Alltech





QUALITY PROBLEMS



Pale-shelled Eggs

The dearee of brown colour in the egg shell is dependent on the quality of pigment in the cuticle deposited onto the shell.

Causes:

- · Infectious bronchitis
- Bird age: higher incidence in older hens
- · High stress in the flock
- Egg Drop Syndrome 76
- · Use of chemotherapeutic agents, e.g. sulfonamides and nicarbazine



Lilac Eggs/ Pink Eggs

The egg appears to be a pink or lilac colour because of the association between the cuticle and an extra calcium layer.

Causes:

- Stress
- Excess calcium in the feed



Dirty Eggs

Causes:

All or part of the egg shell is stained by faeces. Feed ingredients which can cause wet and sticky droppings should be avoided.

Wet-droppings

- High indigestible compound in feed
- Poor aut health
- Electrolyte imbalance/ saline water



Blood Stained Eggs

Smears of blood are more common on eggs from pullets in early lay. These eggs become contaminated by blood from a prolapsed cloaca, cannibalism or vent pecking.

Causes:

- · Pullets are over-weight or coming into lay Sudden large increases in day length
- · Poor hygiene in cage, trays and belt pick-up system



Shell-less Eags

The eags are laid without a shell layer and are only protected by the shell membrane

- Immature shell aland
- Disease: Newcastle disease, infectious bronchitis, avian influenza, Egg Drop Syndrome 76 etc.
- Inadequate nutrition: calcium, phosphorus, manganese or vitamin D₃



These are eggs that are laid with an incomplete shell. A thin layer of calcium is deposited on the shell

Causes

- · Excess phosphorus consumption
- Heat stress
- Bird age: higher incidence in older hens
- Saline water
- Mycotoxins



Cracks

This problem could range from hair line cracks to star cracks to large cracks that result in a hole in the shell

Causes:

- Heat stress
- Saline water
- · Bird age: higher incidence in older hens
- Poor nutrition, especially calcium and vitamin D₃
- Mycotoxins



Corrugated Eggs

These eggs are characterised by a very rough and corrugated surface. These are thought to be produced when there is an inability to control and terminate plumping.

Causes:

- Inherited
- Newcastle disease or infectious bronchitis
- Excessive use of antibiotics
- Excess calcium consumption
- Copper deficiency



Wrinkled Eggs Wrinkled eggs have thinly creased and

Causes:

- Stress
- Disease e.g. Infectious brochitis Defective shell gland
- Over-crowding

wrinkled surfaces.



Pimpled Eggs Small lumps of calcified material

appear on the eag 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 These type of eggs have an extra layer

of calcium all over the eag or on just one end of the egg.

Causes:

- Defective shell gland Disturbances during calcification
- · Poor nutrition, e.g. excess calcium



Calcium Deposits

White colour irregular shaped spots deposited on the external surface of the shell.

Causes:

- Defective shell gland
- Disturbances during calcification
- · Poor nutrition, e.g. excess calcium



White Speckled Eggs Similar to calcium deposits, except

that the speckles are smaller and may be laid down either before or after the cuticle is formed.

Causes:

- · Defective shell gland
- Disturbances during calcification
- · Poor nutrition, e.a. excess calcium



Brown Speckled Eggs Similar to white speckled eggs, except spots are pigmented brown.

Causes:

- Defective shell gland
- Disturbances during calcification
- Poor nutrition, e.g. excess calcium



GLAND A process called "plumping" occurs where water rich with electrolytes enters the albumer and the formation

of the mammilary cores commence.

POUCH The egg shell is formed and the

pigmentation process occurs.



The isthmus produces the fibres that make up the inner and outer shell membranes.

The process of egg formation in

OVARY (left) Ovulation process releases volk or ova into the left oviduct.

The yolk is captured and the formation of the perivitelline membrane and

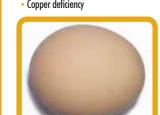
chalazae occurs. In breeder birds,

fertilisation occurs in this section.

INFUNDIBULUM

a hen's oviduct and the time an eag spends in each section

> VAGINA/ CLOACA The egg is laid via this section.



Mottled Shells When placed in front of a light source, the translucent areas of the egg appear mottled or glassy as a result of the failure of the shell to dry

Causes:

out quickly.

- High humidity in the shed
- Disease and mycotoxins
- Manganese deficiency Over-crowding

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

- · Incorrect lighting
- Stress
- Bird age: higher incidence in older hens Over-crowding



Broken and mended In this case, a diagonal break occurs during formation and is mended again before lay.

Causes:

Stress during calcification



differs from the normal shape and size is too small or large, round instead of oval or has major changes in the shape.

• Immature shell aland

- Disease: Newcastle disease
- infectious bronchitis laryngotracheitis, Egg Drop Syndrome 76, etc.
- · Over-crowding



White Banded Eggs

These eggs are the result of two eggs coming in contact with each other in the shell gland pouch. At this point, normal calcification is interrupted and 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 Disease



Slab-sided Eggs

The slab-sided egg is the second egg that enters the pouch. The second egg is not as complete as the first egg and is flattened at the point where the eggs made contact.

Causes: Stress

- · Changes in lighting
- Disense



Tel: + 353 1 8252244 | Fax: +353 1 8252245

For more information email PoultyAdvantage@alltech.com or visit www.alltech.com/poultry



