# Mississippi 4-H Meats Judging Manual



### Introduction

Welcome to the 4-H Meats Judging and Identification Contest. This is one of the most educational and popular activities of the 4-H Red Meats project.

The purpose of this contest is for 4-H'ers to develop an appreciation for red meats as a protein source and to become better informed as consumers. They will learn how to recognize various cuts and quality grades of meat, how to shop wisely, and how to cook meats appropriately.

The 4-H'er taking this project need not be a farm youth. In fact, youth in an urban setting can greatly benefit from this experience and gain an appreciation for food production from farm to table. This contest provides an excellent opportunity for all youth to learn about an agricultural commodity and to become more intelligent consumers in the process. Furthermore, it provides an opportunity to develop reasoning, decision-making, and teamwork skills. Contest activities are designed to develop the whole person, using the subject matter to accomplish this goal.

The contest will consist of:

- 1. Identifying 30 retail cuts of beef, pork, and lamb (fresh, processed, and variety)
- 2. Six Judging Classes:
  - 2 Beef Classes (carcasses or wholesale cuts)
  - 2 Pork Classes (carcasses or wholesale cuts)
  - 2 Retail Cut Classes
- 3. Giving oral reasons on two of the above classes

### Class Selection

The official committee will make every effort to select classes which are appropriate for 4-H'ers. The classes will be selected from the following:

Beef wholesale cut placing/reason classes:

Beef Ribs

**Beef Loins** 

**Beef Rounds** 

Pork wholesale cut placing/reason classes:

Pork Shoulder Boston Butts

Pork Loins

Pork Fresh Hams

Beef retail cut placing/reason classes:

Beef Chuck, Arm Roast

Beef Rib, Rib Steak, Small End

Beef Rib Ribeye Steak

Beef Loin T-Bone/Porterhouse Steak

Beef Loin, Top Loin Steak, Boneless

Beef Loin, Top Sirloin Steak

Beef Round, Round Steak (Bone-In or Boneless)

Pork retail cut placing/reason classes

Pork Shoulder, Blade Boston Roast

Pork Shoulder, Blade Steak

Pork Loin, Blade Roast

Pork Loin, Rib Chop

Pork Loin, Loin Chop

Pork Ham, Smoked Center Slice

If carcasses or wholesale cuts are not available or appropriate for the 4-H judging level, the official committee may use additional retail cut classes so that there are six total judging classes in the contest.

Cuts for retail identification will be selected from the list used for the National 4-H Meat Judging and Identification Contest shown on page 16.

## **Scoring of the Contest**

Meat Identification (30 cuts): 300 pt.

Name of species: 2 pts. each
Name of primal: 3 pts. each
Name of retail cut: 4 pts. each
Cookery method: 1 pt. each

### Judging Classes:

2 Beef @ 50 pt. each	100 pt.
2 Pork @ 50 pt. each	100 pt.
2 Retail @ 50 pt. each	100 pt.

Oral reasons

2 sets @ 50 pt. each **100 pt.** 

**Total Possible Points for Contest: 700** 

# Judging Contest Placing Card

You will be required to turn in a placing card for each class judged. Meat judging classes typically contain four exhibits, numbered 1, 2, 3, and 4, from left to right as they are viewed from the front of the class.

The placing card contains a list of all possible arrangements of the numbers 1, 2, 3, and 4. After deciding how the cuts or carcasses in a class should be ranked, mark your placing on the card. Be sure to fill out your contestant number and the name and number of the class, and to circle the appropriate placing. For example, in the fresh hams class, if you ranked the number 4 ham first, the number 2 ham second, the number 3 ham third, and the number 1 ham last, your placing would be 4-2-3-1, and your card should be marked as shown on the next page.

The number of points you earn for your placing is based on how your placing

compares with that of the official committee. The officials will assign *cuts*, which refers to the number of points difference between each pair. There are three pairs- top, middle, and bottom- in each class, so there will be three numbers used as cuts for each class. A larger cut means that placing that pair should have been an easy decision, and that differences were major. This also means that the penalty for placing the pair incorrectly is larger. For every pair that you place incorrectly, you will lose the number of points designated by the cut.

For example, let's say the official placing for a class of hams is 1-2-3-4, with cuts of 5, 2, and 4. If your placing for the class was 2-1-3-4, you got the top pair incorrect. You would lose 5 points out of the 50 possible, and score 45 for that class. If you place more than one pair incorrectly, you will lose the sum of all points for those pairs.

## **Sample Placing Card:**

	Redson	IIONS - Below are all the possible placings for a class of 4 individuals. Draw a circle around the g which you consider correct for the class you are judging.	S=4-1-2-3 T=4-1-3-2 -4 U=4-2-1-3 -1 V=4-2-3-1 V=4-3-1-2 X=4-3-2-1
10	Class No.	class of 4 ind ire judging.	M=3-1-2-4 N=3-1-4-2 O=3-2-1-4 P=3-2-4-1 Q=3-4-1-2 R=3-4-2-1
Fresh Hams 01	Class	IIONS - Below are all the possible placings for a class of 4 in g which you consider correct for the class you are judging.	G=2-1-3-4 H=2-1-4-3 I=2-3-1-4 J=2-3-4-1 K=2-4-1-3 L=2-4-3-1
8-11	Team No. and Contestant No.	NS - Below are all th which you consider o	A=1-2-3-4 B=1-2-4-3 C=1-3-2-4 D=1-3-4-2 E=1-4-2-3 F=1-4-3-2
	Contest	DIRECTIO placing v	AHOOME
orse			I H-4 iqqississiM gnigbut

# What to Look For When Judging Red Meats

There are three main parameters to look for when evaluating beef, pork, and lamb. These are described as muscling, trimness, and quality. The emphasis placed on each parameter will vary with the type of cut and what it is used for; but, the concepts remain the same.

### Muscling

Muscling can also be referred to as conformation, shape, lean, etc. People buy meat for its lean, as the amount of muscle present in a cut or carcass reflects the amount of edible product available for consumers. Different specimens of meat will have different amounts of lean. Some will appear to be thicker, plumper, and heavier muscled than others. When judging, select cuts or carcasses that have a higher percent of lean meat in comparison to fat.

#### **Trimness**

A certain amount of fat is desirable in high-quality meat; however, too much fat is undesirable. Excess fat, or waste, is not healthy and is therefore trimmed off a cut by most consumers prior to eating. Select cuts or carcasses that are trim and not wasty. There should be a very limited amount of fat on the outside of the cut (or carcass) and between muscle systems.

### Quality

Quality characteristics can indicate the palatability (tenderness, juiciness, and flavor) of meat after it is cooked. There are several factors that contribute to quality:

Marbling. This is one of the primary indicators of quality. Marbling is described as the fine flecks of fat that are distributed within a muscle. It should be finely distributed throughout the cut surface of the

muscle. In contrast, coarse streaks of fat are less desirable.

Texture. Texture indicates the fineness of the size of the muscle bundles. The cut surface of the meat should be smooth and velvety in appearance, indicating a finer texture. A coarse, grainy texture, which may be rough like a bath towel, is undesirable.

Firmness. The cut surface of the meat should be appear to be firm. The meat should not appear soft or soggy. If there is excessive liquid, or purge, on the table next to the meat product or in the package, this indicates that the muscle cannot bind water very well. Thus more moisture will be lost during cooking, resulting in a drier, less desirable final product.

Color of Lean. Beef should be a bright cherry-red. Pork should be a bright reddishpink. Lamb should be a bright pinkish-red. Lean that is excessively dark in beef or lamb, or excessively pale in pork, is considered undesirable. Uniformity of color is also important. In cuts where more than one muscle is visible (such as fresh hams), the muscles should be similar in color. The term "two-toning" refers to a sharp contrast in color between muscles in the same cut; this trait is undesirable.

Maturity. As an animal ages, muscles become less tender. Therefore, younger animals are more desirable, particularly in beef and lamb. More youthful carcasses will exhibit bones that are softer, redder, and rounder.

Color of Fat. Fat should appear creamy white for all species. Fat that appears yellow is often soft and oily, and is thus undesirable.

Always keep in mind the three basic parameters for evaluation when you are judging beef: quality, muscling, and trimness. When evaluating beef carcasses and the high-quality primals (rib and loin), quality is going to be of primary importance because the quality grade will have the largest impact on the value of that cut or carcass. The same applies to judging high-quality retail cuts such as T-bone steaks or ribeye steaks. Once you have determined which cuts or carcasses are of highest quality, you can rank them based on cutability (muscling and trimness).

On the other hand, quality is less important in beef rounds and lower-quality retail cuts such as arm roasts. These cuts are typically less tender and are used for slow-cooking or stews. In that case, the yield of meat is more important than quality, so you should evaluate the cuts on trimness and muscling first, then evaluate quality.

Quality. To evaluate quality, look for the cuts that have the most marbling along with a firm, bright cherry-red colored lean. These cuts would have a higher quality grade than the others. For example, a beef rib that grades USDA Choice would usually place higher than a beef rib that grades USDA Select.

Some useful terms may include:

A higher degree of marbling
A greater amount of marbling
More finely dispersed marbling
A brighter, more cherry-red colored
lean

A firmer, finer-textured lean Harder, whiter fat

# **Evaluating Beef**

*Muscling*. Look for the exhibit that shows the heaviest muscling, whether it is a large

ribeye or loin eye muscle, a thick, heavy muscled back, or a large amount of exposed lean in the opposite cut surface (the blade face in ribs or the sirloin face in loins). On carcasses, the round should be plump and bulging, the sirloin and loin should be full, and the rib and chuck should be thick and meaty. Make sure you observe all possible dimensions: for cuts, note length, width, and depth; for carcasses, note length, width, and thickness. In wholesale cuts and retail cuts, there should be minimal exposed bone. Some useful terms may include:

Thicker Meatier Wider Plumper

Heavier muscled

Fuller

A larger ribeye (only when exposed) A deeper blade (or sirloin) end Had less exposed bone (for retail cuts)

Trimness. The beef carcasses or cuts should not appear overly fat. There should be a minimal amount of seam fat in any cut surface, and the external fat on the outside of the cut or carcass should be limited. Also, look at the internal fat, especially on carcasses. Excessive internal fat can negatively impact the yield grade. Some useful terms may include:

Trimmer Less external fat Less seam fat Less internal fat Less wasty

Yield Statements. These are a good way to tie in several parameters and sum up major differences in a pair. If you had an easy decision that was based on both muscling and trimness, you may wish to use a yield statement that describes the cutability. Some examples for beef include:

A more desirable yield grade
A higher percentage of boneless,
trimmed retail cuts
A greater portion of edible product
(for retail cuts)
Greater cutability
A higher yield of lean meat

When an exhibit has both quality and cutability advantages, you could use terms such as:

Greater merchandising value Greater consumer appeal

# **Evaluating Pork**

The parameters used to evaluate pork- muscling, trimness, and quality- are similar to those for evaluating beef. However, the emphasis placed on each attribute may differ among pork judging classes. In pork, trimness and muscling (cutability) usually take priority over quality as long as the quality of a cut or carcass is acceptable. You will usually not use marbling to place a class of pork loins, as you would a class of beef loins. In many cases, you will not even be able to see the exposed lean in a pork carcass, so meat quality will not be a factor at all in placing the class. In general, the skin will be left on the carcasses and some of the wholesale cuts. Thus, it is important to be able to distinguish between fat and muscle based on the shape of the exhibit. Practice and careful observation will help you do this successfully.

*Trimness.* In general, you should select pork carcasses or cuts which display the least fat. When the skin is left on a carcass or cut, you

will need to observe the cut surfaces to see how much fat is present. On pork carcasses, this will be the backfat, ranging from the last lumbar to the first rib. On hams, look under and along the butt face. In loin classes, look at the fat over the blade end and the sirloin end. There should also be minimal seam fat present in the cut surfaces. Also, look at the shape of the carcass: a trim, muscular carcass may show muscle definition. You are more likely to see the bulge of different muscle systems in a trim carcass, whereas a fat carcass will be smooth and flat particularly over the sirloin and loin areas. Some useful terms may include:

Less backfat at the last rib
Trimmer
Less ham collar fat
Less seam fat
Less wasty
Less fat in the belly pocket
Less backfat from ham to shoulder

Muscling. Besides selecting the trimmest carcasses or cuts, you should also look for the pork exhibits that are heaviest muscled. On carcasses, look at the length, width, thickness, and plumpness of the ham. The sirloin and loin should be full and plump, and the shoulder should be meaty. Fresh hams should show a deep, wide butt face, but more importantly, a deep, wide, plump center section, cushion, and heel. Loins should have a large loin eye and a meaty sirloin face. Retail cuts should be muscular and have minimal exposed bone.

Some useful pork terms may include:

A thicker, plumper ham
Meatier
Fuller
Heavier muscled
Larger loin eye
More exposed lean in the butt face
Less exposed bone
Deeper

#### Wider

Quality. As previously mentioned, more emphasis is typically placed on muscling and trimness than on pork quality; however, you should still always make careful observations based on quality. Ideally, fresh pork should be a bright reddish-pink color that appears firm and moist (but not watery) on the surface with some marbling. The lean should not be too light or too dark. If there is more than one muscle in the cut surface, they should be relatively uniform in color, as two-toned cuts are undesirable. Many consumers prefer lean pork muscles; so, they may discriminate against a large amount of marbling. However, a small amount of marbling is desirable for flavor and juiciness of the cooked product.

One of the biggest problems with fresh pork is pale, soft, and exudative lean, or PSE. This meat appears very pale, watery, and coarse textured. There may be a puddle of fluid underneath the cut, and muscle systems may be separated and look "squishy" or loosely textured. After cooking, the meat will generally be tough and dry. A cut or carcass that is PSE should be strongly criticized and placed in the bottom pair of a class.

When judging cured pork (e.g. center-cut ham slices) the same principles for trimness and muscling apply; however, the quality parameters may be slightly different. The lean should have a uniform "cured pink" color, and be free of spots that are either too dark or too light. The surface should also be free of blood splash (dark purple spots) and gel pockets.

Some useful terms to describe pork quality may include:

Fresh Pork:

Brighter reddish-pink lean Firmer, finer-textured More uniformly colored butt face More marbling

Cured Pork:

More uniform cured meat color Firmer, finer-textured More marbling Fewer (or no) gel pockets

Yield Statements. Yield statements for pork are similar to those used for beef classes. Again, a yield statement can sum up major differences in a pair. Some of the yield statements for pork judging below are different from those used in beef judging due to differences in emphasis placed on trimness, muscling, and quality.

Some examples of pork yield statements include:

A higher percentage of fat-free lean A greater lean to fat ratio A higher percent muscle Higher percentage of edible product Greater consumer appeal Higher yield of the four lean cuts

## **Taking Notes**

The purpose of taking notes in meat judging is to prepare you for giving oral reasons. Taking good, accurate notes can also help you critically observe the class to make sure your placing is correct.

Since your time in front of the classes is limited, you may wish to develop abbreviations so you can take notes faster. It is important to use abbreviations that you will understand later in the day when you are preparing for reasons!

Some examples might include:

T = trimness M = muscling Q = quality RE = ribeye SF= seam fat

You will receive a card or paper to use for notes. You may wish to set up two columns, advantages on the left, grants on the right. There are examples of reasons note cards at the end of this manual (pages 27, 29, and 31). From top to bottom of the note card, you should have four sections: one each for the top pair, middle pair, bottom pair, and the last place exhibit.

Develop a logical sequence for observing each exhibit. In carcasses, start at the top, and work your way down. In cuts that are on a table, start at the front and work your way to the back. Use the same order for every pair in every class to make sure you don't miss something. You must also know correct terminology in order to describe each class correctly (see pages 18-26). This strategy will help your notes and your reasons make sense.

Start with the most important differences in each pair- this will become your topic sentence in your reasons. For example, if the first thing you notice in your top pair is differences in trimness, then trimness is probably your most important point. You should put this first in your notes for your top pair, followed by details. For example, where was 1 trimmer than 2? Write down the parts of exhibit 1 which were trimmer than 2, such as: over the ribeye, along the back, and over the blade face.

While taking notes for each pair, try to observe any advantages that the lower placed exhibit has over its counterpart.

These items go in the "grants" column, and

you will acknowledge them in your reasons.

If appropriate, record whether you thought the decision was close or easy, and report it in your reasons. For example, if an exhibit has many clear advantages but only one small grant, it was probably an easy pair. Conversely, if you had trouble deciding which exhibit to place first, and you have almost as many grants as advantages, it was probably a close decision.

### **Oral Reasons**

Oral reasons are your way of communicating why you placed a class the way you did. Anyone can guess at a class placing. However, good judges must be able to logically explain their reasons for placing a class. Your reasons should be brief, or generally less than two minutes, and have enough detail to emphasize the main points in the class. You should try to present reasons that are accurate, interesting, sincere, and descriptive. Be confident and pleasant when giving reasons. Good presentation technique is critical, also.

Oral reasons are worth 50 points per set. This means it is just as important to have good, accurate reasons as it is to place the class correctly. *Good notes are the key to good reasons*, so make sure you give yourself adequate time to prepare a good set of notes when judging a reasons class. If you spend the entire time trying to place the class, but do not prepare for reasons, you have done yourself a disservice. Even if you place a class incorrectly, you can make up for points lost in placing by giving a good, accurate set of reasons that describes the differences you saw in the class.

The official will determine the score of your reasons based on accuracy, delivery, organization, completeness, and use of the correct terminology.

### **Suggestions for Preparing Oral Reasons**

- 1. *Learn correct terms*. It is imperative to know what you are looking for and what you are talking about.
- 2. Develop a pattern for observing classes. This will help you organize your notes and reasons. Work from top to bottom on carcasses, or front to back on cuts of meat.
- 3. *Make accurate observations and always tell the truth.* When in doubt, leave it out.
- 4. Learn the correct organization for reasons and present them logically. Start with the most important points, then follow these up with more specific details.
- 5. *Grammar is important!* Always use past tense and speak in complete sentences.
- 6. *Be thorough*. Bring out all the major differences that were clearly observed in the class.
- 7. Do not hunt for things to say. If you cannot clearly see a difference, do not discuss it. Well-organized, concise reasons should be less than 2 minutes long.
- 8. Think about the class while speaking. If you can visualize the carcasses or cuts, your reasons may be more accurate.
- 9. Take good notes, but do not read them! Your reasons should be given from memory. 10. Present yourself well. While speaking, stand up straight, feet shoulder-width apart, with your hands behind your back. Look the judge in the eyes, and speak in a loud, clear, confident voice. Avoid fidgeting, swaying,
- 11. Remain calm and businesslike. If you get stuck or forget something, move on to the next point you are able to remember. Do not stand and fidget while trying to remember something.

or other distracting mannerisms.

12. *Practice!* This is the only way to get better. Spend time on your own to develop a technique that works for you. Give reasons to your parents, siblings, friends, or to your reflection in the mirror. The more reasons you give, the more comfortable you will be.

### **Organization of Oral Reasons**

When presenting oral reasons, it is important to keep them organized and easy to follow. This will both keep you on track and help the official understand your reasons. A sample organizational structure for oral reasons is on the next page.

In general, you should start out with an opening statement, including your contestant number, the name of the class, and your placing. Make sure the placing you tell the official matches the one you marked on your placing card! You will automatically lose points if the placings on your card and in your reasons do not match. You should then discuss your first pair (advantages then grants) followed by the second pair, then the third pair.

The last part of your reasons should discuss the specimen you placed last, and how it compares to the rest of the class. Only in this section may you start with the grants first. For example, you might say that the cut you placed last had the most desirable color, but you placed it last because it was the fattest cut in the class.

#### In Review

Remember there are three main parameters you are observing: muscling, trimness, and quality. Decide which is most important in each pair, then discuss *all* the differences for each parameter before moving on to the next parameter. For example, if you think trimness is the most important difference, your topic sentence should focus on trimness. You should talk about all of the trimness advantages and then move on to muscling and quality. Do not jump around among muscling, trimness, and quality, as this will confuse both you and the official. Be clear, concise, and confident.

### **Sample Outline of Oral Reasons**

For the p	ourposes of	this samp	ole set,	assume v	you	placed	the	class	1-2-3-4	ŀ
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- I. Opening Statement.
  - A. I am contestant number \_\_\_\_\_. I placed this class of \_\_\_\_\_\_ 1-2-3-4.
- II. Advantages and Grants for Each Pair (Top pair, Middle pair, Bottom pair).
  - A. Topic sentence: "In my top pair, I placed 1 over 2 because...."

    [This should be the main reason you placed 1 over 2; e.g.,1 was heavier muscled]
    - Details to support topic sentence

      [Describe where 1 was heavier muscled]
    - 2. Additional details to describe the advantages in 1 over 2
    - 3. Grants: "I grant that 2 had...."

      [Describe any advantages for 2 over 1]
  - B. Topic sentence: "In my middle pair, I placed 2 over 3 because..."
    - 1. Details to support topic sentence
    - 2. Additional details
    - 3. Grants: "I realize that 3..."
  - C. Topic Sentence: "In my bottom pair, I placed 3 over 4 because..."
    - 1. Details to support topic sentence
    - 2. Additional details
    - 3. Grants: "I grant that 4..."
- III. Discussion of the Exhibit Placed Last
  - A. Start with any grants, if you choose: "I recognize that 4..."
  - B. Topic sentence for criticisms: "I placed 4 last because..."
    - Details to support topic sentence
       [Use phrases such as "the most fat" or "the smallest ribeye" to
       emphasize the fact that 4 is last]
    - Yield statement: "Finally, 4 would yield..."
       [Describe the last place specimen in terms of edible product, lean percentage, consumer appeal, etc.]

### **Retail Cut Identification**

As a consumer, it is important to be well-informed about your purchases. By learning to identify cuts of meat by their shape and appearance, you will be able to make good purchasing decisions and understand how to prepare different cuts of meat at home.

The retail cut identification portion of the 4-H meat judging contest is worth 300 possible points, over one-third of the total points possible in the contest. Thus it is imperative to practice and become proficient at identifying various cuts of meat. The list of all possible cuts that may be used in the state or national 4-H contest is on page 16.

You will be asked to fill out a card using codes to identify the species, primal, retail cut, type, and cookery method of 30 cuts of meat. These may be fresh or smoked cuts, and can be beef, pork, or lamb.

Variety (organ) meats from all three species may also be included. Be sure to fill in the card carefully and completely to avoid losing points. The codes are shown on pages 16 and 17. You may wish to use these to practice.

There are several ways in which you can learn to identify retail cuts, but the best way is simply to practice. Flash cards and internet resources are available to help you learn your cuts of meat. You may also be speak with a manager at your local butcher shop or grocery store about practicing there. You can also use the following guidelines to help learn:

### Size of Cut and Color of Lean

To identify the species, think of the relative size of the animals from which the cuts originated. Beef cuts will be the

largest. Lamb cuts will be the smallest. Pork cuts will be in between.

Also, look at the color of the lean: Beef should be a bright cherry-red; pork a lighter reddish-pink; and lamb, a slightly darker, pinkish-red. There may also be cured and smoked pork cuts in the retail identification class. These can be identified by the characteristic cured pink color.

### **Identifying the Primal and Retail Cut**

Using the bone or muscle structure of the cuts will help you identify the primal and retail cuts; but, you will have to spend some time learning them.

Many names of cuts are related to the bone or muscle structure of origin. For example, you will find rib bones in rib roasts, rib chops, and rib steaks. Arm and blade roasts, short ribs, spareribs, riblets, T-bone steaks, and shank cross-cuts are all named for the bones they contain. The chart on page 18 shows the different shapes of bones and their anatomical origin.

The muscle characteristics can also help to identify cuts. Look at the number of individual muscles in a cut. For example, a beef top loin steak, boneless is composed primarily of one large muscle, whereas a beef chuck blade steak is composed of several smaller muscles. Note the color and texture of the muscle. Is the texture smooth and velvety, like a beef loin tenderloin steak, or is it coarse with lots of connective tissue, like a shank cross-cut? These features will all help to differentiate among different cuts of meat.

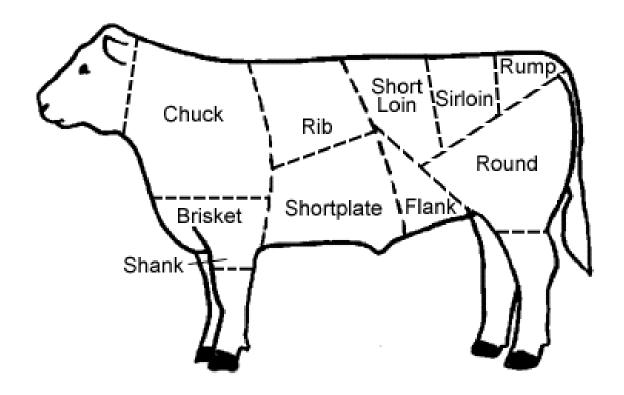
### **Cookery Method**

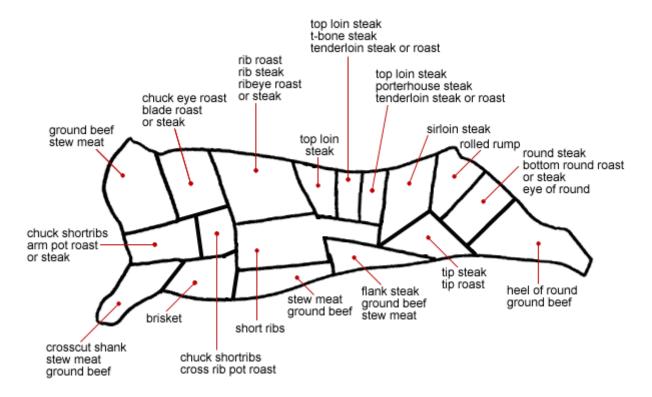
As a consumer, it is necessary to know how to prepare cuts of meat to ensure a positive eating experience. In the 4-H meat judging contest, you will be asked to identify the most appropriate cooking method for each cut of meat. Some cuts are most suitable for dry heat cookery, some for moist heat cookery, and some are suitable for either method.

Dry heat cookery is used for more tender cuts of meat. These usually originate from the muscles along the back, such as in the loin and rib (rack) primal cuts. Examples of dry heat cookery are grilling, broiling, or pan-frying with no added moisture.

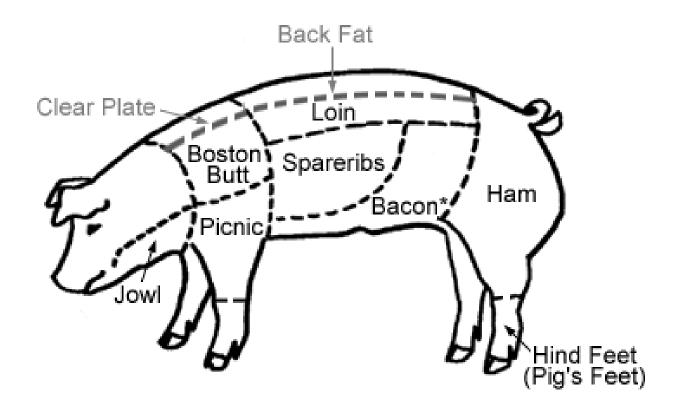
Moist heat cookery is used for less tender cuts of meat. These often originate from the chuck, shoulder, round, or shankareas of the animal that are used for movement. They will generally have a large amount of connective tissue that will make the meat tough if it is not prepared using a moist heat cookery method. One example of this cooking method would be use of a slow-cooker (Crock Pot), or making a stew. You would add water or another liquid to the meat, and cook it for several hours at a low temperature. Another method of moist heat cookery is braising. First, the meat is browned with a small amount of oil. Then a very small amount of liquid is added, and the meat is covered tightly and cooked in an oven for several hours at a low temperature. Moist heat cookery breaks down the connective tissue and makes the meat tender and typically very flavorful.

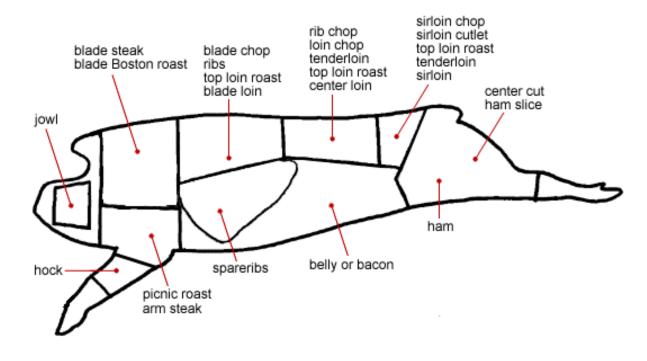
### **Primal and Retail Cuts of Beef**



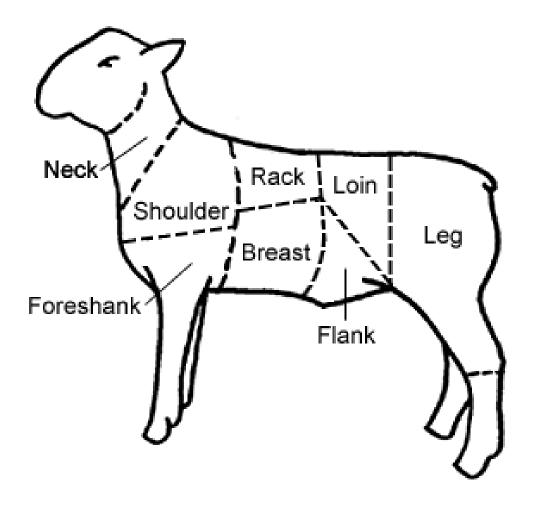


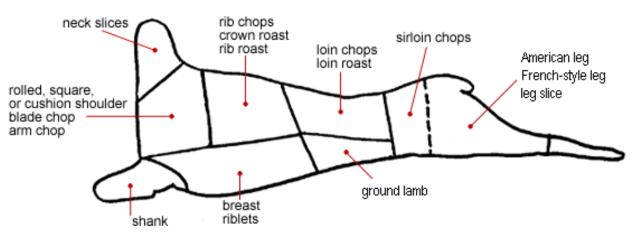
# **Primal and Retail Cuts of Pork**





# **Primal and Retail Cuts of Lamb**





Species	Primal	Retail Cut	<b>Cooking Method</b>
Beef	B - Brisket	10 - Brisket, Whole (Bnls)	Moist
Beef	B - Brisket	15 - Flat Half (Bnls)	Moist
Beef	B - Brisket	89 - Brisket, Corned	Moist
Beef	C - Chuck	03 - Arm Roast	Moist
Beef	C - Chuck	04 - Arm Roast (Bnls)	Moist
Beef	C - Chuck	06 - Blade Roast	Moist
Beef	C - Chuck	13 - Eye Roast (Bnls)	Dry/Moist
Beef	C - Chuck	20 - Mock Tender Roast	Moist
Beef	C - Chuck	21 - Petite Tender	Dry
Beef	C - Chuck	26 - Seven (7) Bone Roast	Moist
Beef	C - Chuck	29 - Shoulder Roast (Bnls)	Dry/Moist
Beef	C - Chuck	45 - Eye Steak (Bnls)	Dry
Beef	C - Chuck	48 - Mock Tender Steak	Moist
Beef	C - Chuck	58 - Top Blade (Bnls) Flat Iron Steak	Dry
Beef	D - Flank	47 - Flank Steak	Dry/Moist
Beef	F - Loin	34 - Tenderloin (Whole)	Dry
Beef	F - Loin	40 - Tri-Tip Roast	Dry
Beef	F - Loin	49 - Porterhouse Steak Dry	
Beef	F - Loin	55 - T-Bone Steak	Dry
Beef	F - Loin	56 - Tenderloin Steak	Dry
Beef	F - Loin	59 - Top Loin Steak	Dry
Beef	F - Loin	60 - Top Loin (Bnls) Steak	Dry
Beef	F - Loin	62 - Top Sirloin Steak (Bnls)	Dry
Beef	F - Loin	63 - Top Sirloin Cap Off Steak (Bnls)	Dry
Beef	F - Loin	64 - Top Sirloin Cap Steak (Bnls)	Dry
Beef	G - Plate	28 - Short Ribs	Moist
Beef	G - Plate	54 - Skirt Steak (Bnls)	Dry/Moist
Beef	H - Rib	13 - Eye Roast (Bnls)	Dry
Beef	H - Rib	22 - Rib Roast	Dry
Beef	H - Rib	45 - Eye Steak (Bnls)	Dry
Beef	H - Rib	50 - Ribeye, Lip-On Steak	Dry

Species	Primal	Retail Cut	Cooking Method
Beef	I - Round	08 - Bottom Round Roast (Bnls)	Dry/Moist
Beef	I - Round	09 - Bottom Round Rump Roast (Bnls)	Dry/Moist
Beef	I - Round	14 - Eye Round Roast	Dry/Moist
Beef	I - Round	36 - Tip, Cap Off Roast	Dry/Moist
Beef	I - Round	39 - Top Round Roast	Dry
Beef	I - Round	43 - Bottom Round Steak	Moist
Beef	I - Round	46 - Eye Round Steak	Dry/Moist
Beef	I - Round	51 - Round Steak	Moist
Beef	I - Round	52 - Round Steak (Bnls)	Moist
Beef	I - Round	57 - Tip, Cap Off Steak	Dry
Beef	I - Round	61 - Top Round Steak	Dry
Beef	M - Variety Meats	76 - Heart	Dry/Moist
Beef	M - Variety Meats	77 - Kidney	Dry/Moist
Beef	M - Variety Meats	78 - Liver	Dry/Moist
Beef	M - Variety Meats	79 - Oxtail	Moist
Beef	M - Variety Meats	80 - Tongue	Dry/Moist
Beef	M - Variety Meats	81 - Tripe	Moist
Beef	N - Various	82 - Beef for Stew	Moist
Beef	N - Various	83 - Cubed Steak	Dry/Moist
Beef	N - Various	84 - Ground Beef	Dry

Species	Primal	Retail Cut	Cooking Method
Lamb	A - Breast	24 - Ribs (Denver Style)	Dry/Moist
Lamb	E - Leg	01 - American Style	Dry
Lamb	E - Leg	16 - Frenched Style	Dry
Lamb	E - Leg	18 - Leg Roast (Bnls)	Dry
Lamb	E - Leg	31 - Sirloin Half	Dry
Lamb	E - Leg	44 - Center Slice	Dry
Lamb	E - Leg	73 - Sirloin Chop	Dry
Lamb	F - Loin	19 - Loin Roast	Dry
Lamb	F - Loin	70 - Loin Chop	Dry
Lamb	H - Rib	22 - Rib Roast	Dry
Lamb	H - Rib	23 - Rib Roast (Frenched) Dry	
Lamb	H - Rib	71 - Rib Chop Dry	
Lamb	H - Rib	72 - Rib Chop (Frenched) Dry	
Lamb	J - Shoulder	33 - Square Cut (Whole)	Dry/Moist
Lamb	J - Shoulder	65 - Arm Chop	Dry/Moist
Lamb	J - Shoulder	66 - Blade Chop	Dry/Moist
Lamb	M - Variety Meats	76 - Heart	Dry/Moist
Lamb	M - Variety Meats	77 - Kidney	Dry/Moist
Lamb	M - Variety Meats	78 - Liver	Dry/Moist
Lamb	M - Variety Meats	80 - Tongue	Dry/Moist
Lamb	N - Various	88 - Shank	Moist

Species	Primal	Retail Cut	<b>Cooking Method</b>
Pork	E - Ham/Leg	25 - Rump Portion	Dry/Moist
Pork	E - Ham/Leg	27 - Shank Portion	Dry/Moist
Pork	E - Ham/Leg	35 - Tip Roast (Bnls)	Dry
Pork	E - Ham/Leg	38 - Top Roast (Bnls)	Dry
Pork	E - Ham/Leg	44 - Center Slice	Dry/Moist
Pork	E - Ham/Leg	90 - Smoked Ham, Center Slice	Dry
Pork	E - Ham/Leg	91 - Smoked Ham (Bnls)	Dry
Pork	E - Ham/Leg	96 - Smoked Ham, Rump Portion	Dry
Pork	E - Ham/Leg	97 - Smoked Ham, Shank Portion	Dry
Pork	F - Loin	05 - Back Ribs	Dry/Moist
Pork	F - Loin	06 - Blade Roast	Dry/Moist
Pork	F - Loin	11 - Center Loin Roast	Dry
Pork	F - Loin	12 - Center Rib Roast	Dry
Pork	F - Loin	30 - Sirloin Roast	Dry
Pork	F - Loin	34 - Tenderloin (Whole)	Dry
Pork	F - Loin	37 - Top Loin Roast (Bnls)	Dry
Pork	F - Loin	53 - Sirloin Cutlets	Dry
Pork	F - Loin	66 - Blade Chop	Dry/Moist
Pork	F - Loin	67 - Blade Chop (Bnls)	Dry/Moist
Pork	F - Loin	68 - Butterflied Chop (Bnls)	Dry
Pork	F - Loin	69 - Country Style Ribs	Dry/Moist
Pork	F - Loin	70 - Loin Chop	Dry
Pork	F - Loin	71 - Rib Chop	Dry
Pork	F - Loin	73 - Sirloin Chop	Dry
Pork	F - Loin	74 - Top Loin Chop	Dry
Pork	F - Loin	75 - Top Loin Chop (Bnls)	Dry
Pork	F - Loin	93 - Smoked Pork Loin Chop	Dry
Pork	F - Loin	95 - Smoked Pork Rib Chop	Dry
Pork	J - Shoulder	02 - Arm Picnic	Dry/Moist
Pork	J - Shoulder	03 - Arm Roast	Dry/Moist
Pork	J - Shoulder	07 - Blade Boston	Dry/Moist
Pork	J - Shoulder	41 - Arm Steak	Dry/Moist
Pork	J - Shoulder	42 - Blade Steak	Dry/Moist
Pork	J - Shoulder	94 - Smoked Picnic (Whole)	Dry/Moist

Species	Primal	Retail Cut	<b>Cooking Method</b>
Pork	K - Side (Belly)	17 - Fresh Side	Moist
Pork	K - Side (Belly)	98 - Slab Bacon	Dry
Pork	K - Side (Belly)	99 - Sliced Bacon	Dry
Pork	L - Spareribs	32 - Spareribs	Dry/Moist
Pork	M - Variety Meats	76 - Heart	Dry/Moist
Pork	M - Variety Meats	77 - Kidney	Dry/Moist
Pork	M - Variety Meats	78 - Liver	Dry/Moist
Pork	M - Variety Meats	80 - Tongue	Dry/Moist
Pork	N - Various	83 - Pork Cubed Steak	Dry/Moist
Pork	N - Various	85 - Ground Pork	Dry
Pork	N - Various	86 - Hocks	Moist
Pork	N - Various	87 - Pork Sausage Links	Dry
Pork	N - Various	87 - Pork Sausage Patties	Dry
Pork	N - Various	92 - Smoked Pork Hocks	Moist

# MISSISSIPPI 4-H MEAT IDENTIFICATION CARD

#### SPECIES

- B Beef
- Lamb
- Pork

#### PRIMAL CUT

- Breast
- B. Brisket
- Chuck C.
- D. Flank
- E. Ham or Leg
- F. Loin
- G. Plate
- Rib or Rack H.
- Round 1.
- J. Shoulder
- Side (Belly) K.
- L. Spareribs
- M. Variety Meats
- N. Various

### **COOKERY METHOD**

- Dry Heat
- M Moist Heat
- D/M Dry or Moist Heat

### **RETAIL CUTS (CHOPS)**

- 65 Arm Chop
- 66 Blade Chop
- 67 Blade Chop (Bnls)
- 68 Butterflied Chop (Bnls)
- 69 Country Style Ribs
- 70 Loin Chop
- 71 Rib Chop
- 72 Rib Chop (Frenched)
- 73 Sirloin Chop
- 74 Top Loin Chop
- 75 Top Loin Chop (Bnls)

### RETAIL CUTS (VARIETY MEATS)

- 76 Heart
- 77 Kidney
- 78 Liver
- 79 Oxtail
- 80 Tongue
- 81 Tripe

### RETAIL CUTS (ROASTS/POT ROASTS)

- 1 American Style
- 2 Arm Picnic
- 3 Arm Roast
- 4 Arm Roast (Bnls)
- 5 Back Ribs
- 6 Blade Roast
- 7 Blade Boston 8 - Bottom Round
  - Roast (Bnls)
- 9 Bottom Round
  - Rump Roast (Bnls)
- 10 Brisket, Whole (Bnls)
- 11 Center Loin Roast
- 12 Center Rib Roast
- 13 Eye Roast (Bnls)
- 14 Eye Round Roast
- 15 Flat Half (Bnls)
- 16 Frenched Style
- 17 Fresh Side
- 18 Leg Roast (Bnls)
- 19 Loin Roast

- - 20 Mock Tender Roast
  - 21 Petite Tender
  - 22 Rib Roast
  - 23 Rib Roast (Frenched)
  - 24 Ribs (Denver Style)
  - 25 Rump Portion
  - 26 Seven (7) Bone Roast
  - 27 Shank Portion
  - 28 Short Ribs
  - 29 Shoulder Roast (Bnls)
  - 30 Sirloin Roast
  - 31 Sirloin Half
  - 32 Spareribs
  - 33 Square Cut (Whole)
  - 34 Tenderloin (Whole)
  - 35 Tip Roast (Bnls)
  - 36 Tip, Cap Off Roast
  - 37 Top Loin Roast (Bnls)
  - 38 Top Roast (Bnls)
  - 39 Top Round Roast
  - 40 Tri-Tip Roast

#### RETAIL CUTS (STEAKS)

- 41 Arm Steak 53 - Sirloin Cutlets
- 42 Blade Steak 54 - Skirt Steak (Bnls)
- 55 T-Bone Steak 43 - Bottom Round Steak
- 44 Center Slice 56 - Tenderloin Steak
- 45 Eye Steak (Bnls) 57 - Tip, Cap Off Steak
- 46 Eye Round Steak 58 - Top Blade (Bnls) Flat Iron Steak
- 47 Flank Steak 59 - Top Loin Steak 48 - Mock Tender Steak
  - 60 Top Loin (Bnls) Steak
- 49 Porterhouse Steak 61 - Top Round Steak
- 50 Ribeye, Lip-On Steak 62 - Top Sirloin Steak (Bnls) 51 - Round Steak 63 - Top Sirloin Cap Off Steak (Bnls)
- 52 Round Steak (Bnls) 64 - Top Sirloin Cap Steak (Bnls)

### RETAIL CUTS (VARIOUS MEATS)

- 82 Beef for Stew
- 83 Cubed Steak
- 84 Ground Beef
- 85 Ground Pork
- 86 Hocks
- 87 Sausage Link/Pattie
- 88 Shank

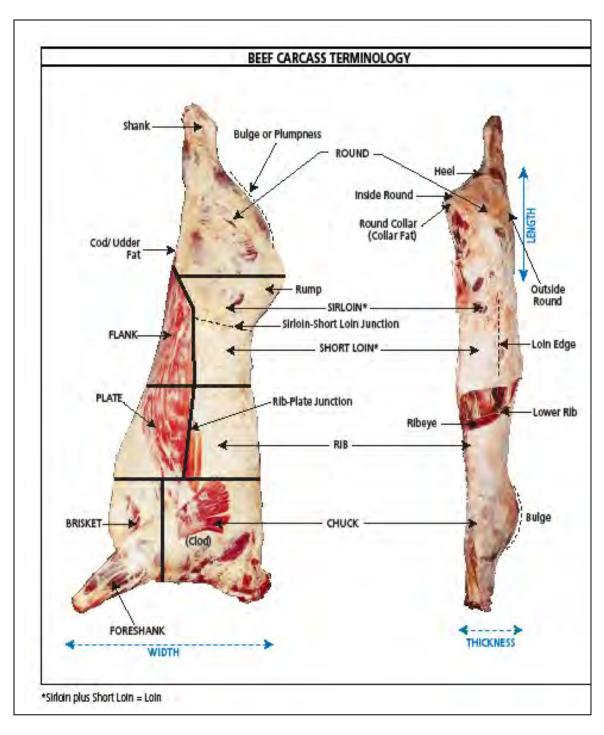
### RETAIL CUTS (SMOKED/CURED)

- 89 Brisket, Corned
- 90 Center Slice
- 91 Ham (Bnls) 92 - Hocks
- 93 Loin Chop
- 94 Picnic (Whole)
- 95 Rib Chop
- 96 Rump Portion
- 97 Shank Portion
- 98 Slab Bacon
- 99 Sliced Bacon

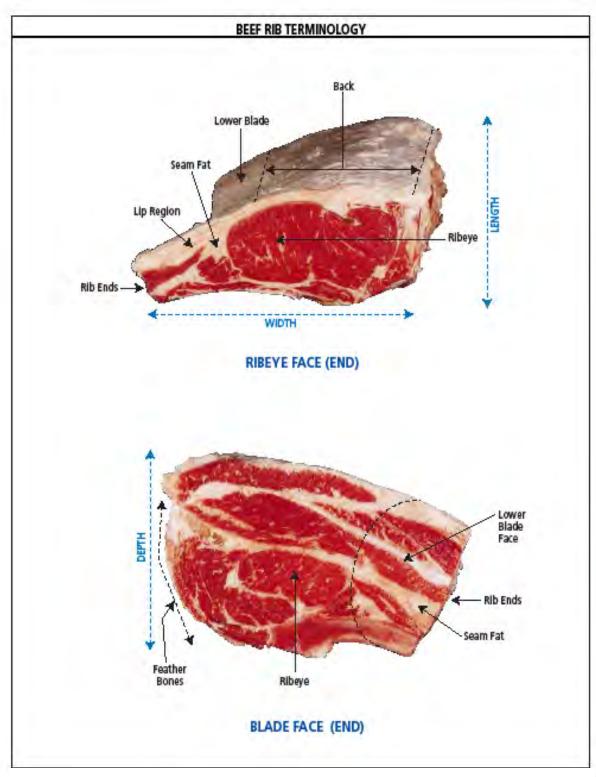
# **Bone Structures According to Anatomical Origin**

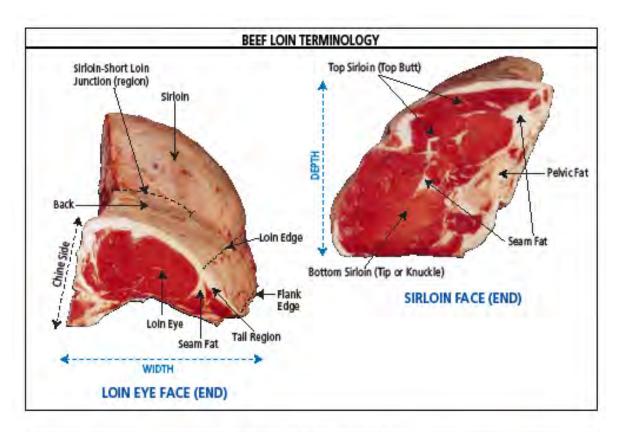
Shoulder Arm Cuts	Shoulder Blade Cuts (cross sections of blade bone)	Rib Cuts	Short Loin Cuts	Hip (Sirloin) Cuts (cross sections of hip bones)	Leg or Round Cuts	Breast or Brisket Cuts
Arm Bone	Blade Bone (near neck)  Blade Bone (center cuts)  Blade Bone (near rib)	Backbone and Rib Bone	Backbone (T-shape) T-Bone	Pinbone (near short loin)  Flat Bone (center cuts)  Wedge Bone (near round)	Leg or Round Bone	Breast and Rib Bone

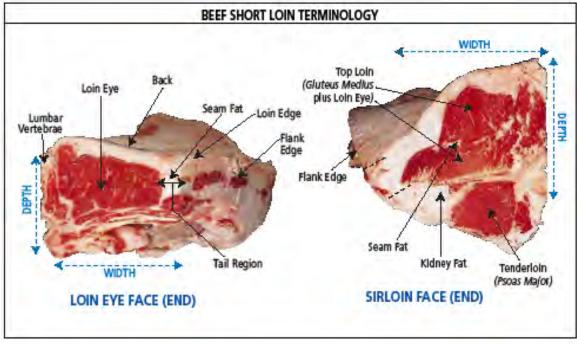
Source: National Live Stock and Meat Board

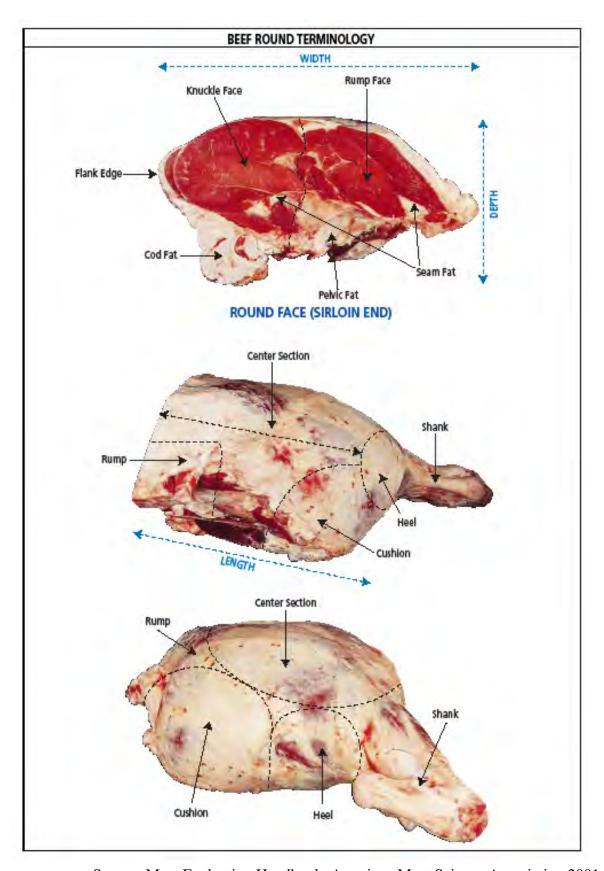


Source: Meat Evaluation Handbook, American Meat Science Association 2001

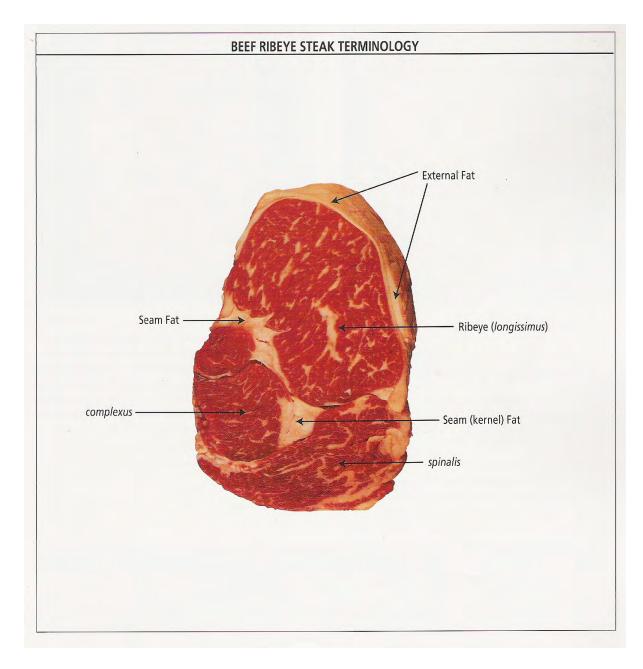




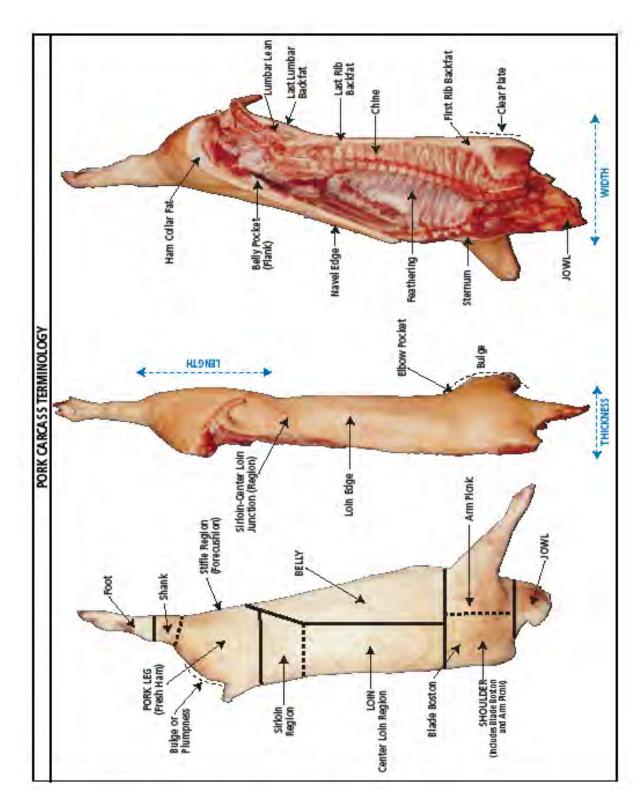




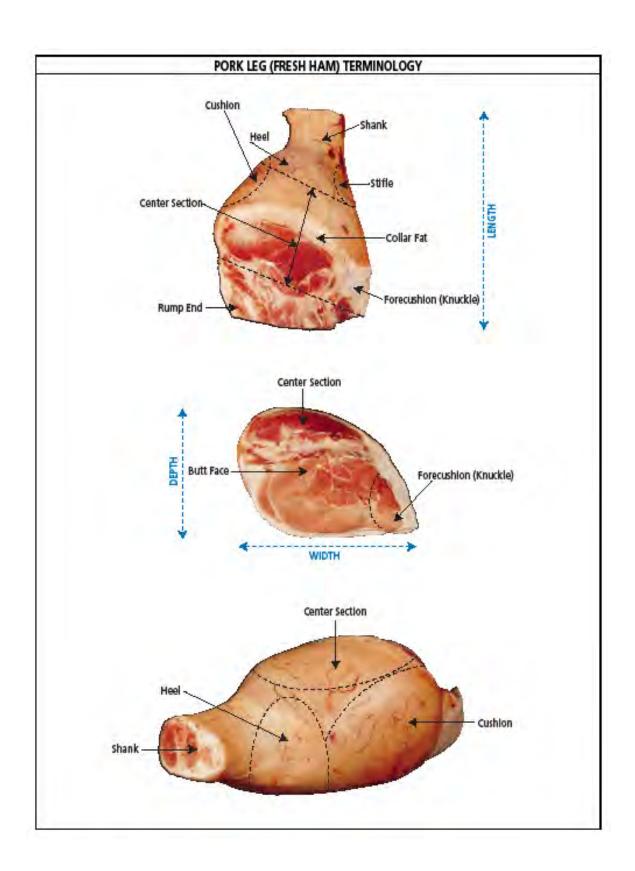
Source: Meat Evaluation Handbook, American Meat Science Association 2001

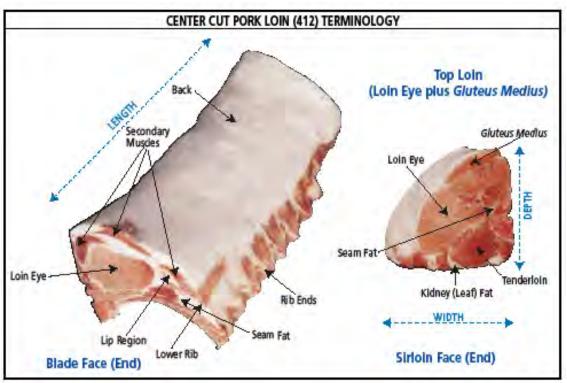


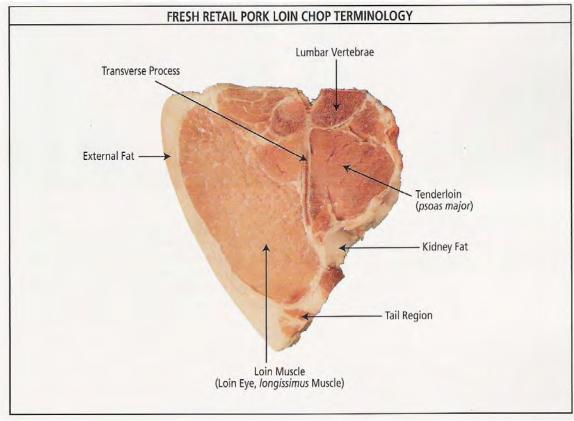
Source: Meat Evaluation Handbook, American Meat Science Association 2001

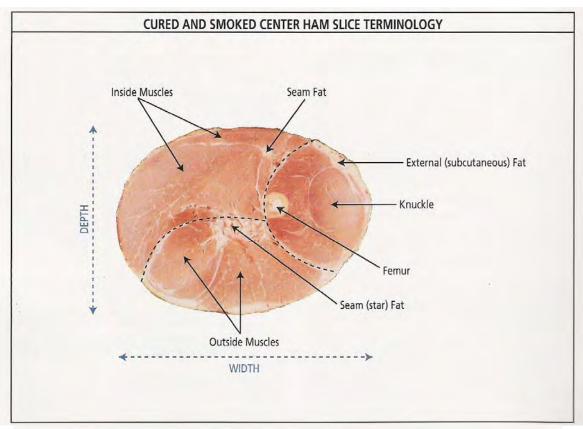


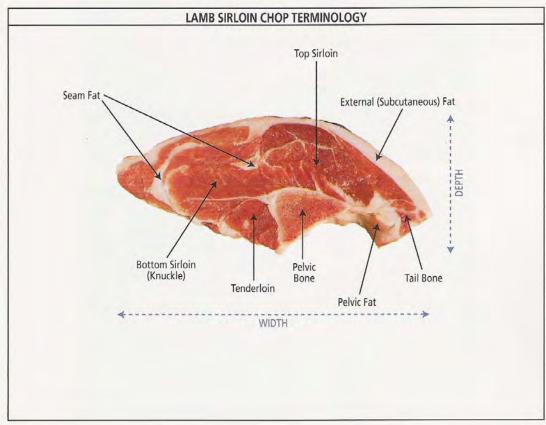
Source: Meat Evaluation Handbook, American Meat Science Association 2001











# Sample Notes: Beef Rounds

Notes for Oral Reasons 4-2-3-1 Beet Kounds 2/4 4/2 @ slightly larger tip (M) deeper center section plumper cushion + heel (1) less fat along Diess seam for flank edge less cod fat @ more marbling in round face 3/2 2/3 Close Pair (M) more exposed lean (M) deeper, wider center sec. in round face plumper cushion 1 less seam fat (T) less cod fat less fat over round face @ more cherry-red color more marbling in round face round face Easy decision 1/3 (T) much trimmer over (M) slightly deeper, round face less seam fat, less cod fat wider center section partially due to fal (M) meatier round face (a) more marbling in round fate 1 Criticisms: (t) most fat over round Grants: face + center section acceptable amount most cod fat of marbling M) flattest center section bright cherry-red tapering cushion + heel round face would yield the lowest % trimmed steaks + roas

## **Sample Reasons: Beef Rounds**

I am contestant number 17-3. I placed this class of beef rounds 4-2-3-1.

In my top pair, I placed 4 over 2 as 4 was a heavier muscled, trimmer round. 4 displayed a deeper center section, along with a plumper cushion and heel. 4 also had less seam fat and less cod fat. Furthermore, 4 revealed more marbling in the round face. I grant that 2 displayed a slightly larger tip. 2 also had less fat along the flank edge.

In a close decision, I placed 2 over 3 because 2 had advantages in muscling. 2 possessed a deeper, wider center section and a plumper cushion. 2 also had less cod fat. Additionally, 2 displayed a brighter cherry-red colored round face. I admit that 3 had more exposed lean in the round face. Furthermore, 3 displayed less fat over the round face and less seam fat. 3 also had more marbling in the round face.

For my bottom pair, I easily placed 3 over 1 as 3 was a much trimmer round that would yield a higher percentage of boneless, trimmed retail cuts. 3 was much trimmer over the round face, and had less seam fat and cod fat. 3 also had a meatier round face. In addition, 3 had more marbling in the round face. I acknowledge that 1 possessed a slightly deeper, wider center section, partially due to fat.

Finally, I realize that 1 displayed an acceptable amount of marbling in a bright, cherry-red colored round face; however, I placed 1 last as 1 was the fattest, lightest muscled round in the class. 1 had the most fat over the round face and center section, along with the most cod fat. Furthermore, 1 had the flattest center section and a tapering heel and cushion. Thus 1 would yield the lowest percentage of trimmed steaks and roasts in the class. Thank you.

**Sample Notes: Pork Carcasses** 

Sample Notes: Pork Carca Notes for Oral Red	
	Carcasses 3-1-2-4
M thicker, plumper ham thicker sirloin + loin meatier shoulder  T less backfat at the last lumbar + last rib less belly pocket fat	Monger careass  Diess ham collar fat
Easy decision  The much less backfat at the last lumbar, last rib, thirst rib much less ham collar the belly pocket fat  Melly pocket fat	Monger, thicker ham (partially due to fat)  abrighter belly lean
Easy decision  Dimuch less backfat at the last lumbar, last rib, the first rib less ham collar, sternum, tinternal fat  Monger ham	M thicker, plumper ham fuller sirloin (partially due to fat)  (partially due to fat)  (partially due to fat)  (partially due to fat)
Grants:  @ brightest belly lean in class  M thick, plump ham partially due to fat	Criticisms:  (a) fattest carcass in class most backfort at last lumbar, last rib, first rib most fat at ham collar, belly pocket would have lowest % fat-free lean

## **Sample Reasons: Pork Carcasses**

I am contestant number 17-3. I placed this class of pork carcasses 3-1-2-4.

In my top pair, I placed 3 over 1 as 3 was a heavier muscled, trimmer carcass. 3 had a thicker, plumper ham, a thicker sirloin and loin, and a meatier shoulder. 3 also displayed less backfat at the last lumbar and last rib, along with less belly pocket fat. I admit that 1 was a longer carcass. 1 also had less ham collar fat.

In an easy decision, I placed 1 over 2 as 1 was a trimmer carcass that would have a higher percentage of muscle. 1 had much less backfat at the last lumbar, last rib, and first rib, coupled with much less ham collar and belly pocket fat. In addition, 1 had a plumper ham and sirloin and a thicker loin and shoulder. I grant that 2 had a longer, thicker ham, partially due to fat. 2 also displayed a brighter colored belly lean.

In another easy decision, I placed 2 over 4 because 2 had superior trimness advantages and would have a higher lean to fat ratio. 2 possessed much less backfat at the last lumbar, last rib, and first rib, less fat over the ham collar and sternum, and less internal fat. Additionally, 2 had a longer ham. I recognize that 4 displayed a thicker, plumper sirloin, and a fuller sirloin, all partially due to fat. 4 also had a brighter belly lean and more rib feathering.

Finally, I acknowledge that 4 had the brightest belly lean in the class. 4 also had a thick, plump ham, partially due to fat; however, I placed 4 last as 4 was by far the fattest carcass in the class. 4 had the most backfat at the last lumbar, last rib, and first rib, the most fat at the ham collar and belly pocket, and the most internal fat. Therefore, 4 would yield the lowest percentage of fat-free lean. Thank you.

**Sample Notes: Fresh Hams** 

Sample Notes: Fresh Ham Notes for Oral Rec	
	Hams 2-4-1-3
3/4 Close decision	4/2
M deeper, wider butt face wider center section  (1) less seam fat  (2) brighter reddish-pink more marbling	M plumper cushion + heel  (A) less fat along butt face less ham collar fat
4/1 Easy decision	1/4
D much trimmer under t along butt face less fat over ham collar t forecushion much less seam fat @ much Armer, finer-textured more uniform color	More exposed lean in butt face deeper, wider center section fuller cushion (partially due to fat)
M meatier butt face much deeper, wider center section plumper cushion + heel  T less fat over forecushion + ham collar	Tless fat under + along butt face less seam fat  more marbling brighter reddish-pink
Grants:  @acceptable quality acceptable marbling, firm, fine-textured bright reddish-pink	Criticisms: Least desirable combination of muscling + trimness  (M) lightest muscled butt face narrowest center section flattest cushion  (T) excess fat under + along butt face most ham collar fat

## Sample Reasons: Fresh Hams

I am contestant number 17-3. I placed this class of fresh hams 2-4-1-3.

I placed 2 over 4, in a close decision, as 2 had advantages in muscling. 2 displayed a deeper, wider butt face and a wider center section. 2 also had less seam fat in the butt face. Additionally, 2 revealed more marbling in a brighter, more reddish-pink colored butt face. I grant that 4 exhibited a plumper cushion and heel. 4 also had less fat along the butt face and less ham collar fat.

I easily placed 4 over 1, as 4 was a much trimmer ham that would yield a higher lean to fat ratio. 4 had much less fat under and along the butt face, less fat over the ham collar and forecushion, and much less seam fat in the butt face. Also, 4 displayed a much firmer, finer-textured, more uniform reddish-pink butt face. I acknowledge that 1 had more exposed lean in the butt face, along with a deeper, wider center section and a fuller cushion, all partially due to fat.

In my third pair, I placed 1 over 3 as 1 was a heavier muscled ham. 1 had a meatier butt face, a much deeper, wider center section, and a plumper cushion and heel. Furthermore, 1 had less fat over the forecushion and ham collar. I admit that 3 had slightly less fat under and along the butt face, as well as less seam fat. 3 also displayed more marbling in a more reddish-pink colored butt face.

I realize that 1 was an acceptable quality ham, with a firm, fine-textured, bright reddish-pink butt face; however, I placed 1 last as 1 had the least desirable combination of muscling and trimness in the class. 1 had the lightest muscled butt face, combined with the narrowest center section and the flattest cushion. Furthermore, 1 had excessive fat under and along the butt face, along with the most ham collar fat. Finally, 1 would yield the lowest percentage of center-cut ham slices in the class.

### **Useful Websites**

The following websites are currently available and may provide additional information, pictures, quizzes, and other resources:

### **American Meat Science Association:**

www.meatscience.org

### **American Meat Science Association Meat Judging Website:**

www.meatjudging.org

### Texas A&M University Meat Judging Page:

http://aggiemeat.tamu.edu/judging/meatjudging.html

### University of Nebraska Meat Identification Page:

http://animalscience.unl.edu/meats/id/

### Nebraska 4-H and FFA Classes and Results Page:

http://animalscience.unl.edu/meats/aged/agedu.htm

### **University of Kentucky Agripedia:**

http://www.ca.uky.edu/agripedia/agmania/meatid/

### Prepared by:

Jason M. Behrends, Ph.D., CCS Sally Yoder, Ph.D. Ty Schmidt, Ph. D. Christine M. Leick, M.S.

### **Updated March 2015 by:**

Dean Jousan, Ph.D.