahoma packaging and labeling laws
-

ODAFF Contacts for Poultry & Eggs

Eggs:

Bryan Buckwald (405) 397-1985

Refer to Food Safety Rules-Title 35. Chapter 37. Subchapter 1

http://www.ag.ok.gov/food/foodsafety_sub1.pdf

Meat Inspection:

Scott Yates (405) 522-6114

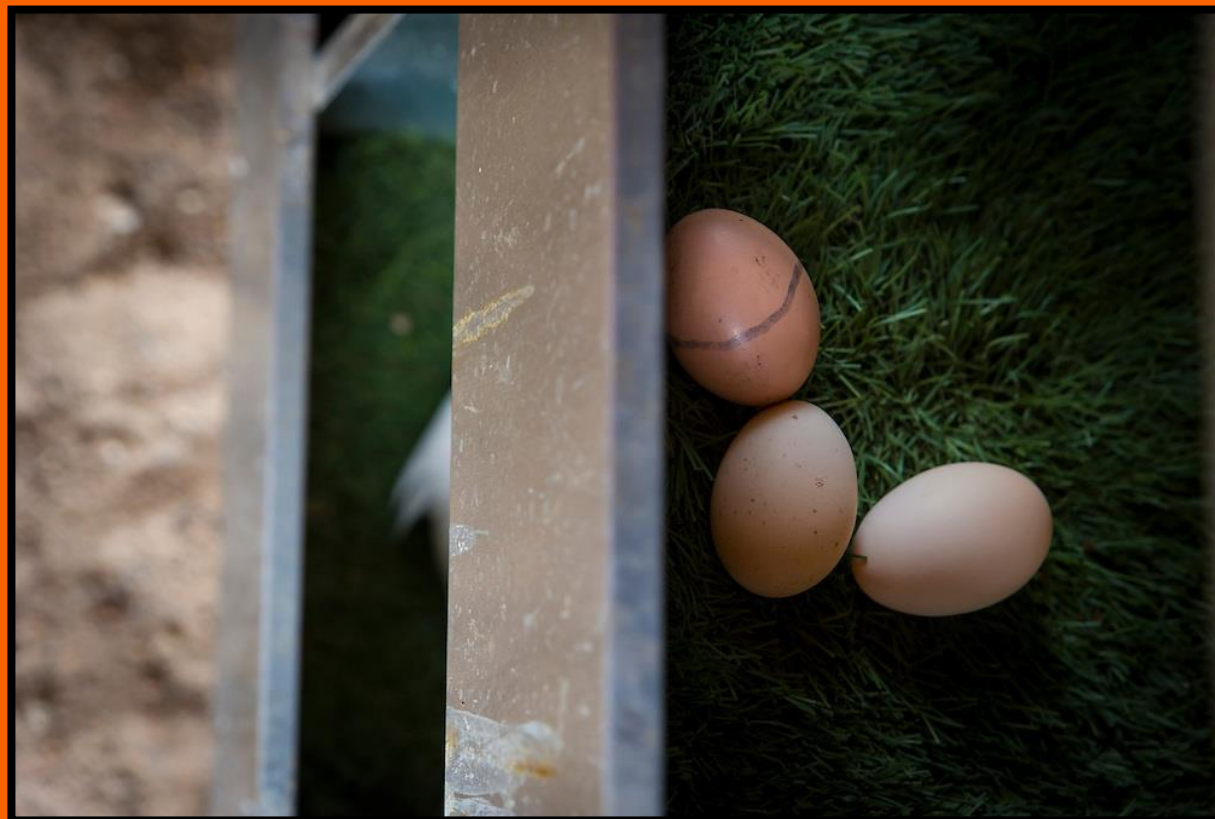
Refer to Food Safety Rules Title 35. Chapter 37. Subchapter 5

<http://www.oda.state.ok.us/food/meat.htm>

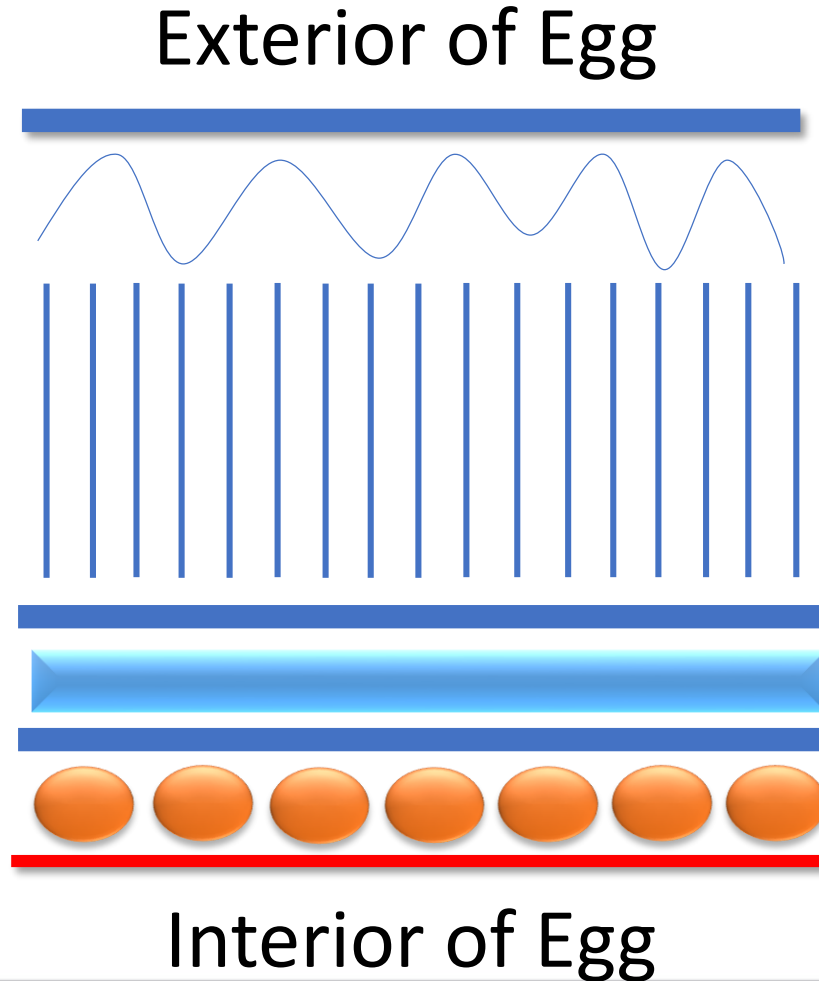
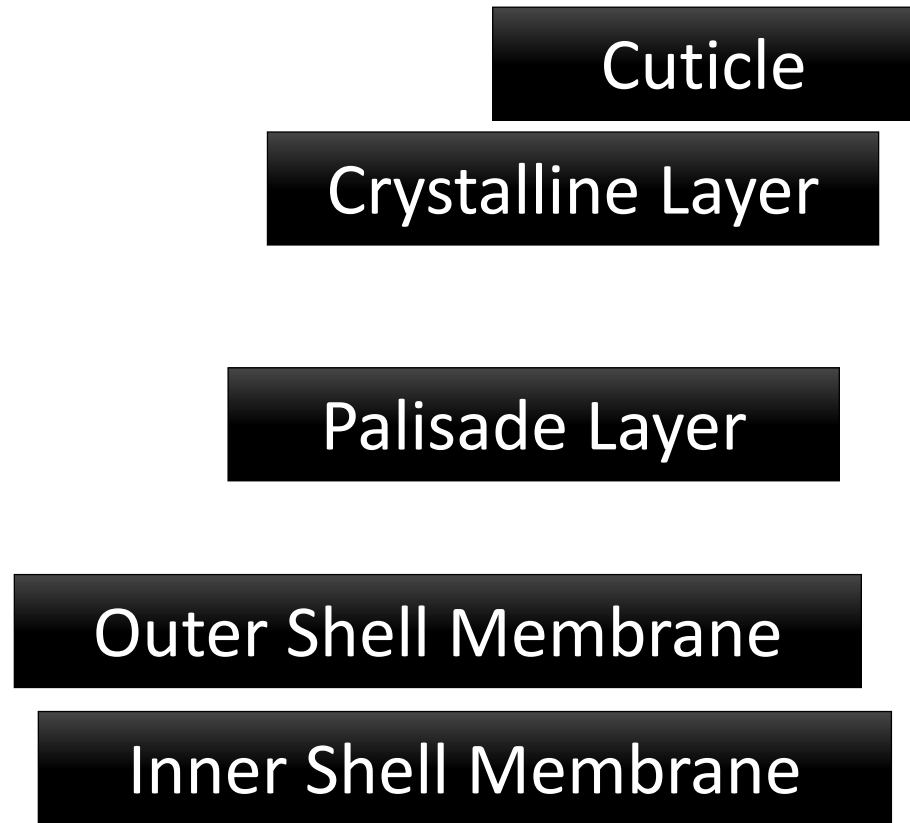
Egg Washing



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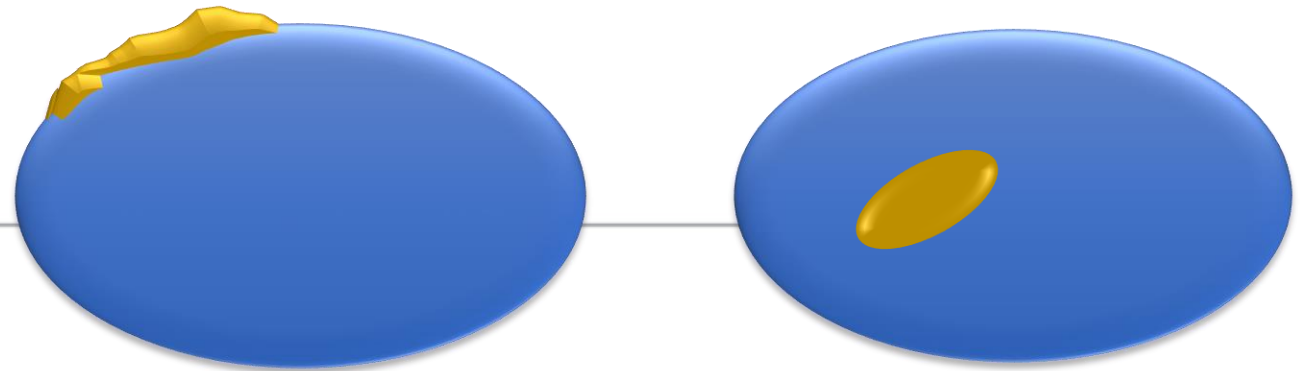


Egg Shell Anatomy



Preparing Eggs for Sale

- To wash or not to wash?
- European method
- National Egg Safety Rules
 - Washed eggs stored in new carton at 45° F or less
- Importance of Reputation

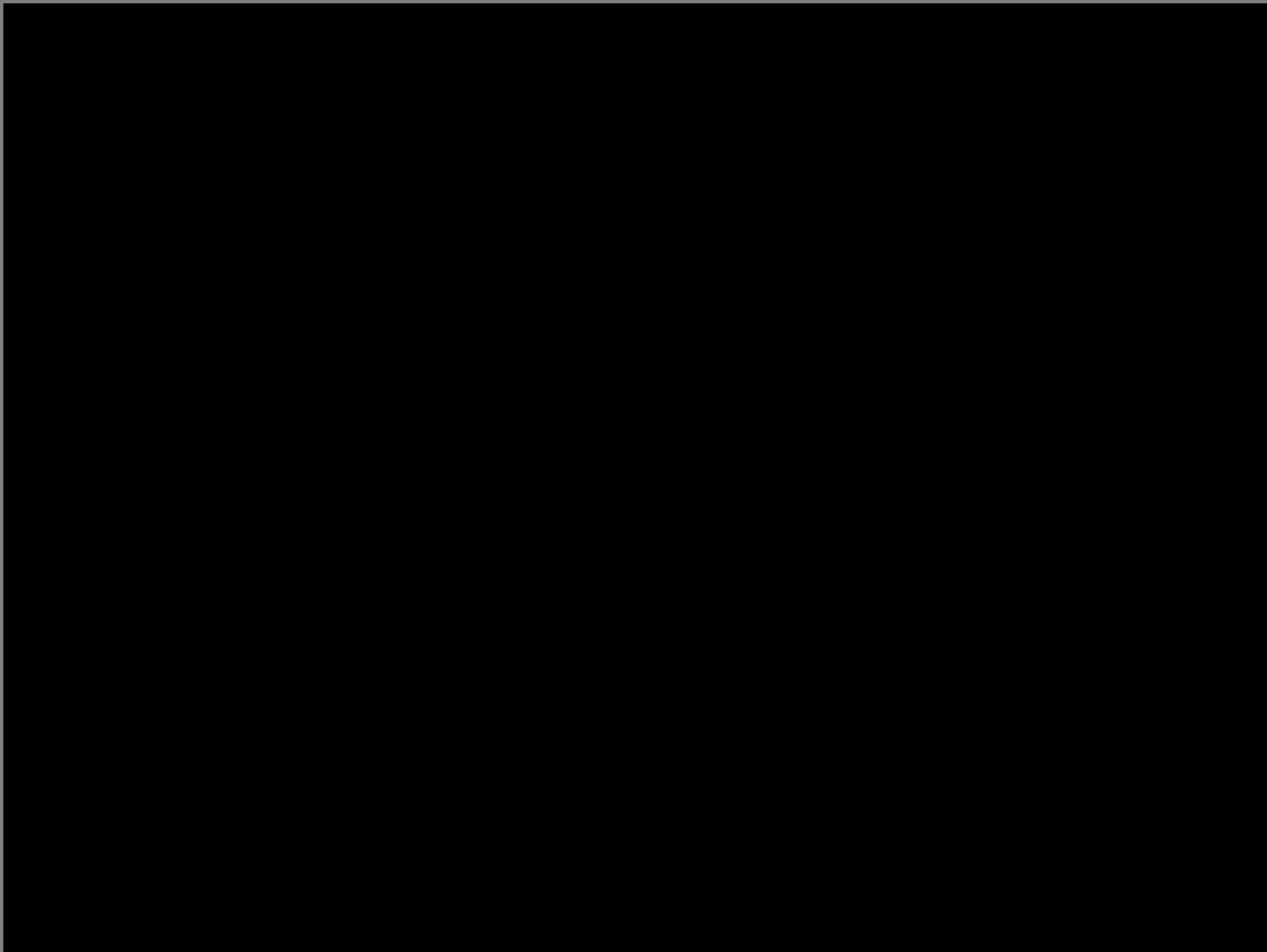


Setting up to Wash Eggs - Two Pan Method

- Pan #1 - Soap dish pan
 - Hot water
 - Food Grade Soap
 - Not too Soapy!
- Pan #2 - Bleach/water pan
 - ¼ tsp. bleach/ gallon water
 - Unscented bleach
- Drying rack
 - cooling rack for baking



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Poultry in an Urban Area?



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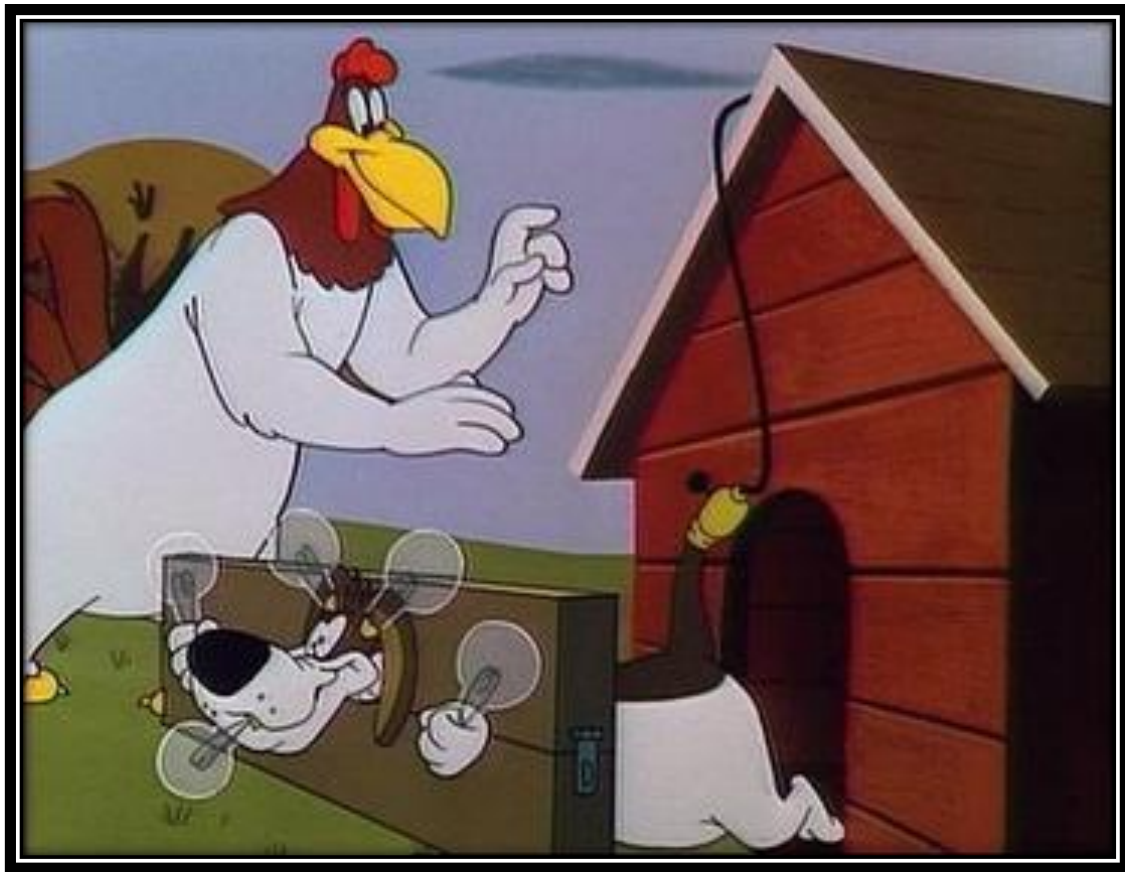


Considerations

- Property Zoning
- Number and Type of Chickens Allowed
- Building Requirements
- Set back



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Considerations

- Respect for Neighboring homes
- Homeowner Assoc. Guidelines
 - May supersede city regulations
- Other Considerations
 - Animal Health sources
 - manure mgmt. and euthanasia



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