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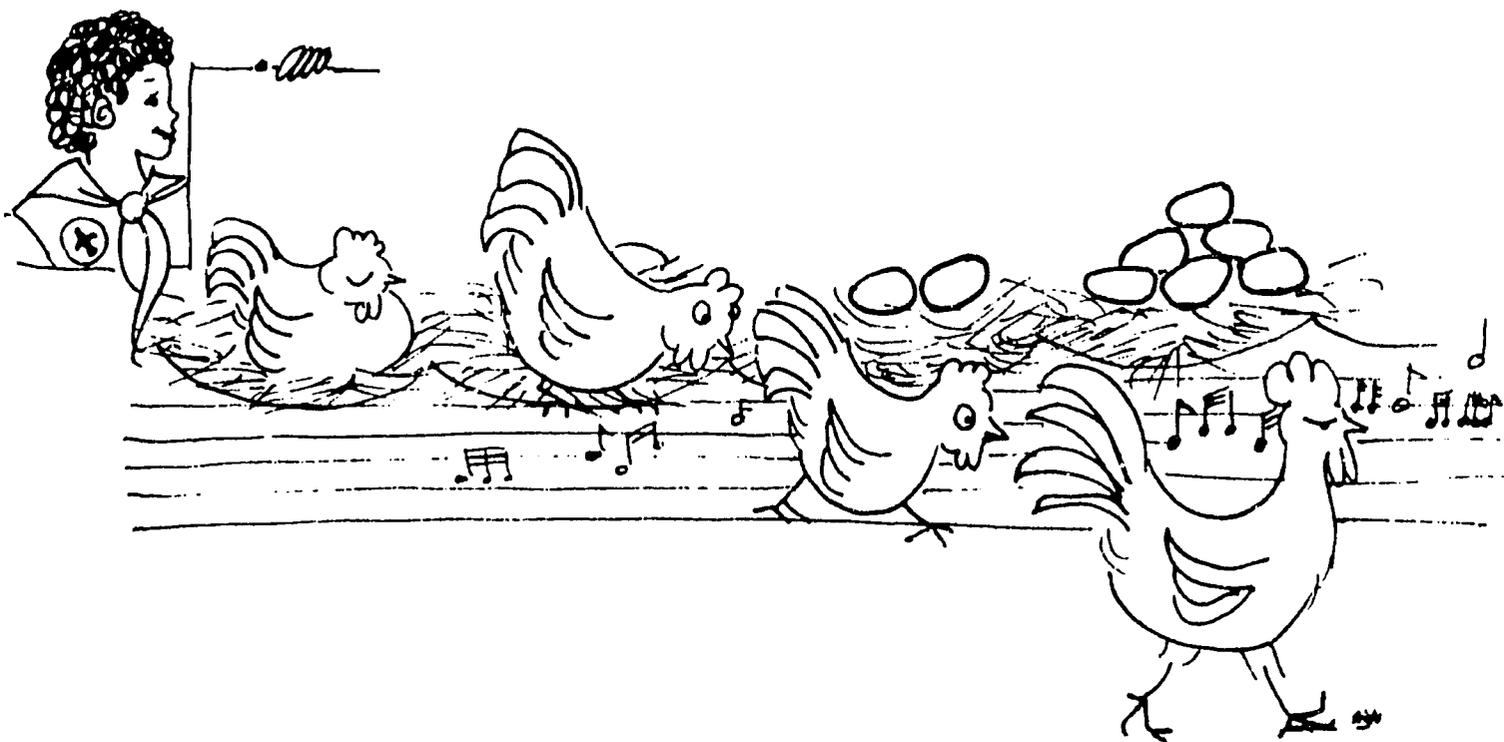
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SCOUTS CAN GROW CHICKENS



SCOUTING AND COMMUNITY DEVELOPMENT

HOW TO MANAGE A LAYING FLOCK

*SCOUTS CAN ADD TO THEIR INCOME AND FAMILY HEALTH BY AN EGG PRODUCTION PROJECT.
WHEN GOOD PRACTICES ARE CAREFULLY STRESSED AND A REGULAR PROGRAMME IS FOLLOWED
YOUR CHICKENS WILL BE PRODUCTIVE*

* * * * *

1. YOUR CHICKENS AND THEIR FEED

Certain breeds of chicken lay more eggs than others. The single comb white (S.C.W.) Leghorn was developed in order to obtain the largest number of high quality eggs. Other breeds (White Plymouth Rocks, Rhode Island Reds, New Hampshires, Barred Plymouth Rocks) or cross breeds (such as Austra White) might be used.

Such breeds start laying about 5 months after they are hatched.

Ask your nearest agricultural specialist to tell you the best months for starting your work. Your local climate must be considered when following the suggestions of worldwide Scouters.

The kind of care and the kind of feed you give your pullets, and continue to give to them, will have a great deal to do with how well they lay.

The best egg production is obtained when the feed for each chicken is at the rate of 19 kilos 500 grain, with 19 kilos 500 mash, with 1 kilo 800 oyster shell per year.

The following are important management practices for you to follow:

1. Feed a balanced ration during the growing period, using a good commercial growing or laying mash. If you would like a formula for mixing your own mash, ask your agricultural agent for formulas which will make use of feeds you have available.
In addition to the mash, fresh water, grain, oyster shell or limestone grit and insoluble grit should always be a part of the ration.
2. Keep mash hoppers about half full of mash most of the time, but allow chicks to clean up mash once a day. Never allow feeders to be empty for long.
3. Provide plenty of feeder and water space:
 - a.) Four 5-foot range feeders for each lot of 100 pullets. (5 feet = 153 cm.)
 - b.) Two 5-gallon capacity waterers for each lot of 100 pullets. (5 gallons = 17 litres.)
4. Raise pullets in a range shelter with plenty of range, if possible.
5. Cull and market slow-growing, unthrifty birds.
6. Watch for any signs of disease. Get in touch with your leader if trouble shows up or you do not know what to do.
7. Do not neglect water. It is an important part of the ration.
8. Skim milk (sweet or sour) is an excellent feed when available. Do not feed milk with a commercial mash unless feeding directions include liquid milk.
9. Watch for lice on the birds and mites around the roosts. Spray roosts at least once each month.
10. Provide some shade.
11. Do not run pullets with old stock.
12. Chickens on the range usually will pick up enough gravel to supply their needs

13. All cockerels that you do not plan to keep for breeders should be fattened and marketed in order to give the pullets every opportunity to grow and develop properly.
14. Chickens should be taught to roost early. If you followed instruction and put roosts in the brooder house when the chicks were around 3 or 4 weeks old, you probably had no trouble getting them to roost early.

2. A HOME FOR YOUR LAYING FLOCK

Have a place for your chickens which is separate from the home flock if possible. A comfortable place is required if you expect your pullets to make the production part of your project profitable.

The first step is to put the laying quarters in good condition. If the house has had chickens in it before, a thorough cleaning and disinfecting - the same as suggested for the brooder house - should be followed.

Prepare the laying quarters about one month before laying time so that the pullets can be moved to their permanent home and become used to it before they come into production. This is very important.

There are several things for you to keep in mind about your poultry laying house.

Size for a Small Flock	Laying quarters 10' x 12' (10' x 12' = 3.1m x 3.7m) in size will accommodate 30 pullets of the heavy breeds or 40 Leghorns. You can use the brooder house for laying quarters later if your flock is small. If you need more space, the addition of a scratching shed is not expensive and would provide more space for a larger flock. It is preferable to have a laying house at least 20 feet (20 feet = 6.1m) deep when more than 100 layers are to be housed. Contact the County Agent for plans of laying houses. See paragraph 3.
Floor Space per Bird	Allow 3 square feet (3 square feet = 0.28m ²) of floor space for Leghorns and 3-1/2 square feet (3-1/2 sq.ft. = 0.33m ²) for the heavy-breed pullets.
Types of Houses	Many types of houses are used for poultry. The shed type is popular.
Height in Front	A 7-foot (7 feet = 2.13m) frontage is a good height for a small house. Do not build higher than this for it is more expensive and is not necessary.
Height in Rear	The rear wall need not be over 5 feet (5 feet = 1.5m) in height.
Depth	The deeper the house, the warmer and more comfortable your birds will be.
Front Arrangement	Cover part of the openings in front of the house with muslin.
Ventilation	Poultry need plenty of fresh air. It also helps to keep the house dry. Arrange the windows so you can slide them down to provide ventilaton.
Floor	A cement floor is best if the house is not to be moved, otherwise build a wooden floor. A dirt floor is hard to clean and is in-sanitary.
Equipment	Roosting pits are an important addition to the laying house. Most poultry farms build the pits instead of droppings boards. Orange boxes nailed on the end walls about 18 inches (18 inches = 46cm) off the floor make good nests. Provide one nest and 1 foot (1 foot = 30.5cm) of mash-feeder space for every five birds.

Does Your Laying House Need to be Remodeled ?

Check your laying house by using the following questionnaire to determine whether it needs remodeling :

	Yes	No
Is it more than 20 feet deep (front to rear)? (20feet = 6.1 meters)	<input type="checkbox"/>	<input type="checkbox"/>
Is it more than 7-1/2 feet high in the front? (7½feet = 2.3 meters)	<input type="checkbox"/>	<input type="checkbox"/>
Is it more than 5 feet high in the back? (5 feet = 1.5 meters)	<input type="checkbox"/>	<input type="checkbox"/>
Does part of the front have a muslin covering?	<input type="checkbox"/>	<input type="checkbox"/>
Is there one nest for every five hens?	<input type="checkbox"/>	<input type="checkbox"/>
Are there at least 8 inches of roost space per bird? (8 in.=20cm)	<input type="checkbox"/>	<input type="checkbox"/>
Does it have a concrete floor?	<input type="checkbox"/>	<input type="checkbox"/>
Does the house have a roosting or droppings pit?	<input type="checkbox"/>	<input type="checkbox"/>
Are the roof and walls insulated?	<input type="checkbox"/>	<input type="checkbox"/>

If there are more checks in the "No" column than in the "Yes" column, your poultry house probably needs to be remodeled. Following are some suggestions on how it can be made a more comfortable place for your laying flock.

Poultry Equipment for Your Laying Flock

Whether you have a small or large laying flock, good equipment, adequate for the number of birds you are housing, will save you much time and labour. It will also result in better growth and higher production. Suggestions are made for the following equipment: Good roost arrangement, good feeders, good waterers and good nests. See that your flock has all of these.

3. REMODELING SUGGESTIONS

Remodeling the laying house will be a good project for you. Many poultry flocks are poorly housed. Good housing does not necessarily mean expensive housing. For a flock to produce profitably and keep in good health, its "home" should be so constructed that health and comfort can be maintained with a minimum of labour and expense. On many farms barns, hog houses, and sometimes other buildings that are not in use can be converted easily into a suitable home for a laying flock.

Many buildings used for housing poultry are either too shallow, too high, too small for the flock, or lack important features such as sufficient nests, droppings pits, and insulation.

When remodeling old buildings or building new ones, keep in mind the elimination of possible drafts. At the same time, provide for necessary ventilation and sunlight.

Allow sufficient floor space per bird. Many of the poultryman's troubles are due to overcrowding. When necessary to keep the flock confined, particularly during the winter months and wet weather, allow 0.37m² of floor space per bird for heavy breeds and 0.28m² for the Mediterranean breeds.

Remodeling Narrow, Shed-Type Buildings

A laying house should be at least 6.1m deep for best results. Height should be not over 2.44m in the front and 1.5m in the rear.

Narrow, shed-type buildings can be remodeled into more suitable quarters for the poultry flock as shown.

If the front is not over 2.13m high, an extension to the front, as shown in figure 1,

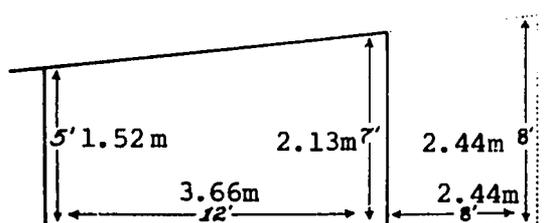


Figure 1.

4. ROOSTING PITS

Roosting pits are replacing droppings boards in many farm poultry houses. Frequent cleaning is easier. Keeping the flock away from droppings reduces disease and parasite infections.

The roosting pit can be built in the back part of the house. It need not be over 2.43m wide. The front of the pit can be constructed of boards to a height of not over 51cm. The roosts are placed over the pit. Under the roosts a 2-inch (5cm) wire mesh is stretched to keep the birds out of the pit.

Advantages of the roosting pit :

1. Less labour to keep house clean.
2. The cost to build is small.
3. Droppings can be removed three or four times yearly.
4. Litter stays clean longer and less litter required to cover floor.
5. Fewer eggs become dirty.
6. Provides more sanitary conditions.
7. Diseases are easier to prevent and control.

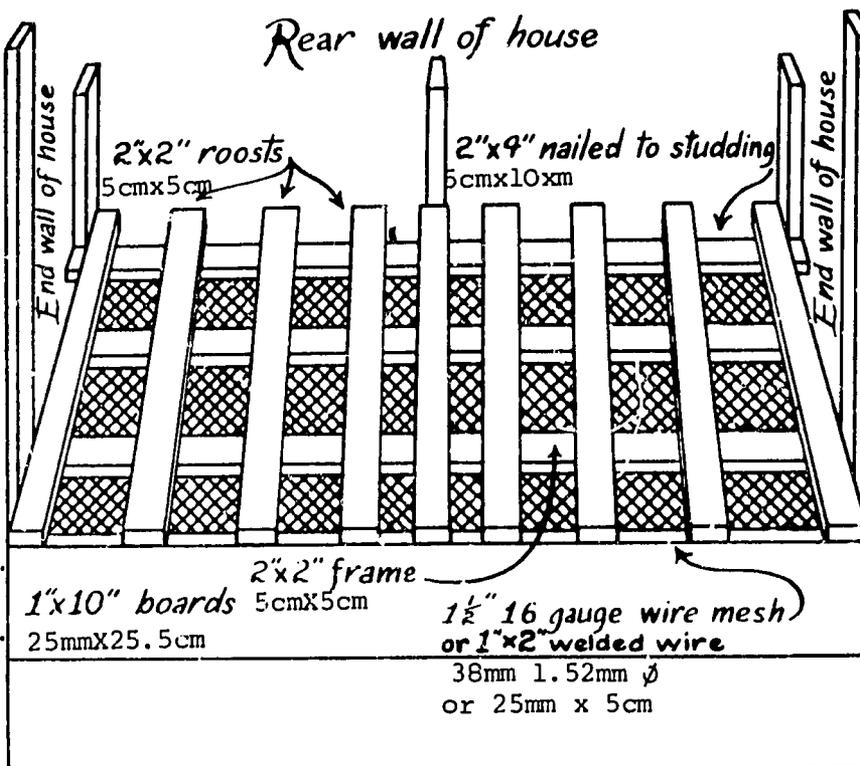


Figure 2. - Roosting pit shown in detail.

For details on how to construct this roosting pit, see below.

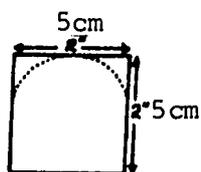


Figure 3.

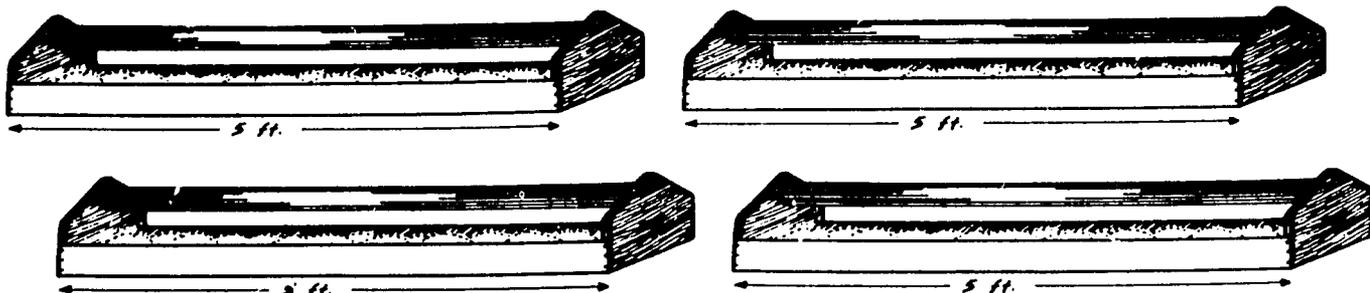
The roosts and wire netting should be fastened together on a frame that can be raised and hooked to the roof when the pit is to be cleaned. Make the front boards removable to make it easier to clean out the pit. Round off the upper edge of the 2" x 2" (2"x2" = 5cm x 5cm) roosts as shown in figure 3.

A 1 1/2-inch 16-gauge (1 1/2-inch = 38mm 16US gauge = 1.52mm Ø) wire netting for under the roosts is preferred to the 2-inch (5 cm) netting. Tack the wire netting to the under side of the frame on which the roosts are fastened. The rear of the roost rests on a 2"x4" (5cmx10cm) nailed to the back studding. Hinges are not necessary.

5. EQUIPMENT FOR FEEDING YOUR LAYING FLOCK

Feeders

Provide four 5-foot feeders for each 100 birds.(5 feet = 152.5cm)



Provide two 5-gallon (17 liters) waterers for each 100 birds.

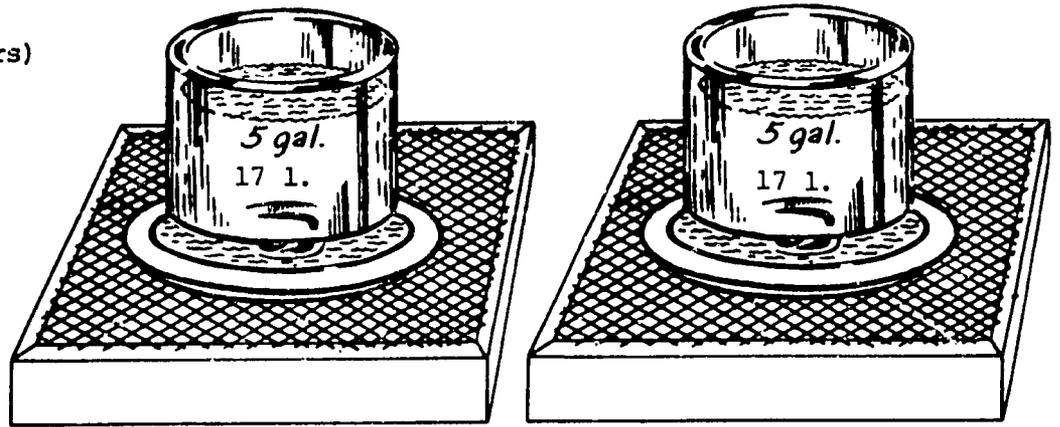


Figure 5

Sanitary Watering Arrangements

Waterers should be placed on a stand as indicated in figures 5 and 6. Some waterers can also be hung 2 or more inches (2 inches = 5cm) above the floor, depending upon the size of the chicks.

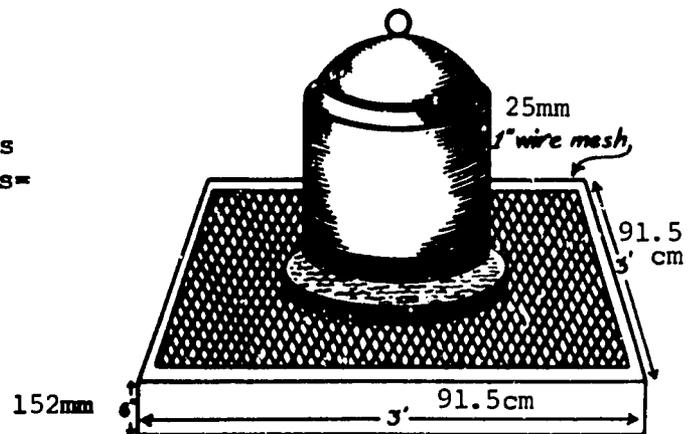


Figure 6

6. BUILDING NESTS IN THE LAYING HOUSE

Figure 7 shows a good nest arrangement for your laying house.

The nest is about 1 m. (3') above the floor.

Some nests are sloped 13mm ($\frac{1}{2}$ ") so that eggs roll into a gutter at back outside the nests.

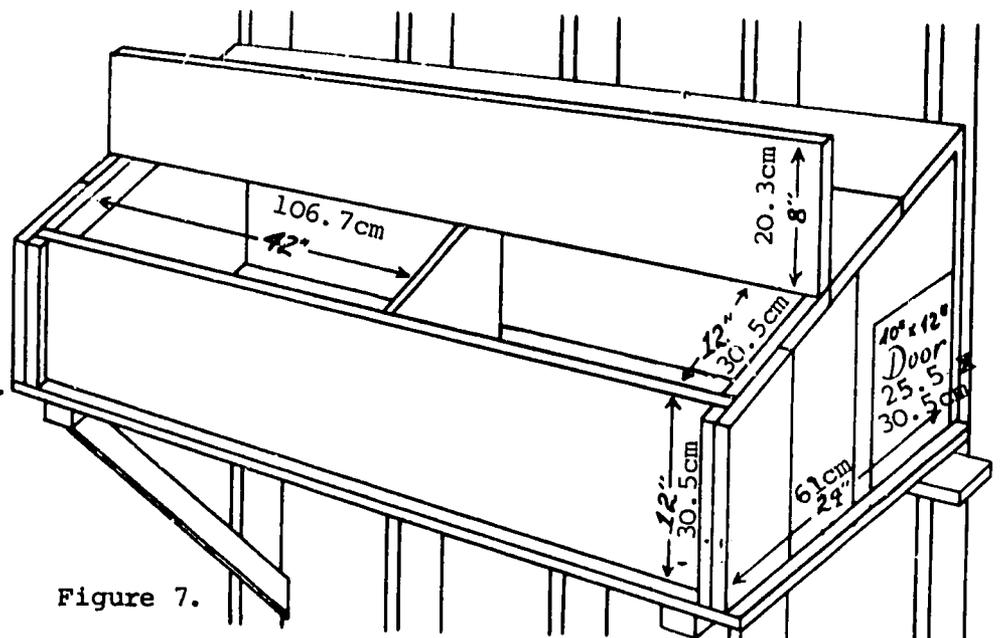


Figure 7.

7. FEEDING AND MANAGING YOUR LAYING FLOCK

You have reached the time of year when, if you have followed the work as outlined in these projects, you should have a fine lot of pullets to go into the laying house for production.

Selecting the Layers

If you have been a good poultryman, you will have only the very best of your flock

pullets should be kept for egg production. If your pullets have vigor, they will have deep, short heads, and short, strong, well-curved beaks. Their eyes will be prominent. Their bodies will be deep, broad and well developed. The healthy pullet is active. The crow or the long and narrow-headed, narrow and shallow-bodied, slow-developing chicken should be culled.

Moving the Pullets

Your pullets should be moved into their home just before they start laying. In this way, they become adjusted to their new quarters before the season changes.

1. Do all remodeling and repair work before moving in the pullets. Provide nests, feeders and waterers.
2. Thoroughly clean and disinfect the building and equipment, using the lye method recommended for cleaning the brooder house.
3. Cover the floor with 6 inches (15 cm) of litter such as shavings.
4. Fill feed hoppers 1/2 full of mash.
5. Allow 4 square feet (4 sq.ft. = 0.37m²) of floor space per bird. Example: A house 20' x 20' (20' x 20' = 6.1m X 6.1m) in size has 400 square feet (400 sq.ft. = 37.2 m²) of floor space and when divided by 4 allows space for 100 birds.
6. Move the pullets to their new quarters at night, placing birds on the roosts.
7. Keep birds confined to their new home.
8. Do not put pullets in with old birds.
9. Treat pullets for lice and spray roosts to control mites (see paragraph 10).
10. Provide one nest for every five hens.

8. FEEDING YOUR LAYING FLOCK

Mash	Keep a good laying mash (20 to 22 percent protein) in every other feeder. Fill hoppers not over 1/2 full. Allow pullets to eat all the mash they desire.
Grain	Keep grain in the other feeders. Each pullet should eat about 1/8 pound of mash and 1/8 pound of grain daily (1/8 pound = 56.7 grams).
Water	Never allow the waterers to become dry.
Oyster Shell	Keep crushed oyster shell or limestone grit in containers before birds at all times.
Grit	Keep a box of insoluble gravel grit or a good commercial granite grit in the laying house.

WHY CULL!

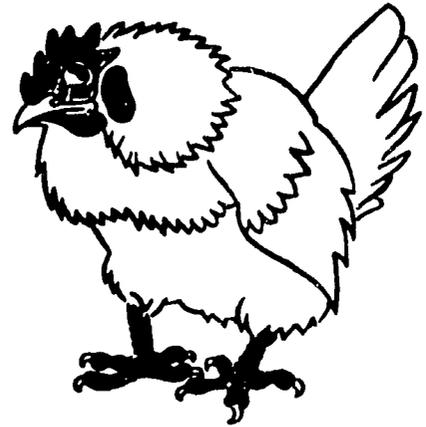


1

I'll tell you what you'd better do,
To get your hens to lay for you,
A lot of eggs that'll fill the pail,
So you will have fresh eggs for sale.

2

You'd better cull those boarders out,
All those old hens that have the gout,
Weed out those runts with those long beaks,
And help stop up your poultry leaks.



3

Some folks have hens that lay each year,
Two hundred two-ounce eggs, my dear,
Just hatch your stock from such as they,
And raise a working bunch that pay.

(2 ounces=57 grams)



4

With feed priced low and eggs priced high,
A few star boarders might get by,
When feed is high and eggs are low,
The hen that loaf's just costs you dough.

*Let's dispose of the culls, and increase
our poultry profits*



A reliable job of culling cannot be done unless the flock has been fed a well-balanced ration and has been properly housed several weeks prior to the time culling work starts.

9. HOW TO CULL

A regular check for culls is an important part of your poultry project. Cull non-producers whenever they show up, especially beginning with the first weeks of the approaching hot season.

The Hen to Keep

will show the following characteristics:

Lays during the hottest or most unfavourable season. Ask your agricultural agent for advice.

Friendly.

Seldom broody.

Healthy.



Figure 9.

Comb and wattles well developed and bright red colour (figure 9).

Pubic bones thin, pliable, spread two or more finger widths (figure 11 left).



Figure 11.



Figure 12.

Figure 8. -Showing the proper method of holding the hen when examining her.



The Hen to Cull

will show the following characteristics:

Stops laying soon after the hottest season begins.

Timid or wild. Sits on roost a great deal of the time.

Broody one or more times.

Signs of droopiness, disease, or low vitality.



Figure 10.

Comb shrunk, dull red, covered with white scaly deposits (figure 10).

Pubic bones thick, covered with fat, less than two finger widths apart (figure 11 right).



Figure 13.

The Hen to Keep (cont'd.)

Abdomen soft, pliable and expanded four or more finger widths between pubic bone and end of breast bone (figure 12, page 8).

Skin thin, soft, pliable.

Plumage frayed, worn, does not moult until at the end of the hottest season (figure 9).

Vent enlarged, moist, pale.

Pigmentation vent, eye ring, beak, shanks, pale or faded.

The Hen to Cull (cont'd.)

Abdomen hard, full of fat, contracted, usually only one or two finger widths between pubic bone and end of breast bone (figure 13, page 8).

Skin thick, hard, and underlaid with fat.

Plumage may be new and bright, moults during the hottest season (figure 10).

Vent small, shrunken and yellow.

Pigmentation skin, beak, eye ring and shanks, yellow.

10. HOW TO CONTROL PARASITESExternal ParasitesLice

These parasites live and stay on birds all the time. Their chief damage to poultry is through discomfort and irritation which lowers birds' resistance and makes them susceptible to other ailments. Lice multiply rapidly during warm weather. Steps should be taken to control them and, if possible, prevent their infesting young stock.

The following control methods are commonly used. The first treatment should be repeated in 10 days, to kill new lice that hatch from egg clusters found around the base of feathers on the neck or near the vent.

- a.) Sodium fluoride powder. This is the best and cheapest treatment, but all birds must be treated. This powder may be obtained from drug stores and poultry feed or supply houses. It is applied by placing small amounts deeply into the feathers under the vent, the wings, and at the back of the head. Repeat the treatment in 10 days.
- b.) Nicotine sulphate solution (40 percent). Fumes from this solution will kill lice if it is dribbled or painted on roosts just before nightfall. This should be done on a quiet night when temperature is over 60° (60° = 15.5° C) but not extremely hot. The house should not be shut up tight or fumes will hurt the birds.

Common Red Mites

Mites are small spider-like parasites that hide in cracks or under filth close to where birds roost and nest. They crawl onto the chickens and suck their blood. The mite is grey in colour when empty and red when full of blood. They multiply very rapidly; if nothing is done to destroy them, the poultry house is soon covered with them. They lower the vitality of the birds until they are unthrifty and do not grow or produce eggs (figure 16).

Treatment

An insecticide must be used which will kill the mites soon after it comes in contact with them.



Figure 14.- Louse egg clusters.

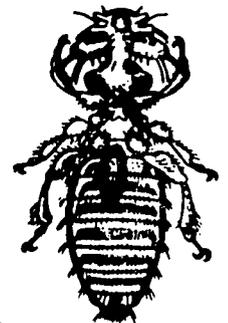


Figure 15.- Chicken louse.

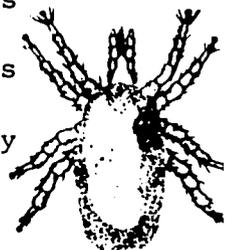
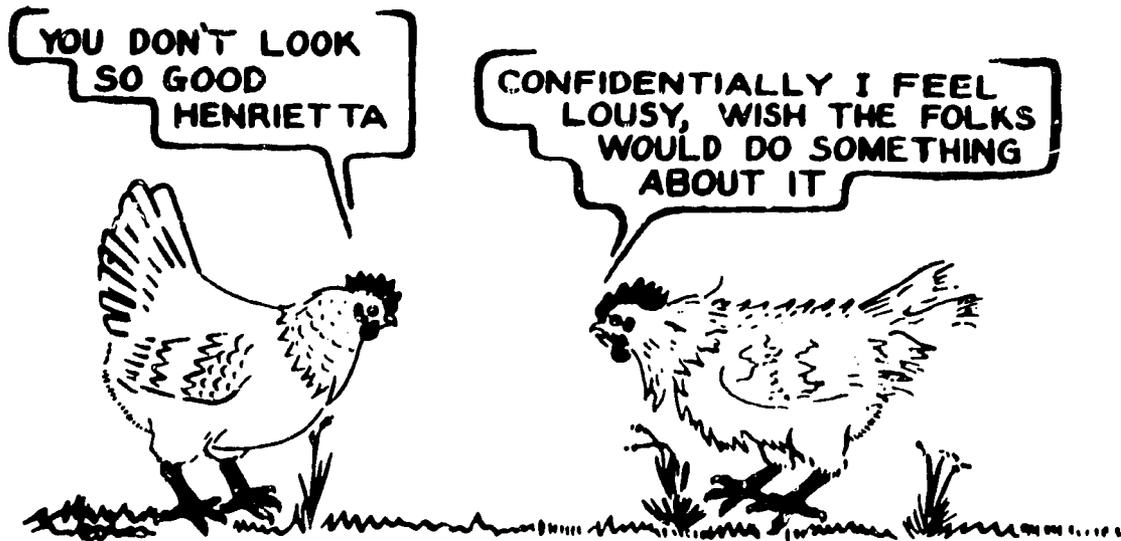


Figure 16.-



A thorough spraying of the poultry house, particularly around the roosts, is the only effective method of controlling them. If you do this early in the spring when weather begins to get warm and follow with an occasional spraying around the roosts, mite control becomes a small problem.

What to Use Any good standard oil dip applied with a spray pump or brush is effective. An economical spray mixture can be made from 1/2 pint (1/2 US pint = 0.24 liter) of stock dip or crude carbolic acid, 2 quarts (2 US quarts = 1.9 liters) of kerosene, and 1 gallon (1 US gallon = 3.79 liters) of crude or crank-case oil.

Scaly Leg Mite The scaly leg mite is a very small parasite that spreads slowly through the flock. It lives and works under the scales on the shanks and toes of the chicken. It burrows beneath the scales into the skin, causing irregular-shaped eruptions or crusts to form on the shank (figure 17).

Treatment In bad cases, where feet and shanks are covered with large crusts or scales, they should be soaked in warm soap water to loosen them. Then dip the feet and shanks in kerosene, melted lard or any oily substance. Do not let kerosene get into the feathers around the hock as it will burn the skin. The oil or grease destroys the mite.

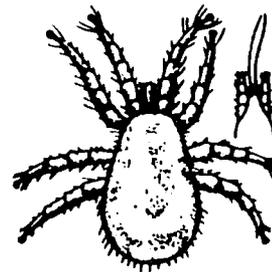


Figure 17.-

Feather or Depluming Mites The feather mite works under the skin at the base of the feathers, causing an itching which makes the bird scratch and pick at the place often. This results in the birds developing the feather-pulling habit.

Treatment When only a few birds are treated, lard or sweet oil can be applied to the affected parts. When a large number of birds are involved, the dip method may be used.

Sodium fluoride is recommended for the dip in the proportion of 1 ounce (1 ounce = 28 grams) to a gallon (1 gallon = 3.79 liters) of water. Dip birds only in warm weather.

11. HOW TO PRODUCE GOOD EGGS

- a. Feed a balanced ration. Take real "Scout care" of your chickens.
- b. Keep clean shavings in nests. Be sure litter on henhouse floor is dry. In rainy weather, depending on local climate, keep chickens indoors until 3 p.m.
- c. Provide one nest for every five layers.
- d. Gather eggs from nests frequently. Usually 10, 12 and 3 p.m.
- e. Clean dirty eggs with fine sandpaper or steel wool. Never wash them.
- f. Cool eggs overnight before packing them in case.
- g. Pack eggs with small end down, pack same colour together, pack dry eggs.
- h. Keep eggs in a cool, moist, well ventilated place. A damp sack over the case helps keep eggs cool and prevents evaporation. The egg cartons should be dry and odorless. Keep away from strong odors. Best storage is 45°F to 60°F, which is 7°C to 15°C, with humidity at least 70%.

12. HOW TO MARKET AT BEST PRICE

- a. Check the local marketing conditions with your agricultural specialist.
- b. Market eggs at least once each week or more often.
- c. Market only clean eggs.
- d. Sell on a graded basis whenever possible. The grading is by size and freshness. Under-sized or thin-shelled eggs should be separated.
- e. Grade by size: Really large eggs are at least 30 ounces (850 grams) per dozen.
- f. Grade by freshness:
 - on being broken the best egg spreads over much less area than do eggs of lower quality. The yolk is round and upstanding with a large portion of firm and thick white and a medium-sized outer margin of thin white;
 - in some places grading is by the terms: extra fresh, fresh and 2nd choice;
 - eggs gradually decrease in quality as they age. When eggs get older the interior changes and the air chamber grows;
 - keep the air chamber at the top by storing the eggs with the point down, and motionless so that yolk does not float upward and touch the shell.
 - to see if an egg is fresh, examine the size of the air chamber by "candling". Hold the egg before a penetrating light in a darkened room and note the characteristics of the white, the yolk, the air chamber. Estimate the condition and assign the alphabetical grade as AA (highest), A, B or C (low). Also look for cracks, bloodspots or other defects;
 - an instrument measure of quality is expressed in a numerical figure (such as "Haug" units) which correlates the thick white height and the egg weight;
 - in certain markets the freshness is demonstrated by "floating" the egg. This is done in a container of salt water (12%, that is: about a small soup spoon of salt - 12 grams - in a liter of water). The fresh egg stays on bottom, while the older egg floats.

To learn what a fresh egg looks like pick several you are positive were just layed. Candle them and then remember, or mark on a paper, the size of the air chamber. Keep them for a week and re-candle them to see the change as air chamber gets larger with age.

FUTURE SALES DEPEND ON PEOPLE'S CONFIDENCE

IN YOUR GRADED QUALITY !

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