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The Home Laying Flock, Part II *Management*

This NebGuide contains management suggestions pertinent to the home laying flock.

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NebGuide G81-541, *The Home Laying Flock, Part I: Getting Started*, provides information on the early decisions, housing, equipment and some management procedures related to these topics. This NebGuide covers other management suggestions pertinent to the home laying flock.

Litter

Start with four inches of a moisture-absorbent litter such as wood shavings. Keep the litter dry and in a loose, uncaked condition. Wet litter causes dirty eggs and increases the risk of disease problems. Preventing water spillage and leaks and providing proper ventilation will keep the litter in good condition. Stir the litter when it becomes damp and packed. Remove any wet spots and replace with fresh litter.

Feeding

Twenty-five light breed hens in good production will eat 5 to 7 pounds of feed per day. The home flock owner will probably get the best results by feeding a complete commercial layer feed that contains 15 to

16 percent protein. If local or home-grown corn or milo is available, you may want to mix your own feed by combining a commercial protein, vitamin and mineral concentrate with ground grain. Follow the manufacturer's recommendations as to the ratio of grain and concentrate to use. However, a fairly large volume of feed must be mixed to make this more economical than purchasing a complete feed. Some producers think they would like to mix their own total formula, but this creates some problems for the small flock owner that make the idea impractical. It requires a very large volume of feed to justify buying and storing even small quantities of vitamins, minerals, protein sources and medicants for poultry.

Feed represents the major expense item in egg production. It is at least 60 percent of the total cost of producing eggs. If the formulation used is not correct, the cost will be even higher. It is very easy to make a change in the formula birds are fed, thinking it is a way to save money when, in fact, it may cause the hens to eat more feed or lay fewer eggs or both. Check with a nutritionist before you try something different.

Fresh waste products from the kitchen may be used to supplement the hen's regular diet if done correctly. Once a day, feed only what the flock will eat in five to 10 minutes. It is very important not to overfeed this type of feed and to also remember that some kitchen scraps, such as onions and fruit peelings, can cause off-flavor in eggs.

Management and Sanitation

All houses and equipment should be thoroughly cleaned and disinfected before new birds are housed. Sanitary practices should be continued throughout the life of the hens. Clean and fill water fountains with fresh water at least daily. Remove wet or moldy feed from the feeders when it occurs. Wet litter should be removed and replaced. Clean droppings pits or roost areas when holding facilities fill with droppings, or if water gets into the manure, or if there is a serious buildup of the fly population.

Control disease carriers such as wild birds, rodents and insects. Young birds are susceptible to diseases carried by old birds and should be kept in separate facilities. Remove and bury or burn sick or dead birds from the flock as soon as they are found.

The layer flock should be culled frequently to reduce feed costs and eliminate possible disease carriers. Non-layers will have shrunken, pale, hard combs and wattles. Their body size will usually be small, their vents shrunken and dry, and the pubic bones close together and may be covered with fat. When a hen stops laying, yellow pigmentation will return to the vent, eyering, earlobe, beak and shank in that order.

Good management and sanitation practices are essential to flock health. Provide plenty of water, feed and floor space, as well as proper temperature and adequate ventilation. A well-balanced diet properly fed will help maintain disease resistance in the flock.

Vaccinations

Most vaccinations are given when birds are younger than 20 weeks. All chickens should be vaccinated for infectious bronchitis and Newcastle disease. Fowl pox vaccine can be used if there has been a problem in your area. Commercially grown pullets are normally vaccinated for these diseases plus Marek's disease. Vaccination for Marek's is done at the hatchery. If you buy started pullets, it is important to check to be sure they have been vaccinated properly. If you grow your own pullets from day-old, it is important to follow a well-planned vaccination program. You may want to request

assistance from your county agent to plan such a program.

Parasites

Mites and lice are the most common *external* parasites found on chickens. Periodically examine the roosts and nests for mites, and the birds under the wings and in the vent area for lice. These bugs are very small, but are visible if you look carefully. They can be controlled with pesticides, such as malathion and Sevin, but be sure to follow instructions and never use a pesticide that is not cleared for use on or around poultry. *Read the label!*

The primary *internal* parasites of poultry are roundworms, cecal worms, and capillary worms. Good sanitation and management will help prevent and control worms. When treatment becomes necessary, consult a specialist and use a worming compound recommended for the specific worm involved.

Fly Control

Fly control is important both from the standpoint of the poultry operation itself and for maintaining good relations with neighbors. In most cases, fly problems are brought on by poor management of litter or droppings. Wet manure provides an excellent breeding area for flies. Keeping the litter and manure dry will help control flies, odors and diseases.

Cannibalism

Birds are naturally cannibalistic, and this tendency is increased when they are confined or placed under stress. It can be caused by overcrowding, insufficient feed or water space, inadequate diet, improper temperature or the sight of blood on another bird. Once the habit is developed, the only way to effectively control the problem is by debeaking. This reduces the birds' ability to do damage but does not stop the tendency toward cannibalism.

Debeaking can be done by removing a portion of the upper beak only. With an electric debeaker, remove approximately half of the upper beak and cauterize the cut with the hot blade. In a small flock, debeaking can be done with a sharp knife or toe nail clippers, but the beak must not be cut deep enough to cause bleeding.

Egg Handling

Eggs should be gathered at least twice each day. More frequent gathering is recommended during hot or cold weather. When eggs are allowed to accumulate in the nest, they are more easily broken by the hens. This encourages egg eating which is another habit that you don't want to develop. Dispose of any hen that learns to be an egg eater.

Dirty eggs should be cleaned (dry or washed) as soon after gathering as possible. If washed, an egg washing compound should be used in water at 110 to 115°F. The eggs should then be rinsed in water that is 5°F warmer than the wash water. It is better to leave eggs dirty than to wash them in cold water. Eggs should be dried, placed in clean cartons and refrigerated at 50 to 55°F as soon as possible after gathering and cleaning. Separate cracked and dirty eggs from the other eggs.

Eggs sold to retail stores must be candled and graded according to State standards. The producer must obtain a license from the State Department of Agriculture to legally sell through stores. However, the producer can sell to a wholesaler or directly to a household customer without grading or candling.

Natural Molting

Molting is a normal process of feathered species. Wild birds usually shed and renew old, worn plumage before the beginning of cold weather and their migratory flights. Since they lay only a few eggs, molting and reproduction are not usually associated.

Domesticated chickens bred for high egg production have a different molting pattern. A natural molt does not normally occur until the end of an extended, intensive laying period. Chickens that have been laying heavily for one year or longer molt easily in the fall since this is the natural molting season. If they finish their intensive year in the spring, they do not molt easily and may wait until the fall.

A chicken loses feathers from various sections of its body in a definite pattern. The order is: head; neck; feather tracks of the breast, thighs and back; wing and tail feathers. Some birds molt more slowly than others; some molt earlier. A good high producing flock tends to molt late and rapidly.

Decreasing day-length is the normal trigger for molting. Therefore, lighting programs for egg production flocks should provide either constant or increasing day-length. Stresses caused by temporary feed or water shortage, disease, cold temperatures, or sudden changes in the lighting program can cause a partial or premature molt.

Force Molting

Force molting is a method of extending the productive life of a laying hen. It forces her to take a vacation and come back ready to go. Force molting causes production to stop and body weight to be reduced. Properly molted hens can be returned to good levels of production in seven to eight weeks. Molted hens will seldom reach the high levels of production received from pullets, but will peak five to eight percent below the original level.

The most common approach is to force molt once after the hens have been laying about 14 months. They can be molted at this time and sold after 21 to 22 months from first lay.

The force molting procedure has been used as many as three times in the life of a flock. When three molts are planned, the first one is usually done after the hens have been laying for 12 months, the second after 18 to 19 months from first lay, and the third after 22 to 23 months. The hens are then sold after 26 to 28 months of production. This many molts for one flock can only be successful with the very best of hens. It is not recommended until after you have had some experience with force molting.

Two other alternatives are to molt twice in the life of a flock or not molt at all. Each molt can be expected to extend the productive life of the flock from four to six months. This assumes that the hens stay healthy and force molting is done properly.

In general, flocks that perform well as pullets perform correspondingly well as molted hens. Flocks that produce poorly during the pullet year stand a better chance of equaling or bettering their first-cycle egg production. However, this will be at a lower level than high-performance flocks.

Cost and availability of good replacement pullets, egg prices, fowl prices and success with force molting are some factors that need to be considered in the use of molting. Home flock owners tend to keep hens until production is very low. Force molting might improve performance if hens are going to be kept for longer than 14 months of lay. Whether or not a flock owners uses force molting depends on an evaluation of its merits under particular conditions. Some flock owners may find it never pays and

others may profitably molt every flock on a routine basis. Because of the wide range of circumstances that can influence the decision, it is unwise to make general statements recommending continuous use of the practice or, on the other hand, to completely condemn its use.

Force Molting Procedure

Many procedures for force molting are available. There is not enough space in this NebGuide to discuss them all. Most of these procedures have a common way to induce molt, which is to remove or limit light, feed and/or water. There is an endless number of versions based on the length of each phase of the program and the quality and quantity of feed given.

A good molting method is simple and easy to follow. It should not require many changes of ration. It must cause the entire flock to go rapidly out of production, and must keep it out of production long enough to allow an adequate period of rest. Finally, it should rapidly bring the flock back into production after the rest period.

The adequate length of the rest period is debatable. Most flocks are back to 50 percent production in the seventh, eighth or ninth week after the start of the molt. Rest periods as short as three weeks and as long as 12 weeks have been tried. The short molting periods do not allow adequate rest, and the longer periods keep hens out of production too long for good economics. However, there may be special reasons why the long or short molt is more useful than the normal molt.

The "California Method" works quite well in Nebraska except for cold weather molting. Adjustments needed for cold weather molting will be discussed later. The "California Method" is as follows:

For a rapid molt (return to 50 percent production in less than 6 weeks).

1. On day one, turn off artificial light in open housing or reduce lighting to eight hours in windowless housing.
2. Remove all feed for 10 days. Do not remove water.
3. Provide oyster shell during the 10 days.
4. After the 10 days of no feed, full-feed a regular laying ration and turn lights back to the normal program.

For normal molting (return to 50 percent production in six to eight weeks).

1. On day one, turn off artificial lighting in open housing or reduce lighting to eight hours in windowless housing.
2. Remove all feed for 10 days. Do not remove water.
3. Oyster shell feeding is optional.
4. Starting the 11th day, full-feed cracked grain for two or three weeks.
5. At the end of the grain feeding period, feed a normal laying ration and turn the lights back on.

For slow molting (return to 50 percent production in nine or more weeks).

1. On day one, turn off artificial lighting in open housing or reduce lighting to eight hours in windowless housing.
2. Remove all feed for 10 days. Do not remove water.
3. Do not feed shell.
4. Starting the 11th day, full-feed cracked grain for four or more weeks.
5. When ready to bring the flock back into production, feed a normal laying ration and turn the lights back on.

The only adjustment in these procedures that is important for force molting in Nebraska's weather when the temperature falls below 40°F is to reduce the severity of the feed restriction. Weather below this temperature is a stress in itself. Under these conditions, feed should be removed for no longer than five days. Three days may be adequate if the temperature is below 32°F in the house.

Hens should always be confined during the force molt period. Increased mortality can be expected and may be quite high in winter time molting. The fall season is the best for molting if your hens are in the proper stage of their life cycle.

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