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Cull Regularly for Increased Production

Boyd A. Ivory

Extension Circular 411

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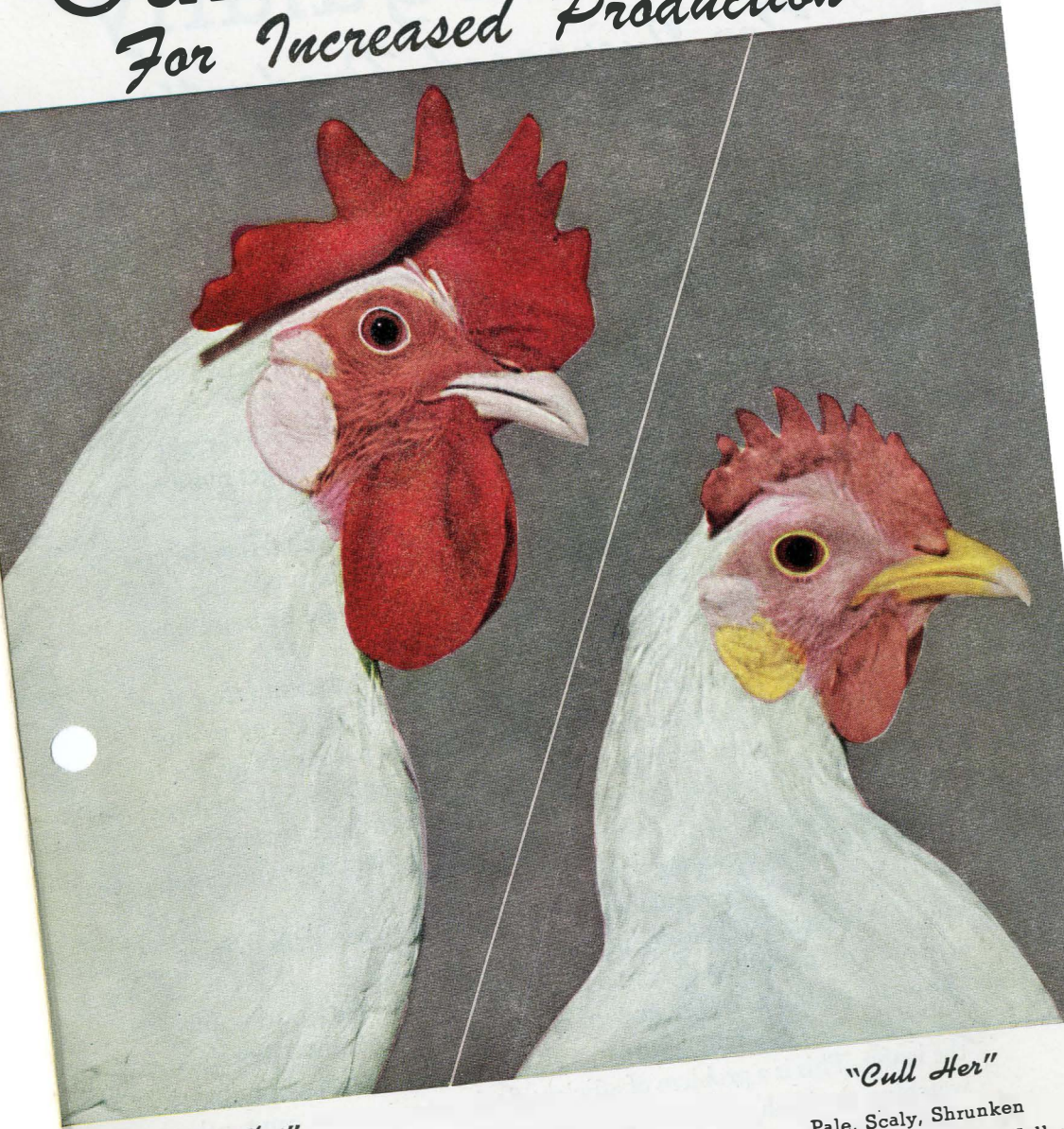

"Keep Her"		*"Cull Her"*
Large, Red, Waxy, Full	COMB	Pale, Scaly, Shrunken
Bleached or Bleaching	BEAK	Yellow or Growing Yello
Bright and Prominent	EYE	Dull and Sunken
Neat and Refined	HEAD	Snaky and Narrow

SOUTH DAKOTA STATE COLLEGE
AGRICULTURAL EXTENSION SERVICE
U. S. DEPT. OF AGRICULTURE COOPERATING

Cull Regularly
For Increased Production

By BOYD A. IVORY, *Extension Poultryman*

It is questionable whether or not it pays to keep a flock longer than the pullet year, since a hen lays 20 to 25 percent less eggs her second year than her first. Furthermore, this loss in production the second year takes place during the fall months when the price of eggs is usually the highest. Keeping a flock the second year also makes disease prevention and control more difficult.

An increasing number of South Dakota poultry growers make it a rule to sell every hen over a year old every year. They get more eggs with less feed. They make more money doing it.

It is always important for poultrymen to keep in mind that the cost of feed amounts to about one-half of the total cost of producing eggs. This is one big reason why every flock-owner should be more interested in the efficient management of the flock.

Regular flock culling is a very important management factor that goes a long way toward maintaining an efficient level of egg production in the flock. As soon as a pullet or yearling hen stops laying, she is costing you money because until she starts to lay again, she returns absolutely nothing for the feed she eats. Therefore, the sooner she is culled from the flock, the better, especially if she gives every indication of not resuming laying for some time.

Culling the flock regularly every month is very necessary to maintain an efficient level of production.

Most of the culling of hens and pullets should be done during July and August, but a certain amount of culling from month to month is still necessary. You can't afford to wait until next summer to eliminate the loafer. This is a problem of efficient flock management, constantly watching the birds in the flock to remove the loafers in order to save feed and thus produce eggs more economically.

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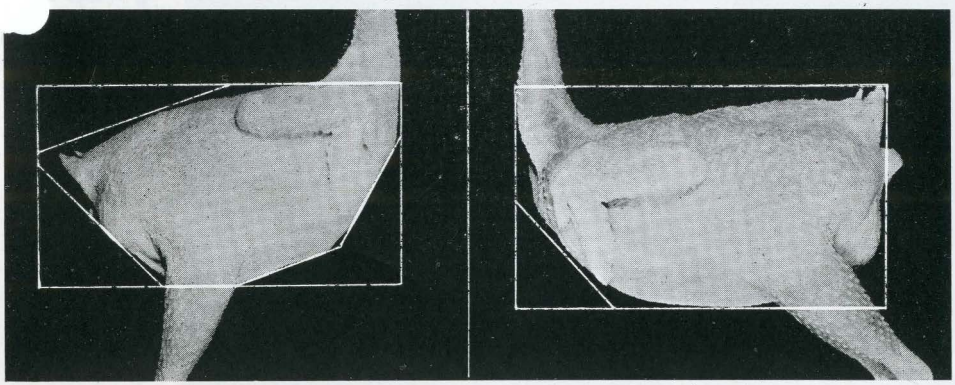
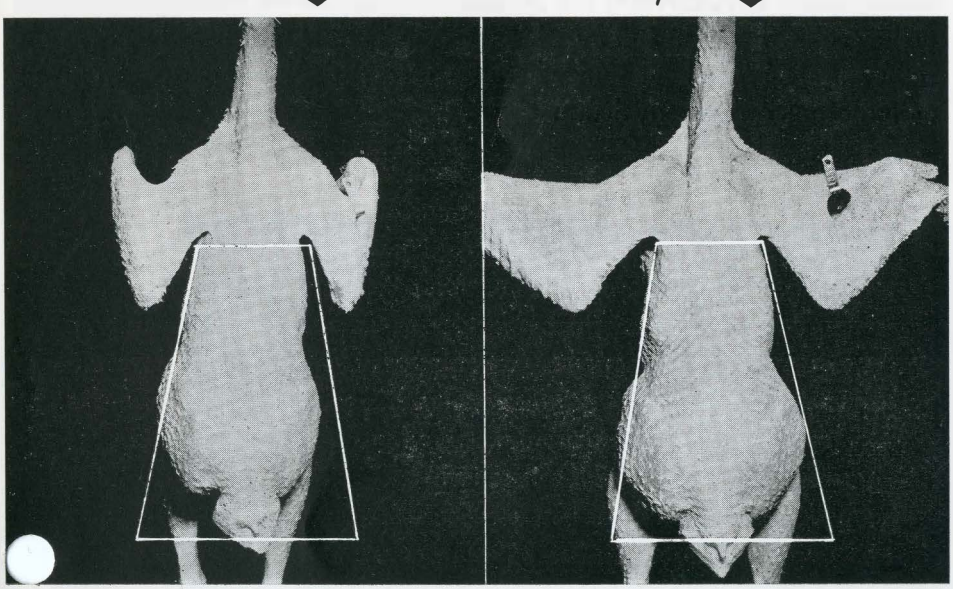


DEPTH OF BIRD. Note that bird on right carries good depth the entire length of body. Lack of depth in bird on left shows lack of heart and lung capacity in front, and lack of abdominal capacity in rear.

Effective selection should be based on five characteristics, which are as follows:

1. **Early maturity,** indicated by age at laying of first egg.
2. **Rate of production** indicated by beak and shank bleaching in yellow skinned breeds.
3. **Persistence of production,** indicated by laying in August and September at the end of the first laying year.
4. **Absence of broodiness.**
5. **Winter pause of short duration.**

WIDTH AND LENGTH OF BACK. Note that bird on right has sufficient width carried well out over pelvic arches to permit good development of reproductive organs. Birds on left lacks good width and length.



Keep 4

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large, moist, oblong, an
has good capacity betw
keel bones. Note the thr

The vent of
small, puckered,
very little spread
bones. Note it h

Culling for Early Maturity

The light or egg breeds should be mature and come into production at 180 days and the heavy or general purpose breeds should come into production in 210 days. A period of three or four weeks should elapse between the date at which the birds should be mature and in production and the date of the first culling. On the laying pullet, the comb and wattles will be fairly large, red, waxy and full. The vent will be large, dilated, moist and bleached to a bluish-white. The skin and body muscles in the abdominal region below the vent will be soft and pliable.

On the non-laying pullet the comb and wattles will be small, undeveloped, shrivelled and dry. The vent will be small, round, puckered and a deep orange-yellow color. The skin and muscles in the abdominal region will be firm and tight and the breast bone somewhat drawn up at the lower extremity, giving an indication of less body depth.

Keep her

The good laying bird
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ing hen, at left, is
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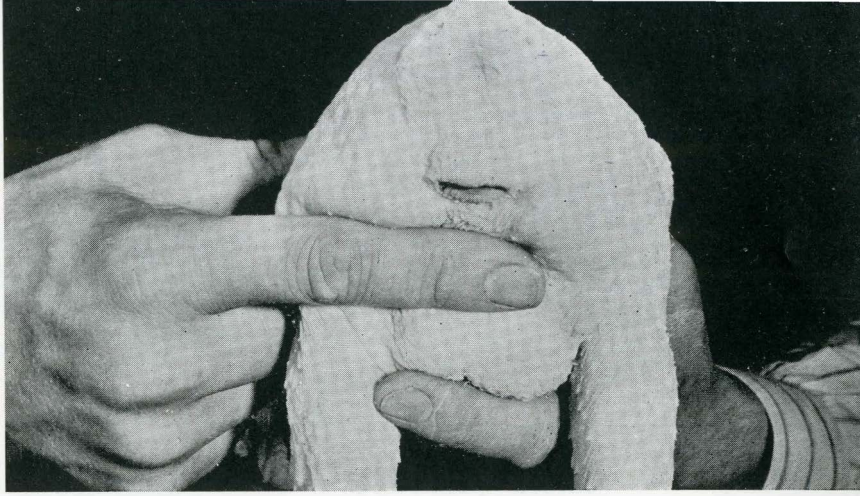
ee-finger spread.

Cull her ▶

the non-layer, at right, is
dry and yellow, and has
between the pelvic and keel
is only a one-finger spread.



Culling for Rate of Production

Cull in February or before heavy spring production starts to detect the difference between hens that have laid well in the winter and those that have not.

Laying hens that have given profitable production during the winter will show a faded or bleached beak. The pelvic bones will be thin and pliable with a good spread. Hens that have not given profitable production for this period will have a yellow beak. Their pelvic bones will be thick, firm and rigid and covered with fatty deposits. These birds should be marked and sold after their spring laying period.

In June, hens that have laid at a rapid rate of production will show completely bleached or faded shank. The amount of yellow pigment in the shank indicates the rate of production. The more yellow present, the slower the rate of production.

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the pelvic bones.

Cull her ▶

aying bi the right has
spread between the pelvic

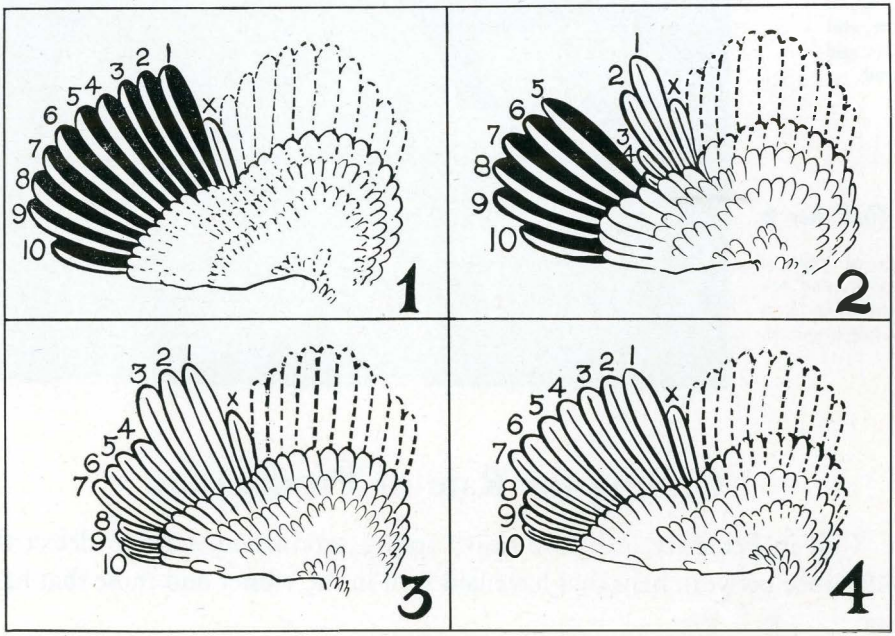

DIAGRAM OF WINGS AT DIFFERENT STAGES OF MOLT. Fig. 1 shows the 10 old primary feathers (black), the secondary feathers (broken outline), separated by the axial feather (x). At six weeks of molt a slow molter, Fig. 2, has one fully grown primary and feathers 2, 3, and 4 are developing at 2 week intervals. In contrast, a fast molter, Fig. 3, has all new feathers. Feathers 1 to 3 were dropped first, now fully developed, feathers 4 to 7 were dropped next, now four weeks old, and feathers 8 to 10 were dropped last, now two weeks old. Two weeks later, Fig. 4, feathers 1 to 7 are fully grown. Ten weeks to complete entire molt as compared to 24 weeks for a slow molter.

Culling for Persistence

Hens that are still in production in late August and September are persistent producers. A rough check on characteristics indicating present production at this time will indicate the persistent producers. Molting can also be considered in this culling. The best laying hens molt rapidly and most of them late. This is indicated by the primary feathers of the wing. From July 1 to October 1 birds that are molting and dropping three or more wing primaries at one time, are classed as fast molters. If they also have been early maturing, good winter layers, and fast layers they should be kept.

Culling for broodiness and winter pause.—Broodiness and winter pause of long duration are characteristics which should be observed and recorded against offending hens. These are inherited characteristics which keep a hen's production low even though she has early maturity, intensity and persistency of production.

To obtain high egg records, proper feeding and management are essential, but breeding is important, and CULLING IS NECESSARY AT ALL TIMES.

CULLING CHART

This chart is arranged so that the poultryman may see at a glance the difference between body characteristics of good and poor, laying and non-laying hens.

CHARACTERISTICS IDENTIFYING LAYERS AND NON-LAYERS

Laying Hen	Character	Non-Laying Hen
Large, Red, Waxy, Full	**Comb**	Small, Pale, Scaly, Shrunken
Bleached or Bleaching	**Beak**	Yellow or Growing Yellow
Bright, Prominent	**Eye**	Dull, Sunken
Bleached	**Eyelids**	Yellow
Bleached	**Eye Ring**	Yellow-Tinted
Neat, Refined	**Head**	Beefy, Crow Head
Flexible, Wide Apart	**Pelvic Bones**	Stiff, Close Together
Deep, Soft, Pliable	**Abdomen**	Shallow, Tough, Tight
Large, Moist, Bleached	**Vent**	Dry, Puckered, Yellow

CHARACTERISTICS INDICATING RATE OF PAST PRODUCTION

Good Layer	Character	Poor Layer
Completely Bleached	**Beak**	Yellow or Growing Yellow
Bleached	**Eye Ring**	Yellow
Bleached	**Earlobes**	Yellow
Bleached	**Shanks**	Yellow
ate (After August 15)	**Molt**	Early (Before August 15)
Worn, Soiled	**Plumage**	Glossy, Slick, Loose
Seldom	**Broodiness**	Often

CHARACTERISTICS INDICATING ABILITY TO LAY

Good Layer	Character	Poor Layer
Alert, Friendly, Active	**Temperament**	Dull, Listless, Wild
High Vitality	**Health**	Low Vitality
Wide, Long, Straight	**Back**	Narrow, Short, Tapering
Deep	**Depth**	Shallow
Long, Good Spring	**Ribs**	Short, Lacking Spring
Large, Deep, Strong	**Head**	Shallow, Weak, Crow Head
Neat, Clean Cut, Refined	**Face**	Coarse, Beefy, Wrinkled
Bright, Prominent	**Eye**	Dull, Sunken
Short, Stout	**Beak**	Long, Thin
Soft, Thin, Silky, Loose	**Skin**	Coarse, Thick, Dry, Tight

SELECTION CALENDAR

From U. S. Department of Agriculture Farmers' Bulletin 1,727 "Selecting Hens for Egg Production."

JANUARY—Keep hens that complete their annual molt this month. Band, as good layers, pullets with well-bleached beaks and shanks.

FEBRUARY—Select hatching eggs and baby chicks with great care. Continue to band pullets that have thoroughly bleached beaks and shanks.

MARCH—Market nonlaying hens and pullets that have yellow beaks and shanks. Break up broody hens and legband them for marketing later, unless it is necessary to use them for incubation.

APRIL—Continue to market hens and pullets with yellow beaks and shanks, if not laying. Market broody hens that wear a leg band indicating previous broodiness.

MAY—Market old breeders not valuable enough to keep for another year. Watch for early molters; they are usually low producers. Remember that market prices for fowls are usually better at this time than later.

JUNE—Market early molters, thereby reducing feed costs. Try to maintain a 50-percent production during the summer months. Begin annual selection this month.

JULY—Continue marketing molters. Early molters are usually slow molters. Market slow-growing pullets.

AUGUST—Keep hens that are still laying this month. Market those which are well into the molt. Remove weak and unthrifty pullets from the growing flock.

SEPTEMBER—Band, as persistent producers, hens that molt late this month or that have laid throughout the month. Band, as good producers, all pullets that begin laying this month.

OCTOBER—Continue to band hens that begin to molt during this month and those that are still laying. Continue to select and band the early maturing pullets.

NOVEMBER—Make up breeding pens comprising hens that matured early, laid at a good rate, were nonbroody, and showed persistent production. Early hatched pullets that began laying this month will be fair producers. Late hatched pullets that come into laying this month will be good producers.

DECEMBER—Band, as good layers, pullets that now have bleached beaks and show some bleaching in shanks. Early hatched pullets that begin to lay this month will be poor layers. Hens that molt this month are persistent layers and may be kept for another year.

ANY MONTH—Remove all birds showing weakness or disease.