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BROILER TIP . . .

MANAGEMENT PROCEDURES TO REDUCE INFECTIOUS PROCESS (IP)



Infectious Process/Inflammatory Process, commonly known as IP, is a form of cellulitis in which inflammation occurs between the skin and muscle tissue. Before IP can be controlled, it is important to understand the underlying factors that contribute to the condition. One common factor among IP incidents is injury to the skin. The skin is the first line of defense against bacterial infections. It is generally accepted that most cases of IP are a result of a scratch or other injury that produces a skin tear allowing bacterial infections to form. While several organisms have been found associated with these lesions, *E. coli* are the bacteria most commonly found. The key to preventing this condition from developing is to manage birds in a way that reduces scratching and to maintain environmental conditions that minimize bacterial challenge from the litter. Below are some common management procedures that can be taken to help prevent IP.

PUTTING KNOWLEDGE TO WORK

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1. **Keep Birds Spread Evenly Throughout the House.**

There are many reasons why it is important to keep birds evenly distributed throughout the house. Not only does this help distribute bird heat, making it easier to maintain proper bird temperatures, but it also helps maintain better litter quality. It is critical to use migration fences throughout the year to keep birds evenly distributed. When too many birds get in one section of the house more moisture is added to the litter in that area and there is more competition for feeder and drinker space that can increase the incidence of scratches. Birds have sharp claws and thin skin, so when they crawl over each other or get too crowded it is relatively easy for a scratch to occur. Utilizing two water meters to monitor water consumption in the front and back of the house

[\(Poultry Housing Tip, July 2002\)](#) is a way to monitor bird distribution. House environmental controllers have the ability to accept multiple water meter inputs making it easy to monitor daily water consumption.

2. **Avoid feed outages.**

Feed bins should be checked routinely to evaluate the amount of feed available. Depending on when the feed outage occurs during the flock growout and how long the birds are off of feed, differences in body weight may never be observed. However, birds will crawl over each other in an attempt to access the feed when the feed pans begin to refill resulting in elevated incidence of scratches. This increases the likelihood that diseases such as Gangrene Dermatitis and IP will occur in the flock.

3. **Maintain good litter quality.**

Adequate ventilation is needed to control moisture in the house. This improves litter and air quality. Good litter quality will help keep bacterial populations in the house in check. If the litter becomes too wet, it is possible that bacterial populations, such as *E. coli*, will increase, thus elevating the challenge to the bird's immune system. Ammonia is a stressor on the bird that not only impacts weight gain and feed conversion, but may also impair the birds' immunological defenses, making them more susceptible to bacterial infections which could lead conditions such as airsacculitis and/or Infectious Process.

4. **Manage feed and drinker lines according to manufacturer guidelines.**
Feeder and drinker systems should be operated according to the manufacturer guidelines. Drinkers that are too low will result in wetter floors that will influence bacterial populations in the house and air quality. Feed lines that are too low are a possible contributor to IP occurrences. If birds can obtain feed from the pans while sitting they may be inclined to settle in these areas for long periods of time. As a result, other broilers will be tempted to crawl over these birds to access feed for themselves which will increase the occurrence of scratches.
5. **Use lighting programs to manage bird activity.**
Lighting programs have a strong influence on bird activity and feeding routines. Lower light intensity will result in less bird activity, which is also usually accompanied by less scratches. Dark periods are desirable during production, but if the dark period is too long (and this will vary among breeds and age of the bird) the birds could rush the feeders when the lights do come on. If this is suspected, dark periods should be reduced or an intermittent lighting program should be considered.
6. **Pace yourself when walking the houses.**
The pace at which a person walks a house can influence the incidence of scratches. If a person walks too quickly, birds will crowd in corners and at migration fences. This can increase skin scratches and the incidence of IP. A slow, steady pace should be used to minimize bird crowding, especially when approaching the migration fences.
7. **Observe birds during the feed withdrawal period.**
Feed withdrawal procedures may influence bird activity. Usually it is preferred to let the birds clean the feed from the pans before the feed lines are raised during the feed withdrawal period prior to catching. However, it has been observed that birds crawl over each other in attempts to access the feed pans. In these situations, it is necessary to raise the pans before they are completely empty. Lighting programs during feed withdrawal are critical and light period or intensity should not be changed during this period. One example that occurred a few years ago was where the light intensity was increased in an effort to make the birds clean the pans in a shorter period of time. While that objective was reached, the downside to the plan was an increase in the incidence of IP due to scratches that occurred due to increased bird activity associated with the increased light intensity. It is possible for some of the initial stages of avian cellulitis to form in as few as 6 hours. As a result management up to the point the birds leave the house is important.
8. **Litter cleanout and windrowing can be effective.**
Research has shown that it is difficult to remove the organisms that cause IP, such as E. coli, without a complete clean out and disinfection. It is important to remove the litter from the farm to ensure that darkling beetles do not carry the bacteria with them as they migrate back into the houses. Down time between flocks does not alleviate the IP problem alone. Adequate downtime between flocks combined with complete clean out and disinfection has been observed to be more effective. Another strategy that has shown to be successful is windrowing litter. Windrowing the litter in the middle of the house to heat the entire pile has shown to reduce E. coli numbers as long as the heat generated is high enough.

Infectious Process is not a disease that is passed from bird to bird and it usually is not associated with increased mortality. It is common for a person to not realize that their birds even have an IP problem until they are processed. If a farm routinely has an IP problem, the producer is encouraged to work with their broiler flock supervisor to investigate whether some of the management issues discussed above can be applied to improve flock performance and reduce the incidence of IP.



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****Consult with your poultry company representative before making management changes.****
"Your local County Extension Agent is a source of more information on this subject"