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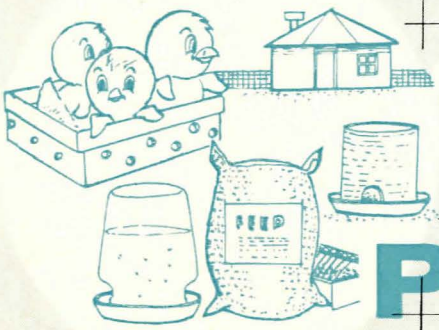
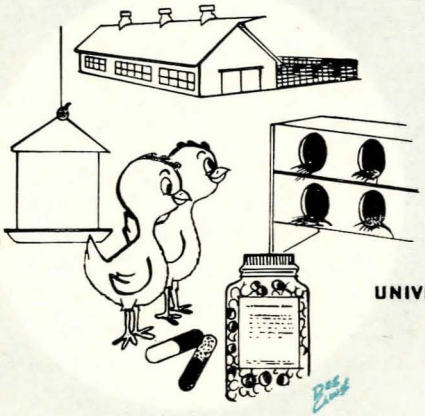
Managing the PULLET FLOCK





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Managing the Pullet Flock

By Kendrick A. Holleman
Asst. Extension Poultryman

Every egg producer has numerous decisions to make in the management of his flock. These decisions will determine the success or failure of his poultry business. In order to help poultrymen make the best decision the following questions are discussed in this circular.

1. Should I buy or raise my replacements?
2. What rearing system should be used to grow out my pullets?
3. When should I start my chicks and when should I change their housing and feeding program?
4. Should I follow a restricted or full feeding program?
5. When should I put my pullets in the laying house?
6. What should I do to keep my birds healthy?
7. Should I debeak my birds and if so, when?

Should I Buy or Raise Replacements?

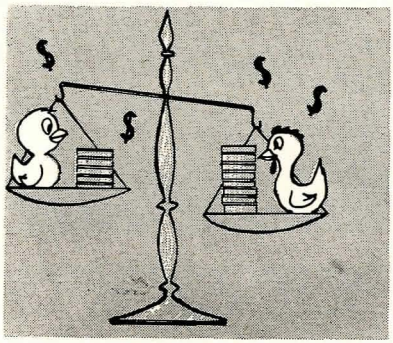
In some parts of the country, producers just getting started buy their birds ready-to-lay for the first year and raise their own thereafter. Generally, they do this to get returns from their investment as soon as possible. If they raised the birds on the farm, these producers would not receive any income for five months or more.

Larger producers sometimes find it desirable to buy replacement stock ready-to-lay because of the extra management, land, buildings, and labor requirements in raising pullets.

Cage operators find ready-to-lay pullets advantageous in that cages require constant replacements. An operator can never be sure how many replacements he will need at a given time. It is more practical for him to buy birds ready-to-lay than to run a continuous program of his own.

Under most conditions, it is desirable for the producer to rear his own replacements. He can see personally that they receive proper care and management. It is also desirable to know the background of the birds, any disease outbreak, age of vaccinations, rations, stresses, per cent mortality, and source of the chicks. Naturally, this information is best obtained when a producer raises the birds himself. When ready-to-lay birds are brought onto the premises, there is always the chance of bringing disease with them.

Pullet replacement costs need to be examined. For the most part, producers do not realize how much cost is involved in rearing pullets. Under average conditions, pullets can be produced at a cost to the producer of approximately $1.63 per bird. A breakdown of this cost is shown below.



Cost of producing a 20 week old pullet*

Chick cost	66¢
Feed cost	59¢
Labor	14¢
Housing and equipment	11¢
Vaccination and medication	4¢
Interest on investment	9¢
Total cost	$1.63

*** 1959 figures.**

Currently, ready-to-lay birds may be purchased for $2.50 each. These prices vary considerably and fluctuate with demand.

What Rearing System Should Be Used?

There has been some controversy during the past few years concerning range and confinement rearing systems. Range rearing of laying stock has been practiced satisfactorily for years. Recently, research workers have raised replacement birds in complete confinement with equally satisfactory results. Following are advantages and conditions necessary for each system.

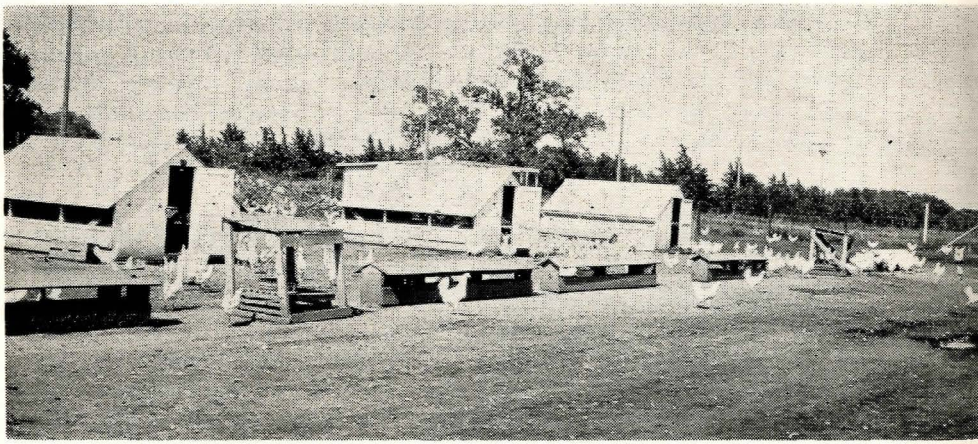
Range Rearing

Advantages

1. Inexpensive housing.
2. Reduction of cannibalism.
3. Isolation from older birds.
4. Less feed cost.
5. Slower maturing, hardier birds.

Conditions Needed

1. Acreage enough for three or four years' rotation.
2. Succulent pasture of good legumes or grass.
3. Portable range shelters, waterers and feeders.
4. Efficient, reliable labor.



Range Rearing scene showing inexpensive housing used, portable waterers and feeders.

In range rearing the birds should be moved to range at about eight weeks of age. They should be placed in range shelters (approximately 100 birds per 80 sq. feet).

These shelters should have elevated wire or slatted floors. A guard should be placed around the base of the shelter to prevent birds from reaching the concentration of droppings under the house. The birds should be confined to these shelters for the first two or three days. They may then be allowed to run free during the daylight hours, but should be confined at night for protection against adverse weather conditions and preditors.

Range birds should receive daily attention even though bulk feeders and waterers are utilized. Inspection of the flock and the premises for signs of disease, dead birds, preditors, entangled birds, and improperly functioning equipment is desirable. The ground should be used only once in three or four years. This is to keep down disease and parasite problems.

Confinement Rearing

Advantages

1. Requires less labor.
2. Utilizes mechanical equipment.
3. Can control climatic conditions.
4. Better protection from thieves and preditors.
5. Uniformity of diets.
6. Better control of sanitary conditions.
7. Can start chicks any time of year.

Conditions Needed

1. Adequate housing with two square feet per bird.
2. Deep litter.
3. Watering and feeding equipment.
4. Proper ventilation.

In confinement rearing, a conventional type laying house or a large brooder house may be used. Pullets may be grown to ten weeks of age on approximately one square foot of floor space per bird.

After ten weeks, the birds should be allowed two square feet of floor space. These birds should receive daily attention.

When Should I Start My Chicks; When Should I Change Their Housing and Feeding Program?

It is a common practice throughout the midwest for poultrymen to house their pullets in the fall. This causes a tremendous number of pullet eggs to reach the market during the fall months. Such an excessive number of any particular size of eggs will cause prices paid for them to drop.

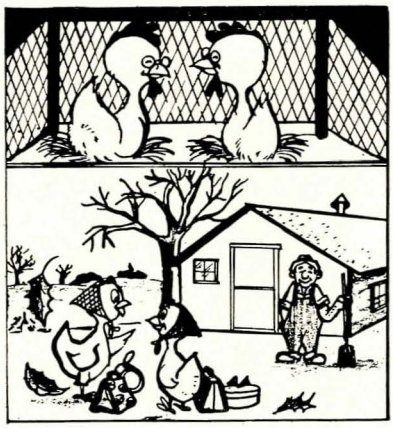
The production curves of all these birds follow about the same pattern; that is, in the summer when the birds are nearing the end of a production year, egg quality is poor, production is low and prices for good eggs are high.

The main reason for this uniform pattern of production, prices and quality is the climate. Because of the climate, poultrymen wait until warm spring weather before starting chicks. These range birds must be housed before cool weather starts in the fall.

By starting chicks in the fall and rearing them in confinement, pullet eggs will be produced when prices for such eggs are more favorable. When high quality eggs are in demand through the summer, the fall hatch flock would be at its peak of production of large, good quality eggs. It is impossible for every poultryman to take advantage of this type of scheduling, but it certainly can benefit some of them.

In the conventional spring hatch system, housing problems exist. There always seems to be a question as to which group should be in the laying house, the old hens or the pullets. The pullets should be in the house getting ready to start their production year, while the old hens are still producing good quality eggs and should remain there also. At the same time, the house should be repaired and cleaned.

These problems can be lessened by the use of summer shelters for layers. Being of pole type, single wall construction, these buildings are inexpensive and easy to ventilate. Old hens should be placed in them early in the summer and kept there until sold. This leaves the conventional laying house open to be cleaned and repaired and made ready for the pullets. The summer laying shelters are sometimes used for machinery, feed or grain storage after the old hens have been marketed.

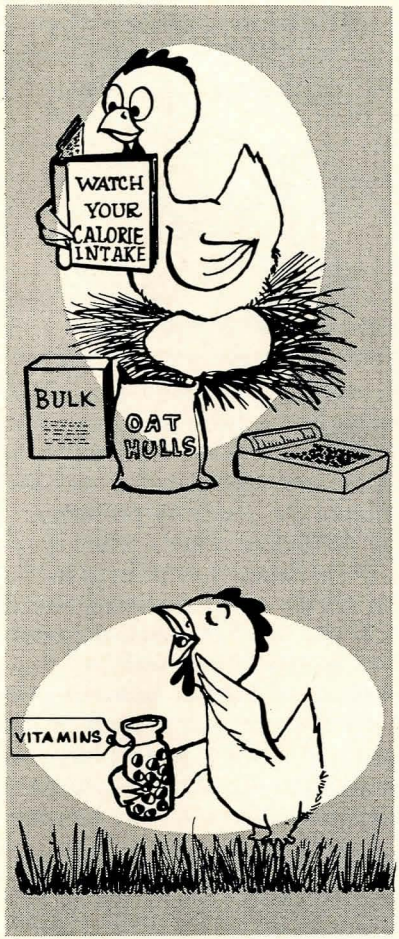


Chicks should be brooded in conventional brooding houses allowing about one square foot of floor space, about 1½ layer inches of feeding space, and about ½ inch watering space per bird. When the birds are ten to 12 weeks of age, they may be moved to the range or confinement rearing houses. These pullets should remain on the range until they are ready to lay. The birds are then ready to be moved to the laying house. Nests should be accessible to birds on range if they have started to lay.

A number of feeding programs are available to the producer. Variations in these programs usually concern the percentage of dietary protein, number of rations utilized, and major components of the ration. Basically, there are only four different feeds necessary to give complete feeding program. They are:

Type	% Protein	Time
Chick starter	20	day old to 4-6 weeks
Chick grower	15-16	4-6 to 10-12 weeks
Developer or range grower	14-15	10-12 weeks to 5-5½ months
Laying ration	15-17	5-5½ months until sold

In all instances, these are all mash rations which may be bought as such or may be a mixture of concentrate and home grown grains. The time or the age of the birds when ration changes are made is flexible and is influenced by the strain of the bird, season of year, and contents of the feed.



Should I Follow a Restricted or a Full Feeding Program?

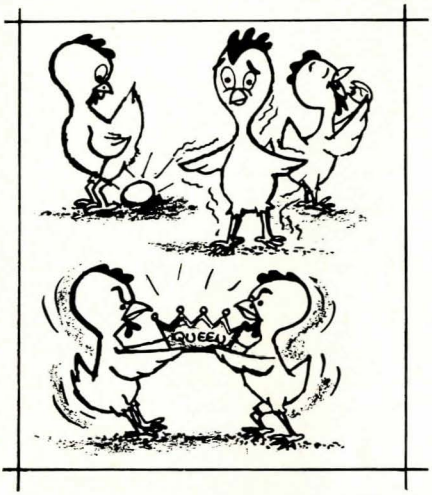
This subject, like that of rearing systems, is highly controversial. Research has shown that more large eggs can be produced by restricting caloric intake of the growing birds. Pullets fed in this manner suffer a slightly higher mortality rate and come into production later than full-fed birds. This method of feeding, often called "self-restriction," is accomplished by using large amounts of fibrous materials, such as oat hulls, in the ration. Some researchers feel that this method of restriction is expensive because birds eat to satisfy energy needs and consequently more of the high fiber ration is consumed.

Another method of restriction is called "mechanical restriction" and is obtained by determining the number of pounds of 15 per cent grower ration normally consumed by the pullet flock and allowing only about 70 to 80 per cent of this amount to be consumed.

If the birds are being reared in confinement or on bare range, the effects are similar to those obtained by the self-restricting method. If a succulent green range is used with the mechanical restriction method, results are similar to those with the birds on the full fed basis. If the latter is used, the ration should be fortified with extra vitamins and minerals to avoid nutritional diseases.

When Should I Put the Pullets in the Laying House?

Laying habits of pullets are established as soon as they have laid a few eggs. If birds have started laying heavily before they are housed, a number of problems usually arise.



1. A larger number of birds become floor layers.

2. Egg eaters develop.

3. Birds in production are more easily stressed, molting and disease sometimes follow.

4. The fighting that results to establish a social order will lower production and feed efficiency.

5. A high level of production may never be attained.

6. Birds in production are more nervous and may suffer losses because of crowding and picking.

On the basis of these potential situations, it is obvious that pullets should be housed before they are producing heavily. It is best to house immediately before production starts. In the event it is impossible to house because the facilities are not ready, conflicts in labor, etc., immediate steps should be taken to eliminate the resulting problems.

Nests should be placed in the range shelters or other rearing quarters. These nests should be either like or be the ones to be used in the laying house. When birds in production are moved to the laying house, they should be handled very carefully. If the weather is hot, the move should be made in the cool of the morning. Operations such as worming, vaccination, debeaking and blood testing should be minimized at this time. Feed should be changed slowly from growing ration to the laying ration. Mixing in the laying ration in an increasingly larger amount each day will do the job. These practices will help to eliminate some of the problems but they are not a substitute for early housing.

What Should I Do To Keep My Birds Healthy?

Every possible effort should be made by every poultryman to prevent the outbreak of disease or parasitism in his pullet flock. Preven-

tion of an outbreak is an absolute must. If it becomes necessary to apply curative measures, a great loss has been sustained. Some of the major preventative measures to take are:

1. Buy chicks from hatcheries that produce only pullorum typhoid free chicks. Do not rely on public carriers but arrange for hatchery delivery or pick them up yourself.

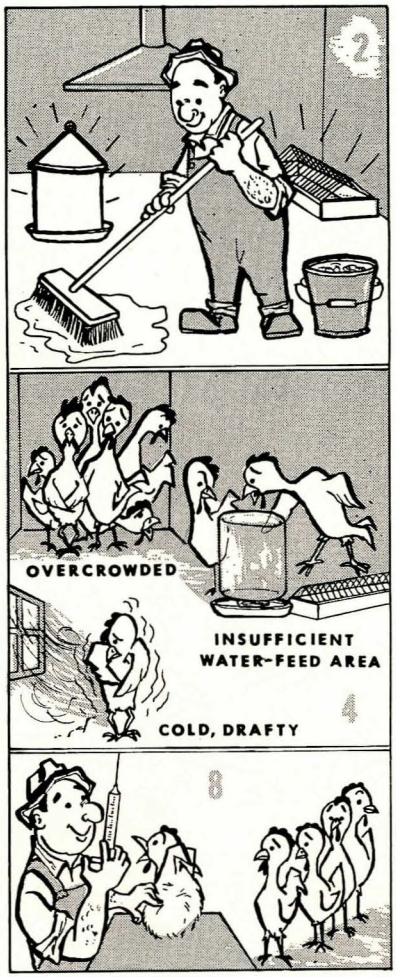
2. Have brooding houses and equipment clean and in good repair in advance of chick delivery. Sanitary quarters are imperative in that some disease forming organisms and parasites can live for months and even years if they are not curbed. The best time to do this is when a house is unoccupied.

3. Young birds should be grown in an area not frequented by older birds, because older birds often carry diseases that can be very harmful to younger birds.

4. Avoid all possible stress factors such as overcrowding, inadequate feeding, insufficient watering and feeding space, cold, drafty buildings and neglect. These factors do not directly cause disease, but leave birds in such a weakened condition that they are susceptible to many diseases.

5. Remove all sick birds from the flock. Burn all dead birds.

6. Follow a three or four year range rotation plan.



7. Provide a well sodded, roomy range, well equipped with shelters, waterers and feeders. A continuous clean water supply should be provided at all times.

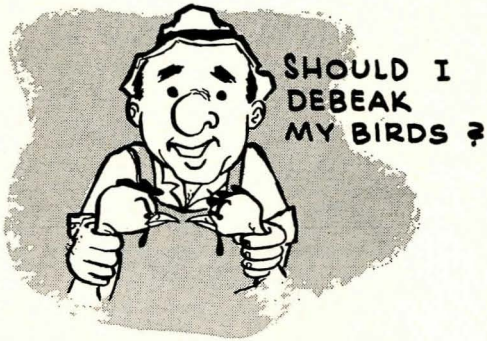
8. Follow a general vaccination plan as follows: 4 days—Newcastle disease and infectious bronchitis, 4 weeks—infectious bronchitis, 6 to 8 weeks—fowl pox, 4 months—Newcastle disease.

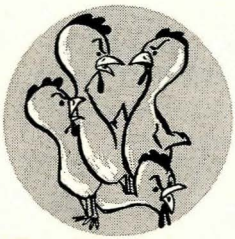
If an outbreak occurs, the treatment should begin immediately. If a poultryman can not make a diagnosis, a veterinarian should be consulted. Follow directions explicitly.

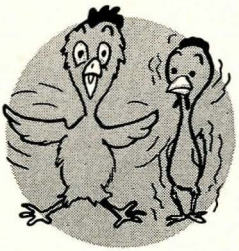
Should I Debeak My Birds and If So, When?

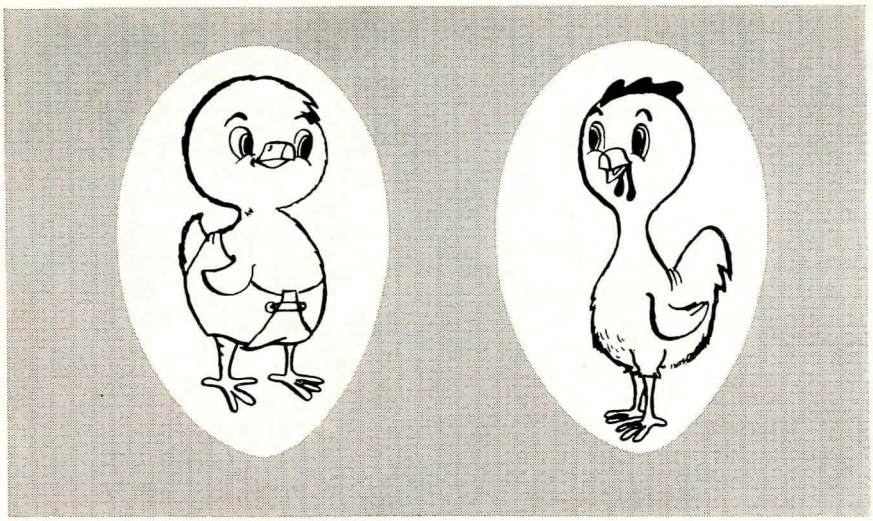
During the brooding and rearing periods most egg type chickens tend to pick each other. This habit sometimes carries over into the mature flock. This picking, called cannibalism, may be caused by any one or several of the following:

1. Crowding.
2. Improper diet, or ration.
3. Prolapse of laying birds.
4. Idle time.
5. Nervousness of certain strains.





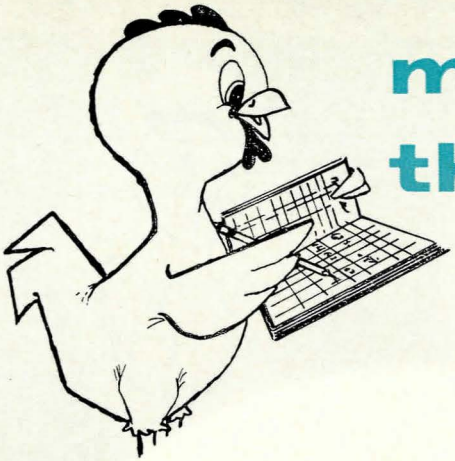




Management plays an important role in controlling several of these factors, but sometimes management itself will not prevent an outbreak. Debeaking is the best method of stopping an outbreak once it has occurred.

The best preventative for cannibalism is a debeaking program. Some successful producers debeak birds when they are one day old, when they are paced on range, and again when they are housed for production. The latter is probably more important to the average Nebraska producer.

Debeaking is not harmful to birds in any way. Whether a definite program is followed or an outbreak occurs, do not hesitate to debeak your birds.



managing the pullet flock

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- E. C. 1321 (REVISED) OUR MARKETING JOB
- E. C. 58-1412—COMPARING MODERN POULTRY HOUSING SYSTEMS
- E. C. 58-1413—KEEPING HENS ON SLAT FLOORS
- E. C. 59-1414—SHOULD THE WINGS GO?
- E. C. 1436 (REVISED)—CONTROLLING CANNIBALISM IN POULTRY
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