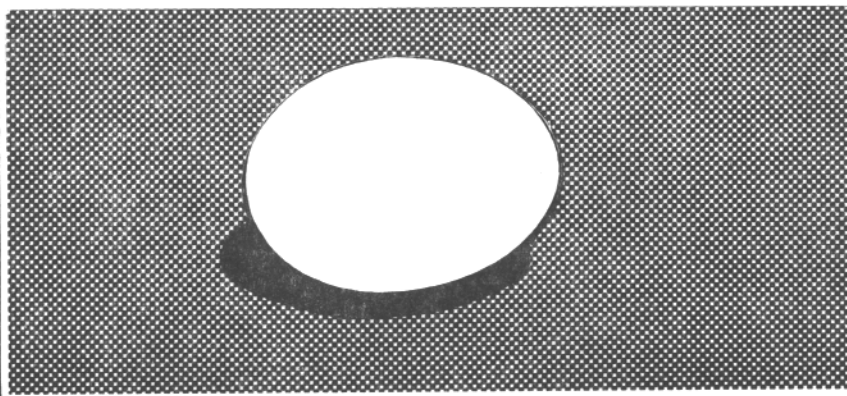
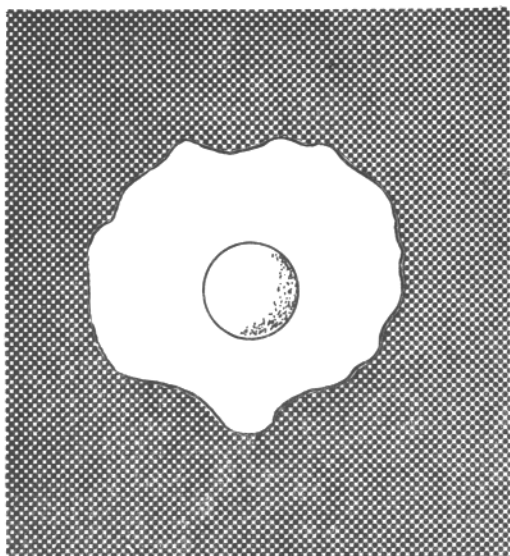
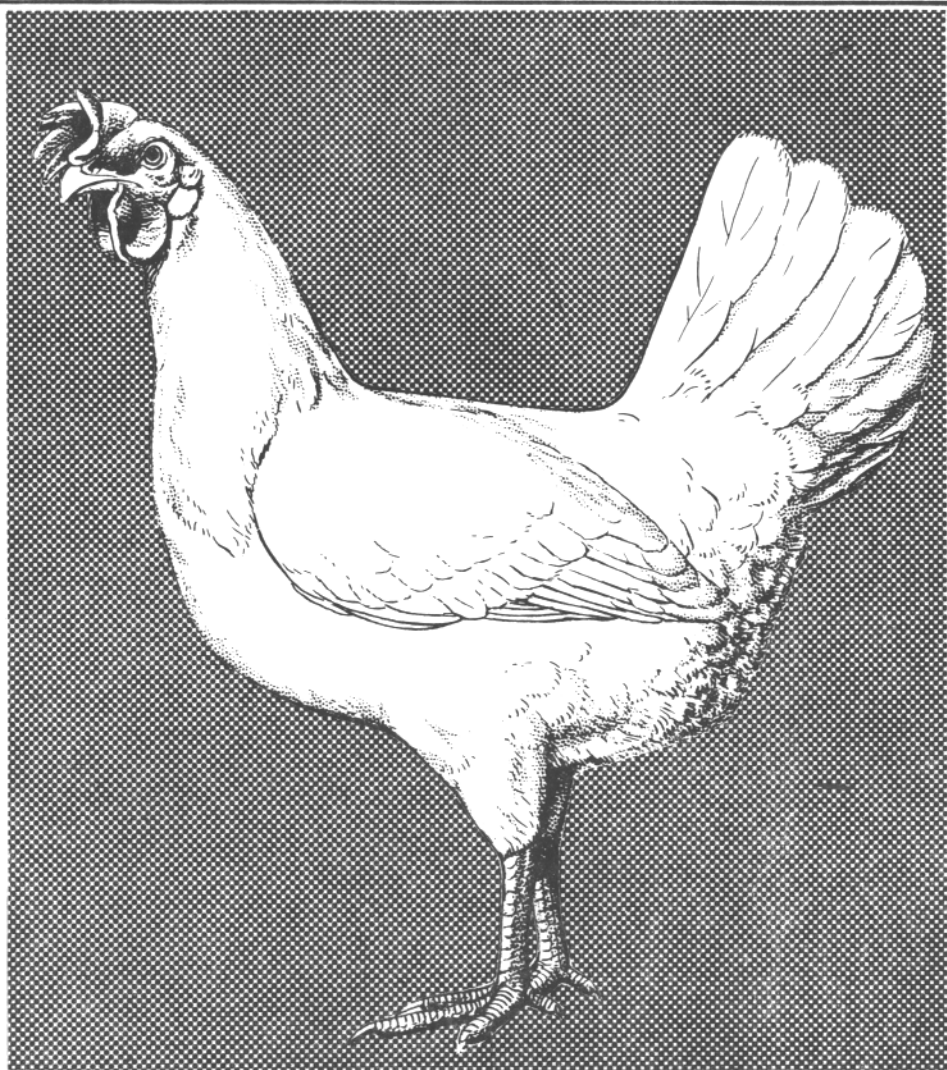




POULTRY JUDGING

4-H Poultry



and Egg Judging

Name _____

Club _____

Objectives

Judging is a tool used to develop 4-H club members. Participation in judging and other competitive events helps 4-H'ers learn to make and defend decisions and to speak in public. Poultry judging provides an excellent opportunity for 4-H'ers to learn about live birds and the basis of grade and quality of poultry products.

This manual was prepared as an aid in teaching beginners, as well as experienced individuals, to properly evaluate egg-producing hens and to apply USDA standards in grading ready-to-cook poultry and eggs. It is intended for use at the local, state and national levels in training poultry judging teams.

The material in this publication was adapted and prepared for use in Tennessee by H. Charles Goan, professor and leader, poultry Extension, University of Tennessee.

R. W. Bastien, former assistant professor of poultry in Tennessee, also contributed to the development of this publication.

4-H Poultry and Egg Judging

Rules and Regulations, Senior Level

District poultry judging contests will be held at each of the five Extension districts.

1. Individuals who have been on a winning state poultry judging team are not eligible. A complete description of the eligibility requirements can be found in the 4-H Awards Handbook.
2. Teams may consist of three or four members. The score of the top three will count.
3. Teams must be at the site ready to begin judging at the specific time.
4. Contestants shall judge:
 - a. Two classes of laying age pullets and/or hens from a past production standpoint. After viewing the birds for two minutes, contestants will be allowed to handle the birds outside the coops. One class of dress broiler or fowl as to USDA grade, A-B-c. One class of eggs broken out as to USDA grade, AA-A-B or inedible. One class of market eggs graded on USDA standards for interior quality of shell eggs AA-A-B or inedible. One class of market eggs graded on USDA standards for exterior quality of shell eggs A-B or dirty. The eggs will be laid horizontally, and decisions will be based on the visible portions only. Eggs in this class will not be handled. One class of cut-up chicken parts must be identified.
 - b. Each contestant shall also give oral reasons on one class of production hens. Each contestant is allowed two minutes for giving reasons. Notes for oral reasons may be taken and studied but cannot be used when giving the reasons.
 - c. Each class, including oral reasons, will be graded on a basis of 100 points for a perfect score.
 - d. Four birds will constitute a ring or class for production judging.
 - e. Twelve minutes will be allowed for judging each class or ring.
 - f. The individual or team earning the greatest number of points will be declared the winner.

Rules and Regulations, Junior High Level

1. The junior high 4-H poultry judging teams will judge the classes as identified in 4a of the rules and regulations for the senior 4-H poultry judging.
2. The junior high 4-H poultry judging contestants do not give reasons.
3. There is no state contest for junior high 4-H poultry judging teams.

The State and National Contests

Ten teams will be eligible to participate in the State Poultry Judging Contest. These teams will be composed of the two high scoring teams from each district.

The state winning team will be sent to the National 4-H Poultry Judging Contest in Louisville, Ky. The Mid-South Fair; Tennessee State Fair; Tennessee Valley Fair; the Tennessee Egg and Poultry Association, and the Tennessee State Department of Agriculture provide financial support to help cover the expenses of the state team on this trip.

Second through fifth place teams may have the opportunity to represent Tennessee in other contests. For further information, please have your county Extension agent contact the state 4-H office.

Egg Production Judging Handling Quality

Handling quality tells more about present production than past production. If two hens have lost the same amount of pigment, handling quality plays an important part in determining how the birds should be placed. The rugged but refined bird is a good layer as contrasted to the beefy non-layer. Quality means thin skin texture, sharp pubic bones, soft abdomen, flat triangular shanks, and a smooth, velvety comb and wattles. Often in contests, birds that have been dubbed (comb cut off when the birds was one day old) will be used in production classes. Do not place the bird down because of a dubbed comb.

Capacity

Good layers have width and flatness of back, depth of abdomen and width between pubic bones and between keel and pubic bones.

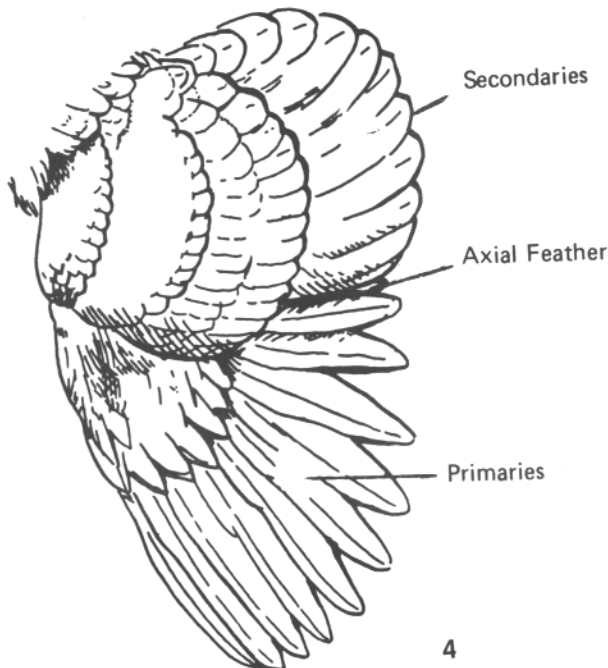
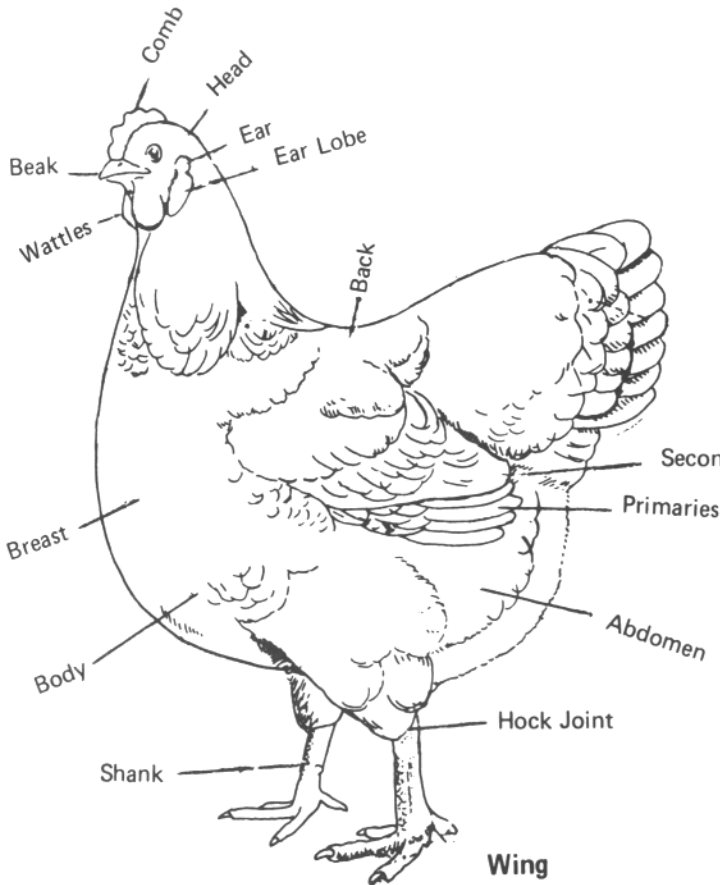
Molt

The good layer can be ragged, but when a hen starts growing new feathers, particularly the wing and tail feathers, there is a possibility she is in a molt and she usually stops laying. Molt is a means of estimating how long a hen has been out of production. It takes six weeks to grow a new wing feather. If she is a slow molter, she drops a wing feather in each wing every two weeks. Therefore, if a hen has one full-grown wing feather (each wing), she has been molting six weeks; if two, eight weeks; three, 10 weeks; and so on. Often a bird will be growing one or two new feathers and will still be laying eggs at a very high rate. If you think a bird is in molt and not laying, check to see if pigment is being replaced in the vent, eye ring and beak.

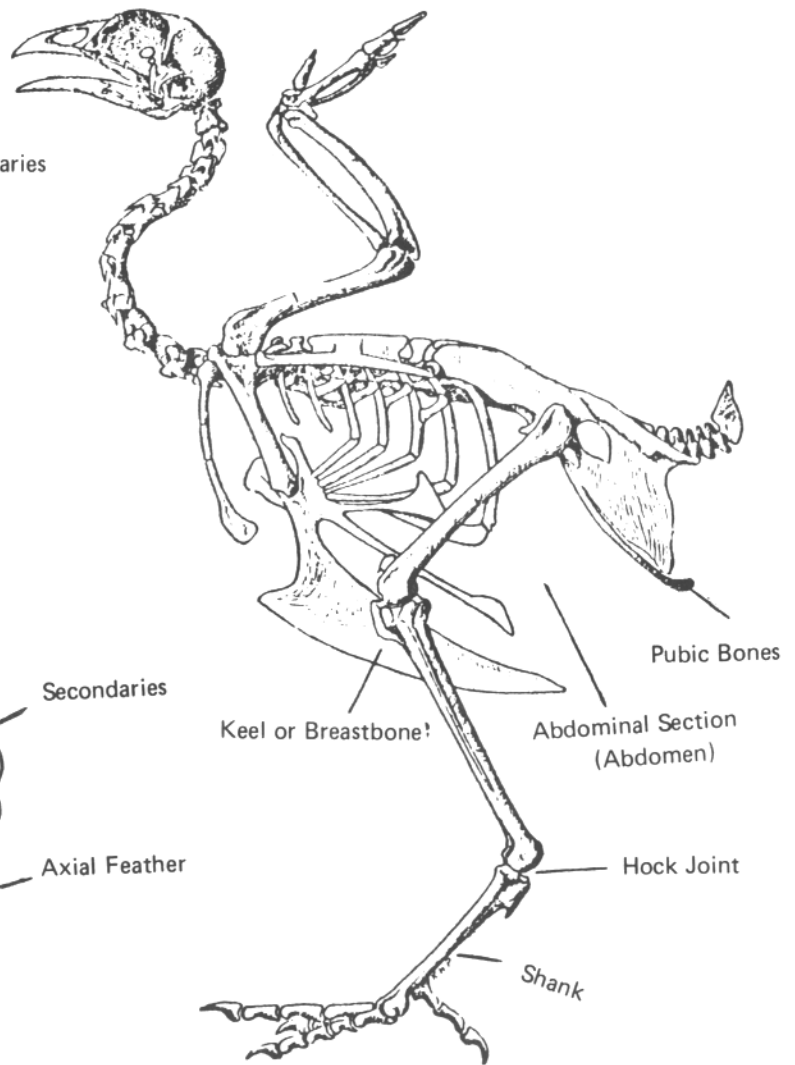
Bleaching of Pigment

Pigment is the yellow coloring in the skin, eye ring, vent, beak and shanks of a pullet just starting to lay. As long as the pullet or hen lays, this yellow pigment is diverted to the yolks of the eggs. Bleaching or loss of pigment is always in a certain order. When a pullet or hen has laid enough eggs, there will be no yellow pigment left in her body. To study and know the order and time of bleaching is the one best method of estimating how many eggs the bird has laid. The

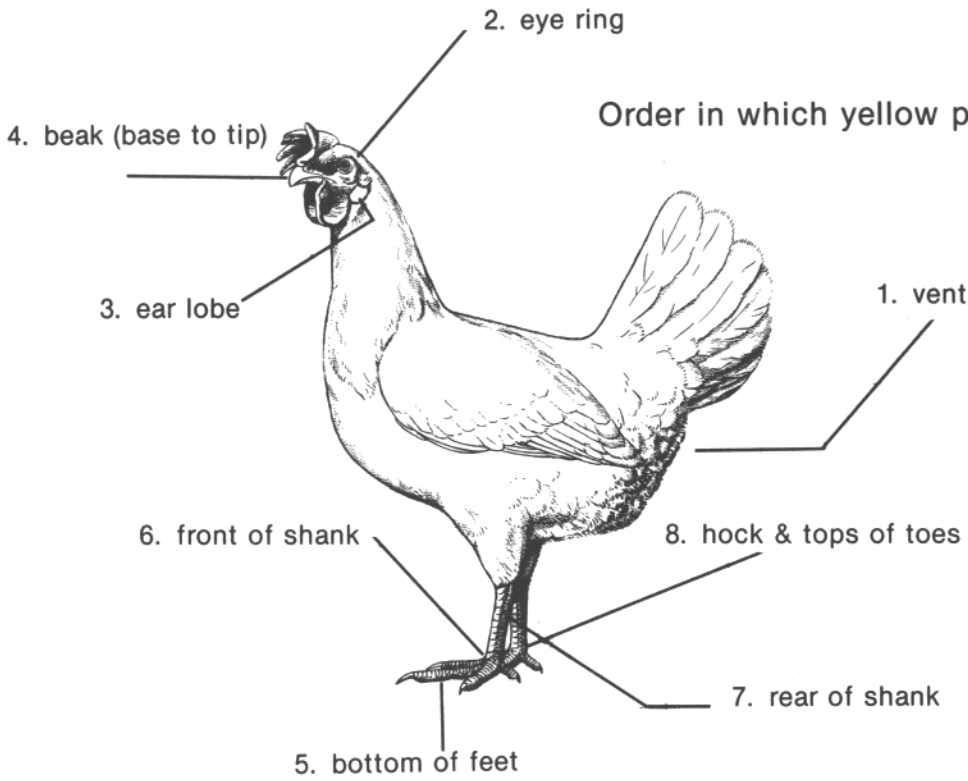
bleached area of a bird laying at a high rate will be completely bleached as to look pearly white. The vent will take six to 10 days or five to 10 eggs to fade and be bluish white; the eye ring, 10 to 14 days; the beak, four to six weeks or roughly 35 eggs; the front of the shank, 15 to 18 weeks or approximately 95 eggs; the rear of the shanks and hock joints, six to eight months or 180 eggs. All these are estimates and will depend somewhat on the size of the birds and the feed they have been receiving.



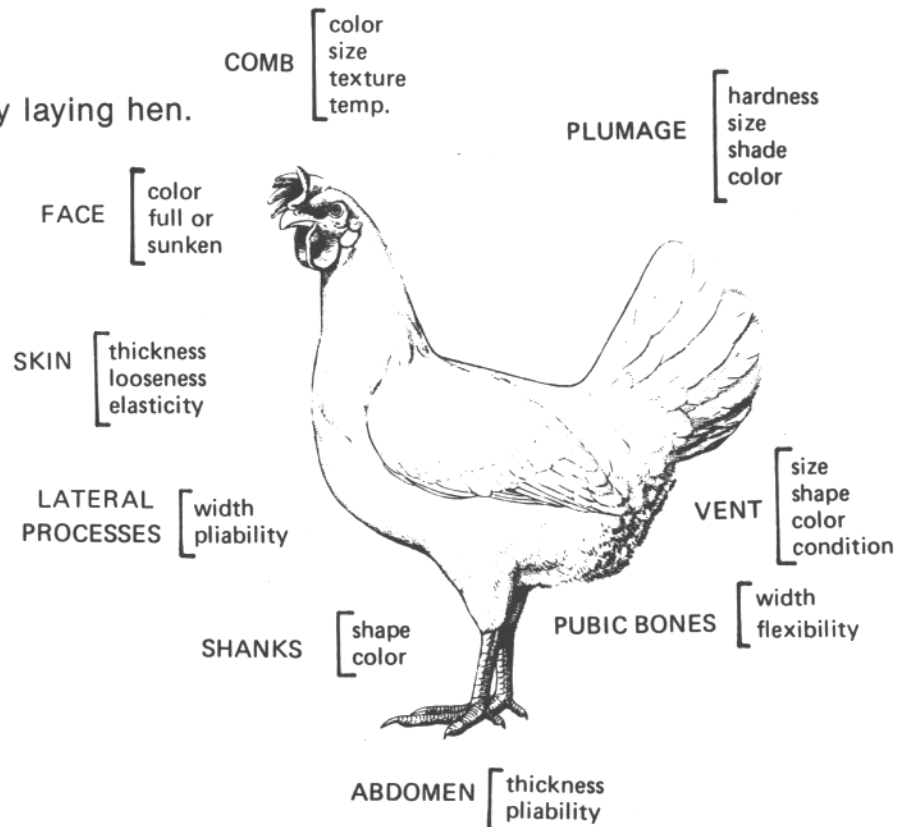
Skeletal Structure

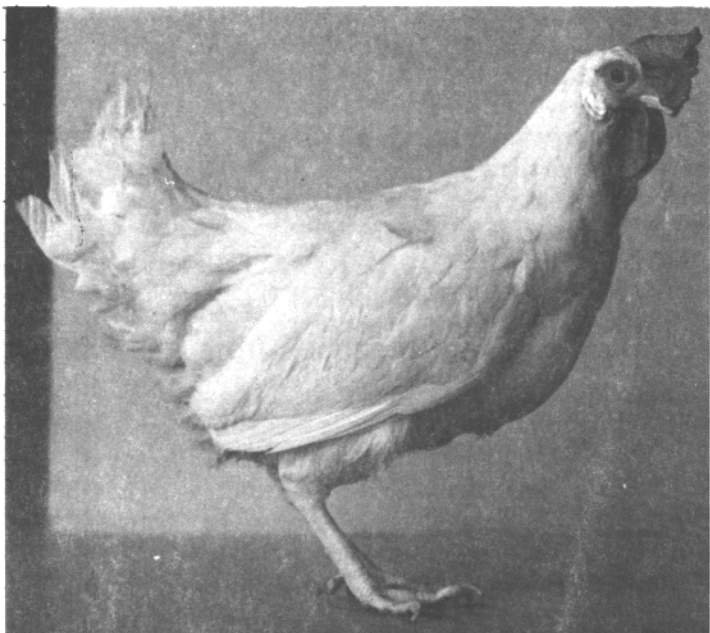


BLEACHING AND LAYING CHARACTERISTICS



Characteristics that indicate a healthy laying hen.

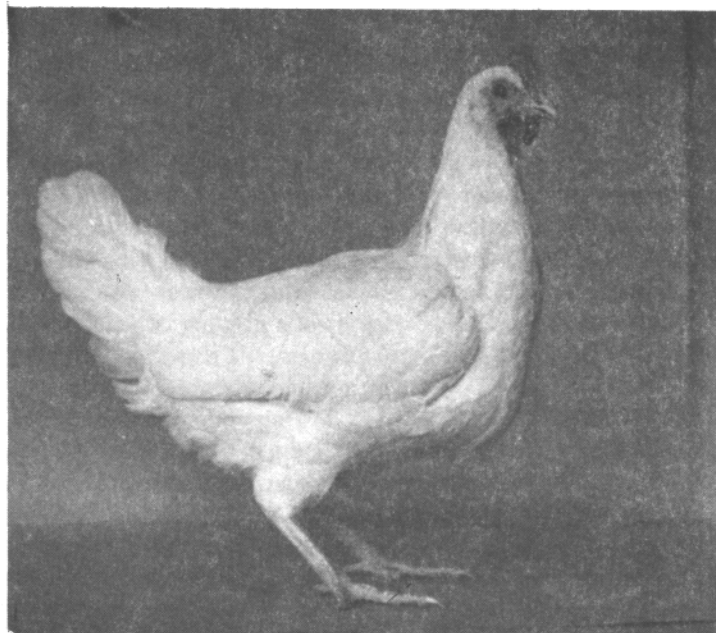




Good Layer

What the number one bird is and looks like, in order of observation:

1. Active, alert, friendly and intelligent looking with clean, red face.
2. Beak short, strong and pearly white.
3. Comb and wattles red, warm and soft.
4. Back long, wide and flat.
5. Feathers worn, hard, brittle and close fitting.
6. Vent large, oval-shaped and bluish white.
7. Abdomen soft and pliable.
8. Good spread (four and five fingers between keel and pubic bones.



Poor Layer

9. A spread of two or three fingers between public bones.
10. Few or no molted primary feathers (outside or flight feathers).
11. Completely bleached (after laying six or eight months) no pigment, even hock joint.

Get the ideal in mind. Put bird nearest to this ideal first, bird next second, etc. As stated earlier, loss of pigment is the number one criteria in production judging.

How to Give Reasons

A poultry judge must have reasons for placing one bird over another. You must know and be able to tell others why and where the bird you "like" excels the other birds in the class. Try to develop a mental picture of each class you judge. The time allowed to judge a class usually runs about 12 minutes. In this time, you must make your observations, record your placings and take any notes you want on the outstanding good and bad points of each bird. Later on, you are generally allowed two minutes to give your oral reasons.

When you are called on to give your reasons:

1. Stand squarely on both feet. Stand 8 to 10 feet in front of the official judge. Look at the judge while you talk.
2. Speak clearly, distinctly and loud enough to be heard. Do not make long pauses. Have confidence in what you are saying.
3. Use a definite system in giving reasons. Begin by telling how you placed the class. Next, tell why you placed the top bird first. Then compare your first pair, then your second pair and last tell why

you have placed the bottom bird last.

4. Make sure you have covered the most important points such as pigment, handling quality, body size or capacity, abdominal capacity, etc. Also make sure your statements are accurate.
5. Make sure your reasons are well organized so they emphasize the big differences. Use more comparative than descriptive terms.
6. Never try to memorize one set of reasons and attempt to apply it to all classes judged. Use correct terms and be able to define, if necessary, the terms used. Try not to use such terms as good, better or best in describing the birds; instead tell how or why one bird is good or better than another.
7. Don't repeat and back-track. Say everything you have to say about each bird or each pair, and go on to the next.
8. Don't hunt for things to say. If you make up some points, they are sure to be wrong. If you forget, just go on to the next pair and discuss them.

Terms To Describe Good And Poor Layers

Good Terms To Use In Giving Reasons

	Parts of Body to Study	Good Layers	Poor Layers
<i>Body</i>	Back Body Keel (breast) bone Pubic Bones	Long, wide, flat Long, wide, deep Slopes downward Thin, straight, pliable ,wide apart	Short, narrow Short, narrow, shallow Slopes upward Thick, curved in close together
<i>Condition</i>	Vent Abdomen Skin Health Fat Feathering Plumage Molting Comb and Wattles Head	Large, moist Full, soft, good capacity Soft, pliable, loose Vigorous Active Alert Well fleshed Good flesh, not excess fat Close, tight Worn, ragged, faded Late and quickly	Small, dry Shallow, lack capacity Hard, dry, tight Not vigorous Not Active Drowsy Thin Excess fat under skin on body and especially around abdomen Loose, fluffy Bright, glossy, clean not worn Early and slowly Small, scaly, shriveled Masculine, coarse or crowhead
<i>Head</i>	Face Eyes	Clean cut and bright red Bright, bulging alert	Fleshy or sunken Dull, sunken, small
<i>Pigmentation</i>	Beak Shanks	White White, thin, flat	Yellow Yellow, plump, round

9. Don't use notes when giving reasons. This is against the rules in most contests. You can, however, make notes while judging the class to study while you are waiting to give reasons. These can be made on the back of your placing card and

therefore be away from you while giving reasons.
10. Do not discuss your placings with anyone until after the contest is over and everyone has given his or her reasons.

Sample Reasons for a Class of Single Comb White Leghorn Production Hens

"Good Morning, I am Contestant Number 10. I place this class of White Leghorn Production hens 3-4-1-2.

"I placed 3 at the top of the class and over 4 because she shows a greater loss of pigmentation than any other bird in the class. The vent, eye ring, beak, shanks hock and toes of 3 are completely bleached, while 4 has come pigment in the hocks and toes. The feathers of 3 are well worn and ragged indicating a long period of egg production. Although 3 has excellent handling qualities, I will grant that 4 has a slight advantage in handling quality because she has a softer and more pliable abdomens.

"In an extremely close placing, I placed 4 second and over 1 because of her excellent handling quality. Her pubic bones are thin and pliable with a five-finger spread between them. Also, there is a four-finger spread

between the pubic bones and the keel bone. Neither bird has an advantage over the other in loss of pigment.

"I place 1 third and over 2 because of a greater loss of pigment, especially in the shanks. While both birds were devoid of pigment in the vent, eye ring and beak, 2 shows substantially more pigment in the rear of the shanks. Although 1 is growing two new feathers, her continued loss of pigment indicates that she remains in a high rate of egg production.

"I place 2 last because she has more pigment in the shanks, feet and toes than any other bird in the class. Also, she lacks the handling quality of the other three birds.

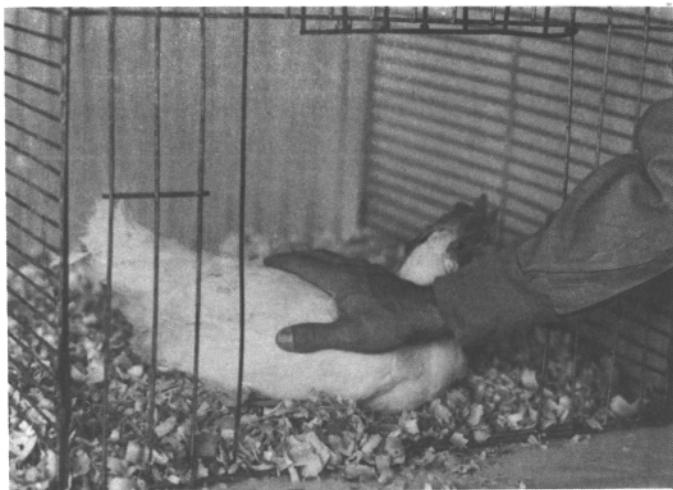
"For these reasons, I placed this class of White Leghorn production hens 3-4-1-2."

Handling Birds

In judging birds for production and live market, it is essential that 4-H club members know how to handle the birds. Over a period of years, the following steps have been determined to be the best. All good judges,

whether adult or 4-H, use this method or one very similar.

Illustrated here are the correct steps in handling birds:



First open the door of the coop quietly. Grasp the back of the bird and quietly move her toward the front of the coop.



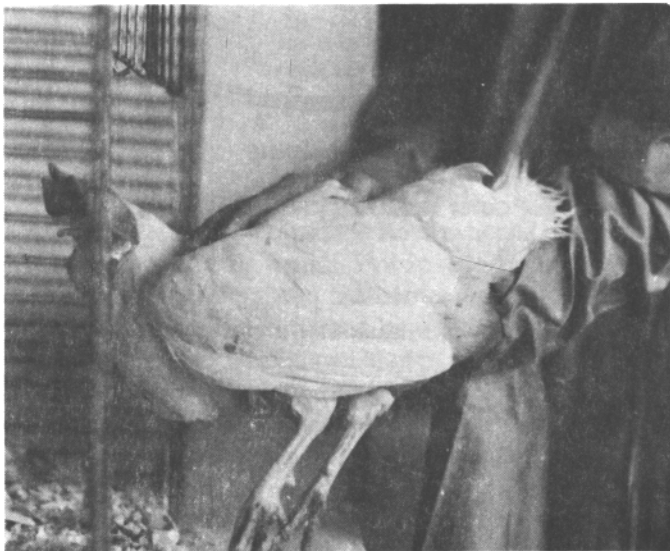
Place your left hand beneath the body of the bird, with the index finger between the legs. Use the thumb and other fingers of left hand to grip legs above hock joint to hold bird. Remove bird from coop head first.



While holding the bird in the palm of the hand, observe the head, face, eyes, ear lobe, wattles and comb.



By holding bird this way and rolling bird over on the left wrist and arm, it is easy to examine all parts of the bird without changing the original grasp of the bird.



Be sure to check for loss of pigment in the shanks, hocks and toes.



This position is correct for measuring width and flatness of back and depth of body.



When you have finished examining the bird, return it to coop, head first. Be sure the bird is returned to the correct coop.

Candling Eggs

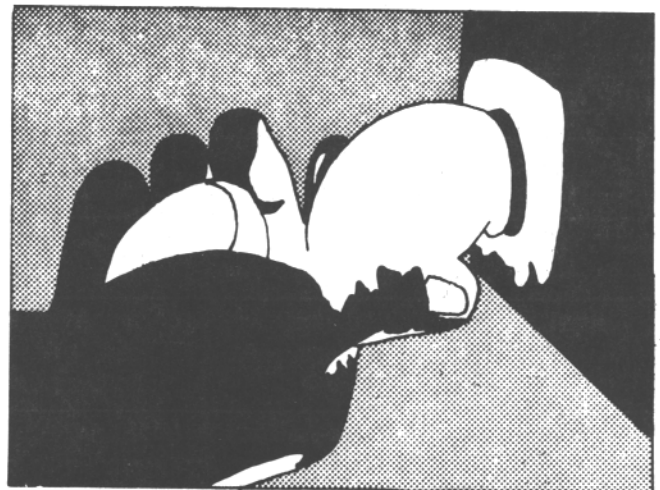
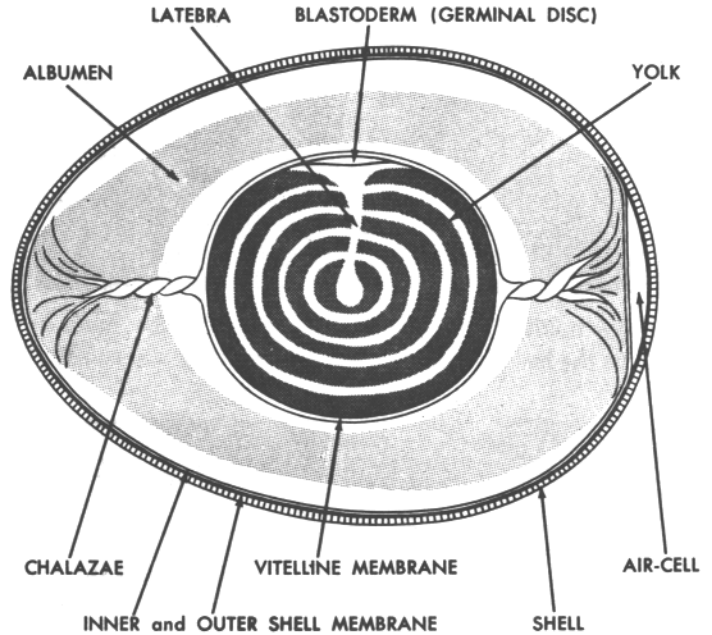
Eggs are candled to determine the condition of the air cell, yolk, white and to detect a bloody white, blood spots or meat spots. Candling is done in a darkened room with the egg held before a strong light that penetrates the egg and makes it possible to observe the contents.

Egg candlers are easy and inexpensive to make. A simple and satisfactory homemade candler is made from a few pieces of wood and a 60-watt electric light inside (see illustrations). The candler should be set on a box or table at a convenient height (about 38 to 44 inches from the floor), so the light will not shine directly into the eyes of the operator.

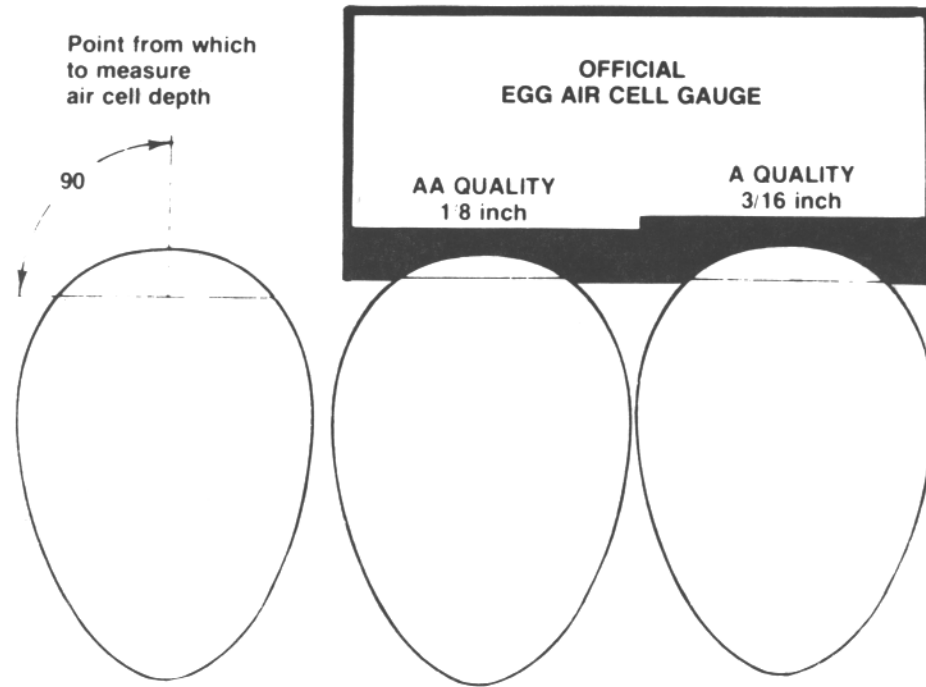
In candling, the egg is held in a slanting position with the large end against the hole in the candler. The egg is grasped by the small end and, while held between the thumb and tips of the first two fingers, is turned quickly to the right and left. This moves the contents of the egg and throws the yolk nearer the shell.

In a fresh egg, the air space is small, measuring no more than 1/8 inch in depth. The yolk shadow can hardly be seen and shows little motion, and the white should be firm and clear. In a stale egg, the air space is larger and may have an irregular moveable lower outline. The yolk shadow is plainly visible and moves freely. The white is thin.

In learning to candle eggs, the eye must be trained to look for the points enumerated and to note them quickly. If you frequently open eggs about which there is a question, you soon learn to recognize differences in interior egg quality and gain skill and confidence.



Measuring Air Cell Depth



Gauge for measuring depth of air cell.

Application of Standards

Use the specifications given in Table 1 to determine the grade of eggs by candling. As mentioned, the depth of the air cell is the main factor in determining grade. However, if an egg is on the border line between two grades, yolk outline affected by quality deterioration and thinning of the albumen may be used to help determine grade.

Eggs with blood or meat spots aggregating more than 1/8" in diameter would be classified as Inedible. Eggs with small spots aggregating less than 1/8" in diameter should be classified as Grade B. Eggs with very small pin point spots will not be used in 4-H judging contest

(intentionally). Judges should not confuse blood spots with the normally occurring chalaza. This "string" of albumen serves to help hold the yolk in the center of the egg and may be prominent in some eggs. The chalaza is distinguished from a blood spot by a bright area of refracted light that accompanies the darker shadow of the chalaza.

The following will not be considered as quality factors when candling eggs for interior quality:

- a. Loose, bubbly or out-of-position air cell
- b. Exterior stains or dirt
- c. Faulty eggshell shape or texture

Table 1. Summary of Standards for Interior Quality of Eggs by Candling for 4-H Poultry Judging

QUALITY FACTOR	AA QUALITY	A QUALITY	B QUALITY	INEDIBLE
Air Cell	1/8 inch or less in depth	3/16 inch or less in depth	More than 3/16 inch	Does not apply
White	Clear Firm	Clear May be reasonably firm	Clear May be slightly weak	Does not apply
Yolk	Outline slightly defined	Outline may be fairly well defined	Outline may be well defined	Does not apply
Spots (Blood or Meat)	None	None	Blood or meat spots aggregating not more than 1/8" in diameter	Blood or meat spots aggregating not more than 1/8" in diameter

A Homemade Candler

Materials

- 1 60-watt bulb
- 1 porcelain socket
- 1 piece stock lumber, 1" x 6" x 38"
- 2 number 8 round head wood screws, 1" in length
- 1 piece plywood 1/4" x 6-3/8" x 6-3/8"
- 1 male electric plug
- 4 small brads
- 6 feet of extension cord
- 16 seven-penny coated box nails

Procedure

1. Cut four pieces 8" long from the 1" x 6" board.
2. Drill a 1" hole in one of the pieces as shown in figure 1.
3. Bevel the edge of the hole.
4. Nail the four 8" pieces together as shown in figure 2.
5. Cut the remaining piece of board to fit inside the candling box as a bottom.
6. Before nailing the bottom piece in place, screw the porcelain socket to the center of this piece.
7. Wire socket with extension cord and then nail bottom in place.
8. Drill a hole in back of the candler for extension cord, and wire male plug to cord after feeding the cord through the hole (see figure 3).
9. Nail two small cleats to the 6-3/8" plywood. This piece will act as a removable top that will be held in place by the cleats.

Figure 2

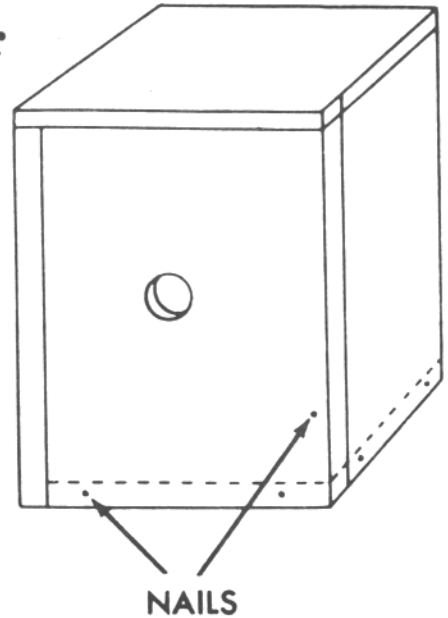


Figure 3

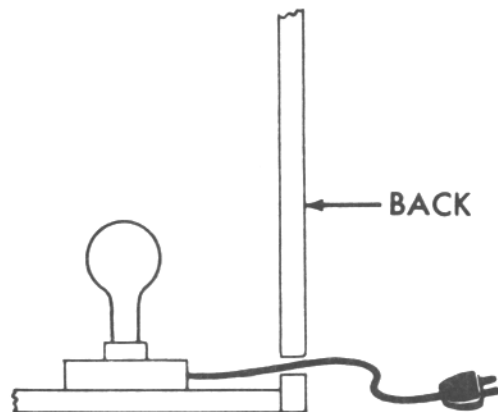


Figure 1

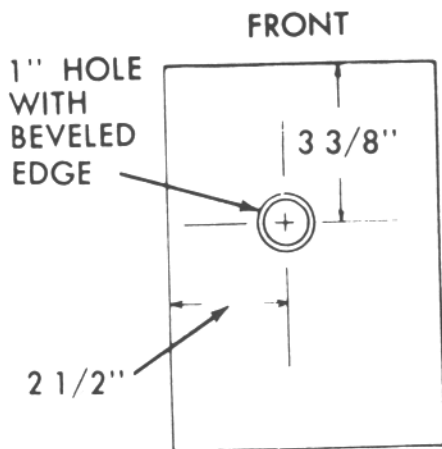
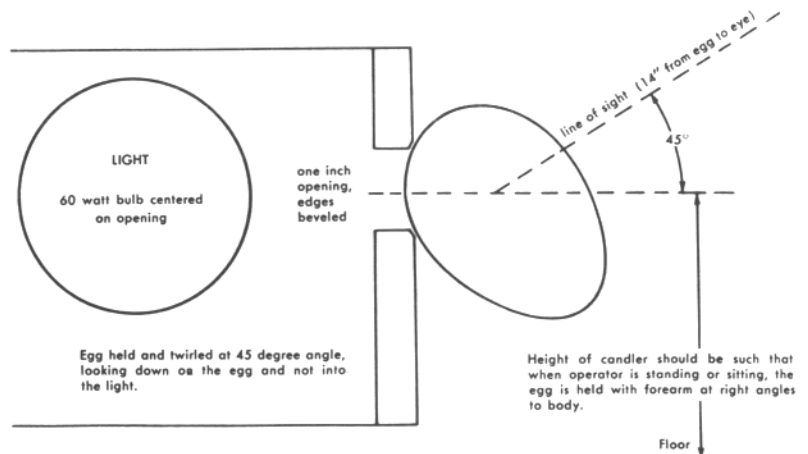


Figure 1

Figure 4



Grading Eggs for Exterior Quality

Background

In commercial egg-processing plants, eggs are graded simultaneously for exterior and interior quality. However, in judging contests, it is necessary to grade eggs for exterior quality separately, mainly because the handling of eggs by contestants can change the grade. The essence of standards for exterior quality is to reduce the number of eggs with defects that detract from the appearance of the egg or that would have a low probability of surviving the rigors of handling in normal marketing channels. In other words, we want the consumer to have clean, unbroken eggs with practically normal shape and texture. Judges are cautioned not to be too harsh in grade assignment to eggs that may have minor defects; this is especially important when judges have gained experience in evaluating eggs with various degrees of abnormalities.

Exterior Quality Grades

Table 2 summarizes the descriptive terminology used in the USDA Egg Grading Manual to help determine the grade of an egg by exterior quality. For 4-H Poultry Judging Contest, eggs will be assigned the grades of A, B and Dirty. Grades AA and A have identical standards. Each of the factors that affect exterior quality is discussed below.

Judges will be evaluating only exposed surface of the egg. The underside of the egg should be considered to be free from defects. Evaluate only what you see.

Strains

Grade A eggs are clean. They may show small specks or stains that do not detract from the general clean appearance. They may also show traces of processing oil (used to preserve freshness).

This processing oil may give a shiny or opaque appearance. Grade B eggs may have slight stains (no limit) which are readily visible. Grade B eggs may have moderate localized stains covering up to 1/32 of shell surface, or moderate scattered stains covering less than 1/16 of shell surface.

Figure 6 will help to visualize these areas. Eggs classified as dirty have moderate localized stains covering more than 1/32 of shell surface or moderate scattered stains covering more than 1/16 of shell surface or any prominent stain (readily apparent from a distance of several feet).

Table 2. Summary of Standards for Exterior Quality of Eggs

Factor	GRADE		
	A	B	Dirty
Stain	Clean—may show small specks, stains or cage marks that do not detract from general clean appearance of the egg—may show traces of processing oil.	Slight stains, moderate localized stains up to 1/32 of shell surface or moderate scattered stains covering less than 1/16 of shell surface.	Moderate localized stains covering more than 1/32 of shell surface or moderate scattered stains covering more than 1/16 of shell surface or any prominent stain.
Adhering dirt or foreign material	None	None	Adhering dirt or foreign material.
Egg Shape	Approximately the usual shape.	May be misshapen (very long or distorted).	Does not apply
Shell Texture	May have rough areas and small calcium deposits that do not materially affect shape or strength.	Extremely rough areas that may be faulty in soundness or strength. May have large calcium deposits.	Does not apply
Body checks/ridges	Slight ridges that do not affect shape or strength.	May have pronounced ridges and/or body checks.	Does not apply
Shell Thickness	Free from thin spots.	May have pronounced thin areas.	Does not apply

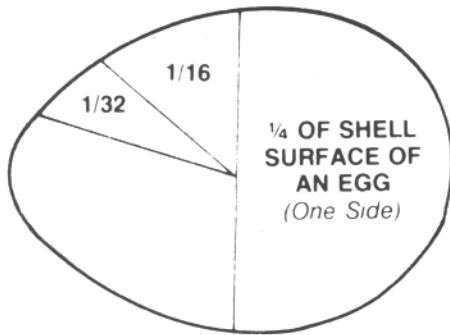


Figure 6 — One thirty-secondth, one-sixteenth, and one-fourth of shell surface of an egg (areas shown are approximate).

Adhering Dirt or Foreign Material

Grade A and B eggs may not have any adhering dirt or foreign material. Eggs with adhering material (three-dimensional) larger than a speck (about 1.0 mm²) should be classified as Dirty. Small specks of dust that may have settled out of the air should not be considered.

Egg Shape

There is a considerable range of egg shaped that could be considered “approximately the usual shape” or Grade A. Eggs that are mishappen, long or distorted, are graded B quality.

Shell Texture

Eggs with faculty texture are much weaker in shell strength and may be broken during distribution. Shells with large calcium deposits (greater than 1/8 inch in diameter) should be classified as Grade B. Eggs with small calcium deposits are classified as Grade A. There is no standard for number of calcium deposits which

means that small calcium deposits which means that small calcium deposits over the entire shell may be classified as Grade A if otherwise qualified. A good rule of thumb is that if you were to pull your fingernail across a calcium deposit, and there would be a good size hole if it came off, it would be classified as Grade B.

It is believed that ridges and body checks (the forming egg cracked inside the hen then “healed” over) can result in weakened shells. Eggs having small or slight ridges that do not affect shape or strength are to be classified as Grade A. Grade B eggs may have pronounced ridges or body checks.

Shell Thickness

Although thin spots are not normally found in eggs judged in 4-H Poultry Judging Contests, judges should learn to recognize these areas that are very susceptible to cracks. Grade A eggs do not have thin spots. Grade B eggs, however, may have pronounced thin areas.

Grading Eggs for Broken-Out Quality

Eggs broken out for this class will be Grades AA, A, B, and Inedible. Eggs with spots (blood and meat) aggregating more than 1/8” in diameter will be classified as inedible. Eggs with spots totaling less than 1/8” will not be intentionally used in district and state contests and should be ignored.

The only other criteria that should be used to grade broken- out eggs is the height of the thick albumen relative to the size of the egg. The size, flatness, or position of the yolk should not be considered. Broken-out grade determination must be based on the USDA chart “U.S. Standards for Quality of Shell Eggs.” Representative AA, A, and B grade eggs are provided in Figure 7.

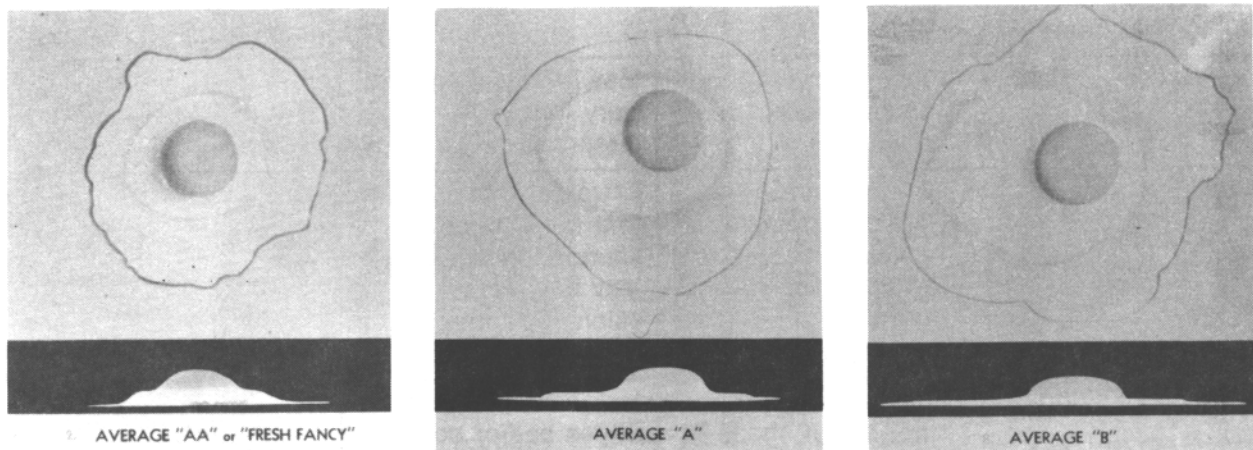


Figure 7 — Grade AA egg covers small area; white is thick, stands high. Grade A egg covers moderate area; white is reasonably thick, stands fairly high. Grade B egg covers large area; white is slightly weak or thin, stands moderately low.

Grading Ready-to-Cook Poultry

Ready-to-cook poultry is graded according to the specifications given in Table 3. These specifications are similar to those used by USDA. However, for purposes of the district, state and national contest, only the grades A, B and C quality and the following factors will be considered.

1. Exposed flesh
2. Disjointed and broken bones
3. Missing parts

Carcasses used for judging contests will have good fleshing, conformation and fat covering, so these factors will not be considered. All carcasses that are of B or C quality have been downgraded from A prior to the start of the contest.

During the contest, carcasses have a tendency to dry out. Therefore, ignore discolorations due to bruising, and to dried out or freezer burn areas. In addition, feathers and pinfeathers are not to be used as a quality factor in judging ready-to-cook poultry.

Carcasses will hang from shackles to allow inspection of the whole bird. You are permitted to turn the shackles only. **DO NOT TOUCH OR HANDLE CARCASSES.** Look first for any defect that may cause the carcass to be graded C quality (wing removed, protruding broken bone, large area of exposed flesh, etc.). If one of these defects is found, the grade can be marked and no other defects considered for the carcass. The same applies for defects associated with B grade. **ALWAYS BASE THE GRADE OF THE CARCASS ON THE MOST SERIOUS DEFECT FOUND.**

In the district and state contests, the carcasses to be graded will be in the 2- to 6-pound weight range. In the national contest, however, all size categories are used. Therefore, senior 4-H judges should be familiar with the specifications for all sizes.

Table 3. Summary of Poultry Judging Contest Specifications of Quality for Individual Carcasses of Ready-to-Cook Poultry

Factor		A Quality		B Quality	C Quality
Exposed Flesh¹ Carcass Weight		<i>Breast² & Legs</i>	<i>Else- where</i>	<i>Breast, Legs & Elsewhere</i>	
<i>Minimum</i>	<i>Maximum</i>				
None	2 lbs	1/4"	1"	1/3 of flesh exposed on each part of carcass provided meat yield not appreciably affected	No Limit
Over 2 lbs	6 lbs	1/4"	1 1/2"		
Over 6 lbs	16 lbs	1/2"	2"		
Over 16 lbs	None	1/2"	3"		
Disjointed bones		1 disjointed		2 disjointed and no broken or	No Limit
Broken bones		None		1 disjointed and 1 nonprotruding broken	No Limit
Missing parts		Wing tips and/or tail removed at the base		Wings(s) to 2nd joint. Back area not wider than base of tail and extending halfway between base of tail and hip joints.	Entire wing(s) Back area not wider than base of tail extending to area between hip joints.

¹Longest length for a cut and total area for tears and missing skin based on the whole part.

²For purposes of definition the parts of the carcass shall be each wing, leg, entire breast and entire back.

Cuts, Tears and Trims

Cuts, tears and trims are a result of a miscut with a knife or tearing of the skin during a processing operation. When ready-to-cook poultry is downgraded for carcass and the part. The length of a cut or the amount of flesh showing on the part determines the grade. **REMEMBER: CUTS, TEARS OR TRIMS MUST BE COMPLETELY THROUGH THE SKIN SO THAT THE MEAT, CALLED FLESH, CAN BE SEEN IN ORDER TO PUT THE CARCASS IN A LOWER GRADE.**

The grade is determined by the amount of exposed flesh as length of cut or amount of skin missing (Table 3). Sometimes there may be more than one cut, tear or trim on the same carcass or part. When there is more than one cut, tear or trim on a particular part, add the length, or amount missing, to determine the grade based on that part only. Each part is graded separately and the grade is determined by the part having the lowest grade on that carcass. Exposed flesh from the continuation of an evisceration cut at the front and back of the breast should not be considered in determining carcass grade.

The Grade A carcass is not permitted to have any cuts, tears or missing skin. The Grade B carcass can have up to one-third of the flesh showing as long as meat yield is not materially affected. The Grade C carcass has more than one-third of the flesh showing.

A good rule of thumb is that the trim is a slight trim if it does not exceed the thickness of a five-cent piece (nickel) or 1/8". An excessive trim that would move the grade lower would have the appearance of a cupped effect that looks deeper than 1/8".

Refer to Table 3 for the section on cuts and tears for the lengths and amount of exposed flesh that is allowed. Remember a slight cut into the meat not more than the thickness of a nickel (1/8") so that the appearance of the part does not look bad is permitted in Grade B. If the trim into the meat is more than the width of a nickel (1/8") of the trim appreciably alters the appearance of the meat, then it is a Grade C.

Disjointed and Broken Bones

When two or more bones come together, a joint is formed. A disjointed bone, therefore, is a bone which has become separated from a joint. A disjointed bone is not a broken bone. In a contest disjointed bones are likely to appear in four locations. They are:

1. The second wing joint.
2. The joint between the wing and the shoulder.
3. The joint between the thigh and hip.
4. The joint between the thigh and drumstick.

To recognize a dislocated bone, you have to be familiar with the position of the legs and wings of a carcass which does not have any disjointed bones. A dislocation between the wing and shoulder, for example, will cause the wing to hang in a lower position. If the dislocation occurs between the second wing joint, the position of the wing part will be lower and you may be able to see the end or knobby part of the bone just under the skin.

A broken bone is a bone that is no longer whole, but consists of at least two separate pieces. In a contest, the bone can be broken so that the jagged end does not break through the skin. This is called a non-protruding bone. When the jagged end of the broken bone does break through the skin, it is called a protruding bone.

There are two bones between the first and second joint of each wing. However, these bones (radius and ulna) are counted as one bone. Thus, a carcass with no defect other than radius and ulna broken (non-protruding) is one wing would be a B quality. If these bones are broken in both wings, the grade would be C quality. If any bone is broken and protruding, the grade is C.

Missing Parts

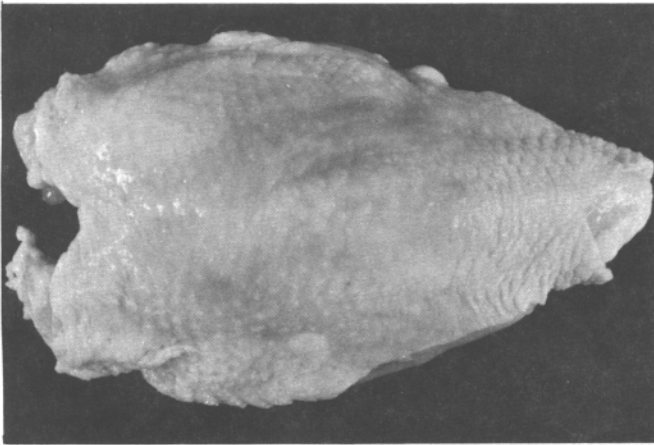
Missing parts to be considered in judging are the wings, tail, and part of the back area if it is no wider than the base of the tail. It is important to remember that weight of the carcass does not count in judging for missing parts.

The Grade A carcass may have the wing tips and tail missing where the tail joins the back. The Grade B joint, as well as the tail and back less than halfway to the hips. In a Grade C ready-to-cook carcass the wing may be cut off at the third joint at the juncture of the body. In addition, the tail and back, more than halfway to the hip, may be missing.

Parts Identification

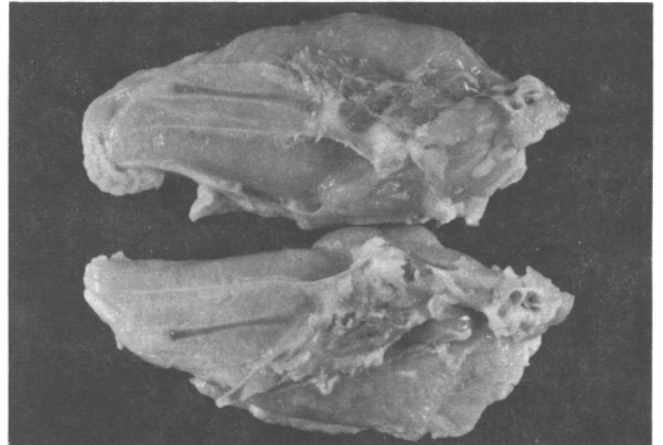
Identifying common poultry parts found in a retail store is important to the consumer. Prepackaging has allowed poultry to be sold in many forms. The consumer

should know the parts of the carcass that are usually prepackaged for sale in the meat counter. Photographs and definitions for 15 of the more common broiler parts found in retail stores follow.



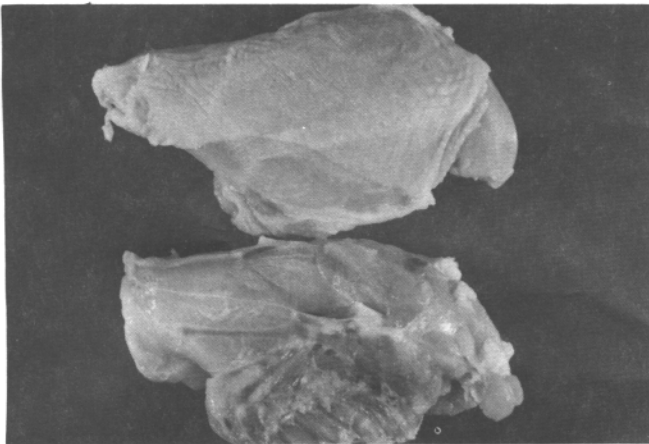
Whole Breast

Intact breast separated from the remainder of the chicken at the junction of the vertebral and sternal ribs. The sternal ribs remain attached to the breast bone and the vertebral ribs are attached to the back.



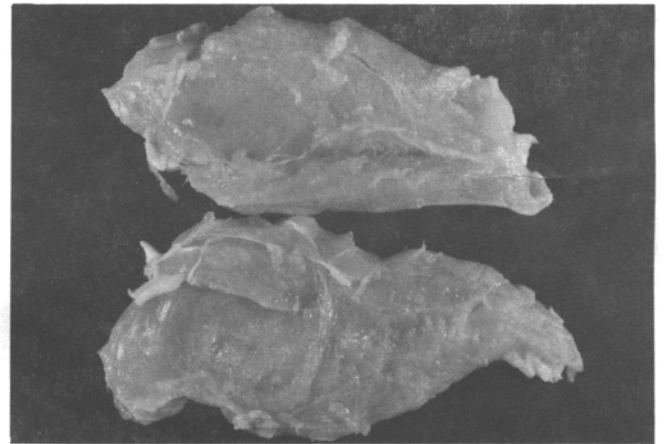
Split Breast

Breast cut in half parallel to the breast bone to approximate two equal halves.



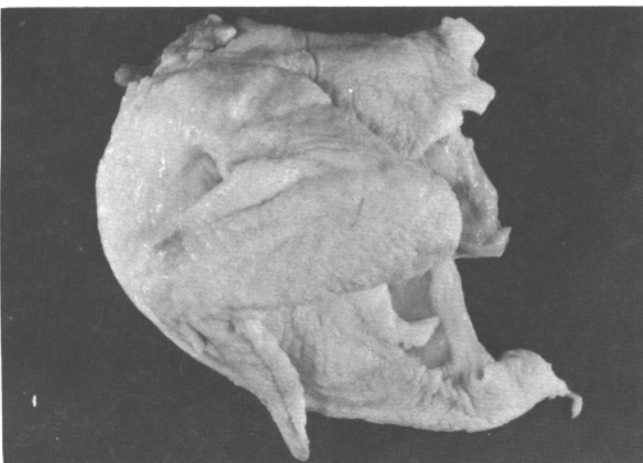
Breast with Ribs

Intact breast separated from the backbone at the junction of the back. The entire rib cage is attached to the breast.



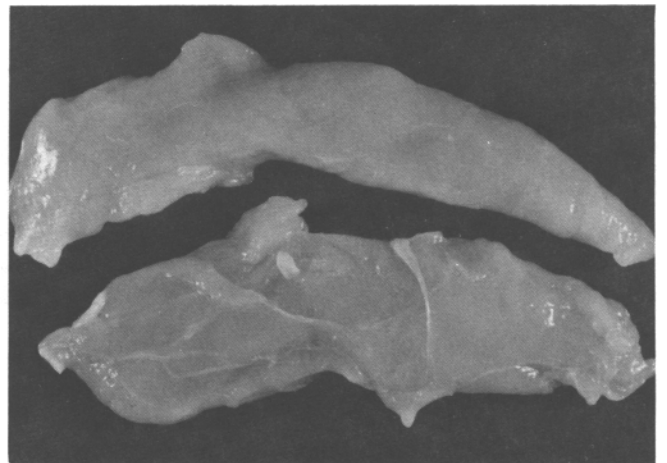
Boneless Breast

Whole breast with bones removed. Skin can be attached or removed.



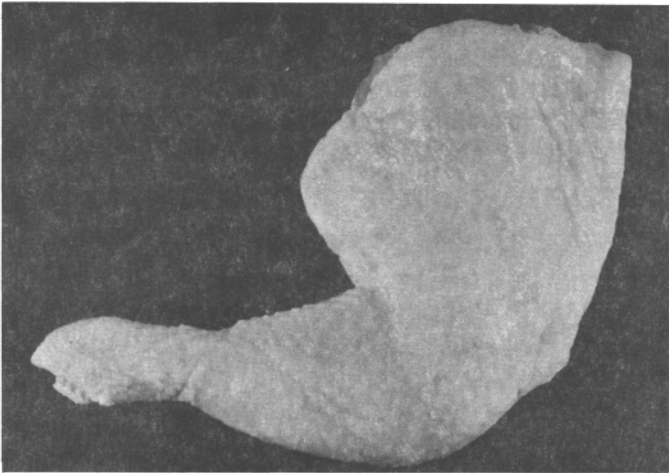
Breast Quarter

Half of the breast with the wing and back portion attached.



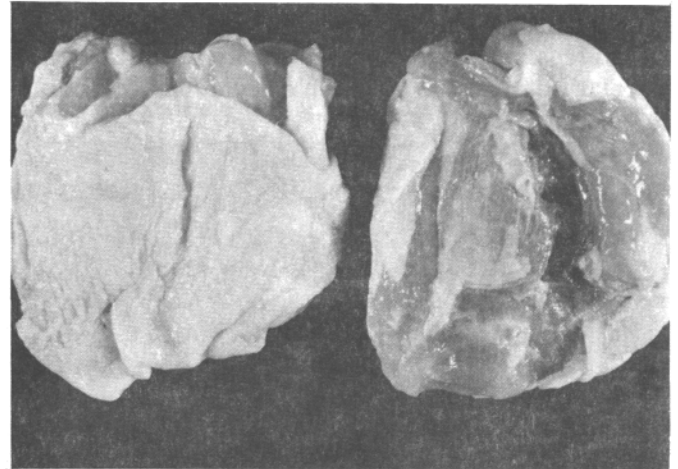
Breast Tenderloin

Inner pectoral muscle that lies against the keel bone.



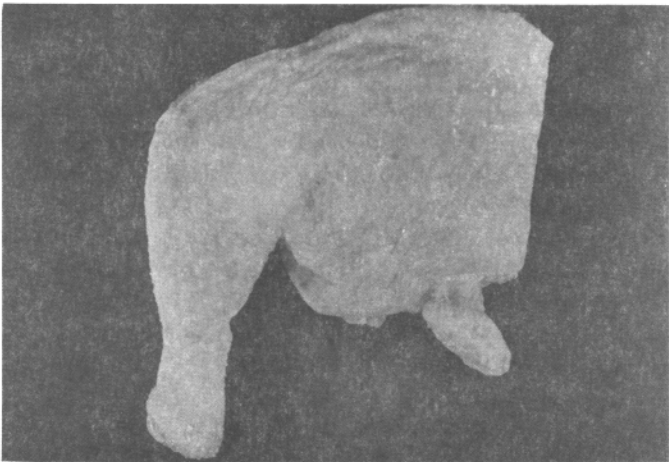
Whole Leg

Thigh and drumstick attached with back portion removed. The oyster can be attached. The oyster is the piece of meat on the back that lies just in front of the hip joint.



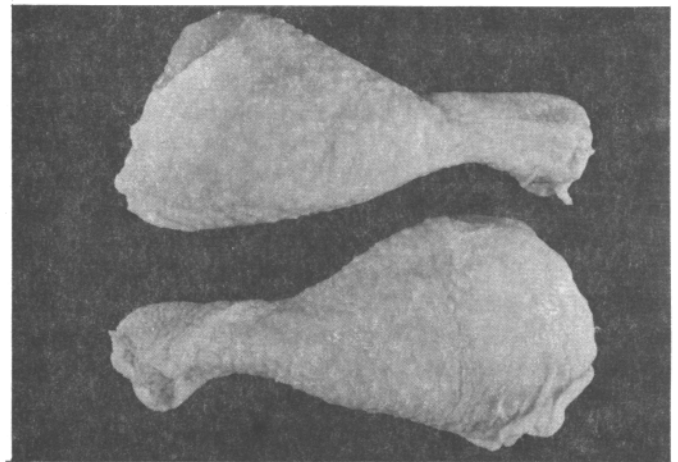
Boneless Thigh

Whole thigh with bone removed. Skin may or may not be attached.



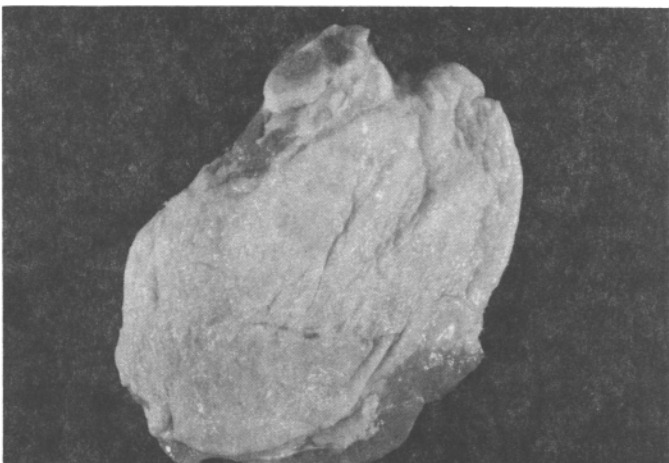
Leg Quarter

Thigh and drumstick with a portion of the back attached.



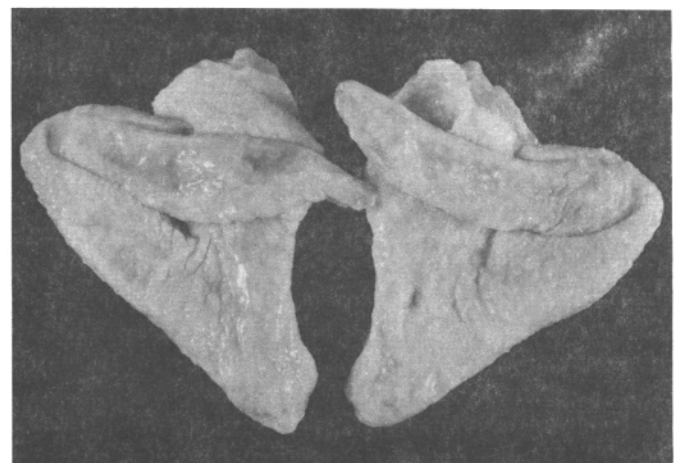
Drumstick

Lower portion of the leg that is separated at the knee and hock joints.



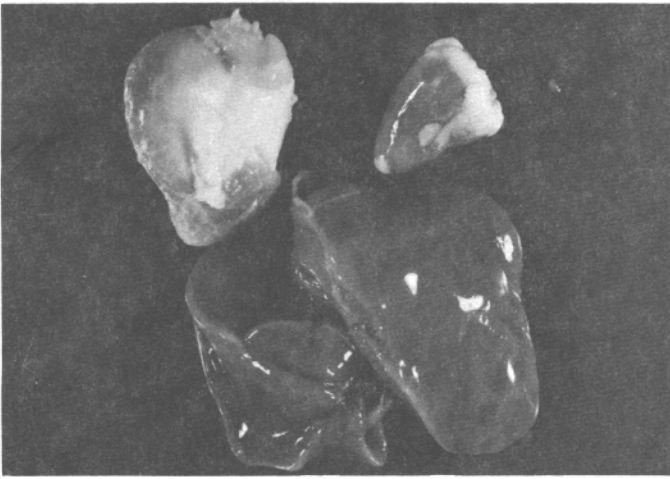
Thigh

Upper portion of the whole leg that is separated at the knee and hip joint.



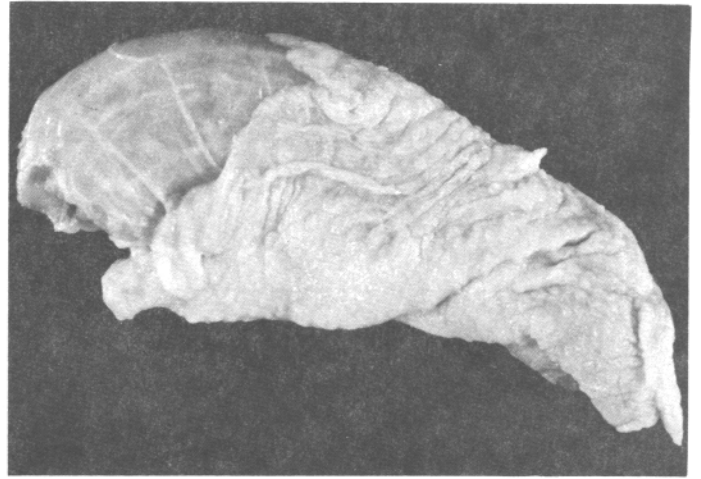
Wings

Entire wing with all muscle, bone and skin attached except the wing tip or portions of the wing tip may be removed.



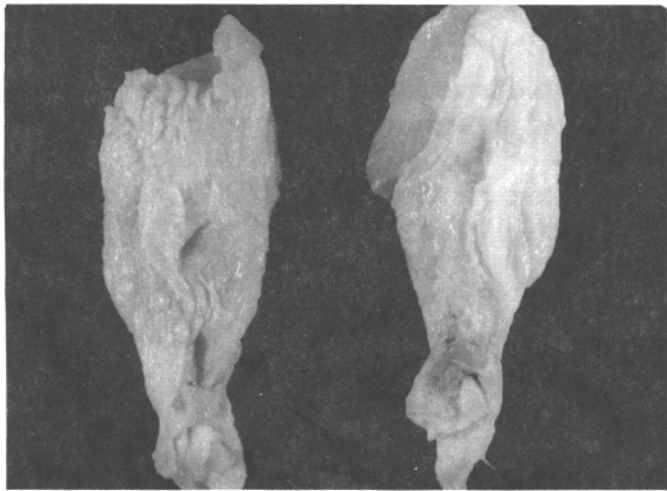
Giblets

Heart, gizzard and liver.



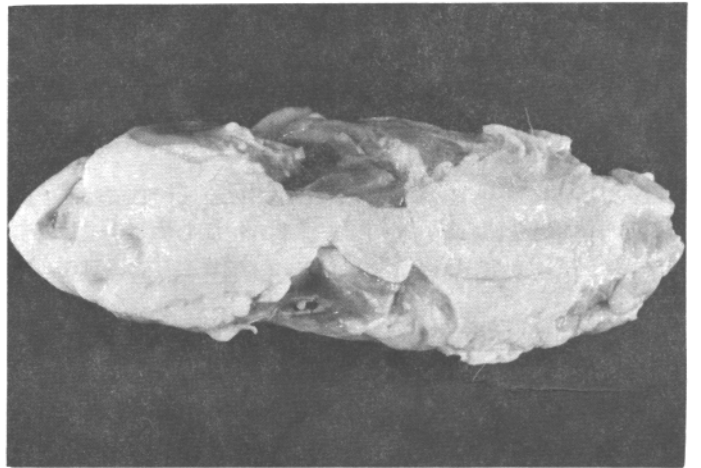
Neck

The neck bones with flesh attached. The skin may or may not be present.



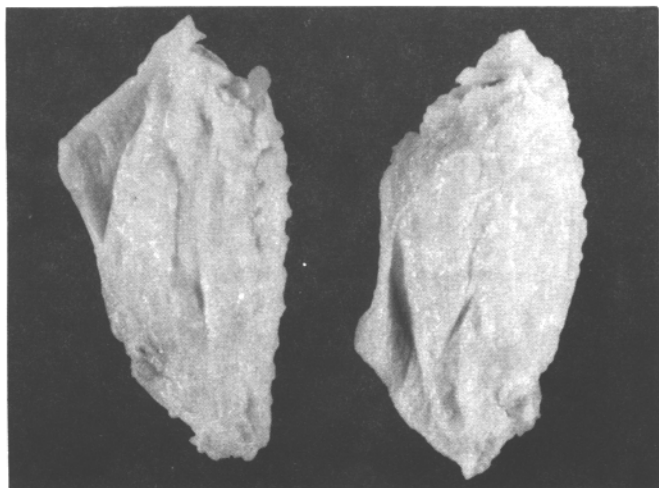
Drumette

Portion of the wing from the second to the third joint normally attached to the body.



Back

The back of the carcass beginning at the base of the neck and extending backward to the tail. It includes the vertebral ribs, hip bones and attached flesh. All or portions of the oyster may also be attached.



Flats

Part from the first to second joint attached to the drumette and wing tip.

References

- U. S. Department of Agriculture. Egg Grading Manual. Agricultural Handbook Number 75. Poultry Division, AMS, USDA, Washington, D.C. 20250.
- U.S. Department of Agriculture. Regulations Governing the Voluntary Grading of Poultry Products and Rabbit Products and U.S. Classes, Standards and Grades. Poultry, AMS. USDA, Washington, D. C. 20250.



Become a Tennessee 4-H All Star Member

Do you enjoy doing things for others? Are you interested in making your community a better place to live? Then maybe the 4-H All Star organization is for you!

All Stars are outstanding Tennessee 4-H members who have pledged to encourage service to others through both individual and cooperative efforts. The purpose of the group is expressed in its motto: "Service."

The requirements for All Star membership are simple. Here's what you need to do:

- Be a senior 4-H member during the current calendar year.
- Complete three years of 4-H.
- Be a Tennessee 4-H Honor Club member.
- Complete an individual or group community service project.

Ask your 4-H agent or local volunteer leader about All Star membership. Join the thousands of Tennessee 4-H members who already enjoy 4-H All Star activities.



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Agricultural Extension Service, Billy G. Hicks, Dean