11-1951

EC1490 Revised 1951 Seasonal Culling of Growing Stock and Laying Hens

J. H. Claybaugh

November 1951 E. C. 1490 (Revised)

Seasonal Culling of Growing Stock and Laying Hens

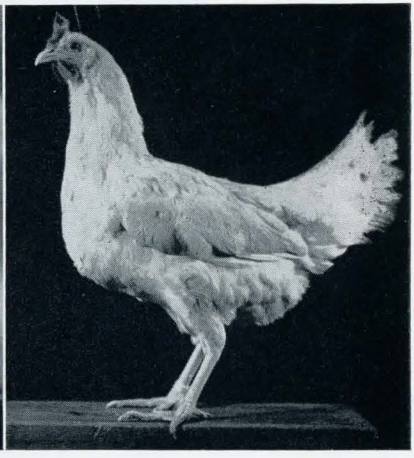
Extension Service
University of Nebraska College of Agriculture
and U. S. Department of Agriculture
Cooperating
W. V. Lambert, Director

Seasonal Culling of Growing Stock and Laying Hens

J. H. CLAYBAUGH

The removal of unproductive and unhealthy members of the flock at frequent intervals throughout the entire year is a practice well established among poultrymen whose flocks pay dividends. For efficiency, a knowledge of a few methods is necessary. The time required is not great; in fact, the removal of unproductive chickens, or "culling," can be made a part of a routine and need not require more than a few hours per month. These directions apply in a general way to all breed types. Slight modifications can be made in accordance with variations in breed characteristics.

Keep good hens over the second year, but cull continuously to protect health of flock and remove low producers. Poultrymen often cull 50 per cent of the flock in a year.



A poor layer, with shallow body; long, thin, shallow head and face; and shrunken comb. These hens eat up profits of good layers, and keep disease in flock.

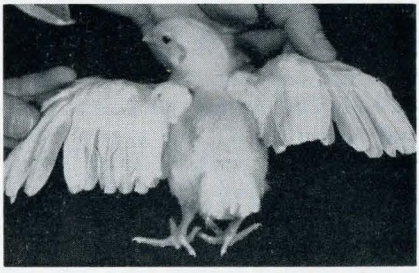
Culling techniques change with the seasons. One must always consider the age of the birds, the record of production, the state of health, as well as present and future conditions under which chickens are to be kept, before he is qualified to start culling. The following recommended month-by-month culling program assumes that management provides healthy conditions, comfortable quarters, complete rations, adequate equipment, regular attention and that the ratio of feed cost to egg price is favorable.

THE FIRST WEEK OF BROODING

Cull and destroy all crippled and deformed chicks as well as those that do not learn to eat. Cull those that show shrunken shanks and bodies when 7 to 10 days of age.

WHEN CHICKS ARE TEN DAYS OLD

Encircle the brood within the draft shield, examine each chick individually, and mark each chick whose tail feathers are not at least ½ inch long. Such slow feathering chicks should not be left in any group that is to develop into a breeding flock. Trimming the toenail of one rear toe is an easy way to mark these chickens.

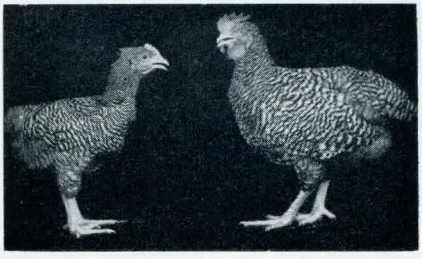


WHEN CHICKS ARE FOUR TO SIX WEEKS OLD

Again encircle the chicks within a draft shield, catch and examine each chick, and mark as a broiler chick any that has not developed feathers all along the back. Trim the toenail from the other rear toe. Thus any chick with two rear toenails trimmed has failed to pass both of the two tests for fast feathering and should later be marketed.

BEFORE MARKET BIRDS ARE SOLD

Males for the next year's breeding flock should be selected from the largest fast feathering cockerels of grade A market type before any market birds are sold. Such cockerels can be marked by smearing paint on their necks.



WHEN PULLETS GO TO RANGE

The weak or undersized pullets that are slow to feather are seldom worth leaving in the flock. When cockerels are separated from the pullets or the pullets are moved to summer range, cull the runts. Some of them may be good enough to leave with the cockerels for market birds.

WHEN PULLETS ARE MOVED TO LAYING QUARTERS

The development of red headgear of pullets forecasts that egg production will soon start. Some producers prefer to provide nests around the range shelters and postpone housing of early hatched pullets until September. Other managers grade and house the pullets when they are ready to lay.

At housing time, ready-to-lay pullet selection is based on health as shown by body fleshing and plumpness, smoothness of feathering, richly pigmented and plump shanks, and normal healthy eye color. The more rugged birds with refined, strong-appearing beaks that start laying first might well be graded and housed separately from those that are slower to develop enlarged combs and red headgear. This eliminates much "bossism."

At housing time, destroy and burn the carcasses of pullets that have sharp breasts, ruffled feathers, and pale, thin shanks caused by loss of weight or lameness, blindness or tumors.

Cull for market the undersized, slow-to-develop pullets that still have a fair amount of fleshing but may lack yellow pigment or show deformities in shape of pupil or color of iris of the eyes.

CULLING PULLETS AFTER SIX WEEKS OF 40% PRODUCTION

Trapnest records serve as the basis for the statement that the best fall layers of the flock are also the best summer layers. The poorest summer layers usually are the same hens with unsatisfactory fall egg production records. After a flock of pullets has been in 40 to 50 per cent production for 6 weeks, the better, healthier layers will still show plumpness of body and softness of skin, with bright eyes and headgear, but considerable fading of yellow pigment. This yellow color fades in the following order: The vent, the eyering, the base of beak before the middle or tip of the beak, the front of the shanks before the rear of shanks or hocks. Where all pullets have bright yellow shanks when housed, those that lose the yellow pigment first are usually the more intensive layers.

Where pullets are not well graded when housed, the ones that are slow to start laying should be culled. Cull those with nonflexible pubic bones, and yellow color at vents, eyerings, and beaks.

Some pullets stop laying after a few weeks of production. Such birds usually show the characteristics of a poor layer. They may be the type that is less rugged, overly refined, or timid. When such birds are culled early in the fall, the flock will be able to make a more efficient egg production record. When culling such pullet flocks, those that have stopped laying will show shrunken headgear, pubic bones close together, and dry and puckered vent. If the pullets represent the yellow skinned breeds, yellow pigment will soon return to the vent, eyering and back part of the beak when a healthy pullet has stopped laying. Loose feathers or new feathers along the neck indicate

that a pullet has developed a neck molt. Unless such pullets can be housed separately and kept under ideal conditions they should be marketed.

When the pullets are to be used as a breeding flock they can be culled and tested for pullorum disease after they have been in 40 to 50 per cent production for a period of 6 weeks. At this culling, those showing gray iris or deformed pupils should be culled even though they appear plump and are laying well. Gray and deformed eyes are associated with leukosis.

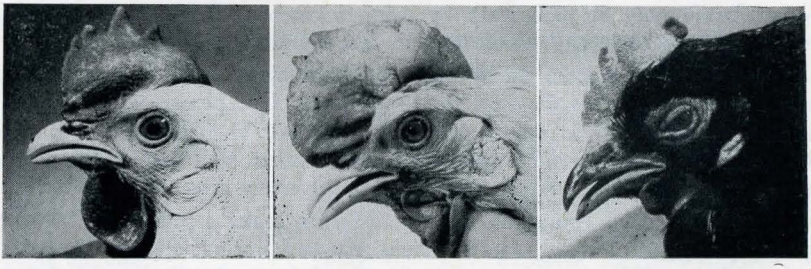
Broodiness is a problem with some strains of chickens. Persistent broody hens are usually unprofitable layers. When the broody hens are marketed during the first few months of laying, the incidence of broodiness during the later months is apparently reduced. Removing broody hens from breeding flocks is a requirement for an improvement program.

WINTER CULLING OF PULLETS

Culling pullets that have gone into a winter molt because of disease, neglect, or faulty management calls for sound judgment and a program which attempts to rectify the cause. If pullets are well graded when housed and well culled after 6 weeks of 50 per cent production, the ones that should be removed during the remainder of the winter are those that might develop prolapsus or become diseased. It is always desirable to protect the main flock by removing any bird that shows evidence of any form of incurable leukosis, as indicated by enlarged liver, external or internal tumors, lameness, gray eyes, or deformed pupils.

Respiratory diseases, including Newcastle, may be the chief cause for reduced egg production during the winter months. This may be severe enough to cause most pullets to molt. In cases studied, about 8 per cent of the pullets kept on laying. Another 10 to 12 per cent were back in production at the end of three weeks. About 40 per cent started to lay after a pause of 20 to 30 days, and most of the remainder of the flock had a rest of 30 to 40 days. The few birds that can be culled from such a flock are those too thin in flesh to be marketed. Such emaciated birds should be killed and burned.

The deformed pupil or the changing of the normal red color of the iris to gray is considered justification for selling plump laying hens from the flock as soon as found. These are called optic paralysis and are often the first symptoms of leukosis. Leukosis-infected birds are disease spreaders. As leukosis develops the hens lose weight and market value.



Left. Normal wide-open eye, bay iris, round pupil. Center. Deformed pupil. Right. Gray iris, eyelid partly closed.

APRIL TO SEPTEMBER CULLING OF HENS

Between April 1 and September, the same kind of culling program can be applied to both pullets in their first year of production and to older hens. Throughout the spring and summer, hens that stop laying should generally be marketed. The shrunken, pale or scaly comb, the dry puckered vent, the closed and stiffened pubic bones, the tight skin around the abdomen, with yellow pigment returning to the skin, vent and beak are all evidence that such hens have stopped laying. Heavy hens that develop coarseness and meatiness about the heads are seldom profitable summer layers. Heavy eyelids or dull appearance about the eye are not the signs of an active layer. Hens that lose vigor often lose weight and develop crow heads with sunken eyes. Such hens should be culled before they lose their market value. The heads of the best summer layers will show rugged refinement and high vitality with neat smooth faces and wide-open eyes. Combs and wattles will continue to be bright, waxy and enlarged. They retain normal plump weight with deep, soft abdomen and loose pliable skin. The pubic bones remain wide apart and flexible. The vents are large, moist and bleached. A continuous summer culling program distributes the nonlayers to the market quite evenly. It also reduces summer death losses and the feed cost of producing eggs.

When such a culling program has been followed, only the best old hens that have laid persistently for 10 to 12 months are on hand by August or September. If such hens are to be held for a breeding flock, they now need to be selected, pullorum-tested and banded. This needs to be done before they start to molt. On farms where pullets only are wintered, all old hens should be marketed in time so that the hen house can remain clean and empty for 10 days before pullets are housed.

CULLING TECHNIQUES

Since the handling of laying hens sometimes slows up egg production, the best culling method is one that will disturb the hens the least. One means of assuring only slight disturbance is to use a "catching coop" with an opening at the end that may be set against the door of the hen house. Wire panels are useful in driving hens into the coop. The hens are removed one by one from the opening on top of the catching coop.

Using a few wire-covered panels to corner a few hens at a time inside the chicken house is another way of confining the hens in such a way that the poorer layers may be picked up by using a catching hook. Hens showing evidence of intensive egg production are not handled.

Flashlight culling from the roosts at night is a rapid method of picking up a few nonproducers showing shriveled combs. One person works quietly, turning the flashlight on until a nonlayer is spotted. Then the light is turned off while the hen is gently picked up and handed to a helper. This procedure does not disturb the hens enough to adversely affect egg production.

When the flock is being fed, good poultrymen make a practice of picking up and placing in broody coops any hens that lack normal appetite. Any hen with prolapsus (blow outs) must be separated from the flock immediately if her meat value is to be salvaged. The hens in the broody coops may then

be sorted into those out of condition and those still marketable. An experienced workman can catch nonlayers or "picked" birds with a catching hook whenever they appear, without disturbing the good layers.

HANDLING TECHNIQUE

There is only one good way to handle chickens. The bird's head is always held toward the operator's body with its breast resting in the palm of the hand, the forefinger between the bird's legs, and the legs held tightly with the rest of the hand. By this method any bird can be held easily without harm to bird or person.

CHARACTERISTICS BY WHICH LAYERS MAY BE DISTINGUISHED FROM NONLAYERS

Layers	Characters	Nonlayers
Enlarged, red, waxy	Headgear	Shrunken, pale, scaly
Bleaching or bleached	Beak	Yellow or gaining yellow
Bright, prominent	Eye	Dull, sunken
Bleached	Eyering	Yellow
Neat, refined	Head	Meaty, or crow headed
Flexible, wide apart	Pubic bones	Stiff, close together
Deep, soft, pliable	Abdomen	Shallow, tough, tight
Large, moist, bleached	Vent	Dry, puckered, yellow

CHARACTERISTICS BY WHICH RATE OR PERSISTENCY OF PAST PRODUCTION CAN BE DETERMINED

Good Layers	Characters	Poor Layers
Completely bleached	Beak	Yellow
Bleached	Eyering	Yellow
Bleached, triangular, clean	Shanks	Rounded, yellow or gaining yellow
Late and rapid (after 10 months of laying)	Molt	Early and slow (before 10 months of laying)
Worn, soiled	Plumage	Glossy, slick

CHARACTERISTICS BY WHICH POSSIBLE FUTURE PRODUCTION MAY BE JUDGED

Profitable Layers	Characters	Nonprofitable Layers
Alert, friendly, active	Temperament	Dull, wild, listless
High vitality	Health	Low vitality
Normal, plump	Weight	Abnormal
Large, deep, rugged, refined	Head	Shallow, weak, crow head
Neat, smooth	Face	Coarse, meaty, wrinkled
Bright, prominent, normal	Eye	Dull, sunken, deformed
Short, stout	Beak	Long, thin

FEED COST—EGG PRICE RATIOS

High feed costs with a relative low egg price makes regular culling of hens of great importance. Cost account records show that whenever the egg income is twice the feed cost the manager usually has a satisfactory labor return. When egg income is only 50 per cent more than the feed cost, the margin left for labor income is not satisfactory. Feed costs are usually about two thirds of the cash expense of producing a dozen eggs. Feed costs per hen and per dozen eggs can be determined at the end of each month if feed consumption and egg production records are kept and summarized. Not more than 6 pounds of feed should be used to produce a dozen eggs.

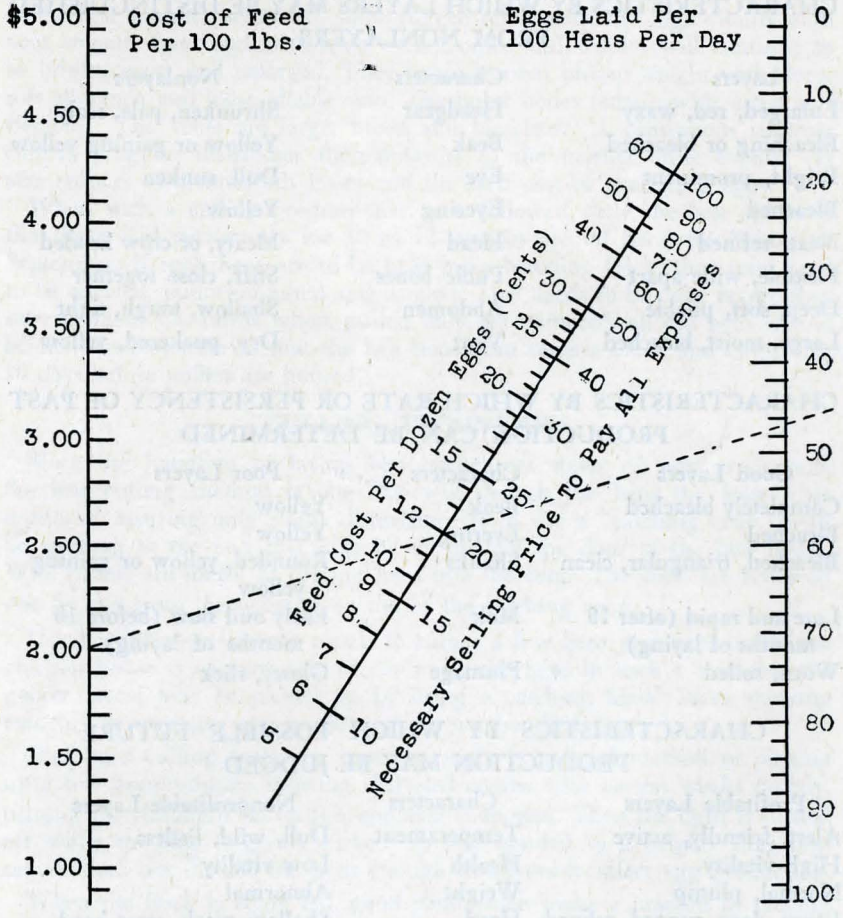


Chart for calculating feed cost of eggs. To find cost per dozen, place ruler across chart. Dotted line is an example. With cost of feed at $2.00 and production at 45 per hundred hens daily, feed cost is 12 cents a dozen. (Courtesy Prof. L. C. Card, University of Illinois.)