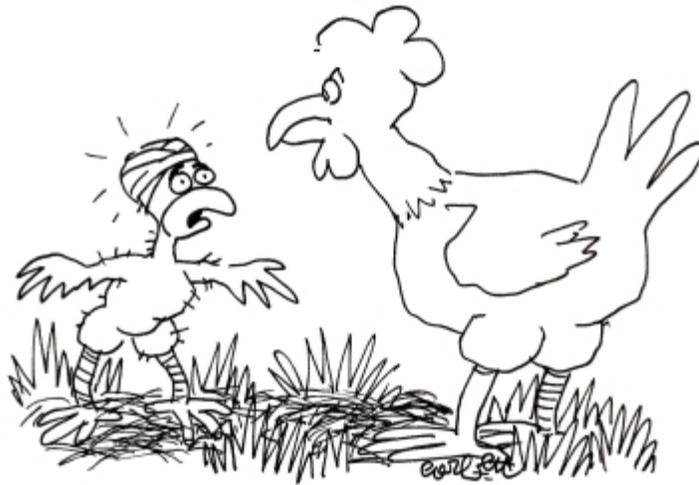




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## **Cannibalism in Poultry**

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# Are Your Birds Hen-Pecked?

## Pecking and Cannibalism in Poultry

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Pecking and cannibalistic behaviour are considered serious welfare and economic problems to poultry producers world wide. Pecking is a natural expression of dominance in poultry flocks. Dominant birds will peck at the submissive members of the flock or its cage mates. Unfortunately, pecking can also be a learned behaviour and is enhanced by the flock observing other birds engaging in the behaviour. Aggressive pecking, which causes beak inflicted injuries, can lead to cannibalism.

Cannibalistic behaviour occurs throughout the animal kingdom in wild and captive populations. In the wild, the adaptive function increases an individual's fitness by providing nutrients and reducing competition for resources. In captive situations, it is perceived as an abnormal behaviour and its underlying causes are poorly understood. Cannibalism is one of the main causes of mortality in laying hens. Often a very aggressive hen will kill all of its cage mates until it is the only one left.

The types of pecking in poultry are described below.

**Toe Pecking.** Toe pecking is sometimes widespread amongst young chicks and is often the result of inadequate feeder space or the inability of the chick to find feed. The active chick will peck at its neighbours' toes and sometimes even its own toes. While toe picking may not lead to significant injury in chicks, it can in adult birds.

**Feather Pecking.** This is a habit forming trait that can be instilled in other birds, resulting in the entire flock becoming affected. It can be common in caged flocks or those kept in close confinement, resulting in the lack of sufficient exercise. Feather pecking resembles feed pecking or exploratory pecking, which is usually directed towards the head of the bird. Feather "licking" causes no apparent damage to the feathers and is considered normal exploratory behaviour. Aggressive feather pecking is an abnormal behaviour and is more persistent. It can result in ragged looking feather shafts and feather loss. Feather loss is the most serious, as it leaves the skin exposed to physical injury and heat loss. Physical injury results in blood loss and can lead to cannibalism. Poorly feathered birds will need to consume more feed in order to generate heat. The most common feather pecking targets are on the back, rump and tail areas.



**Figure 1:** A victim of cannibalism (Source: [http://www.poultryhub.org/index.php/Minimising\\_cannibalism\\_using\\_innovative\\_beak\\_trimming\\_methods](http://www.poultryhub.org/index.php/Minimising_cannibalism_using_innovative_beak_trimming_methods))

**Head Pecking.** Head pecking is often seen in overcrowded, young flocks, where the combs and wattles are the main targets.

**Vent Pecking.** Vent pecking is the most severe form of cannibalism. It is generally seen in high-production layer flocks or young overweight maturing hens. Layers with a history of some other pecking problem can also start vent pecking. The target area includes the vent or the region of the abdomen several inches below the vent. A prolapsed oviduct and tearing of the tissues by the passage of an abnormally large egg are two predisposing factors. Vent pecking can result in anemia due to blood loss. A prolapsed oviduct is usually permanent and results in other birds pecking until the affected bird bleeds to death. Affected birds need to be culled from the flock.

### **Causes of Pecking and Cannibalism**

Signs of pecking include uneasiness in the flock and shyness in some birds. There is a positive correlation between the amount of feather pecking damage sustained and the fearfulness of the flock. There are several causes of pecking and cannibalism that it is hard to pin point the exact cause. Nutrition and poor management are the most common triggers.

#### Nutrition

The absence of feed or water, or a shortage of water and feeder space can cause pecking and cannibalism. Ensure you have the proper amount of feeder space per bird and the correct ratio of drinkers to birds. Birds that have limited access to food will fight for access to it or if they are always hungry will increase their incidence of pecking. Hence, they require access to food and water at all times. Breeder flocks are often restricted access to feed to control their weight for optimal production and hence have higher incidences of pecking.

Nutritionally unbalanced diets can also cause pecking in poultry. Feather pecking has been linked to protein, methionine, sodium and phosphorus deficiencies. High sodium diets can also cause pecking. Extremely high energy and low fibre diets cause extra activity and

aggressiveness in poultry. Higher fibre diets will keep the crop fuller for a longer period of time, making the birds more content and less prone to pecking. Several studies have shown that feed form can also affect pecking and cannibalism. Crumbs are often preferred over pellet as it takes longer to consume, which means the bird spends more time foraging and has less time for cannibalism and pecking. An additional study found that layers fed a mash diet exhibited significantly lower cannibalism, fewer skin lesions, and better feather condition than hens fed the same diet in a pelleted form. Feed a diet balanced for the age and stage of production of your flock.

### Management

Social stresses, such as stocking density, insufficient nests and boredom can cause pecking and cannibalism. Follow breed recommendations and provincial guidelines for stocking density to prevent overcrowding. Housing different poultry breeds, ages, colours and sizes that have not been reared together can upset the social order of birds. Avoid brooding feathered leg fowl, crested fowl or bearded fowl with fowl that lack these traits as curiosity can lead to pecking. Some breeds are more aggressive in nature and will need control methods, such as a lower light intensity. Health stresses, such as injuries and external parasites can result in pecking and cannibalism. Healthy birds will pick on the crippled and dead ones due to social order and curiosity. This may not only cause the spread of disease, may also promote pecking and cannibalism. Abrupt changes in the environment or management practices can lead to stress and also cause pecking.

### Excessive Heat

Excessive heat can cause poultry to become aggressive and cannibalistic. Follow breeder recommended temperatures, making sure you decrease heat as birds get older. To ensure you have the correct temperature for the age of the flock, measure the temperature at the height of the birds back directly under the heat source. Do not heat the entire brooding facility – always provide cooler areas for the birds to escape the heat if they become overheated. Use equipment designed for providing heat in brooding facilities, such as infra-red heat lamps, tube radiant heaters or pancake brooders.

### Light Intensity

Extremely bright or excessively long periods of light can stress birds, causing them to become hostile to one another. The standard light intensity used in poultry housing is 5-10 lux (0.5 to 1.0 foot candles). Provide an adequate amount of light for the first few days for broiler flocks in order to stimulate chick activity and ensure immediate water and feed consumption. This will prevent early dehydration and starve-out losses. Older birds should have a lower light intensity to maintain calmness in the flock. Be cautious in adjusting the lighting program for layer and breeder flocks as they require light stimulation for egg production. Red covers over lights can be used to calm otherwise aggressive, flighty birds. Follow breed recommendations and maintain adequate light for growth and production.

## Treatment

Due to the numerous causes of pecking and cannibalism, it is often very hard to determine the exact cause. However, some sort of stress is usually the cause. If a pecking problem is noticed in its early stages, it can be held in check. If pecking is left to get out of control and leads to cannibalism, it can be very costly to the producer. Cannibalism can lower the value of the birds due to torn and damaged flesh, poor feathering and can result in high mortality. Once it gets out of hand it is very hard to eliminate. If you notice any pecking behaviour, try to correct any management or nutritional issues before it leads to cannibalism. Darken facilities by using red covers on light bulbs or red bulbs to calm the birds, and reduce the temperature slightly, if possible. Remove any badly injured birds and those that show aggressive pecking. Small flock producers can try using anti-peck ointment or pine tar on injured birds to defer pecking or provide alternative pecking objects such as straw bales, etc.

## Beak Trimming

Beak trimming is a routine husbandry procedure in the commercial poultry industry, particularly in breeding and laying hens. Its purpose is to reduce or inhibit feather pecking and aggressive pecking. The conventional hot-blade beak trimming is the preferred method, which involves the removal of part of the upper and lower mandibles with a heated blade. This is performed on chicks between one and ten days of age, with further trimming, if necessary, at 10-12 weeks of age. A recent study showed that infra-red beak trimming resulted in a less painful, more precise beak trimming method compared with the hot-blade method. While infra-red treated birds had longer beak stumps, they had excellent feather condition and reduced aggressiveness under high light intensity.



**Figure 2:** A properly trimmed beak (Source: [http://www.poultryhub.org/index.php/Minimising\\_cannibalism\\_using\\_innovative\\_beak\\_trimming\\_methods](http://www.poultryhub.org/index.php/Minimising_cannibalism_using_innovative_beak_trimming_methods))

## Prevention

Prevention is the key to avoiding pecking and cannibalism in poultry. Below are a few key preventative measures:

1. Feed a well-balanced diet that is appropriate for the age and stage of production of your flock. Provide appropriate feeding and drinking systems that provide lots of space for the size of your flock.

2. Cull your flock as needed. Practice good culling methods in your flock by walking through your flock at least twice daily to look for and remove any crippled, injured or dead birds.
3. Practice good management skills by provide adequate floor and nest space, good ventilation, proper temperature and light intensity for the age of the flock. Treat any parasitic problems immediately.
4. Have a professional trim the beaks of commercial layer flocks.
5. Provide enriched environments for small backyard flocks. Enrichment ideas include access to the outside, nest boxes and perches, providing scratch grain and fresh greens in the litter to promote natural foraging behaviour. Hang coloured strings and large 2L pop bottles filled with colour water for the birds to peck at.

## **References**

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