

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Nebraska 4-H Clubs: Historical Materials and Publications

4-H Youth Development

1956

Selecting and Judging Chickens for Production : Extension Circular 14-05-2

Elvin Schultz

Don Wiles

Follow this and additional works at: <https://digitalcommons.unl.edu/a4hhistory>

Schultz, Elvin and Wiles, Don, "Selecting and Judging Chickens for Production : Extension Circular 14-05-2" (1956). *Nebraska 4-H Clubs: Historical Materials and Publications*. 286.
<https://digitalcommons.unl.edu/a4hhistory/286>

This Article is brought to you for free and open access by the 4-H Youth Development at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Nebraska 4-H Clubs: Historical Materials and Publications by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

E.C. 14-05-2

1956

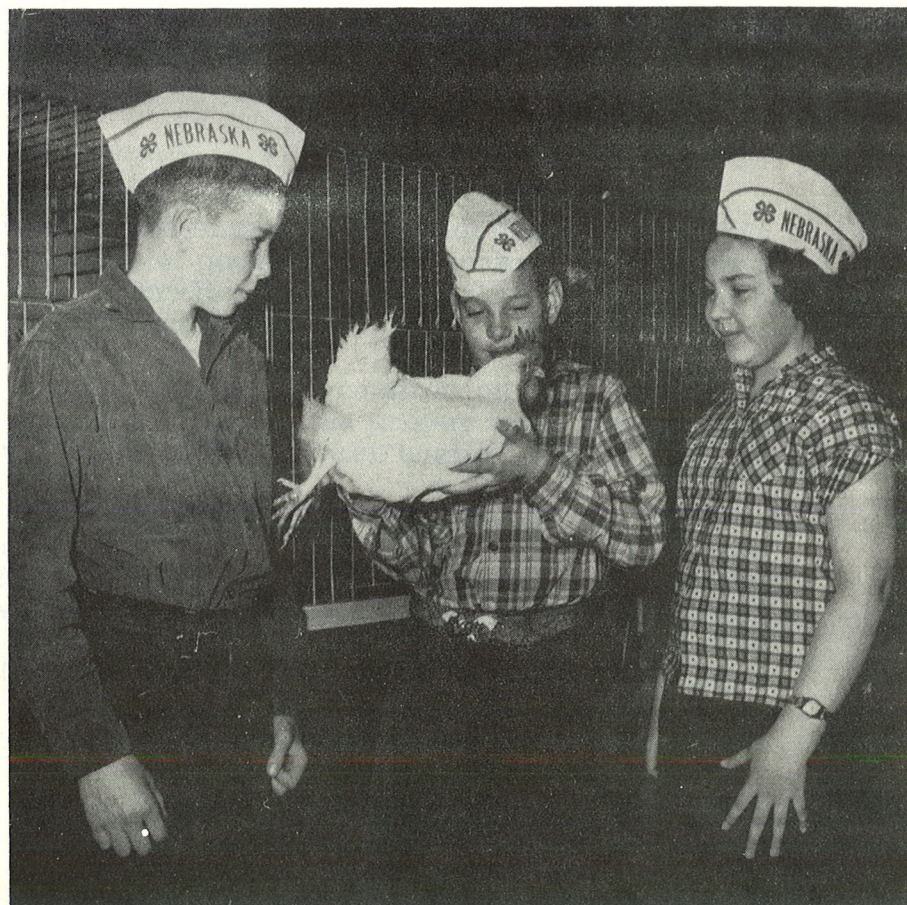
E.C.14-05-2

Selecting and Judging chickens for Production

RECEIVED

DEC 10 1956

COLLEGE OF AGRICULTURE
LIBRARY



EXTENSION SERVICE
UNIVERSITY OF NEBRASKA COLLEGE OF AGRICULTURE
AND U.S. DEPARTMENT OF AGRICULTURE
COOPERATING
W. V. LAMBERT, DIRECTOR

C.1

Contents

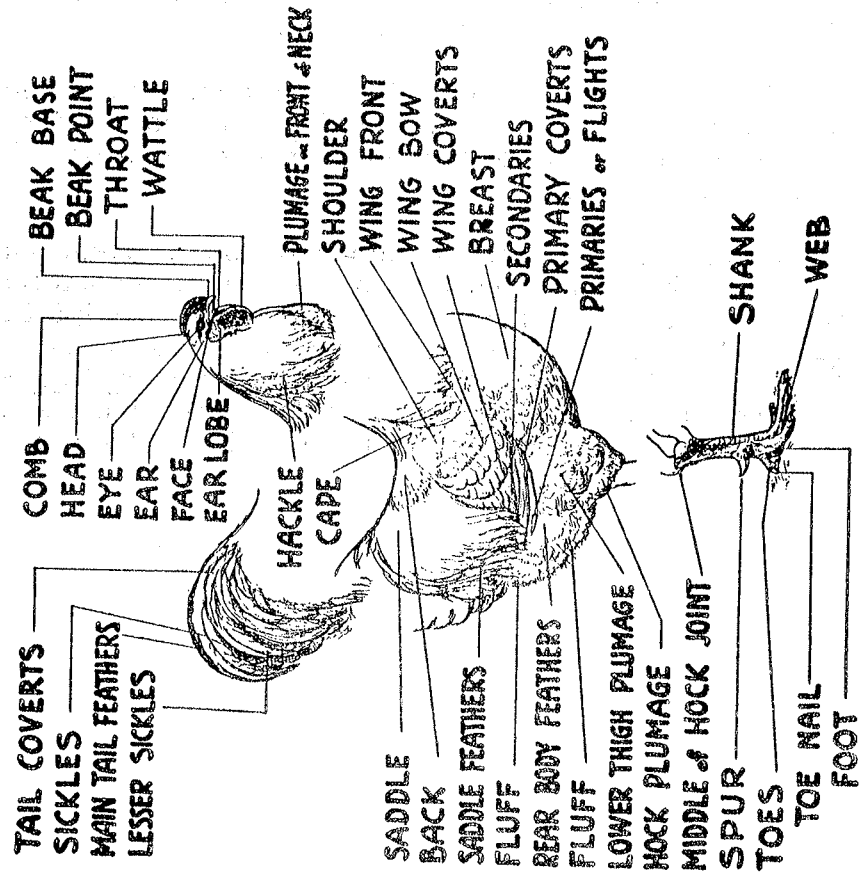
Importance of Judging Experience	1
How to Handle Poultry	1
Judging for Egg Production	3
Judging Breeding Chickens	7
Judging and Grading Live and Dressed Market Chickens . . .	11
Steps in Judging, Selecting, and Grading	16

This circular is designed to serve as a guide for county agents, 4-H club leaders, coaches of poultry judging teams, and judges of small poultry shows. Four-H members will also find it useful in their poultry projects and activities.

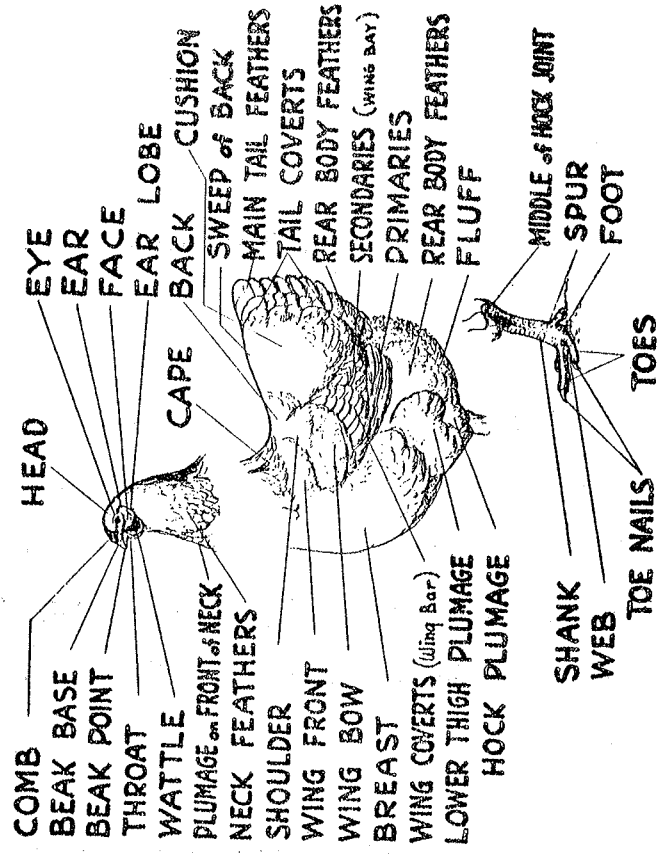
This circular provides basic information on how to tell good layers from poor ones; how to select the proper birds for breeding purposes; and how to determine market quality of both live and dressed chickens.

However, some of the more technical questions are not discussed. Such information can be found in books that are devoted to the subject. Two publications that may be helpful are the Standard of Perfection published by the American Poultry Association, Inc. of Atlanta, Georgia; and the Poultry Grading Manual, Agriculture Handbook No. 31, distributed by Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

PARTS OF THE MALE



PARTS OF THE FEMALE



Selecting and Judging Chickens for Production

by Elvin C. Schultz and Don K. Wiles *

Importance of Judging Experience

The primary importance of an educational program such as 4-H club work is development of the individual club member. One of the best ways of developing a person is through judging experiences. Such activities help develop one's initiative and judgment; and one's ability to think, act, and speak before an audience. Judging will also help to teach approved practices and increase the efficiency of the person, which in turn helps him to get the most profit from his enterprise.

Poultry judging, as well as other types of judging work, helps stimulate interest within a club and offers an excellent opportunity for group activities, programs, and round-ups. Judging can be limited to the local group or can be conducted on a community, county, or larger level.

Because of its educational as well as economic importance, judging should be included as a part of the county's 4-H poultry training program.

How to Handle Poultry

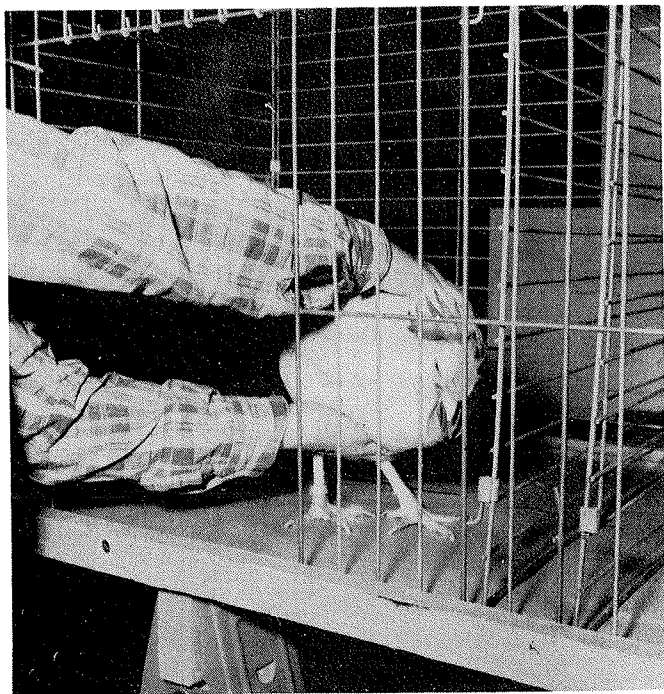


Fig. 1. The proper way to remove a bird from a cage.

The proper way to handle and hold a bird for examination is one that is comfortable for both the bird and the examiner, and one that lessens the chance of injury. The suggested procedure for handling a bird is as follows:

1. Remove the bird from the coop or crate head first.
 - a. Keep your right hand above the bird to prevent it from flying. Grasp the wing at the shoulder with the right hand, and at the same time grasp the legs just above the hock joint with the left hand. (If you are left-handed you may use the left hand in place of the right.) Always keep one finger between the legs. Gently turn the bird until it faces the door of the coop. Then remove it from the coop. See Figure 1.

* Much of the information used in this circular was taken from a bulletin prepared by Denver D. Bragg of the Agricultural Extension Service of Virginia Polytechnic Institute.



Fig. 2. The proper way to hold a bird. (Underside view)

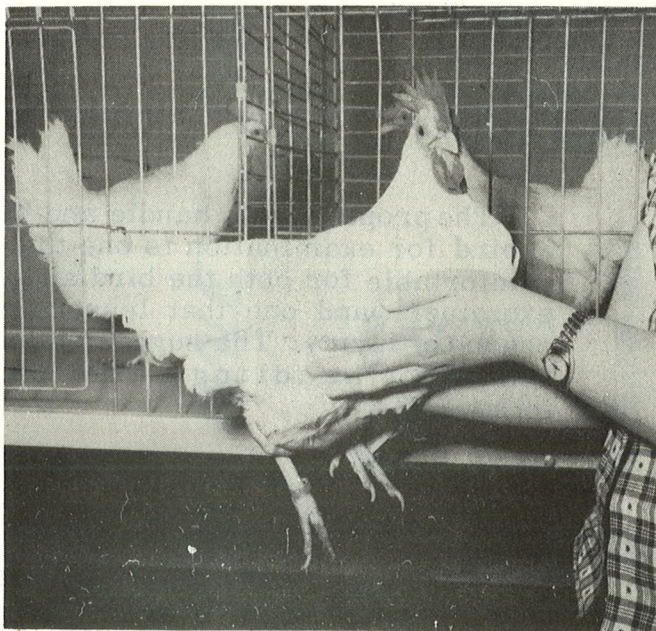


Fig. 3. The proper way to hold a bird. (Side view)

5. When it is necessary to hold the bird for a long time, place the head under your arm with the body resting on your forearm. Keep the original hold on the thighs. This position is comfortable for both you and the bird.
6. Return the bird to the coop or crate head first. See Figure 4.

2. Hold the bird with either hand.
 - a. Grasp the legs close to the body; have at least one finger between the thighs. See Figure 2.
 - b. Let the keel bone of the bird rest upon the palm of your hand, with the head of the bird toward your body. See Figure 2.
3. Examine the bird's head by placing the free hand under the breast and lifting the bird to a plane level with your eye. See Figure 3.
4. Examine the wings and other parts of the bird's body by:
 - a. Keeping the original hold on the thighs.
 - b. Placing one foot on some object about 12 inches in height.
 - c. Resting the body of the bird on your uplifted knee.
 - d. Using the free hand to examine the various parts of the bird; such as the body, (width, depth and color), wing feathers, legs, and feet.

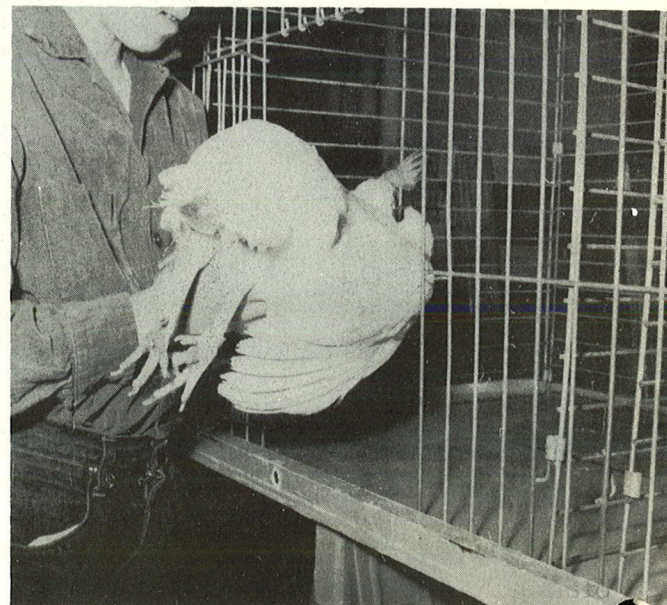


Fig. 4. The proper way to put a bird back into the cage.

Judging for Egg Production

In judging birds for egg production consider three things:

- A. Present production.
- B. Past production.
- C. Ability to produce.

These can be rather accurately determined by closely checking the appearance and condition of certain parts of the bird's body.

A. Present Production: It is relatively easy to determine whether or not a hen is in production. If a hen is laying, her comb and wattles will be large, bright red, soft, and waxy; her eyes will be bright and prominent, her pubic bones will be well spread and flexible; the abdomen will be full, soft, and pliable; and the vent will be moist, bleached*, and enlarged.

When a hen is not laying, the comb and wattles will be small, pale, and scaly; her eyes will be dull and sunken; her pubic bones will be rigid and close together; the abdomen will be hard and compact; and her vent will be yellow*, dry, and contracted.

B. Past Production: It is somewhat more difficult to accurately judge hens for past production than it is to judge them for present production. This is because breed and environment may affect the appearance and condition of those parts of the bird's body that tell past production.

A hen's past production is determined mainly by the amount of pigment** that is left in her body, and the time and rate of her molt. If a hen has produced a large number of eggs before the time she is examined, the yellow pigment will be bleached from her body and her skin will be white; her feathers will be brittle, rough, broken, and soiled.

If she has produced only a few eggs, her body will contain more pigment; and her beak and shanks will be almost yellow; her feathers will look smooth and bright.

Loss and Gain of Pigment: Before starting into production, all healthy yellow-skinned birds will have yellow shanks, beaks, earlobes, eyerings, and vents. As production progresses these parts bleach and gradually become white. The yellow pigment, however, is bleached from the various parts of the bird's body in a very definite order; this helps you to get some fairly accurate information about the bird's past production. Bleaching is first noticeable at the edge of the vent where the color disappears in just a few days after the bird starts into production. The edges of the eyelids, commonly called the "eyerings," will bleach next. This is followed by a bleaching of the earlobes and beak. The yellow color fades at the base or corners of the beak and continues on out to the tip of the beak. Four to six weeks are needed to bleach the entire beak. The feet and shanks are last to lose color. Twenty to thirty weeks of production are normally required for a bird to lose all of her pigment.

The chart opposite will show the approximate number of eggs and the estimated time needed to bleach the various parts of a bird's body.

Order of Bleaching	Approximate Number of Eggs	Estimated Time Required
(a) Vent -----	2 to 6 eggs	4 to 6 days
(b) Eyerling -----	9-10 "	2 weeks
(c) Earlobe -----	10-15 "	3 weeks
(d) Beak		
1/3 bleached -----	11 "	
1/2 bleached -----	19 "	
2/3 bleached -----	23 "	
4/5 bleached -----	29 "	5- 8 weeks
All bleached -----	35 "	
(e) Feet and Shanks		
Bottom of feet -----	68 "	
Front of shank -----	96 "	
Back of shank -----	159 "	
Top of toes -----	175 "	20-30 weeks
Hock (near feathers) -----	181 "	

*In yellow-skinned breeds only. In white-skinned breeds the vent will always be white and appear bleached.

**Pigment is the yellow coloring found in the skin, beak, and shanks of yellow-skinned breeds. White-skinned breeds do not have pigment in their skin.

Heavier breeds, because of a somewhat thicker skin, tend to lose their yellow pigment more slowly than Leghorns and other lighter breeds.

When a hen stops laying, the pigment returns to the various parts of the body in the same order in which it leaves, but much faster. It first returns to the vent; then to the eyerings, earlobes, and beak; and last to the feet and shanks.

Time and Rate of Molt: Molt has much less relationship to past egg production than does pigmentation. Nevertheless, the nature of the molt in high-producing hens differs in some ways from that found in low-producing hens. When judging breeds that are not yellow-skinned, you will have to rely almost entirely upon information given by the molt.

In order for a bird to lay during her molt, she must either be gaining in weight or holding a steady weight. Most good layers limit their molt to the primary wing feathers and to a light body molt; and complete the molt at a later date. Birds that complete their molt at the end of 8 to 10 months of production are considered early molters. Such birds have completed their molt ahead of the late molters, and as a result have been out of production much longer than late molters. Because of this, good layers will have a plumage consisting of brittle, rough, broken, and soiled feathers; while poor layers will have a smoother and more attractive plumage.

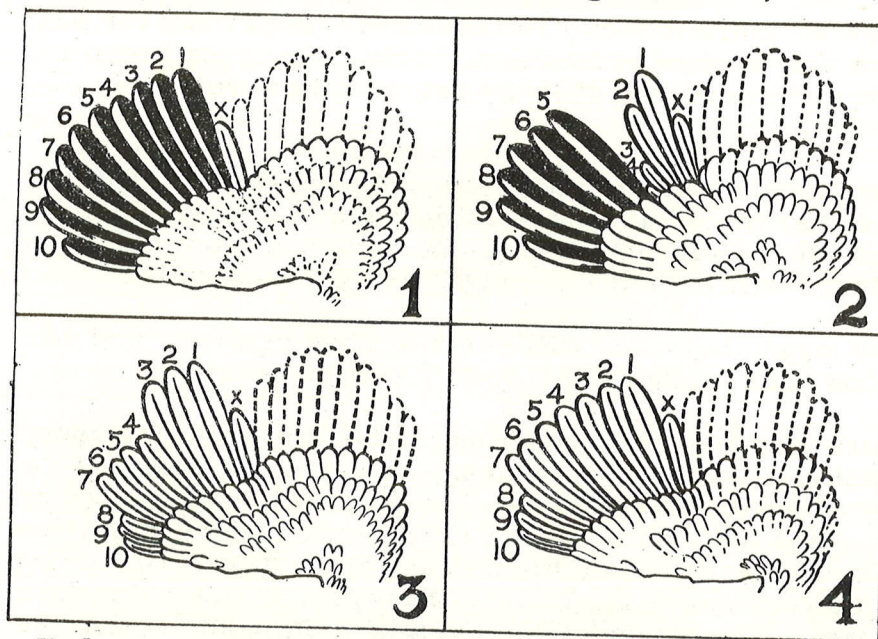


Fig. 5 Wings at different stages of growth. 1 (top left) shows the 10 old primary feathers (black), the secondary feathers (broken outline), separated by the axial feather (x). 2 shows a slow molt at six weeks of molt, with one fully grown primary and feathers 2, 3, and 4 developing at two-week intervals. In contrast, 3, a fast molt, has all new feathers. Feathers 1 to 3 (now four weeks old), and feathers 8 to 10 were dropped last (now two weeks old). Two weeks later (4; lower right), feathers 1 to 7 are fully grown. The fast molt took 10 weeks, as compared to 24 weeks for a slow molt.

During the laying period, a good producer will drop one primary wing feather at intervals of one week; or will drop several primary feathers at the same time. If several primary feathers are dropped at once the time before more feathers are dropped is lengthened. Poor producers seldom drop more than one primary feather at a time and will require two or more weeks between the dropping of such feathers. The period of time between droppings of primary feathers can be determined by comparing the sizes of the feathers. It requires six weeks for a new primary feather, or a group of primaries, to grow. Thus, if the new feather is approximately one-third the size of an old primary feather it would be about two weeks old.

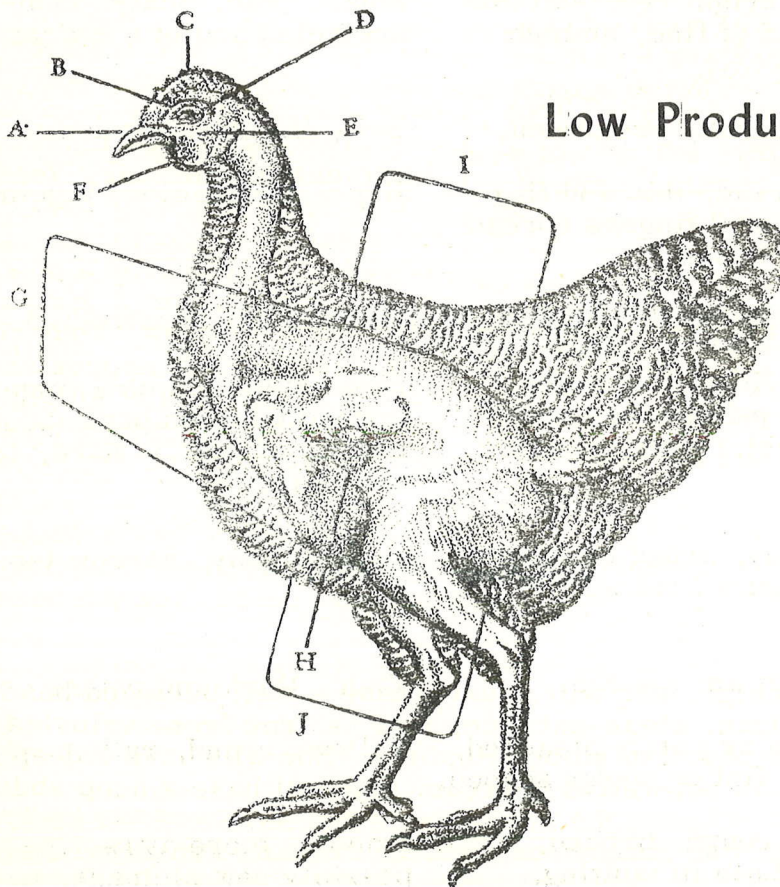
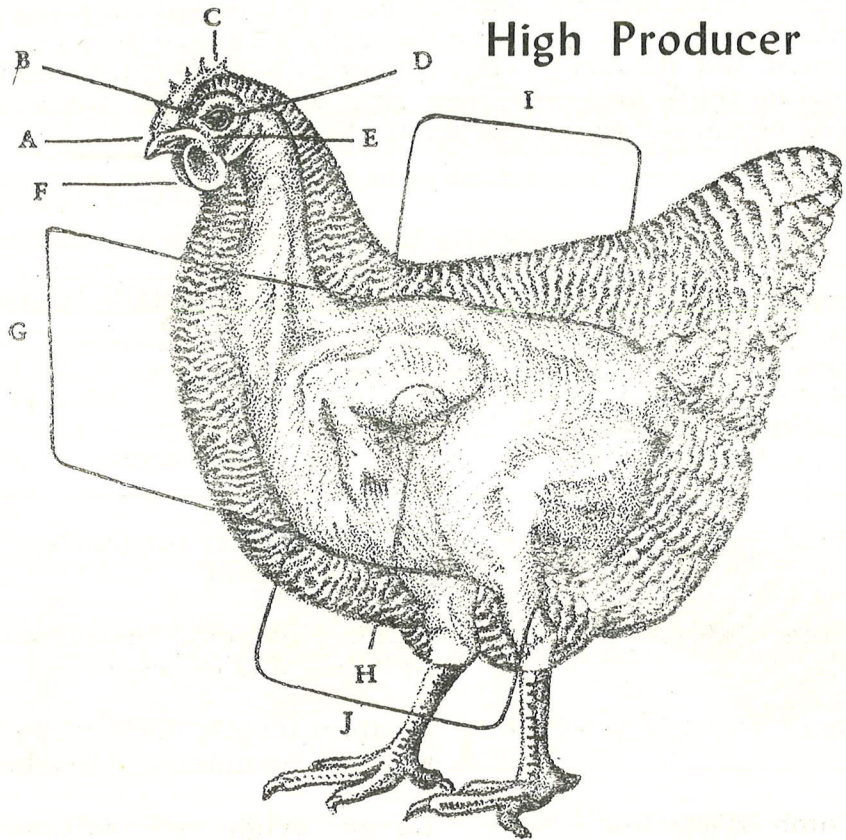
C. Ability to Produce: A bird's ability to produce is indicated by the shape and refinement of her head, the width and depth of her body, her abdominal capacity, the softness and pliability of her abdomen, the thinness of her pubic bones, the thinness and pliability of her skin, and the shape of her shanks.

If a hen's ability to produce is high, she will usually have a well balanced head that is moderately broad and deep; a lean, clean-cut face, that is free from wrinkles and coarseness; and comb and wattles of a fine smooth texture. She will have a deep body and a broad back that carries its width out well to the rear. She will have a deep abdomen that measures four fingers or more between the pubic bones and the tip of the keel. Her abdomen will be soft and pliable, and her pubic bones will be thin and somewhat flexible. Her skin will be soft, thin, and pliable; and her shanks will be rather flat or wedge-shaped.

Characteristics that show vigor and productiveness.

A, Beak- properly proportioned; B, Skull- properly proportioned; C, Comb- thick at base, properly developed; D, Eye- expressing vigor and alertness; E, Face- full, smooth texture; F, Wattles- properly developed; G, Body- deep, broad, well-developed; H, Heart girth- ample; I, Back- broad, flat; J, Keel- of good length.

Fig. 6



Low Producer

Characteristics that show lack of vigor and productiveness.

A, Beak- shallow, narrow, long; B, Skull- narrow; C, Comb- thin, undeveloped; D, Eye- small, sunken, showing lack of vigor; F, Wattles- undeveloped; G, Body- shallow, undeveloped; H, Heart girth- small; I, Back- narrow, sloping; J, Keel- short, making breast too flat.

Fig. 7

If a hen's ability to produce is low, she will usually have a head that is not well balanced - that is long and shallow or short and deep; her face will be puffy or coarse; her beak may be rather long and sharp; her comb and wattles will be rather coarse; her body will often be shallow; and her back rather narrow and tapering. She will have a relatively small or shallow abdomen that may measure only two or three fingers between the pubic bones and the keel. Her abdomen will be rather hard, tight, and fatty; her pubic bones will be thick and stiff; her skin will be tight, thick, and rather coarse; and her shanks will be rather round and somewhat rough.

A SUMMARY OF THINGS TO CONSIDER WHEN JUDGING BIRDS FOR EGG PRODUCTION

Physical Character Considered	Good Layer	Poor Layer
Head - - - - -	Well balanced, moderately broad and deep	Long and shallow or short and deep.
Face - - - - -	Lean, clean cut, free from wrinkles and coarseness.	Puffy, coarse.
Beak - - - - -	Medium length, well curved, white -- completely bleached.	Long, sharp, yellow.
Comb & Wattles - - -	Large, bright red, soft and waxy and of fine, smooth texture.	Small, pale, scaly, sometimes shriveled and of a coarse texture.
Eyes - - - - -	Bright, alert, prominent.	Dull, listless, sunken.
Pubic bones - - - - -	Well spread, thin and flexible. (2 or 3 fingers spread between bones.)	Rigid, thick, close together.
Vent - - - - -	Moist, bleached, enlarged.	Yellow, dry, contracted.
Abdomen - - - - -	Deep (4 fingers or more between pubic bones and tip of keel.) Soft, pliable.	Shallow (only 2 or 3 fingers spread between pubic bones and tip of keel.) Hard, tight, and fatty.
Body - - - - -	Deep body, broad back with width carried out well to the rear.	Shallow body, narrow tapering back.
Skin - - - - -	Soft, thin and pliable.	Tight, thick and rather coarse.
Feet - - - - -	Bleached or partly bleached, smooth, flat or wedge shaped.	Yellow, round, rather rough.
Plumage - - - - -	Brittle, rough, broken, soiled. Late in molting.	Smooth, more attractive, possibly new plumage, early in molting.

Judging Breeding Chickens

When judging breeding birds consider four things:

- A. Egg production qualities.
- B. Breed type (body shape) and variety characteristics.
- C. Condition and vigor.
- D. Standard defects and disqualifications.

A. **Egg Production Qualities:** You should be able to do a good job of selecting birds for egg production before trying to select birds as breeders. How to select birds for egg production has been explained in the previous part of this bulletin.

B. **Breed Type and Variety Characteristics:** When judging birds as breeders it is very important to know what the ideal type or shape of the bird should be. It is also important to know the desired plumage color and type of comb. Perhaps the best way to learn breed types, plumage color, type of comb, and other characteristics, is to study the different breeds. (Pictures of each breed are shown in the book "Standard of Perfection." A brief description of four of Nebraska's most common breeds is given in Figure 8.

C. **Condition and Vigor:** Condition and vigor is a very important factor to consider when selecting or judging breeding birds. Desirable breeding birds will be free from any signs of disease and will generally be very active and alert. They will stand up straight and tall, and will be full of vigor and vitality. They will be sturdy, early maturing birds that show a rugged refinement about the head, face, and body. The plumage although it may be somewhat worn or soiled, will generally be in good physical condition.

D. **Standard Disqualifications and Defects:** In judging breeding birds, watch for disqualifications and defects. A disqualification is a deformity or defect that is serious enough to exclude the fowl from an award or score. Birds having one or more disqualifications should be culled from breeding flocks, and should be disqualified in shows and judging contests. A defect is a departure from the ideal, as described in "Standard of Perfection." A defect will lower the bird's desirability, but will not bar it from competition in shows or use in breeding flocks.

General Disqualifications: The following are general disqualifications that should be looked for when selecting or judging breeding birds: Back, Beak, Wing and Tail --

Crooked back.

Deformed beak.

A wing showing clipped flights or secondaries or both.

Slipped wing (wing not correctly folded, not held up in proper position; result of injury or weakness of muscle).

Split wing (so irregularly formed as to show a decided gap between primaries and secondaries).

Twisted wing or tail feathers.

Complete absence of main tail feathers.

Decidedly wry tails (crooked).

Decidedly squirrel tails (forward over back).

Combs --

Lopped combs on single-comb varieties except in Mediterranean and New Hampshire females.

Rose combs falling to one side, or so large as to obstruct sight.

Side sprigs on all single-comb varieties. (A growth like the points of the comb grow out horizontally from the comb.)

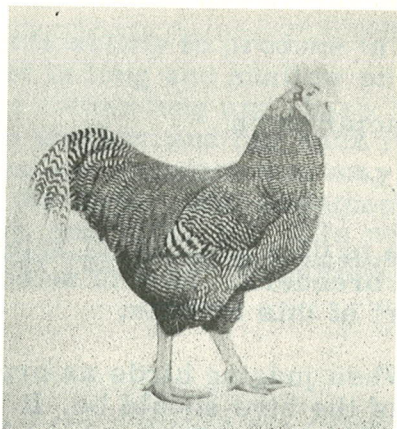
Comb foreign to breed.

Split comb (a division of the comb forming an overlapping or doubling of the blade).

Absence of spike on rose comb.

Figure 8.

Ideal Breed Types



NEW HAMPSHIRE

Body Shape: somewhat similar to that of the Plymouth Rock but with tail carried higher.

Back: medium length, extends in a gradual concave sweep from the shoulders to the tail.

Body: deep; broad, full and well rounded breast

Tail: carried at an angle of about 35 to 45 degrees.

Head: medium size single-comb; comb, face, wattles and earlobes are bright red.

Plumage: chestnut red; main tail feathers are black; some black in wings.



RHODE ISLAND REDS

Body Shape: rectangular, brick shaped.

Back: long, moderately broad and horizontal.

Body: long, straight and moderately deep.

Tail: medium size, well spread and carried at an angle of 30 to 40 degrees.

Head: single or rose comb depending upon variety; comb, face, wattles and earlobes are bright red.

Plumage: feathers carried close to the body; dark red; black main tail feathers and some black in wings.

LEGHORNS

Body Shape: oval or egg shape with several long sweeping curves.

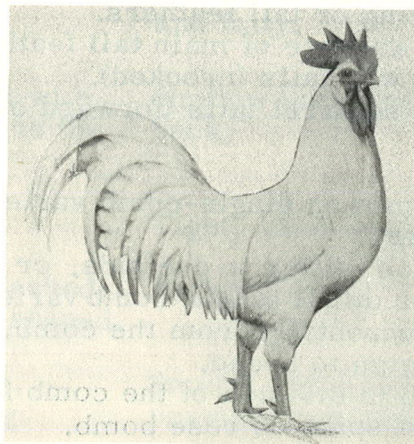
Back: rather long; slopes downward from the shoulders to the center of the back, then rises with a long concave sweep to the top of the tail.

Body: fairly deep, relatively broad, carried somewhat higher in front than in back, legs and neck are moderately long in relation to body.

Tail: large and long in comparison to size of bird.

Head: single or rose comb depending upon variety; comb, face and wattles are bright red; earlobes are enamel white.

Plumage: fits closely to body; color depends upon variety.



PLYMOUTH ROCKS

Body Shape: somewhat similar to that of an inverted derby hat or a fairly deep gravy bowl.

Back: long, nearly horizontal but with a slight concave sweep to the tail.

Body: moderately long, broad and deep.

Tail: medium size, moderately well spread and carried at an angle of 20 to 30 degrees.

Head: small single-comb, comb, face, wattles and earlobes are bright red.

Plumage: color depends on the variety. White Rocks often show scattered gray flecks.

Head --

Positive enamel white in face of Mediterranean cockerels and pullets.
Positive enamel white in earlobe of males or females of American breeds.

Shanks and Toes --

Stubs (feathers or down on shanks, feet, or toes) on breeds required to have unfeathered shanks.
Legs or toes foreign to color of breed.
Web feet.
Duck footed (the fourth or hind toe carried forward).
Bowed legs or knocked knees.

Color --

Red or yellow feathers in any black variety.
Foreign color in any part of the plumage of white varieties except slight gray ticking.

NOTE: Red pigment on sides or back of shanks is not to be considered a defect. Under all disqualifying clauses, the specimen shall have the benefit of the doubt.

Specific Disqualifications: There are certain specific disqualifications that apply to the various breeds and varieties. The specific disqualifications and weights of four of our most common breeds are given below.

Barred Plymouth Rocks --

Red or yellow in any part of plumage.
Two or more solid black primaries; two or more solid black secondaries; or two or more solid black main tail feathers.
Shanks other than yellow (dark spots not to disqualify).

Single-comb Rhode Island Reds --

One or more entirely white feathers showing in outer plumage.
Shanks and feet other than yellow or reddish horn.

Single-comb White Leghorns --

Red covering more than one-third of the surface of the earlobes in cockerels and pullets, or more than half of the surface of the earlobes in cocks and hens.
Males more than 1 1/2 pounds underweight.
Females more than 1 pound underweight.
Feathers other than white in any part of the plumage.
Shanks other than yellow.

New Hampshires --

One or more entirely white feathers showing in outer plumage.

Weight Requirements --

(American Class)	Cock Lbs.	Cockerel Lbs.	Hen Lbs.	Pullet Lbs.
White & Barred Plymouth Rocks	9 1/2	8	7 1/2	6
Single-comb Rhode Island Red	8 1/2	7 1/2	6 1/2	5 1/2
New Hampshires	8 1/2	7 1/2	6 1/2	5 1/2
(Mediterranean Class)				
Single-comb White Leghorns	6	5	4 1/2	4

Defects: The following are some of the more common defects you may find when judging or examining breeding or exhibition poultry.

Comb, Wattles, and Earlobes --

- Thumb marks (a hollowed impression inside of comb as may be made by the thumb).
- Rear of comb turning to one side.
- Twisted comb in front.
- Frosted comb.
- Comb with double points.
- Coarse, wrinkled wattles.
- Loosely fitting earlobes.
- Too many points--too few points (5 generally required).

Eye --

- Eye destroyed, leaving only socket.
- Eye showing permanent injury.
- Color of eye not as described by standard (red or bay eye color normal for most of our more common breeds).

Head --

- Crow head--long, narrow, shallow.
- Coarse, beefy.
- Over refined.

Face --

- Positive white in face of cocks and hens of Mediterranean class (except white-faced black Spanish)

Wings and Tail --

- Missing feathers or part of feathers.
- Broken feathers that are not detached.
- Pinched tails in Leghorn females.
- Split tail in young birds (in old birds a disqualification).
- Absence of sickle feathers, the tail of the male bird.
- Absence of one or more main tail feathers.
- Tail not well developed (less than $3/4$ its normal size).

Legs and Toes --

- Crooked toes.
- Double spurs (in all varieties except Sumatras).
- Horny, well defined spurs on females.
- Dark spots on shanks or toes in all varieties required to have yellow, white, or pinkish-white shanks and toes.

Breast --

- Crooked breasts or keel bone. (A badly crooked keel bone is a disqualification in the Cornish breed.)

Plumage --

- Smut (slaty appearance) in the under color of Rhode Island Reds.
- Poor (irregular) barring in Barred Plymouth Rocks.
- Black feathers in the body of Barred Plymouth Rocks.
- Brassiness in all varieties; creaminess in white birds.
- Gray specks on the plumage of white birds.
- Irregular or deficient penciling in penciled varieties; poor, indistinct or too heavy lacing in laced varieties.
- Mealiness (ground color dotted with lighter color) in plumage of buff or red varieties.

Judging and Grading Live and Dressed Market Chickens

All market poultry, live and dressed, is classified according to age, tenderness of flesh, and sex. Market poultry is further graded according to quality. Before you start to judge market poultry, become acquainted with the various classifications.

Classes of Market Poultry

Broilers or Fryers -- Young, tender-meated chickens (usually under 16 weeks of age) of either sex, with soft, pliable, smooth-textured skin. Usually under 4 pounds live weight.

Roasters -- Young, tender-meated chickens (usually under 8 months of age) of either sex, with soft, pliable, smooth-textured skin. Breast bones are somewhat more rigid than in broilers and fryers, but with some remaining flexible cartilage over the ends. Usually 4 pounds or over live weight.

Capons and Caponettes -- Young, tender-meated, desexed male chickens (usually under 10 months of age) showing practically no comb development. Have soft, pliable, smooth-textured skin.

Stags -- Young male chickens with somewhat toughened flesh and considerable hardening of the breast bones. Combs may be well developed. Spurs may be prominent but are not fully developed. Stags show, in general, an intermediate condition of flesh and sexual development between roasters and cocks.

Hens (stewing chickens or fowl) -- Mature female chickens with hardened breast bones. This includes all female chickens that have lost the soft fleshed condition characteristic of young chickens. The fact that some fowls can be roasted by special or prolonged cooking is not enough to classify them as roasting chickens.

Cocks (old roosters) -- Mature male chickens with toughened flesh and hardened breast bones.

Judging and Grading Live Market Poultry

Live market poultry is graded as U. S. Grade A or No. 1 quality, U. S. Grade B or No. 2 quality, U. S. Grade C or No. 3 quality, and rejects. A reject is a bird that is unfit for human consumption; and in a judging contest it should be disqualified. When judging, you may be asked to place the birds first, second, third, and fourth or you may be asked to grade according to quality.

The following factors should be considered when you judge or grade live market poultry:

- | | |
|----------------------|------------------------------------|
| A. Health and vigor. | D. Fleshing. |
| B. Feathering. | E. Fat covering. |
| C. Conformation. | F. Degree of freedom from defects. |

A. Health and Vigor: Health and vigor are closely related to feathering, conformation, fleshing, and fat covering. Birds with good health and vigor have tight and brilliant plumage; good body conformation; plump, well-developed breast and leg muscles; and a good fat covering. Also, a desirable live market bird usually has a strong, well-proportioned head with full, round, bright, and alert eyes.

B. Feathering: Select well-feathered birds with few pinfeathers. Freedom from pinfeathers is a desirable factor of quality in dressed and ready-to-cook poultry and deserves particular attention. Well-feathered birds are also more attractive than poorly feathered ones. Feathers broken off at the base next to the skin of a bird are not desired. They not only detract from appearance, but lower the quality of the bird after it is processed.

The following chart shows a summary of the preceding specification for U. S. Grades of Live Market Poultry. (Individual bird basis. Minimum requirements and maximum defects permitted.)

Factor	A or No. 1 Quality	B or No. 2 Quality	C or No. 3 Quality
HEALTH and VIGOR	Alert, bright eyes, healthy, vigorous.	Good health and vigor.	Lacking in vigor.
FEATHERING	Well covered with feathers showing luster or sheen. Slight scattering of pinfeathers.	Fairly well covered with feathers. Moderate number of pinfeathers.	Complete lack of plumage feathers on back. Large number of pinfeathers.
CONFORMATION	Normal.	Practically normal.	Abnormal.
Breast bone	Slight curve, 1/8" dent (chickens), 1/4" dent (turkeys).	Slightly crooked.	Crooked.
Back	Normal (except slight curve).	Moderately crooked	Crooked or hunched back.
Legs and Wings	Normal.	Slightly misshapen.	Misshapen.
FLESHING	Well fleshed, moderately broad and long breast.	Fairly well fleshed.	Poorly developed, narrow breast, thin covering of flesh.
FAT COVERING	Well covered, some fat under skin over entire carcass. Chicken fryers and turkey fryers and young toms only moderate covering. No excess abdominal fat.	Enough fat on breast and legs to prevent a distinct appearance of flesh through skin. Hens or fowl may have excessive abdominal fat.	Lacking in fat covering on back and thighs, small amount in feather tracks.
DEFECTS	Slight.	Moderate.	Serious.
Tears and broken bones	Free.	Free.	Free.
Bruises, scratches and callouses	Slight skin bruises, scratches and callouses.	Moderate (except only slight flesh bruises).	Unlimited to extent no part unfit for of food.
Shanks	Slightly scaly.	Moderately scaly.	Seriously scaly.

C. **Conformation:** Conformation refers to the general form of the body of a bird. A bird with good physical conformation has a relatively large girth; and good length, depth, and breadth of body. This permits proper growth of the vital organs (heart and lungs particularly) and digestive organs to maintain life, and to take care of the extra work imposed on the bird to produce sufficient flesh and fat covering. The large, rangy type body is not as desirable as one that is compact and shorter legged. Generally speaking, the ideal body shape for both meat type birds and egg production birds is about the same. See Figures 6 and 7.

The ideal bird has a broad shoulder that is flat on top; a wide back that carries well from the shoulder to the rump; and a moderately deep, wide, full, and round breast. Excessively deep breasts are not desirable because of the danger of being poorly fleshed. The keel bone should be long and straight. Look for short thighs and wings. The thighs should also be thick and set well apart to give good width to the body.

D. **Fleshing:** Fleshing is one of the most important factors in market poultry, because it is the flesh of the bird for which the consumer pays. Since the larger muscles of the body are located along the breastbone and on the thighs and legs of the bird, it is particularly important that these parts be well covered with flesh. The back should also be well covered with flesh.

E. **Fat covering:** From the standpoint of quality, flavor, texture, and tenderness in the cooked bird, fat is one of the most important factors in determining quality. For this reason, a high-quality bird should be well covered with fat on the breast, back, hips, and pinbones. Birds carrying a good fat covering have a white or creamy colored carcass; and birds that have a poor fat covering or no fat have a reddish tinged or flesh colored carcass.

Carcasses having spots of fat and spots without fat are called patchy. This characteristic is undesirable. Also, a hard lump of fat in the abdomen of the bird is not wanted.

F. **Degree of Freedom from Defects:** Tears and broken bones detract from the appearance of the bird and lower the quality of the bird's carcass. The number and extent of defects that are permitted in good-quality birds depend on the location. For example, defects on the breast and thighs are more serious than those on other parts of the body.

Bruises are caused largely by rough handling. They also detract from the appearance and sales value of the processed bird.

Judging and Grading Dressed Market Poultry

Dressed poultry is graded as U. S. Grade A, U. S. Grade B, and U. S. Grade C. Birds can not be classified in any of the grades if they show evidence of disease, extreme lack of flesh, abdominal accumulations, excessive internal bleeding, or poor drainage of blood from the carcass, and bruises in excess of those permitted in C-quality birds. As in the case of live market birds, you may have to place the carcasses or you may be asked to grade them.

The following factors are considered in judging and grading the quality of dressed market carcasses:

- | | |
|------------------------------|-------------------------------------|
| A. Conformation. | E. Freedom from cuts, tears, and |
| B. Fleshing. | disjointed and broken bones. |
| C. Fat covering. | F. Freedom from discolorations of |
| D. Freedom from pinfeathers. | skin, flesh blemishes, and bruises. |
| | G. Freedom from freezer burn. |

- A. Conformation: The desired conformation is the same as that for live market birds. Top quality carcasses are free from abnormalities in the skeletal structure.
- B. Fleshing: The desired fleshing is the same as for live market birds.
- C. Fat coverings: Same as for live market birds.
- D. Freedom from pinfeathers: Many consumers consider the presence of pinfeathers on dressed and ready-to-cook poultry as one of the more important quality defects. Try to have as few as possible.

Pinfeathers are of two types -- those that protrude and those that do not. It is permissible to have non-protruding pinfeathers when it is not permissible to have protruding pinfeathers. Vestigial feathers are also considered as quality factors and should be at a minimum. Vestigial feathers are commonly referred to as hair in poultry.

E. Freedom from cuts, tears, and broken bones: Cuts, tears, and broken or disjointed bones detract from the appearance of the bird and lower the quality. Cuts and tears permit the flesh to dry out during the cooking process; thus lowering the eating quality of the bird. The seriousness of the defects depends upon their location. For example, a tear on the breast or thigh is more serious than a similar tear on the back or wing.

F. Freedom from discolorations of skin, flesh blemishes, and bruises: Any discoloration of the carcass should be studied closely; it may indicate that the bird was unhealthy or may be the result of improper dressing techniques. Avoid carcasses with an unnatural skin color. Red spots or bruises are not desired and lower the value of the dressed bird.

G. Freedom from freezer burn: The discoloration and drying out of the skin of poultry carcasses during storage is commonly called "freezer burn." This defect detracts from the appearance and sales value of the carcass. Moderate or severe freezer burns lower the quality.

The following chart shows a summary of the preceding specifications for U. S. Grades of Dressed and Ready-to-Cook Poultry. (Individual carcasses. Minimum Requirements and Maximum Defects Permitted.)

Factor	A Quality		B Quality		C Quality	
CONFORMATION	Normal.		Practically normal		Abnormal.	
Breastbone	Slight curve, 1/8" dent.		Dented, curved, slightly crooked.		Seriously crooked	
Back	Normal (except slight curve).		Moderately crooked.		Seriously crooked	
Legs and Wings	Normal.		Moderately misshapen.		Misshapen.	
FLESHING	Well fleshed, moderately long and broad breast.		Fairly well fleshed on breast and legs.		Poorly fleshed.	
Breastbone	Not prominent.		Not prominent.		May be prominent.	
FAT COVERING	Well covered — some fat under skin over entire carcass.		Sufficient fat on breast and legs to prevent a distinct appearance of flesh through skin.		Lacking in fat covering over all parts of carcass.	
	Broilers or fryers only moderate covering.					
PINFEATHERS	Breast and legs	Elsewhere	Breast and legs	Elsewhere	Breast and legs	Elsewhere
Dressed:						
Pins and hair	Pract. free	Pract. free	Relatively few	Sl. scattering	Numerous	Numerous
Ready-to-cook:						
Non-protruding pins	Pract. free	Pract. free	Few scattered	Few scattered	Scattering	Scattering.
Protruding pins and hair	Free	Free	Free	Free	Free	Free
CUTS & TEARS ¹	Free	1—1½"	1—1½"	3"	No limit.	
Disjointed bones	1		2		No limit.	
Broken bones	None (except one non-protruding if broiler or fryer)		1 Non-protruding		No limit.	
DISCOLORATION ²						
Flesh bruises	0"	½"	½"	1—1½"	No limit. ³	
Skin bruises	½"	¾"	¾"	1—1½"	No limit. ³	
All discolorations	1"	1—1½"	1—1½"	3"	No limit. ³	
FREEZER BURN	Few small (1/8" diameter) pock-marks.		Moderate-dried areas not in excess of ½" in diameter.		Numerous pock-marks and large dried areas.	

The quality designations specified herein are not applicable to birds possessing any of the following conditions: dirty or bloody head or carcass, dirty feet or vent, fan feathers or neck feathers or garter feathers, or feed in the crop.

¹ Total aggregate length of all cuts and tears including incision for removal of the crop or its contents.

² Maximum diameter of aggregate areas of all flesh bruises, skin bruises and discolorations.

³ No limit on size and number of areas of discoloration and flesh bruises if such areas do not render part of carcass unfit for food.

Steps in Judging, Selecting, and Grading

There are many factors to be considered when you judge, select, or grade a bird or a carcass. Each factor must be considered separately, and in relation to the other factors. When you judge, select, and grade:

1. Know what the bird is being selected for.
2. Observe the entire bird to get a general impression of its over-all appearance. While doing this try to classify or place the bird or the carcass.
3. Examine each part of the bird or carcass closely. Watch for factors that may warrant culling, disqualifying, or rejecting the bird. If these are present, dispose of the bird or carcass, or in the case of a judging class disqualify it.
4. Observe the bird as a whole and make your final classification as to place in the class, usability, or grade.

The factors you should consider when judging poultry are as follows:

HENS FOR EGG PRODUCTION

- A. Present production.
- B. Past production.
- C. Ability to produce.

CHICKENS FOR BREEDING OR EXHIBITING

- A. Egg production qualities.
- B. Breed type and variety characteristics.
- C. Defects and disqualifications.
- D. Condition and vigor.

LIVE MARKET POULTRY

- A. Health and vigor.
- B. Feathering.
- C. Conformation.
- D. Fleshing.
- E. Fat covering.
- F. Degree of freedom from defects.

DRESSED MARKET POULTRY

- A. Conformation.
- B. Fleshing.
- C. Fat covering.
- D. Freedom from pinfeathers.
- E. Freedom from cuts, tears and disjointed and broken bones.
- F. Freedom from discolorations of skin, flesh blemishes, and bruises.
- G. Freedom from freezer burn.