

# Molting and Other Causes of Feather Loss in Small Poultry Flocks

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*Many people maintain small poultry flocks for a source of eggs or meat, youth projects, or as a hobby. With proper care and attention, maintaining a small poultry flock is not too difficult once set up.*

*Small flock owners sometimes become concerned that a few of their birds are experiencing excessive feather loss. They are worried that something such as poor quality feed or disease is causing the loss of feathers. Although these factors may play a part, more often feather loss is a natural phenomenon that may actually improve the health and well being of the flock.*

## **The Feathering Process**

When a chick hatches, it has virtually no feathers. It is covered with down except for the wings and tail where some early feather growth is evident. Soon, the down lengths and the shaft of the feathers erupts. By the time they are 4 to 5 weeks old, the chick is fully feathered. Shortly thereafter the first set of feathers falls off and another set is in place by 8 to 10 weeks of age. Finally, as the bird becomes sexually mature, a third set of feathers are complete. Many of the specialized feathers of fancy breeds won't be apparent for several more months. Breed, feed, and environmental temperature affect these stages. For example, a producer shouldn't worry if a set of meat-type broiler chicks has patches of bare skin evident since this type of bird is often gaining weight faster than the feathers can cover it. Also, colder temperatures will accelerate feather growth as the birds attempt to regulate body temperature.

Eventually, the feathers of mature birds are broken or frayed, become worn away, are soiled or are pulled out. Other birds will attempt to blend into their environment by shedding colored feathers for white feathers in the winter so that predators will not easily locate them. This shedding process is known as molting. The molting

process and regrowth of feathers are controlled by the bird's hormones, which are regulated by the length of daylight or artificial light that the birds receive each day. The feathers are lost intermittently in a natural setting and the birds are never without some cover. The birds will lose old feathers and grow a new set in the following order: head, neck, body, wings and tail. As an egg production-type bird enters a molt, the hen usually stops laying and rests during this time.

Some breeds of chickens may molt over a one- to two-month period while some of the older or fancy breeds may be in molt for three to five months. The longer your birds are in molt, the fewer eggs you will get over the laying season. However, when the birds return to production, they often lay more eggs in a given time period. Also, the eggs usually have better shells and interior quality.

## **What caused the loss?**

Before becoming alarmed at the loss of feathers in your flock, first determine if the loss is due only to pecking or if the feathers are actually missing. If the result of pecking, the feathers will appear broken and frayed. Sometimes, only the quill will remain. Extreme pecking may often lead to cannibalism which is common in mixed farm flocks.

If the birds are simply in molt, you should be able to locate new feathers emerging from their sheaths over different sections of the body. Because birds usually molt when the day length decreases, feather loss during the fall is generally the result of a molt.

### ***What to do?***

If the loss of feathers is due to pecking, the cause should be determined immediately before a loss of the bird or egg production occurs. Pecking can be the result of boredom or overcrowding. Reducing the stocking density and providing something for the birds to peck at should reduce pecking from bird to bird.

Mites or other external parasites may be infesting the birds causing irritation. Mites can sometimes be seen around the vent area or under scales on the legs. If mites are present, the entire flock and facilities should be treated to eradicate them.

Sometimes, increased pecking is caused by a high light intensity. Reduce the intensity in the flock's house by using a lower watt bulb or a dimmer.

An inadequate diet may also lead to feather problems.

However, small flocks fed a balanced ration from a commercial supplier rarely experience poor feathering due to feed problems.

In a natural setting with mature roosters present, some of the females may exhibit "barebacks" which are the result of the mating process. Excessively heavy males or too many males may increase the incidence of barebacks. These males may need to be separated or culled from the flock. The feathers on these hens will grow back shortly or during the next molt.

If the feathers appear to be missing in a distinct pattern and it is during the fall, your flock is probably molting. Another sign is a gradual decrease in egg production. Since this is a natural process, there is no cause for alarm because the hens will soon return to production at a higher rate with better quality eggs.

To prevent your flock from molting and keep them laying, the general rule of thumb is to provide a combination of natural daylight and artificial light equal to the longest day of the year. This is about 16 hours in Kansas. For example, if there are 12 hours of light

from sun up to sun down, you will need to provide an additional four hours of artificial light in the hen house to keep your flock from molting. If you allow the number of hours to decrease, the flock will probably begin to molt. An inexpensive timer that comes on at a set time then goes off as the sun rises can be used to control the day length. But remember, egg quality and percent egg production decrease gradually if a flock is not allowed to molt.

Most commercial egg operations induce a forced molt. This is done by decreased light exposure and limiting feed intake. The molted hens will then be more uniform once they return to egg production. However, because this technique can be difficult, flock owners should consult with an extension specialist before attempting to force their flock to molt.

### ***Summary***

The loss or lack of feathers in a small flock doesn't necessarily indicate that problems exist. After proper diagnosis and corrective measures, the flock should rapidly recover and return to peak production and plumage condition.

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