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ELK GROVE MILLING, INC.

ESTABLISHED 1982

STABLE MIX™

*For Healthier, Happier Horses*

# Webinar Series: Poultry

ELK GROVE MILLING, INC.

STABLE MIX™

*For Healthier, Happier Horses*

# Elk Grove Milling, Inc.

- Producing high quality horse and animal feeds since 1982
- Feeds made in an antibiotic-free facility
- 71 feed dealers across California and Nevada



# Healthy Chicks and Chickens

With

 **Alltech**®

Karyl Hedden  
Poultry Specialist



# The Right Start

Getting chicks and chickens off the right start leads to a healthier, happier flock.



# Baby chicks rely on you...

To fulfill all their needs, you are now Mother Hen.



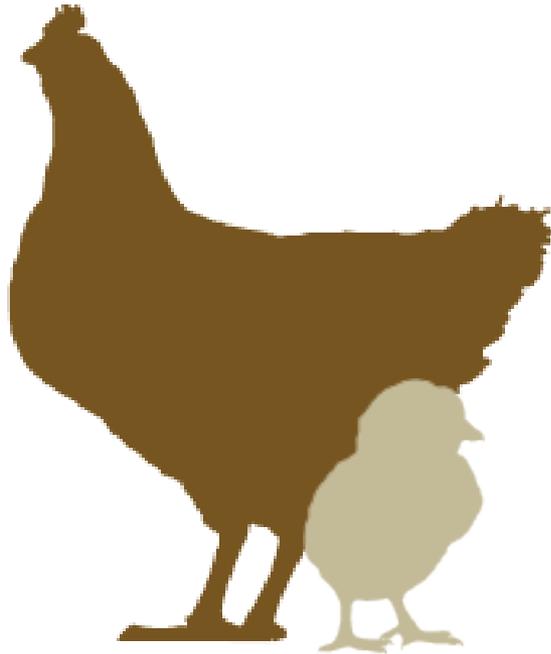
# Body Temperature

A chicken's body temperature is 104° F

- Chicks are unable to regulate their body temperature for the first two weeks of life
- Use heat lamps to help maintain stable chick body temperatures



# The Big 3



Chickens, like humans, need 3 basic things to be healthy:

- Clean Air
- Clean Water
- Clean Feed



# Clean Feed and Water

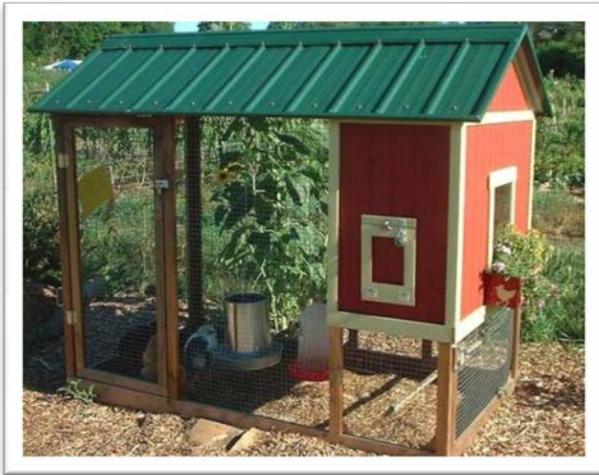
Fresh feed and water are pivotal to raising healthy chicks and chickens.

- Check feed and water several times a day
- Move feed and water daily to avoid caking or dirtying of shavings
- As chickens grow, elevate feed and water, hang or set on blocks to avoid dirt and debris
  - Watch birds to ensure they can reach all items



# Clean Air

Coops with ample ventilation and outdoor access are best for providing clean air to your flock.





**Keep litter clean and  
fresh in the nest!**



# Egg Production

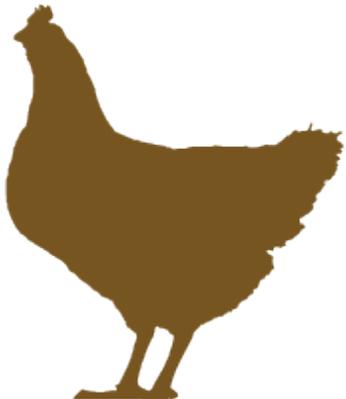
Things you need to know about egg laying and egg shell quality.



# Egg Production



- Chickens start laying eggs around 18 weeks
- Chickens lay up to 5 or 6 days in a row
  - 2 day no lay period prior to next clutch
- No rooster in coop= infertile eggs
- Collect table eggs in morning prior to temperature highs



# Heat and Light

- Keep the coop ventilated, without strong drafts.
- Supplement natural light with a light bulb, so chickens have a total of 14 hours of light each day.
- Coop temperatures should stay around 50°F each night.



# Feed: Start Strong, Finish Strong

Choosing the right feeds to meet the nutritional demands of your flock.



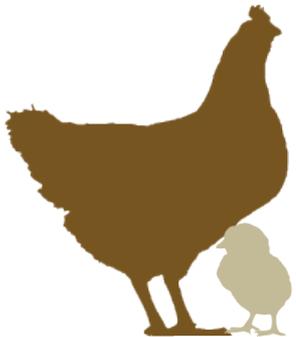
# Nutritional Needs

## Chicks

- Need complete feed to support immune, bone and hormone development
- Feeds with higher levels of proteins ideal
- Look for feeds with pre- and probiotics to support gut health and immunity

## Chickens

- Need feeds to support egg production, to avoid nutrient depletion
- Feeds with more calcium needed to sustain egg production
- Look for feeds supporting intestinal health, 60% of immune response relies on gut health



Healthy hens produce eggs!



# Egg Shell Quality

Color, strength, texture, shape and density are a product of a hens nutrition. Here are some common egg shell quality problems:



**Pale-shelled Eggs**  
The degree of brown color in the egg shell is determined by the quality of deposited pigment in the cuticle.  
**Causes:**

- Infectious bronchitis
- Bird age (older hen)
- High stress in the flock
- Egg Drop Syndrome 76
- Use of chemotherapeutic agents (i.e. sulfonamides and nicarbazin)



**Lilac Eggs/Pink Eggs**  
The egg appears to be pink or lilac due to the association between the cuticle and an extra calcium layer.  
**Causes:**

- Stress
- Excess calcium in the feed



**Dirty Eggs**  
If the egg shell is stained by feces, it is important to avoid feed ingredients which cause wet and sticky droppings.  
**Causes:**

- Wet droppings
- Large amounts of indigestible compounds in the feed
- Poor gut health
- Electrolyte imbalance/saline water



**Blood Stained Eggs**  
Usually from pullets in early lay, eggs are contaminated by smears of blood from a prolapsed cloaca, vent pecking, or cannibalism.  
**Causes:**

- Overweight pullets
- Pullets coming into lay
- Sudden, large increases in day length
- Poor hygiene: Cage, trays, belt pick-up system



**Shell-less Eggs**  
Laid without a shell layer, these eggs are protected only by the shell membrane.  
**Causes:**

- Immature shell gland
- Disease: Avian influenza NDV, infectious bronchitis, Egg Drop Syndrome 76
- Inadequate nutrition: Calcium, phosphorus, manganese, or vitamin D3



**Soft-shelled Eggs**  
Laid with an incomplete shell, only a thin layer of calcium is deposited on the shell membrane.  
**Causes:**

- Excessive phosphorus consumption
- Heat stress
- Bird age (older hen)
- Saline water
- Mycotoxins



**Cracks**  
This problem includes hair line cracks, star cracks, or large cracks that result in a hole in the shell.  
**Causes:**

- Heat stress
- Saline water
- Bird age (older hen)
- Inadequate nutrition: Calcium and vitamin D3
- Mycotoxins



**Corrugated Eggs**  
Characterized by a very rough, corrugated surface, these eggs are produced when plumping is not controlled and terminated.  
**Causes:**

- Heat stress
- Saline water
- Bird age (older hen)
- Poor nutrition, especially calcium and vitamin D3
- Mycotoxins



**Wrinkled Eggs**  
Eggs with thinly created and wrinkled surfaces.  
**Causes:**

- Stress
- Infectious bronchitis
- Defective shell gland
- Overcrowding



**Pimpled Eggs**  
Classified by small lumps of calcified material on the egg shell, the severity of pimples depends on the foreign material present during the calcification process.  
**Causes:**

- Bird age
- Strain of bird
- Inadequate nutrition



**Calcium Coated Eggs**  
An extra layer of calcium can be seen all over the egg or on just one end.  
**Causes:**

- Defective shell gland
- Disturbances during calcification
- Excess calcium in the diet



**Calcium Deposits**  
These eggs are classified by white, irregularly shaped spots deposited on the external surface of the shell.  
**Causes:**

- Defective shell gland
- Disturbances during calcification
- Excess calcium in the diet



**White/Brown Speckled**  
With smaller speckles than calcium deposits, these eggs may be laid down before or after the cuticle is formed.  
**Causes:**

- Defective shell gland
- Disturbances during calcification
- Excess calcium in the diet



**Mottled Shells**  
When placed in front of a light, the translucent areas appear mottled or glassy as a result of the shell's failure to dry out quickly.  
**Causes:**

- High humidity in the shed
- Disease and mycotoxins
- Manganese deficiency
- Overcrowding



**Body-Checked Eggs**  
The egg is cracked in the shell gland pouch and then repaired before lay.  
**Causes:**

- Incorrect lighting
- Stress
- Bird age (older hen)
- Overcrowding



**Broken and Mended**  
A diagonal break occurs during formation and is mended again before lay.  
**Causes:**

- Stress during calcification



**Misshapen Eggs**  
These eggs are too small or large, round instead of oval, or differ from normal shapes.  
**Causes:**

- Immature shell gland
- Disease: Avian influenza NDV, infectious bronchitis, Egg Drop Syndrome 76
- Stress
- Overcrowding



**White Banded Eggs**  
If two eggs come into contact with each other in the shell gland pouch, normal calcification is interrupted. The first egg retained in the pouch will have an extra layer of calcium seen as the white band marking.  
**Causes:**

- Stress
- Changes in lighting



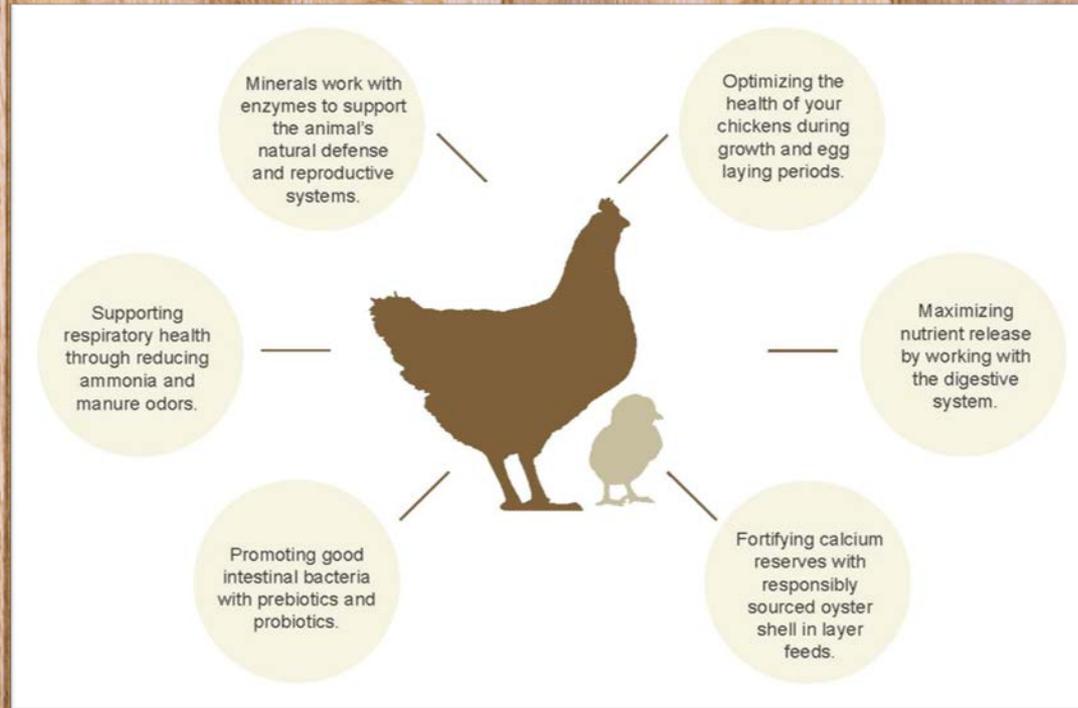
**Slab-sided Eggs**  
The second egg that enters the shell gland pouch is not as complete as the first egg and is flattened where the eggs made contact.  
**Causes:**

- Stress
- Changes in lighting
- Disease



# Elk Grove Milling COOP MIX™ Feeds

Formulated to cover the nutritional needs for healthy hens and good egg shell quality throughout the egg production cycle.



FORMULATED WITH  
**Altech**<sup>®</sup>  
SOLUTIONS



# Healthy Chickens are Happy Chickens

Knowing your flock to keep your chickens healthy and happy.



# Know your Chickens

- Pay attention to your chickens appearance and normal routines
- Watch for:
  1. Swollen sinuses, nasal discharge
  2. Swollen comb or wattle
  3. Inactive birds
  4. Swollen feet or legs
  5. Loose manure
- Keep rodents and wild birds away from your chickens to limit risk of illness

**If symptoms occur call your county ag extension service or a veterinary immediately!**





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