

April, 1922

No. 189-A

Colorado Agricultural College

EXTENSION SERVICE

Fort Collins, Colorado

HOW TO SELECT A GOOD FLOCK

By Paul C. Jamieson



The Hen That Lays Is the Hen That Pays

CO-OPERATIVE EXTENSION WORK IN AGRICULTURE AND
HOME ECONOMICS—U. S. DEPARTMENT OF AGRICULTURE
AND COLORADO AGRICULTURAL COLLEGE CO-OPERATING

Distributed in Furtherance of Acts of Congress of May 8 and June 30, 1914

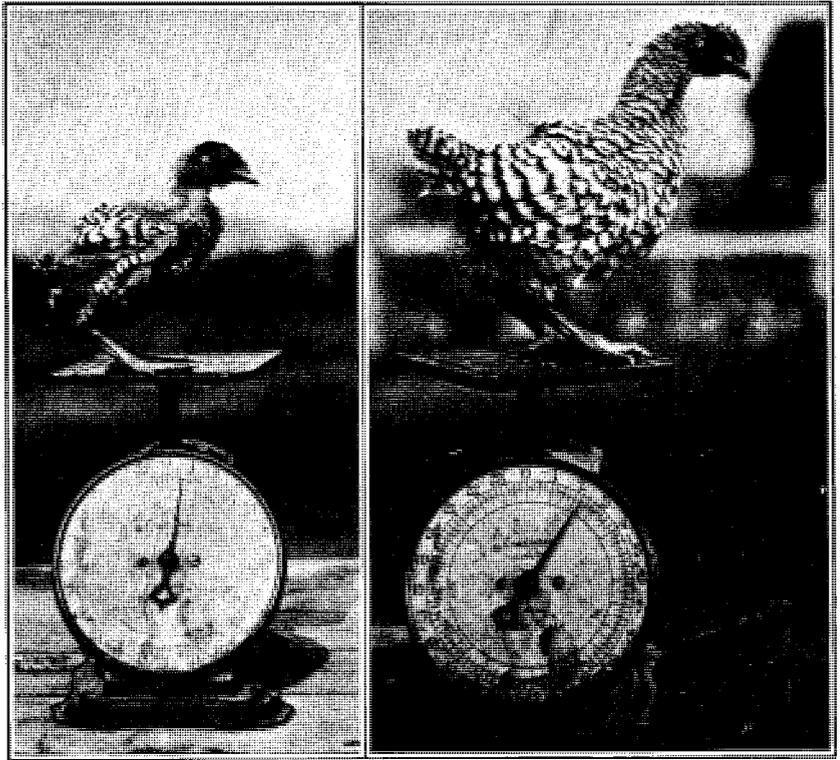


Fig 1. Undesirable type: Cockerel not crowing until five months of age. When the photograph was taken he was the same age as the cockerel in Fig. 2. He is poorly feathered and poorly developed,—simply a runt. If used for a breeder he would ruin a flock because of his late maturity and other undesirable characteristics which would undoubtedly be transmitted to his offspring.

Fig. 2. Desirable type: Cockerel crowing at eight weeks of age. He is well feathered. His comb and wattles are developing. He has a vigorous, healthy appearance, characteristic of early maturing cockerels.

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Economic production is necessary to insure success where competition prevails. Colorado farmers must meet the competition of the world in the production of eggs.

Economic production of eggs is possible only when poultry culling is practiced continually from the time the chicks are hatched until the oldest breeding stock has passed its period of usefulness.

START CULLING EARLY

All weak or deformed chicks should be disposed of as soon as they are hatched. It never pays to put a penny's worth of feed into them. All slow-maturing, runty chickens should be culled during the summer. They will not pay for their feed and if, by accident, they are allowed to become part of the breeding flock, they will do a great deal of harm by transmitting their slow-maturing characteristics and tendencies toward weakness to their offspring.

SELECT EARLY MATURING AND VIGOROUS FLOCK

The selection of good, early maturing, vigorous, male birds is of great importance. They should be up to standard weight or a little over.

Cockerels such as those shown in Fig. 2 and 3 should be selected and banded as soon as their superiority over the rest of the flock is noticed. The banded cockerels should be watched throughout the summer and any which show defects or undesirable characteristics should be culled. Banded chicks should be watched and the bands changed when necessary. Good birds are often ruined by tight bands. Those birds coming through the summer in good condition may be kept or sold for breeding stock. They will make excellent breeders, provided the selection has been carefully made.

Many people dispose of their early maturing cockerels for broilers, keeping those which develop slowly for breeders because they are not good broilers. Such a practice is extremely detrimental to the development of the poultry industry.



Fig. 3. A good cockerel. Note his natural rounding out. He is twelve weeks old. His well-developed comb and wattles indicate early maturity. His bright eyes show vigor. His large breast and well-developed body show that he is going to be a large bird with a strong constitution.

ing pens. Too often male birds lacking health and vigor are used for breeding stock. They get a low percentage of fertility. The germs are often weak, which causes many chicks to die in the shell. Weak, runty chicks are often the result of careless selection of the breeding stock.

Hens used for breeding stock should be healthy,

Early maturing pullets are the best producers. They feather out rapidly, develop properly and begin laying before cold weather sets in. With proper feed and a good place to live, they will lay throughout the winter when eggs are at a high price.

When pullets are used for breeding stock, it is usually best to mate them with cock birds. The cock birds give size to the offspring which is often lacking in pullets and in cockerels. Extreme care and good judgment should be used in selecting cock birds for breed-

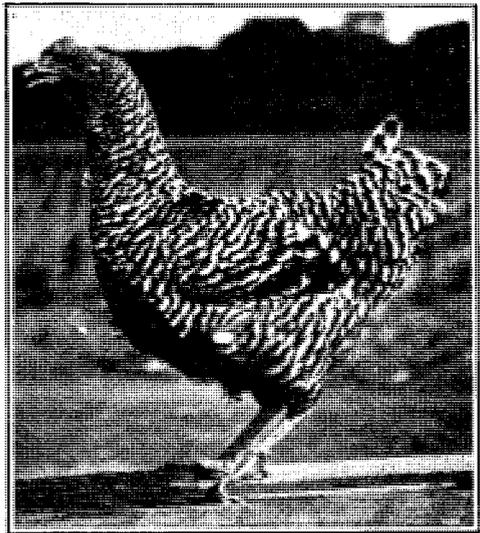


Fig. 4. This pullet was hatched March 1, and laid her first egg July 7, 1918. She commenced to lay when four months and seven days old, continued to be a high producer throughout the fall and winter and made a very good record.

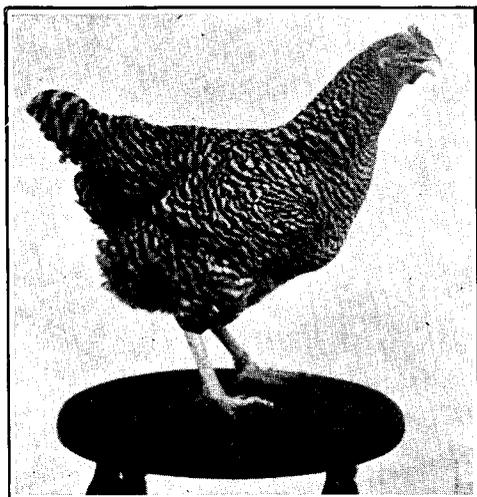


Fig. 5. Lady Activity. She produced 263 eggs in 365 days. Note the keen, refined expression. Her large, bright eyes and narrow skull and clean-cut face, free from wrinkles, show femininity, vigor, alertness and vitality. She is a large, well-developed individual. She is healthy, in good condition of flesh, and is a good breeder.

vigorous, alert, active individuals. They should have all of the characteristics of good producers. They should be in good flesh. Hens may be bred to cockerels. The cockerels will give vigor and strength to the offspring which is sometimes lacking when hens are mated with cock birds.

SELECTION OF GOOD PRODUCERS ALWAYS PAYS

Care in selecting breeding stock and proper culling of young stock pays well. The reward is more economic production and fewer culls among the

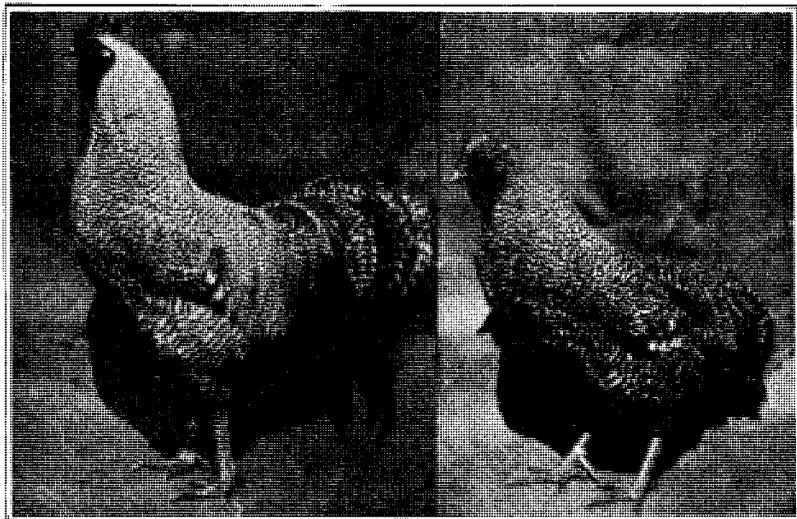


Fig. 6. (Left) Large, healthy, vigorous cock birds such as this should be used for two or more breeding seasons.
Fig. 7. This cock bird lacks health and vigor. Such birds get low percentages of fertility and weak offspring.

pullets and cockerels. Individual pullets and hens, however, differ greatly in their egg-laying ability. Some do not produce enough to be self-supporting. Others pay for their keep and give a small margin of profit. Still others make handsome returns, often producing three times as many eggs as are necessary to pay for their keep. To make good records as egg producers, hens must have egg-type characteristics.

Standard Breeds are Best Producers

Most standard-bred flocks receive some extra care, attention and selection which is not given to mongrel flocks. Standard-bred hens must be mated with standard-bred males if the offspring is to be pure. There is usually some careful attention given to the selection of these males. Common mongrels are often inbred and usually little care or attention is given to the breeding stock. Standard-bred birds are usually the best egg producers because of the extra care and selection which they have had.

Individual Is More Important Than the Breed

There are individuals in every breed that have the necessary egg-type characteristics. High egg-production records are possible with most common breeds if the proper individuals are selected. There are, however, more individuals with egg-type characteristics among the lighter breeds than among the heavier breeds.

If the people in each community would standardize on one or two breeds and select the high-producing individuals, there would be no question about their success in the poultry business. Standardization on one or two breeds makes it possible to exchange breeding stock. It opens a home market and finally an outside market for hatching eggs and breeding stock. It helps to do away with the mail-order poultry business which is usually so unsatisfactory because high prices are paid for birds which the purchaser has not examined.



Fig. 9. Showing the proper method of holding the hen when examining her.

other leg to hang free and she will relax her body. The accompanying illustration shows clearly how to hold the hen.

HOW TO CULL

To determine a hen's ability as an egg producer, it is necessary to handle her. In order to make all of the tests properly the hen must be held in a particular way. Hold the hen upright in your right hand with her head toward you. Place the flight feathers of her wing and one of her legs between your thumb and first fingers. Place your other three fingers underneath her breast bone to support her. This will allow her

her body. The accompanying-

When to Cull

Culling should be continuous throughout the year. Continuous culling should consist of weeding out all sick hens, all poor, emaciated hens, and all those which show evidences of non-production. The whole flock should be given a careful and systematic culling at some time during each year. The culls should be sold on the market at once. They should never be sold for breeding stock.

While going over the flock it is always well to band the best layers in order that they may be used for breeding stock. The single, systematic culling produces best results when made in July or August. At this time it is easier to make a fairly close estimate of the relative value of a hen as an egg producer, and to weed out the non-producers than at any other time of the year.

Never neglect culling. It may mean the difference between a good profit and a large loss.

Hens Must be Healthy to Produce

Good health and strong constitutional vigor are necessary for high egg-production. Good health is indicated by fair condition of flesh. Vigor is shown by an active, alert disposition. A hen in poor

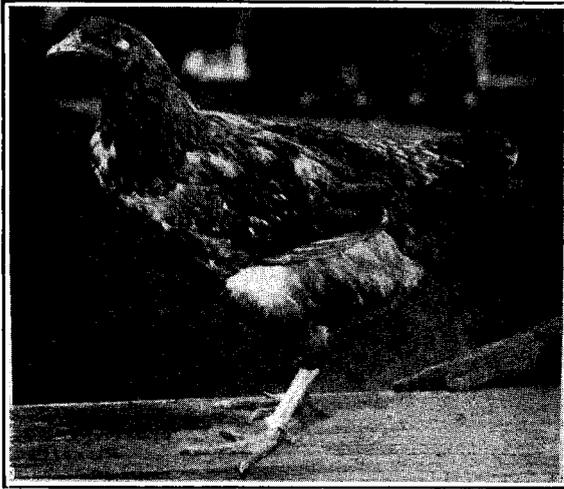


Fig. 10. A poor layer. She shows a weak constitution and general run-down condition. Note her long beak and shallow face, which indicates weakness.

health will have a listless, dumpy, emaciated appearance. She may be thin or she may be overly fat.

Early Molters are Quitters

When a hen molts she has usually finished her egg-laying season. One that molts in July or August has a short egg-laying season. A hen

that delays molting until September or October or November has a longer laying season. Some late molters do not go through a complete molt, but just develop a few new feathers and begin laying again in from six to eight weeks. Early molters usually molt slowly and prolong the development of a new coat throughout the entire summer and fall. They do not give much attention to egg production until the following spring. Occasionally an early molter will lay a few eggs in the winter, but she is not the desirable type of persistent producer.

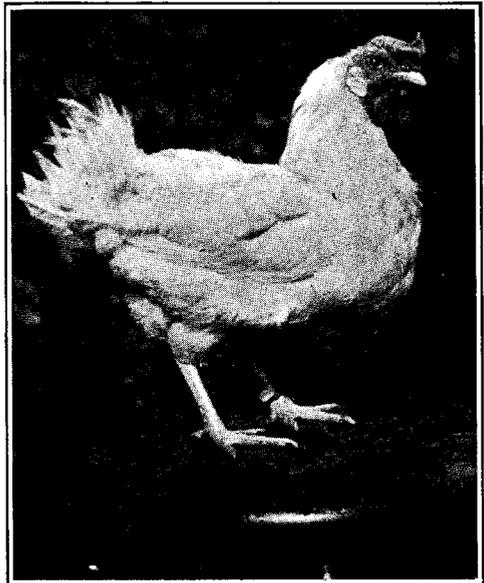


Fig. 11. The late molter. A 240-egg hen that delayed molting until the middle of November. She molted rapidly and began laying again in January.

Waxy Red Comb Indicates Egg Production

When a pullet, or a hen that has been laying off, begins to produce she develops a waxy, red comb, full of blood. When a hen stops laying or when she is about to stop laying, her comb becomes shrunken, paler or a duller red in color, comparatively hard, and later it may be covered with whitish scales. By these indications one can tell whether a hen is nearing the end of her egg-laying period or whether she will probably continue production for some time.

Prominent Bright Eye is a Good Egg-Type Characteristic

The hen that has a prominent, bright eye is more alert and active than one that has a sunken, dull, listless eye. Heavy-laying hens must consume much more food than poor producers. Activity is, consequently, very important. The alert, active hen will secure plenty of food to maintain her body and produce eggs while the dull, listless hen will get just enough food to maintain her body.

A bright eye is an egg-type characteristic, while a sunken, dull eye is a meat-type characteristic. Hens of the meat type are not profitable egg producers. Fig. 12 and 13 show clearly the difference.

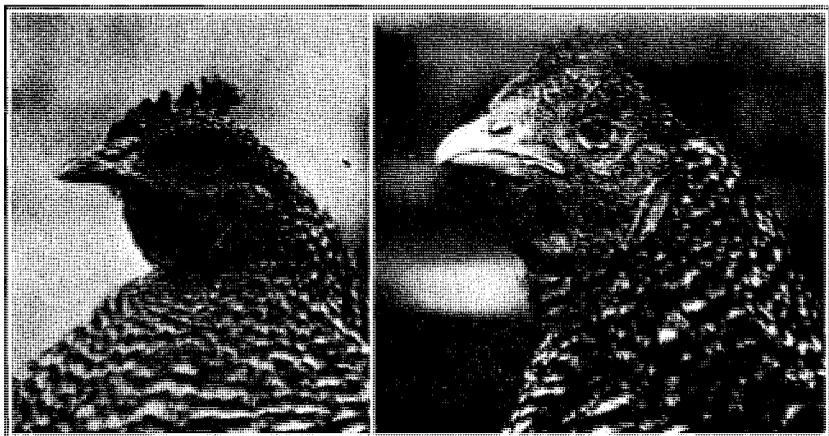


Fig. 12. Miss Bright Eyes. This hen has bright eyes, narrow skull, a smooth face, free from wrinkles, and a well-developed, waxy comb. Her head shows extreme refinement. Care and good judgment must be exercised or the refinement of the head will lead to the selection of individuals that are not sufficiently robust to stand the continuous strain of heavy egg-production.

Fig. 13. Miss I. W. W. She has a lazy disposition. Note her dull, sunken, listless eye. Her face is covered with wrinkles. Her comb has a dry, meaty appearance. Old hens which have come to the end of their usefulness and are taking on fat will also show the broad skull, wrinkled face, china eye and a dull, inactive expression.

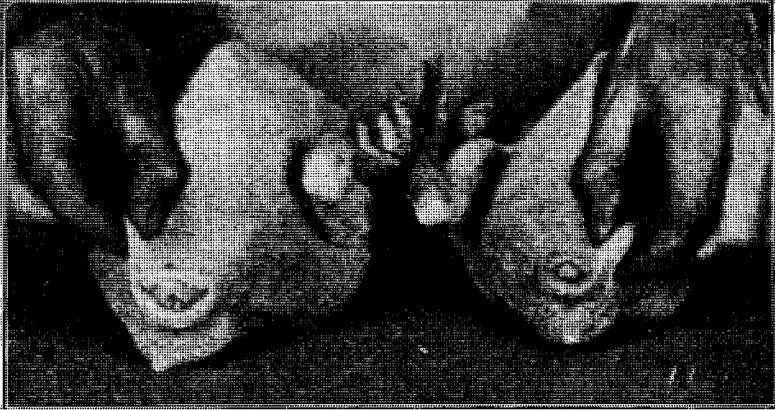


Fig. 14. Thin and medium-heavy pelvic bones. The thin pelvic bones are those of a heavy producer. The thick pelvic bones are those of a low producer. Note also the large vent of the heavy producer, and the small vent of the low producer.

Thin Pelvic Bones Indicate Egg-Type Hens

The pelvic bones are the two small bones which can be felt as points on each side of the vent. Thin, flexible pelvic bones indicate egg type, and consequent high production, while thick, heavy pelvic bones are an indication of meat type accompanied by medium or low production.

Wide Spread of Pelvic Bones Evidence of Capacity

Large body capacity is necessary for high egg-production. Heavy-producing hens must consume nearly twice the amount of food re-

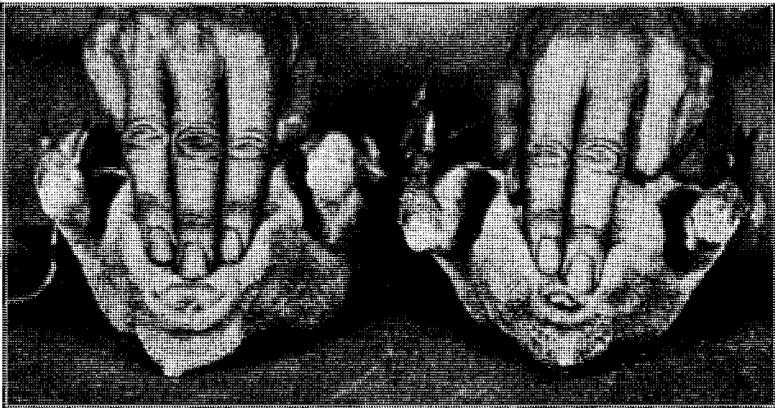


Fig. 14. Three-finger and two-finger spread between the pelvic bones. Note also the large vent of the heavy producer.



Fig. 16. Good Capacity, a width of four fingers between the pelvic bones and the rear end of the breast bone. Note also the proper way to hold the hen.

quired by their less desirable sisters. The digestive organs must enlarge to take care of the added amount of food necessary for production. The ovary, the oviduct and eggs in the process of development, require considerable room in the body cavity. The enlargement of the digestive and reproductive organs in a producing hen causes her pelvic bones to spread apart. Heavy producers during their egg-laying period will often have a spread equal to the width of three fingers between their pelvic bones. Dormant hens or low-producing hens often have a spread of the width of only one finger or less between the pelvic bones.

Size of Abdomen Shows Capacity

The evidence of capacity in a hen's body is shown not only by the spread between the pelvic bones, but also by the distance from the pelvic bones to the rear end of the breast bone. This depth of the body, indicating capacity, can be measured by placing the fingers between the pelvic bones and the rear end of the breast bone. Do not forget the importance of holding the hen properly.

A hen with a small body-capacity, having a spread of only one or two fingers between the pelvic bones and the rear end of the breast bone, is usually not worth considering as an egg producer. A larger spread indicates larger capacity and larger production. A hen with real small capacity will lay only one or two or occasionally three eggs in a cycle before she lays off for a day or more to recuperate and get a new start. A hen with "three fingers" capacity between the pelvic bones and the rear end of the breast bone may lay from three to seven or more eggs in a cycle.

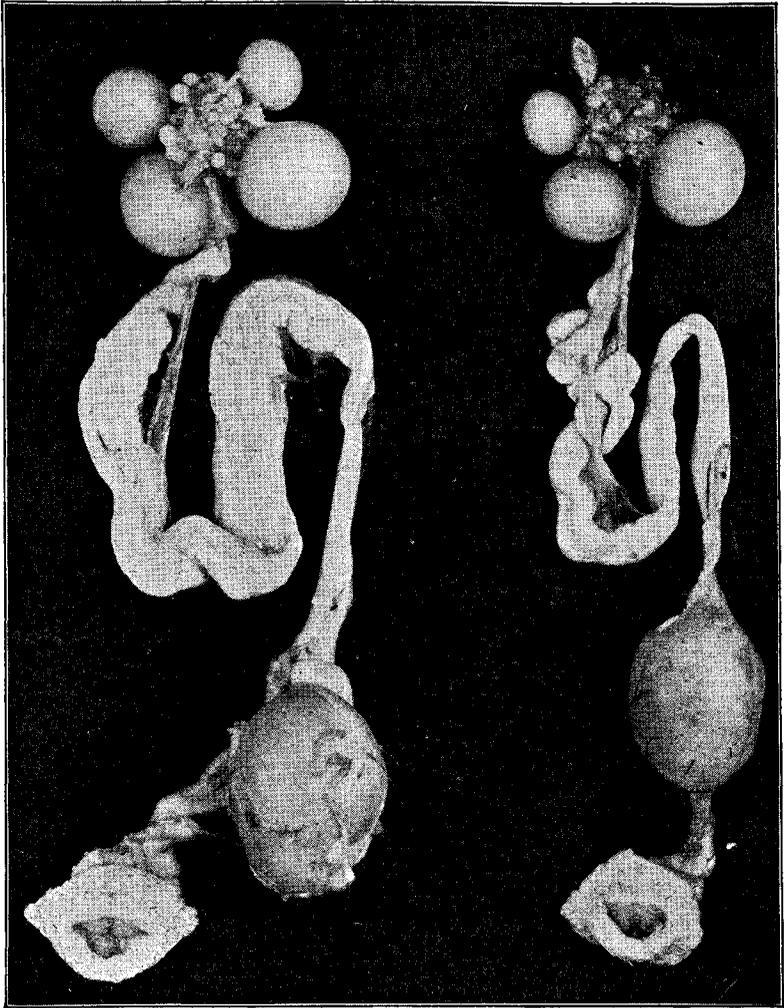


Fig. 17. High production, left, medium production, right. Each oviduct contains an egg, but the size of the oviduct and the development of the egg yolks in the egg cluster indicate the rate of production. The high-producing hen had a capacity of four fingers between the pelvic bones and the rear end of the breast bone. She laid several eggs in each cycle of production. The other hen with only "two fingers" capacity laid just one or two eggs in a cycle.

The capacity measurements fluctuate, according to the condition of the ovary, and the rate of ovulation. When a hen is in the dormant condition the capacity becomes very much contracted.

Quality of the Egg-Sack Very Important

The egg-sack is the mass of skin and flesh which envelopes the internal organs which lie between the pelvic bones and the breast bone. The quality of the egg-sack is worthy of careful consideration. A hen may show evidence of capacity and still be a non-producer, carrying a surplus of hard fat in her egg-sack. A hen may carry a little surplus of fat and still be a high producer, but the fat will be soft and well distributed. The skin of a high-producing hen will be soft, silky and pliable. The test for quality of the egg-sack is made by placing the fingers between the pelvic bones and the rear end of the breast bone, bearing down to determine whether the sack is hard or soft. A hard, fat, egg-sack indicates non-production.

Large Moist Vent Shows Heavy Production

A hen with a large, expanded, moist vent, white in color, is laying, and she is usually a better producer than a hen that has a comparatively small, hard, dry, puckered vent, yellow in color. A hen will not have a small, yellow, puckered vent unless she has been taking a prolonged vacation.

Color of Vent, Ear-Lobes, Beak and Shanks Indicate Production

This test is applicable only to yellow-shanked breeds such as the White Leghorns, Plymouth Rocks, etc. It is best applied during the summer months.

Pullets just maturing or coming into laying condition, and older hens that are not laboring under the strain of egg production, usually carry a surplus of fat which is manifest externally by a yellow pigment which gives color to the shanks, beak, ear-lobes, face and vent. Only hens that are not developing yolks are able to make these fatty deposits beneath the skin. The color bleaches out as the hens produce. It bleaches out in regular order, first from the vent, then from the face, eyes, ear-lobes, beaks and shanks. The color is regained in the same regular order when the hen becomes dormant.

In the early summer any hen of the yellow-shanked breeds that has whitish shanks and a white beak has been producing heavily. One that has a yellow beak is either a very pronounced slacker that has never lost her yellow pigment or she is one that has been taking a prolonged vacation. Some exceptions should be noted. Hens lacking constitutional vigor will often show pale colored legs.

Influence of Age of Hens on Egg Production

Hens lay the majority of eggs during their first two laying seasons and especially during their pullet year, if they are early hatched.

If a hen lays well during her pullet year she should be kept for another year as a breeder. If she lays well during her second year she should be kept for another year as a breeder. The older she is and the more culling she survives the better, for then she has proved that she has the vitality to stand up under long-continued laying, and consequently is valuable as a breeder.

Summary of Points for Culling

- I. Young stock.—Dispose of all weak or deformed chicks as soon as they are hatched. Sell all weak, late-hatched or undeveloped pullets. Keep all mature, vigorous, healthy pullets.

- II. Hens.—Get rid of all hens that are weak, sick, or overly fat, the early molters, those with shrunken scaly combs, those with sunken, dull, listless eyes, those with thick pelvic bones, small abdomens, hard, fat egg-sacks, small, dry, yellow vents, and those with prominent, yellow shanks, beaks or ear-lobes. Save hens that are healthy, strong, active, late molters, those with waxy, full red combs, prominent, bright eyes, thin pelvic bones, large abdomens, soft, flexible egg-sacks, large expanded, moist vents, and those with pale shanks, beaks and ear-lobes.

- III. Aged Birds.—Cull all aged male birds that lack constitutional vigor and vitality. Cull all aged hens that do not show exceptional qualities as egg producers.

ACKNOWLEDGMENTS

The author is indebted to Extension Director R. J. Baldwin and to Professor E. C. Foreman of the Michigan Agricultural College and to Wm. F. Kirkpatrick of the Connecticut Agricultural College for several of the photographs used in this publication.

Grateful acknowledgment is made to them for their valuable assistance.

To make poultry culling more effective in Colorado the Agricultural College is anxious to get accurate data with which to work. Will you kindly fill out the following blank report within a few days after you cull your flock and forward it to the Extension Service of the Agricultural College at Fort Collins?

BEFORE CULLING		AFTER CULLING		AFTER CULLING	
No. of Hens.....		No. of Good Hens.....		No. of Culls.....	
Day	No. of Eggs	Day	No. of Eggs	Day	No. of Eggs
1.....					
2.....					
3.....					
4.....					
5.....					
6.....					
7.....					
8.....					
9.....					
10.....					
11.....					
12.....					
13.....					
14.....					
Total.....					

Have you ever attended a Poultry Culling Demonstration?.....

If so, who gave it?.....

Date hens were culled..... Breed.....

Name..... Address.....

