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Extension Circular 1416 -33

Revised, May, 1933

How to Select Good Layers



A GOOD LAYER AND BREEDER, A-7112

Records: 253, 212, and 186 in Three Years

Egg Size: 25 Ounces per Dozen Her First Year

This hen is the dam of many high producers

The University of Nebraska Agricultural College Extension Service
and United States Department of Agriculture Cooperating
W. H. Brokaw, Director, Lincoln

CULLING PRINCIPLES CONDENSED

Good Layers Usually

1. Molt late—starting after October 1st.
2. Molt rapidly—dropping great numbers of feathers at one time.
3. Have clean-cut, strong, refined heads.
4. Have large, bright, prominent eyes.
5. Show refinement — in comb, wattles, legs, and skin.
6. Are active, alert, and healthy.
7. Have flattened (or triangular) lean shanks.
8. Lose the yellow color from their beak and shanks. (Applies only to yellow-shanked breeds.)
9. Are deep-chested and slab-sided.
10. Have worn, weather-beaten plumage from spring until they molt in the fall.
11. Have pointed flexible lay-bones (or pubic bones, which are on each side of the vent.)
12. Have broad, flat backs.
13. Have soft, pliable abdomens.

A good layer will show part or all of these characteristics.

The first 4 are the most important.

Poor Layers Usually

1. Molt early—before October 1st.
2. Molt slowly—dropping just a few feathers at a time.
3. Have coarse, meaty, or else thin, weak-looking head.
4. Have small, sleepy, or sunken eyes.
5. Show lack of refinement — roughness and coarseness in comb, wattles, legs, and skin.
6. Are “pepless” or sleepy.
7. Have rounded, fat shanks.
8. Retain part or all of their yellow color in beak and shanks. (Shows only in yellow-skinned breeds.)
9. Are shallow-chested and round-bodied.
10. Have sleek, shiny plumage at all times unless sick.
11. Have thick, meaty, rigid lay-bones.
12. Have rounded, narrow backs.
13. Have hard abdomen.

A poor layer will show part or all of these characteristics.

The first 4 are the most important.

How To Select Good Layers

ORIGINALLY BY S. J. MARSDEN—REVISED BY J. R. REDDITT.

Research work has shown that high egg production is an inherited characteristic which is transmitted from generation to generation in fundamentally the same way as are such characteristics as size, shape, and color. The selection of the best layers is of great importance therefore, not only because of the immediate effect on flock profits, but also because of the more permanent effect on the egg producing capacity of the flock.

Trapnesting is admittedly the most accurate method of getting information about the laying ability of hens, but since trapnesting is not always practical for farm and commercial poultry producers, other methods of selection must be used. The purpose of this circular is to show how the best producers can be selected with reasonable accuracy without the use of trapnests.

Two terms very commonly used by poultrymen need definition in order to avoid confusion. The term, "cull", is used to indicate the poor layers and "culling" is the practice of removing the poor layers from the flock. Market poultry buyers have sometimes used the term, "cull", to indicate birds of very low vigor and poor market quality. As a matter of fact many culls according to the poultry farmer's meaning of the word are fat and plump, and of the very highest market quality. Because of the accepted understanding of these terms by poultry raisers, the term, "cull", will be used in this circular to designate a poor layer.

ALL YEAR CULLING

Successful poultrymen do not restrict their selection efforts to any one season of the year, but are continually removing those birds which show signs of poor laying ability. One method of doing this periodic culling is to take a flash-light or lantern and go over the flock as a group when they are on the roosts at night. All birds that show poor fleshing, inherent weakness, and any evidence of sickness or disease should be removed.

Another way is to have a catching hook handy in the house so that every time a poor layer is seen or suspected, she can be caught, examined, and removed if she proves to be a poor layer.

It is well on these occasions also to handle a few of the birds to see whether they are holding up in weight and see whether the crops are well filled. The birds should be examined for lice, and if these parasites are numerous, may be treated with blue ointment or sodium fluoride, the directions for the use of which are given in another circular available from the College of Agriculture.

From the standpoint of market distribution, it appears—from the following tabulation—that greater returns could be had if hens were culled and sold before fall.

*Mean Per Cent of Annual Poultry Crop Marketed
Each Month **

January	5.41	July	6.50
February	3.98	August	9.88
March	3.81	September	11.46
April	2.85	October	14.49
May	4.82	November	16.45
June	5.86	December	14.49

* Armour's Livestock Bureau, 1920.

GENERAL CONSIDERATIONS IN CULLING

Head and Eyes.—The head of a typically good layer reflects refinement and quality. Poor layers nearly always have coarse head features in contrast with the refinement of the good layers whose heads are free from wrinkles and not excessively meaty. We must be careful, of course, not to emphasize over-refinement which may often indicate weakness. The term which has been used to define this desirable quality is "rugged refinement". The head of the good layer will suggest strength, vigor, and intelligence. The general shape of the head will be quite deep and the beak rather short and well curved. A straight beak gives an impression of too much length to the head and is not desirable. The "beefy type" cull will have a coarse meaty head with an overhanging eyebrow. The over-refined birds have thin, weak, and non-vigorous appearing heads.

There are differences in breed type, and the descriptions that would fit the small varieties perfectly would not so well fit the large breeds. A study of the particular breed in question is important.

A new theory of selecting good layers is based on the shape of the skull. In this system the theory is advanced that good layers have a skull that is flat and broad at the top, the breadth being carried well forward in front of the eyes. The eyes themselves will be set toward the upper part of the bird's head and not far from the top line of the skull. A head that appears decidedly rounded, either from the front or side view indicates low production. The eye set low in the head is also undesirable. This head point system may be used in connection with other characteristics.

The Molt.—A study of the molting characteristics of the hen show that the best layers always molt late in the season, but they molt rapidly and come back into production again at about the same time as do those birds that started much earlier. Late molting is always correlated with exceedingly

good vigor which is always an outstanding characteristic of the best layers. The molting test is of especial value; first, because it is very simple and easy to use, and second, when used in late September or October, birds which are selected by this test, are almost invariably good producers. If breeding stock is selected by simply picking hens that have not started to molt by October first, the best layers will no doubt be included in the selection. Hens that have not yet started to molt will have ragged, weather-worn plumage in the fall.

The Handling Quality Test.—Handling quality may be determined by feeling the abdomen and pelvic bones of the bird. Birds having good quality will have a pliable abdomen, free from hard fat. The skin will be loose and pliable. The pelvic bones will be thin, pointed, pliable, and free from hard patches of fat. The shanks of these birds will be rather thin, smooth, and flat with close-fitting scales. Round, plump shanks, or exceedingly coarse ones are indications of poor production.

The quality characteristics are not so evident as the hen grows old, hence this test is not so accurate with birds that are two years old or over.

Quality again is influenced greatly by the breed, strain, feeding conditions, and management factors. Large birds will not always carry or show the quality that can be noticed in the smaller type, even though they may lay as many eggs. Hens in active laying condition will show more evidence of quality than the same hens during a non-laying or resting period.

The Pigmentation Test.—Yellow-skinned breeds experience a fading out of the natural yellow pigmentation in the beak, shanks, and skin during heavy laying. When egg production stops, the yellow color reappears, provided the ration is rich in the yellow pigment-containing ingredients. Given the same feed and management conditions, the loss of pigment occurs most rapidly in the best layers and least rapidly in the very poor layers.

Disposition and Temperament.—Another indicator of laying ability is temperament. Good laying hens are always friendly, active, and ambitious. They will not be wild or flighty, nor will they be lazy and sluggish. Good layers go to roost late at night and are always off the roost early in the morning. When in laying condition, good layers are hearty eaters and will be perfectly willing to rustle for their food supply. The toenails of good layers will, as a rule, be worn from much scratching if they are housed on a cement floor.

The Capacity Test.—Good layers must have plenty of room for the digestive and egg-laying organs. Heavy layers

are hearty eaters. A five-pound hen producing 200 eggs in a year must convert about 85 pounds of raw material in the form of grains and by-products over into about 25 pounds of eggs. Plenty of room for a large, fully-developed digestive and reproductive system is therefore important and the term used to denote this quality is "capacity".

Comparative length and breadth of the body cavity can be noted by measuring the distance between the pelvic or lay-bones and the distance from the end of the breast bone to the pelvic bones. Body width is indicated by the distance between the two pelvic bones, depth and length by the distance from the breast bone to the pelvic bones.

Body Type.—If reasonable attention is paid to standard breed type in the selection of breeding stock, birds of reasonably good egg type will automatically be picked, for the standard type of all common breeds embodies an ideal which is not inconsistent with good egg-laying ability. Good breadth of back, a good spring of rib, depth of body, both front and rear, are the important points, especially for males. These factors are of real significance in the selection of breeding males and exhibition birds of both sexes, hence, are automatically cared for if breeding stock is selected for standard qualities.

CLASSIFICATION OF HENS ACCORDING TO PRODUCTION

With a little experience the poultryman can divide the birds in his flock into three groups:

(1) Poor Layers.—Poor layers are birds laying less than 125 eggs per year. These birds are the ones that should be sent to market as soon as they are discovered, provided, of course, that they are of good market quality.

(2) Medium Good Layers.—These are birds that are capable of producing from 125 to 175 eggs per year. Such birds may be kept to the end of their first laying year, at which time they also may be discarded to make way for the more profitable pullets. Birds in this group, however, that possess certain desirable features of color or type or of good egg size, may be kept as breeders, or for flock matings.

(3) Good Layers.—With a record of 175 or more eggs per year. These are the birds that should by all means be kept for breeding purposes and for their second year egg production. Such birds will often lay more eggs during their second year and the eggs will average larger in size than pullet eggs, so that they will have a higher market value. These are the birds which will still be laying on October first, which have little or no pigmentation, have good production heads, and other indications of egg-laying ability.

CULLING TECHNIQUE

The handling of laying hens usually slows up egg production more or less, hence the best handling method is one that will disturb the hens the least. Perhaps the best way is to use the "catching coop", which has an opening at one end that may be set against the door of the henhouse. Hens are then gently driven into it and removed one by one from a door at the top. Using wire fence inside the house is probably quicker. A few hens are driven into a small wire pen and a catching hook is used to remove them from it.

In handling chickens there is only one good way, that is, holding the birds' head always toward the operator's body with its breast-bone resting in the palm of the hand, placing the forefinger between the bird's legs and holding the legs tightly with the rest of the hand. By this method any bird can easily be held without harm to bird or person.

Successful poultrymen remove poor layers whenever they appear. These are caught with a catching hook and the good layers are not disturbed. This system of culling when properly done, insures maximum production averages and is a factor in keeping costs low. This system of constant culling is also helpful in lowering the death rates. See chart.

Laying Conditions.—One should first determine whether or not the hen is in laying condition. Laying condition is denoted in three ways: (1) comb and wattles enlarged, smooth, and usually red; (2) abdomen dilated and comparatively soft and pliable; (3) vent enlarged, moist, and pliable.

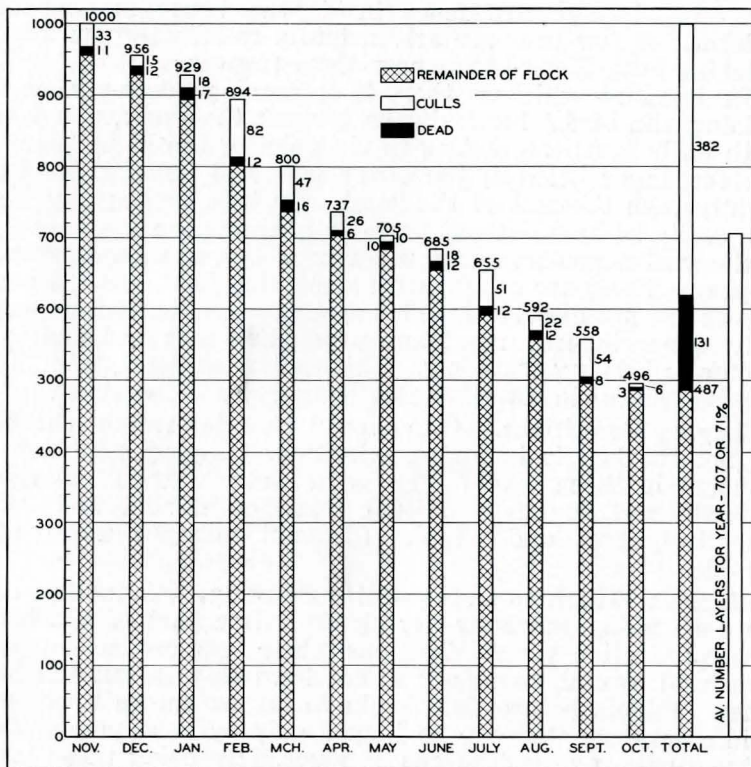
Age at Which to Cull.—Culling for egg production can be done most accurately during the latter part of the hen's first production year. Hens past their first production year are hard to cull, though it is not hard to pick out the best ones. Pullets before they begin to lay or before they have laid several months can be judged only by head points, rate of maturity, and indications of vigor. By using these tests, quite a large percentage of the outstanding culls can be taken out before much housing space or feed is wasted on them. Select the pullets that have refined, strong-appearing heads and bright, intelligent eyes.

SUMMARY

Continuous culling to eliminate sick or weak birds and the decided culls should be done throughout the year. Head points, body weight, and freedom from disease are the main points to use.

A summer culling in June or July will serve to eliminate the outstandingly poor layers. Head points, pigmentation, quality, and general health are the best characters to use. Delousing may be done at this handling.

The culling of pullets before they have laid may be done chiefly on the basis of maturity and indications of physical vigor.



EFFICIENT MANAGEMENT INCLUDES CONTINUOUS CULLING

Culling and death loss reduce size of flock each month. Continuous culling reduces death loss and increases eggs per hen. (From Nebraska Poultry Cost Account Records, 1932.)

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