Culling the Poultry Flock

(Revision of Extension Bulletin 347)

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FIG. 1. 0-778 306-EGG DAUGHTER FROM 305-EGG DAM.
Laid 306 eggs from October 14, 1924 to October 13, 1925. This barred rock hen bred and owned by Oregon Agricultural Experiment Station, Corvallis, Ore.
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INTRODUCTION

In any kind of plant or animal breeding there always exist a number of low-producing, unprofitable individuals. A method whereby these low-producing individuals may be detected and eliminated is called culling.

Culling is but one of several necessary phases of successful poultry management. It has no more relative importance than proper feed and feeding methods, freedom from external and internal parasites, time of hatching, good housing facilities, and other factors.

Trap-nesting is the only accurate method of determining the exact egg production of the hen. This method is only economical for the poultryman doing careful, accurate, pedigree breeding work. Trap-nesting is under ordinary conditions not practical for the general farmer or commercial poultryman. The poultryman has to choose one of three things: first, to trap-nest; second, to study and apply the principles of culling; or, third, to continue keeping at a loss low-producing, money-losing hens. A hen's ability to manufacture a profitable or unprofitable number of eggs is evidenced by her vigor, shape of body, temperament, presence or absence of yellow pigment, width of back, depth and pliability of abdomen, and time of year in which she molts.

Careful, systematic culling of the entire flock will not transform poorly housed, lousy, crowded, and improperly fed hens into high producers. Culling is profitable only when the flock has and will continue to receive uniform and sensible care. Accuracy in culling depends upon the judgment of the poultryman, and his judgment must be based upon definite knowledge relative to the management of that flock during the preceding year. Any factor, such as moving the flock, sickness, forcing under lights, partial molt, crowding, or change in feed or feeding methods, if not taken into consideration will result in many errors of judgment. Many profitable hens have been sold as culls, not that the methods of culling as herein described were at fault, but because the poultryman failed to consider all the characteristics of the hen and the care she had received. A daily egg record of the flock during the preceding seasons discloses the care the flock has received and is a valuable asset in doing intelligent, accurate culling.

TIME TO CULL

Culling should begin at the time eggs are selected for incubation; weak, malformed, and undesirable chicks should be culled when transferring from the incubator to the brooder; chicks that are of low vitality should be culled as soon as discovered during the developing period; and pullets that are a few months later in starting to lay than the average of the flock should be culled. Culling should be a continuous three-hundred-and-sixty-five-day watching for unprofitable hens.

In addition to continuous culling of low-producing hens, one or more systematic examinations of the entire flock should be made from June to
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August inclusive. The select breeding hens may then be chosen from the number remaining after the August culling, preferably between September 15 and October 15.

If more culling were done during the growing period there would be less to be done with hens that have been kept a year or more at a loss. It isn’t NUMBER of hens that pays, it is the KIND.

VALUE OF VIGOR AND HEALTH

Vigor is the very foundation of a successful poultry business. An active disposition, bright, clear eye, and well-worn toe nails indicate health. Small, weak, deformed, inactive hens with long beaks and heads lack vigor and should be culled. Hens with baggy abdomens have broken down and become very fat; when they stop laying they seldom start again, and the death rate is very high.

Hens that are large, coarse, and have small sunken eyes are big eaters, poor layers, and rightly belong to the “beef” class.

VALUE OF YELLOW PIGMENT IN CULLING

A laying hen removes the fat from the skin. In yellow-skinned breeds the same pigment that colors the yolk of the egg colors the vent, eye ring, beak, skin, and shanks. As the hen starts laying this yellow pigment begins to disintegrate, break up, and disappear. The different parts of the body fade out white in proportion to the amount of fat stored in those parts, the kinds of feed fed, the weight of the body, the size of egg laid, and the length of the production period.

The skin around the vent is first to whiten, then the eye lids, the ear lobes, the beak, and last the shanks. When a hen stops laying the color returns in the same order that it leaves, only very much more rapidly. The loss of yellow color in the shanks indicates a long laying period, which varies from three to six months, dependent upon the breed, the rate of production, size of egg, and kind of feed. The presence or absence of yellow pigment in the vent, eye lids, ear lobes, and beak denotes a shorter laying or resting period, varying from a few days to four or five weeks.

Sick hens and hens in a dry yard, fed little or no yellow corn and green feed, will have faded beaks and shanks even though not laying.

The person culling a flock of Orpingtons, Minorcas, Dorkings, or breeds which do not have yellow skin must disregard yellow-pigment indications and make the selection on the value of the other characteristics.

IT IS NOT USING THE BEST JUDGMENT TO CULL ON YELLOW PIGMENT ALONE.
VALUE OF MOLT IN CULLING

A hen usually starts molting any time of the year she stops laying. Poor inherent breeding or poor management may cause her to stop laying. The later a hen lays in the summer the greater has been her annual production and the later she will molt. Hens of poor breeding stop laying early and start to molt and, contrary to old-time opinion, do not make the fall and winter layers. Hens of general purpose or meat breeds frequently lay and molt at the same time. High-producing hens usually molt more rapidly than low-producers. The best layers have dry, ragged, frayed, and brittle feathers, and the tail feathers are badly worn during summer and fall months. The number of new or old feathers in the wing primaries is a safer guide in determining the molt of hens than other parts of the body. It takes about six weeks to renew the primary feather next to the axial feather and an additional two weeks for each subsequent primary feather. If one or more growing primary feathers are the same length they should be credited only with the growing time of one feather. The poor layers will have more new primaries in July and August than the high layers.

FIG. 2. P-530. S. C. WHITE LEGHORN HATCHED MARCH 2, 1925.

Began laying Sept. 18, 1925. Production by months: September, 11; October, 24; November, 22; December, 21; January, 23; February, 21; March, 24; April, 23; May, 24; June, 23. Total 216 eggs. Picture taken July 1, 1926. A protable hen easily selected by applying the culling principles. Bred and owned by Oregon Agricultural Experiment Station.
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Heavy fall and winter egg production should only be expected from early-hatched, well-matured pullets. There is no practical value derived from forcing a flock of hens into an early summer molt in an attempt to obtain from them a high fall and winter production.

While late-molting hens are practically certain to be the best layers during the following year, it is not advisable to go to extremes in selecting the laying flock by this factor. The net return from the medium-late molters may be as great or greater than that of the extremely late molters.

Loose feathering is usually a characteristic of the coarse, late-maturing, and low-producing hens.

Any factor of mismanagement that checks egg production in summer will force the molt, and such conditions must be given due consideration by the person culling the flock.

IT IS POOR JUDGMENT TO CULL ON THE BASIS OF THE MOLT ALONE.
VALUE OF BODY CHANGES IN CULLING

The laying hen has a large, moist, dilated vent as compared to a round, dry, puckered vent of a hen not laying. In order to lay well a hen must be able to consume and digest a large amount of feed. The reproductive and digestive organs require a large amount of room. When a hen starts laying the entire abdomen becomes dilated; the pelvic bones, between which the egg must pass, become wide spread; the keel is forced down, and the lateral processes are sprung outward. When a hen stops laying these measurements are materially reduced. Poultrymen measure a hen's capacity by the perpendicular distance between the pelvic bones and the posterior end of keel. This measurement, whether two fingers or six fingers, is influenced by the size of the bird, length of keel, size of eggs laid, and whether the hen is laying or not laying at the time of examination.

With high production the fat goes out of the skin and the hen has a soft, velvety skin and a very soft and pliable abdomen. Thick, blunt, crooked pelvic bones and deposits of hard fat in the abdomen indicate either low production or a long period of time since profitable production.

The back should be broad and flat and its width should be carried well back to the tail. The back that is narrow, curved, cushioned on top, tapers toward the rear or slopes down, indicates very poor capacity.

IT IS NOT GOOD BUSINESS TO CULL ON BODY CHANGES ALONE.

VALUE OF HEAD AND ADJUNCTS IN CULLING

Fineness of the head is an indication of a good laying hen. The face is clean cut; the eye round, bold, prominent, and set in an oval socket; and the wattles and ear lobes fit close to the head. The comb is fine in texture; soft and pliable; serrations are broad at the base and follow, usually, the general curvature of the head. The beak is short and well curved.

Unprofitable hens usually have long, narrow serrations on the comb, shrunken, hard to the touch, and covered with whitish scales. The eye is usually sunken, not prominent when viewed from the front, and with a dull, listless expression. The long beak, narrow, crow-head is never found on a high-record hen.

DON'T CULL ON THE BASIS OF HEAD DEFECTS ALONE.

VALUE OF TEMPERAMENT AND ACTIVITY IN CULLING

A high-producing hen is more active and more nervous than a poor layer, yet more easily caught and handled. The high producer is friendly, while the poor layer is sly, stays on the roost or outer edge of the flock, and squawks when caught. The first hens off the roost in the morning and last to go to roost at night are the best layers.
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PRECAUTIONS TO OBSERVE IN CULLING

Culling is an intelligent comparison between hens of the same flock which have had equal opportunity to lay so far as housing, feeding and management are concerned. There is no set rule or rules that will apply to all flocks because it is a matter of intelligent judgment based upon uniform management of the flock.

It is not safe to judge a hen solely by any one of the indications previously discussed. Such procedure will result in untold errors. Only when all indications are applied to each hen can intelligent judgment be passed.

Unless hens have been kept under conditions favorable to egg production no one can do accurate culling work. Parasitic infection, improper feed, or irregular feeding methods, poor housing conditions, crowding, and forcing for egg production at some season of the year will cause many otherwise good hens to be classed as culls. There are culls that are so because of poor inherent ability to produce and there are hens easily mistaken for such because of the poor care they have received.

Give the questionable hen the benefit of the doubt, in culling for egg production, but not in selecting breeders.

A CONVENIENT METHOD OF CATCHING HENS

Various methods for catching fowls are used by different poultry-men. Where the fowls are to be handled individually, the best method is to use a catching crate similar to the one shown on page 8. (Fig. 4.) This crate is placed on a level with the exit-door of the poultry house. The fowls are driven into the crate, the exit-door closed, and the fowls removed through the door in the top of the crate. There is less danger from fright and injury in using a catching crate than from any other method. The fowls will enter the crate more willingly when the framework of the crate is covered with wire netting rather than boards or slats.
FIG. 4. A CATCHING CRATE IS NEEDED BY EVERY POULTRYMAN.