INFO SHEET

Broodiness in Turkeys

Hybrid
A Hendrix Genetics Company

info.hybrid@hendrix-genetics.com
www.hybridturkeys.com

Question: What is broodiness?

Answer: The urge for a hen to want to sit on eggs until they hatch.

It is a fact that all breeds of today's turkey hens still go "broody".

In the wild, the turkey hen lays a clutch of eggs (10- 14) from approximately mid-April on, depending on the latitude of the location. Once she has laid these eggs, she gets the natural urge to sit on them (prolactin levels in the blood change.) At that time, she stops laying more eggs and dedicates herself to sitting on them (she lays only one clutch). After 28 days, the eggs hatch and the poults grow to maturity.

After the longest day of the year (June 21), day length gradually decreases. The young birds are then approximately 7–8 weeks old. Decreasing day length ultimately causes a molt after approximately 3 weeks of light reduction. The bird is then 10–11 weeks old—feathers fall after approximately 6 weeks. At 12–14 weeks of age, the bird enters a juvenile molt. Some feathers drop and the bird grows new feathers while laying fat on the fat pads to prepare them for winter. This process is completed by the end of October.

Lengthening days in the spring cause photostimulation of the hen, causing hormonal changes and, eventually, egg production. The bird is now approximately 11 months old. Unfortunately, we now live in an "instant world" in which everything must be done faster. Economics dictate that we must speed up the process of lay. We, of course, are not happy with the lengthy "natural" process and have decided to manipulate it. We have created situations in which the bird is tricked into believing that she should start to lay eggs in September or December (or whatever month we choose), thus disrupting her natural lay pattern.

Of course, she still has a natural tendency to broodiness and we must influence that behavior in such a way as to offset the start of broodiness. Instead of increasing lights gradually, we do it suddenly, thereby starting egg production in a uniform way. However, after the hen has laid a clutch of eggs (10-14 eggs), she stills want to go broody.

Husbandry skills are essential to achieving effective broody control. The barn operator should be sensitive to the behavioral changes of his/her flock. Not all employees recognize this, so training is essential!

Turkey Broody Control

Hybrid believes that the term broody "control" is a misnomer. Once a bird has gone broody, it is too late to "control" the situation. Therefore, we prefer to speak about broody "prevention", and to work with "potential broodies" to stop the problem before it begins.

The "Potential Broody" hen is very difficult to identify since she has no consistent pattern of behavior. Identifying the "Potential Broody" must start in the first week of production rather than waiting until the flock reaches peak production. Some hens will defend their nest, indicating broodiness, while others want to defend their nest out of instinct, so this activity does not necessarily indicate broodiness.

Normal broodiness occurs after the hen has laid its first clutch of eggs in comfortable and familiar surroundings. However, this may vary depending on weather and management applied. If her routine is changed and she is forced into different surroundings, she will often lose her tendency to sit on the nest and continue to lay. Skillful broody management requires a system that will "break up" potential broody hens quickly, without creating a molt or damaging the rest of the flock. The importance of adapting a workable broody control program cannot be over emphasized to the producer and their employees. An appropriate broody program will always be a good investment towards the profitability of a breeder flock.

Be careful not to overstress your flock as you can damage good layers by working the birds too hard in an effort to control broodiness.

Remember a true broody hen (a bird which will not break [overt] or is tight) generally is beyond repair and should be separated from the flock and preferably sent to slaughter.

Symptoms to Recognize a Broody Hen by:

- Increased nesting time
- Ceasing of egg production
- Aggressive protection of her nest (i.e. picking)
- More vocal behavior (hissing)
- Reduced feed consumption
- Birds move stiffly and slowly when disturbed

Symptoms of broodiness which cannot be readily recognized by the barn operator:

- Increased blood prolactin levels
- Ceasing of ovulation
- Regression of the ovaries
- Some broody hens do not show evidence of broody symptoms

Factors that Promote Broodiness:

- Hot weather (time of year)
- Lack of uniform lighting
- Low light intensity
- Not gathering eggs often enough
- Letting hens sit on eggs (i.e. at night)
- Lots of obstacles and corners in the pen
- Not removing hens from the nest after each collection
- Not starting broody control early enough
- Premature squatting of breeder replacement hens
- Floor layers

Methods of Addressing Broodiness

- Management
- Hen "training" begins when the hens are light stimulated
- Tie nest fronts open, if possible, until the flock reaches 50% production or hens are "doubling up" in one nest
- Use nest bedding that is different from floor litter
- Remove straw piles, gates or anything that might form a corner to stimulate nesting on the floor
- Uniform light throughout pen will prevent dark corners
- Put hens that show floor laying habits in a nest to train them where to lay eggs
- Collect floor eggs before and after each nest collection
- Collect the egg first, and then push each hen completely off the nest at each egg collection
- Gather eggs often (7–9 times per day; even more frequent with automatic nests)
- Design pens so entrance doors do not form a corner in which hens can lay or go broody
- Never decrease lay length while hens are in production
- A gradual increase in day length, after peak production, is recommended to a maximum of 17 hours
- With automatic and conventional nest systems, close traps in the evening and use drop curtains in front of nests to assist in moving potential broodies to the broody pen

Broody Pen Design

- Allow 10% of barn space or ½ sq ft.(0.05 m^2) per hen housed
- Double light intensity as compared to main laying pen
- Use same day length as main laying pen
- Have fresh feed and cool, clean water in all pens
- Ventilate to a minimum of 1.5 cfm/lb (5.6 m^3/ hr/kg) body weight
- Use floor litter which is different from laying pen (sand, pea gravel, shavings, rice hulls, etc.)
- Adequate doors for easy moving of hens from one pen to the other
- Tights and culls are kept in separate pens (never put with potential broodies)

Three Pen Method

- One hour before lights off—make last egg gathering, pushing all hens from nest
- One half hour before lights go off—remove all hens that have returned to the nest, as potential broodies, and place in 1st broody pen
- The first night—hens stay in the first broody pen overnight
- The next day (10:00 am)—move hens from pen 1 into pen 2
- The following day (10:00 am)—move hens from pen 2 into pen 3 (squatters are not broody, so each day remove them to laying pen)
- The last day (10:00 am)—return remaining hens to laying pen

- For maximum results, use the above system to pull potential broodies seven days per week (Remember—squatters are not broody, so each day move them from the broody pens to the laying pen).

Pen Switching Method

- Use this method when daily broody pull needs assistance (i.e. potential broodies are becoming too numerous)
- Pen switching can be very beneficial because it introduces a new environment to a potential broody
- Normally pen switching is done on the day of insemination
- Pen switching too early in production may negatively affect egg production
- Best results are achieved if this method is implemented after 5 weeks production
- In barns with nests around the perimeter and the barn is divided in the middle, switch all hens from one end of the barn to the other
- In barns with the nests lengthwise down the centre of the barn, switch the hens from side to side
- In barns with nests down the centre of barn and the barn is divided into quarters, switch the hens one quarter at a time

Painting with Food Colouring Method

- Mix 1½ oz of food colouring with 15 oz of water, and put in hand held spray bottle
- At 9:00 a.m., Paint all hens which are on the nests
- At 3:00 p.m. (or 6 hours after painting the hens), remove all painted hens still on the nest to the broody pen, as they have spent the whole day on the nest — an indication of broody tendencies

Floor Broodies

The definition of a floor broody is a hen that has used the floor for a nest, instead of using a nest box, and after laying a clutch of eggs has decided to become an incubator to hatch whatever eggs she can collect under her. These hens are extremely dangerous as they will teach good hens to come and lay their eggs beside them on the floor.

The key word is "PREVENTION".

Floor Broody Prevention Techniques:

- After light stimulation in the laying barn, walk the floor and use flag sticks to keep hens away from walls and corners every 30 minutes
- At the onset of lay, put the first eggs laid on the floor into nests to help encourage hens to use the nests
- Hens showing signs of floor laying should be physically put in a nest
- Paint suspected floor broodies with food colouring at 9:00 a.m. If they are still in the same spot 6 hours later, remove them and treat as normal potential broodies
- It is crucial that a proper lighting schedule and "dark out" techniques are used in the conditioning phase of a hen's life, so the flock will come into production evenly. A flock which has prematurely lit turkeys will be more prone to floor broodiness

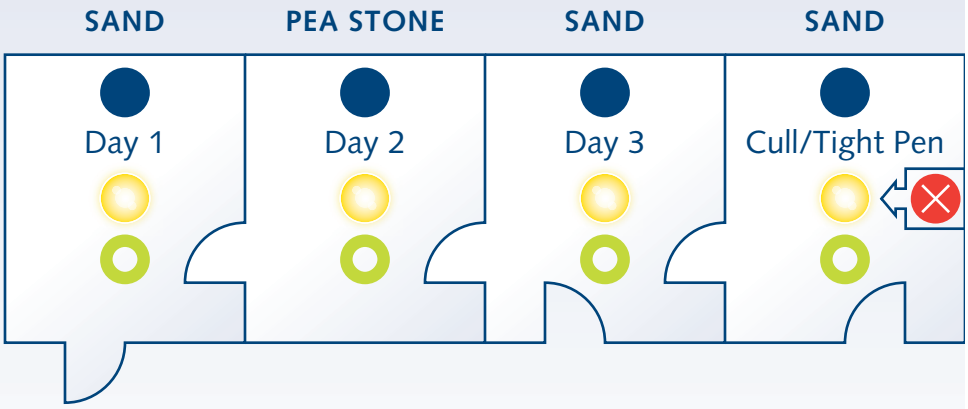
"Potential Broody" Treatment

There are many systems used throughout the world to address the "Potential Broody" problem. The diagram below illustrates a system that Hybrid has found to be very effective.

Next to disease control and disease prevention, the control of broodiness is by far the single largest factor that affects the final profit picture of a healthy laying flock.

Typical broody pen layout:

Pen 1: Dry Sand
Pen 2: Pea Stone
Pen 3: Dry Sand
Cull/Tight Pen: Dry Sand



Feeders

Waterer

Ventilation — move ample fresh air through the broody pens

Light intensity — should be double the main laying pen intensity
Light duration — same as laying barn

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