



## **194R *Sheep Resource Handbook* Changes in the 2011 Edition**

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Thank you for your interest in the Ohio 4-H publication *194R Sheep Resource Handbook* (2011). The following pages show the areas in which **significant** changes have been made to the 2000 edition. Pages with only minor changes are not included.

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## To the Member

After you have made the decision to take a sheep project, it is important that you know what type of animal you are looking for, how to feed it, diseases it may have, management practices, and many other important concepts.

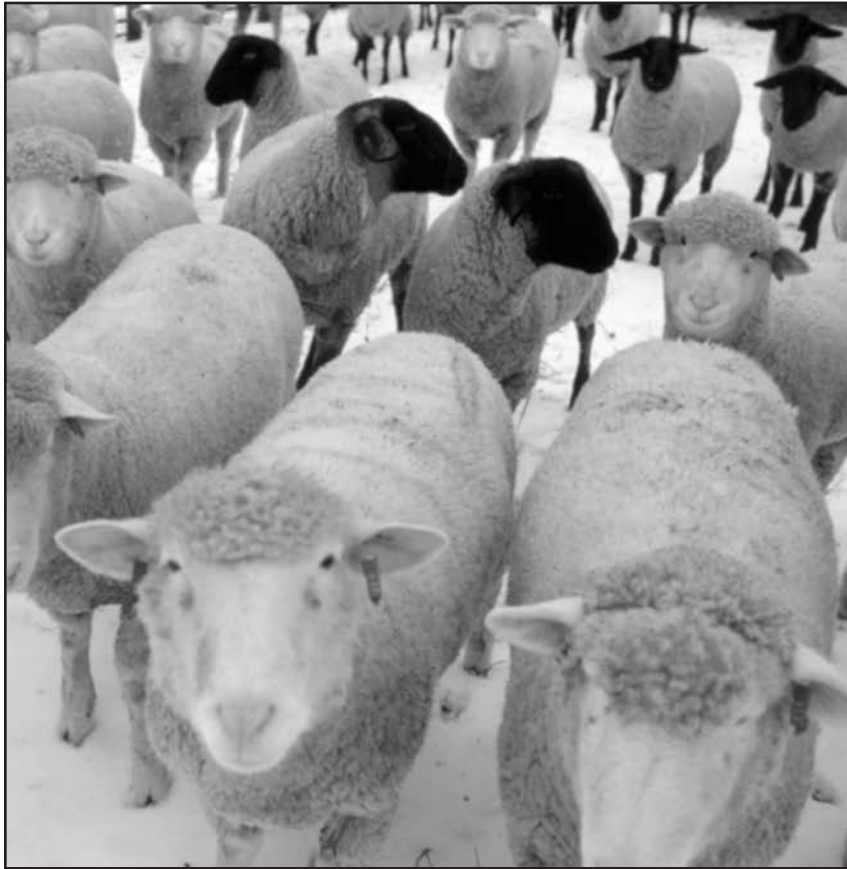
By teaching you these matters through information and experience, this project will make it possible for you to produce a high-quality

and safe product—in other words, *lamb that the consumer wants to buy*. To have a successful project you must be willing to study and review the information contained in this handbook and apply it.

The 4-H member project books contain activities that enhance learning from the information gained in this handbook.

← Sentence updated.

## History



Sheep originated in Asia 10,000–20,000 years ago. Scientists believe they looked like goats and had horns and coarse hair. Over several generations, the hair turned to wool.

For thousands of years, sheep have provided food and clothing for humans. Sometimes, they have been used as pack animals. In the past 200–300 years, they have become important providers of meat.

As new countries settled, sheep spread throughout the world. They are now raised in almost every country, with Australia and Mongolia being the leading sheep-producing countries.

Sheep were brought to North America by Spanish and English settlers. Columbus brought the animals to the New World on his second voyage in 1493. Sheep were shipped to Virginia from England in 1609. As people moved west across the United States, sheep went with them. Approximately 75 percent of the sheep in the United States are now west of the Mississippi River.

Sheep are found on many farms in Ohio. They can be a good source of income with two important products—wool and meat.

# Selection: The First Step

## Ways to Start Your Project

There are several ways to start your market lamb and/or sheep breeding project. One is to select a lamb or lambs from your parents' or your own ewe flock. Another is to purchase a market lamb or a breeding sheep from an established sheep producer in your county or area. Sheep producers provide many outstanding sheep each year for sale on the farm or through sheep sales.

## Selecting Your Lamb

Selection of a project animal should be done carefully, with consideration given to breed, size, and quality. Size and quality are especially important, and while management and nutrition have great influence on both, it is a big help to begin with a good animal.

At the same time, however, while you want to select the best lambs you can possibly afford, be sure that the price you pay is consistent with your objectives. For the beginner, who is learning about feeding, management, etc., good quality lambs bought at a modest price may be the wisest investment. Purchasing livestock at high prices does not guarantee success nor mean easier management.

A successful project outcome requires the lamb to have a desirable genetic background and an excellent environment while in your care.

This handbook will give you the information you need to select good quality sheep. But before discussing the characteristics of size and conformation that indicate good quality, it will be helpful (1) to review the parts of a lamb and (2) identify some of the breeds commonly available.

Sheep selection and evaluation consists of making a careful analysis of animals and measuring them against a commonly accepted ideal. Both visual (or phenotypic) and genetic (or genotypic) evaluation is important. Training in livestock or sheep selection is important because it gives you practical experience in making individual decisions and supporting those decisions verbally. Most importantly, skills in sheep selection will help you identify the individual animal that will add the desired traits to a breeding sheep flock.

Sentence added.

### How to be a good judge:

- Study pictures of ideal animals.
- Select animals based on ideal you have studied.
- Review judging terminology.
- Learn the different parts of the live animal and carcass.
- Have a clearly defined “mental picture” of the ideal animal.
- Make a quick and accurate observation or decision.
- Be able to evaluate what you see.
- Be confident and honest.
- Be able to defend the decisions you made—think on your feet.

Bullet added.

## Judging Market Lambs

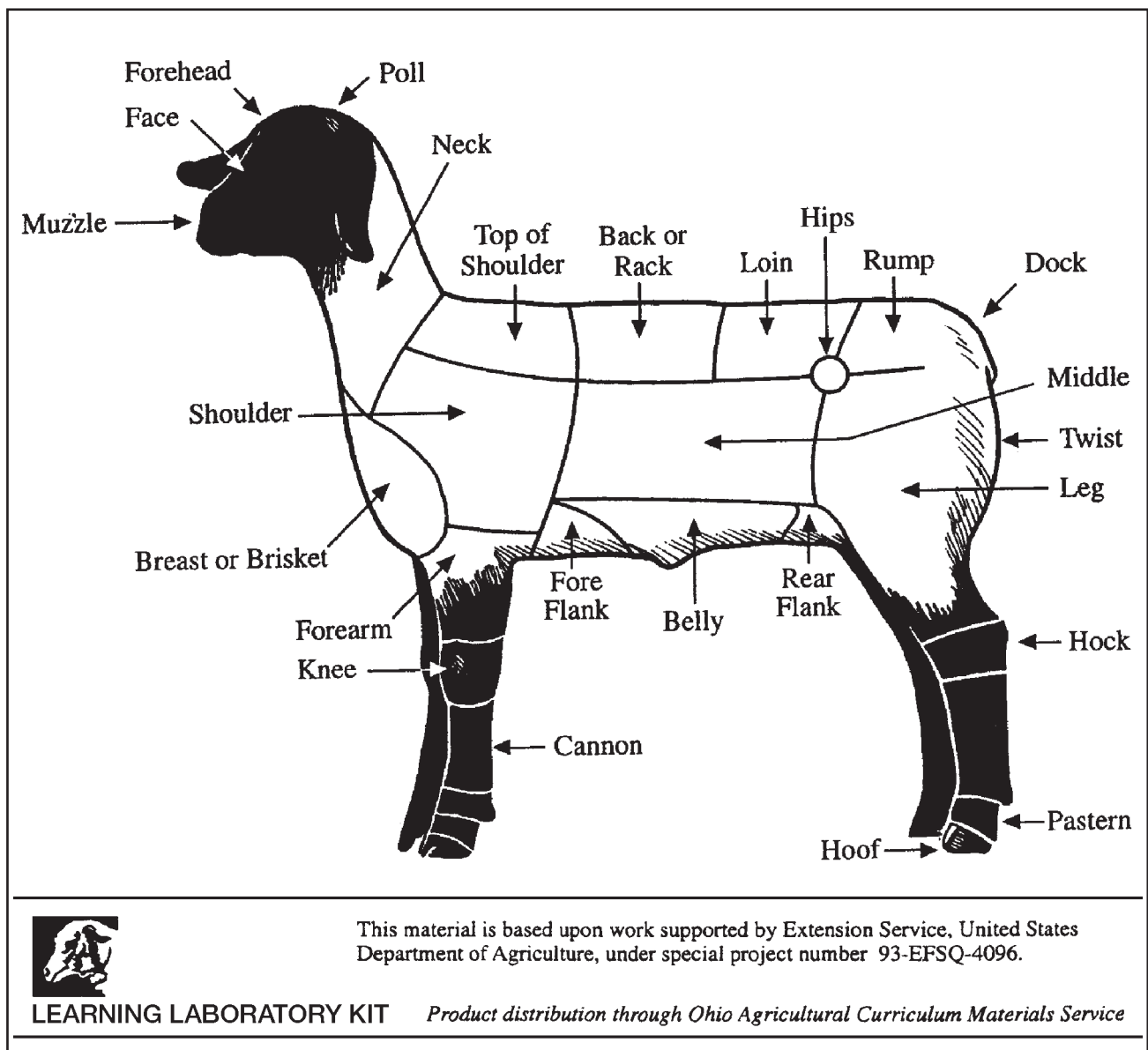
The main points to consider in judging market lambs are structure, type, muscling, and finish. (See Figures 3 and 4.) Evaluation of carcass merit is an estimate that measures the relationship between finish and muscle.

↑  
Paragraph updated.

## Parts of the Lamb

To be successful in raising and selecting sheep, you should know the names of the various parts of the animal and their locations on the animal's body. Using industry-accepted terms helps you know what to look for and to accurately describe an animal's traits (Figure 1).

↖  
Last sentence updated.



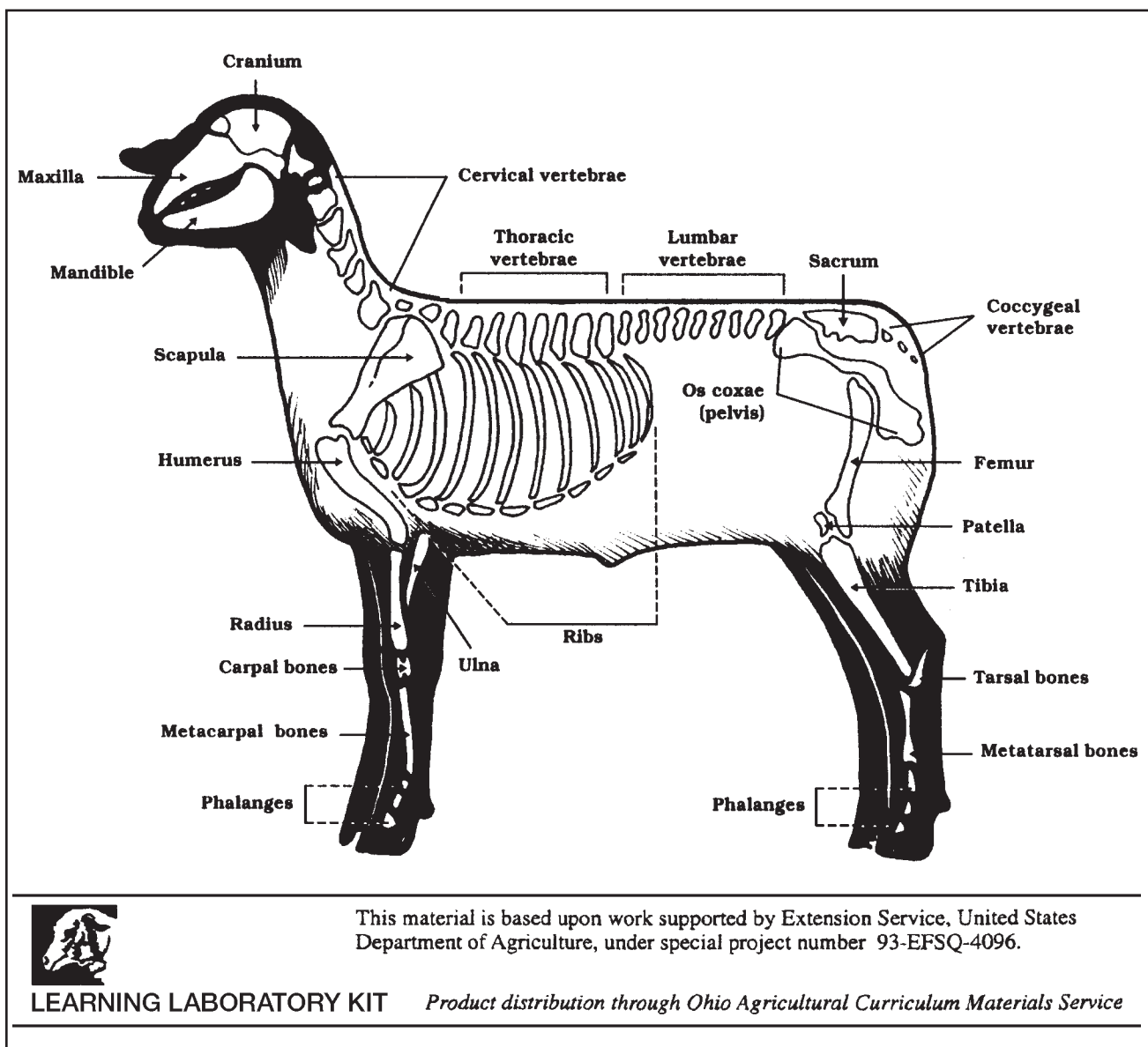
*Figure 1*  
*Parts of a Sheep*

This knowledge should be permanent, at least for as long as you are involved in raising and showing sheep. When talking to fellow 4-H members, a breeder, or a judge, you will want to sound knowledgeable about your 4-H project. So take some time now to study the following diagram and become thoroughly familiar with all the indicated parts of a lamb.

## Size Considerations

Regardless of breed, it is important when selecting your project lambs to select ones at the right size. Select a size that is appropriate to the amount of time you have from project start until fair time. Know the dates of your fair and figure the number of days you will be feeding your lamb. Lambs will generally be purchased at 10–14 weeks of age and will weigh 60–90 pounds.

Ages and weights updated. 



*Figure 2*  
*Sheep Skeletal System*

## Paragraph and chart updated.

Most lamb projects are started in April or early May. Market lambs at fair time should weigh 100 pounds or more, with ideal being 115–140 pounds. Minimum weight varies due to individual fair requirements. An average lamb on a good ration will gain 0.60 to 0.80 pounds per day. Feed your lamb with a weight goal in mind, leaving margins for extreme hot weather, sickness, and other unforeseen problems.

The following chart may help you in selection:

Days Until Showing	Purchase Weight	Total Gain	Final Weight (rounded)
100	50	68	118
100	65	68	133
100	80	68	148
80	50	54.4	104
80	65	54.4	119
80	80	54.4	134
60	50	40.8	91
60	65	40.8	106
60	80	40.8	121

When selecting size, don't forget to consider frame size as well. Frame size plays an important part in the weight of your lamb. If you have a large-framed lamb, it can carry 130 pounds much easier and better than a smaller framed animal. The smaller framed lamb will appear to be fatter. Also, if you are buying two or more lambs, choose animals that are similar in frame size and weight.

## Selecting the Right Type of Lamb

A good lamb should catch your eye when you first see it. Select lambs with enough length of body and leg to denote growthiness but with good muscle development over the hindsaddle and in the rear legs. Avoid short, fat, and early-maturing lambs or rangy, narrow types that lack muscle development or ruggedness.

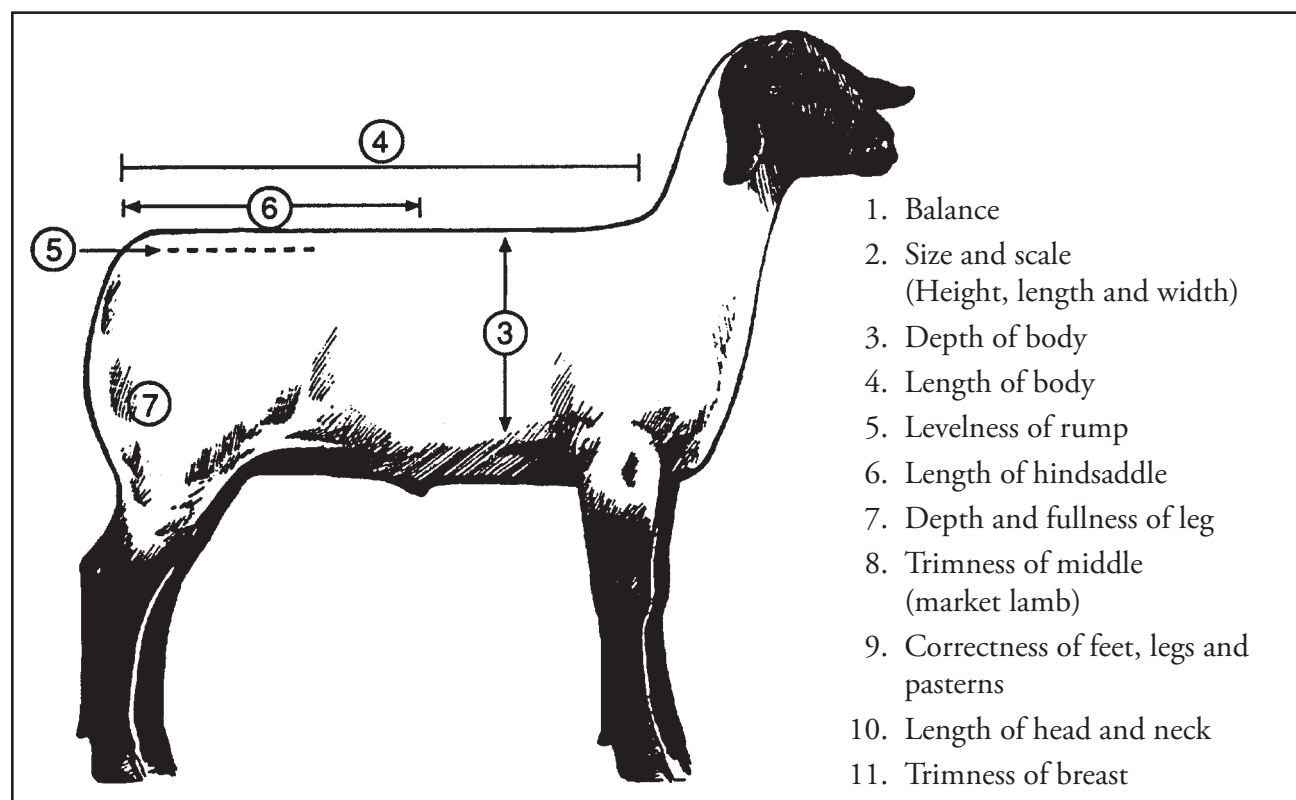


Figure 3

Paragraph updated.

## Conformation

An ideal market lamb is one that combines weight and frame, correctness, natural muscling, and trimness. The ideal market lamb weighs between 115 and 140 pounds, has adequate frame, is long-bodied, and is clean and trim throughout the front end and middle. Look for a strong, level topline. Your lamb should be especially long and level through the loin and rump (hindsaddle) standing on a sound, structurally correct set of feet and legs (Figure 3).

## Balance

This is the proportion of body parts. The lamb should be strong-topped and level-rumped, with a long neck and head. It should also be clean and trim (Figure 3). Muscling should be uniform from shoulder getting progressively thicker through to dock.

Sentence added.

## Capacity

The body capacity should be moderately deep and square, with the ribs sprung wide throughout

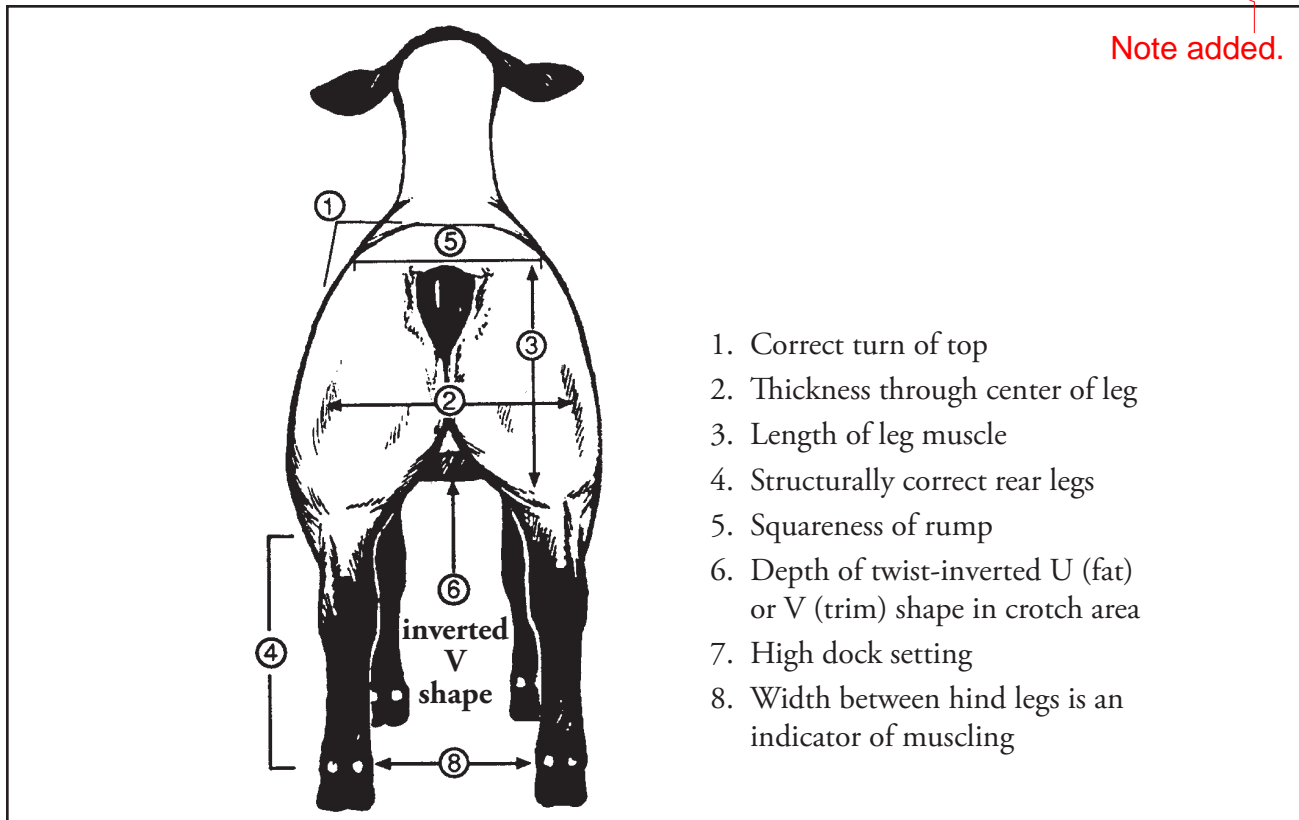
the chest cavity. The depth should continue the length of the animal's body in a uniform manner from the fore flank to the rear flank (Figure 3). Body capacity is important for maintaining health, intake of feed, and adequate reproductive volume.

## Muscle

The ideal market lamb should exhibit extra muscling through its top, hindsaddle, and leg. These are the areas from which the high-priced cuts of meat come from. An indication of muscling is thickness through the center of the leg. When viewed from the rear, the lamb should stand naturally with its legs wide apart. Natural thickness over the top will be visible with a slightly rounded appearance and good width, length, and depth of loin. There should also be good width and length of rump (Figure 4) and muscle expression in the forearm.

NOTE: Natural muscle is round, not square. If the animal is starting to square up over the loin edge, an assessment of over fatness should be made.

Note added.



1. Correct turn of top
2. Thickness through center of leg
3. Length of leg muscle
4. Structurally correct rear legs
5. Squareness of rump
6. Depth of twist-inverted U (fat) or V (trim) shape in crotch area
7. High dock setting
8. Width between hind legs is an indicator of muscling

Figure 4



After viewing several lambs, you will soon realize that the angle at the hocks varies. The greater the degree to which this angle varies, the more incorrect the animal is and the more serious the fault (Figure 5).

The sickle-hocked lamb (Figure 5) has too much set or angle at the hock. In horses, this defect causes curbing, a bony growth on the back of the hock that develops because of strain on the joint. This can occur in sheep, but rarely does, because a sheep does not strain the hock to the same extent as a horse.

A more serious fault is a hind leg that is too straight, or post-legged (Figure 5). This condition changes the angulation of the bones at the hock and the stifle joint and shortens the stride. The patella (knee cap) at the stifle joint may be displaced resulting in a stifled, lame, unsound animal.

Figure 5 illustrates the proper set to the hind leg when the animal is viewed from the rear. Figure 5 shows a cow-hocked lamb. With this condition, the hocks are too close together, the cannons are not parallel and the toes deviate extremely outward. A lamb with this defect has an unsightly, inefficient gait.

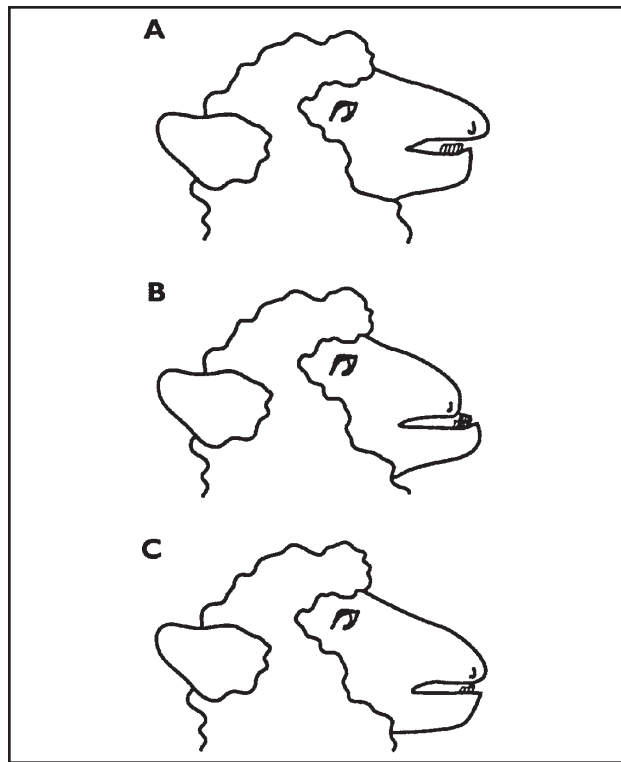
A lamb can also be bowlegged off the hind legs (Figure 5).

## Sheep Jaw Structure

(See Figure 6.)

- A. Undershot (Parrot-mouth)—in this situation the lower jaw is too short.
- B. Overshot (Monkey-mouth)—the lower jaw is too long, and the teeth are in the front of the upper mouth pad.
- C. Normal mouth—the top and bottom jaws are properly aligned. Note that the incisor teeth are flush with the pad on the upper jaw.

Unsound mouth diagrams such as A and B are inherited traits that interfere with the sheep's ability to gather food.



**Figure 6**  
(North Central Region Extension  
Publication #300)

## Finish

Correct finish is important to determine the cutability (retail value) of a lamb. Finish is the amount of external fat on a lamb. To determine the amount of finish, handle the lamb over the backbone and ribs. Excessive prominence of the backbone and ribs shows a lack of finish. Too much finish is present when you cannot feel the backbone or ribs by normal handling methods. Correct finish is 0.15–0.25 inches of backfat. Desirable traits in regard to finish include: smooth and uniform fat cover over the ribs; no excessive fullness in breast; a uniform fat cover of 0.15–0.25 inches.

Finish or Condition is evaluated in the:

- sternum
- over backbone and loin (12th and 13th rib)
- lower forerib
- flank
- upper rear rib
- twist

The measurement over the 12th and 13th rib is the only measurement used in the current USDA yield grade equation.

Measurements updated.

Parenthesis added.

Sentence added.



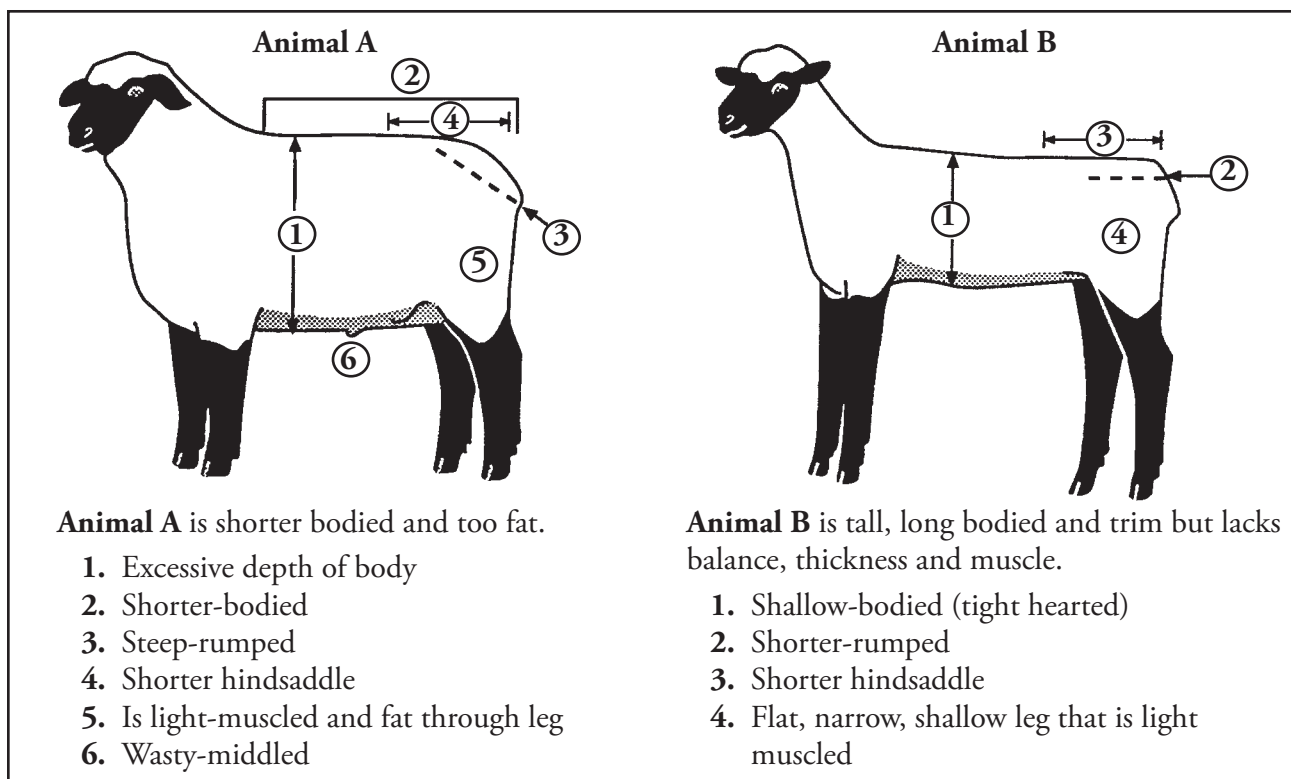


Figure 7

Middle sentences added.

## Judging Breeding Sheep

Breeding sheep classes are usually assumed to be purebred, and the animals are to be used for purebred breeding stock unless you are told otherwise. However, wether sire and dam shows have been growing in popularity. Although there are divisions that are purebred, there are also crossbred divisions. In both cases, the animals are intended to be judged as breeding sheep. Breeding sheep are judged on the same major points as market lambs. In addition, condition, size, soundness, breed and sex character, and fleece are considered.

### Condition

Condition refers to the amount of fat. In breeding sheep, excess condition leads to reproductive problems. Over-fat ewes have trouble breeding and lambing. Ewes that are too thin also may have trouble breeding or raising lambs.

### Size

Size is how big or heavy an animal is for its age. Skeletal frame and bone and muscle development are good indicators. Size between breeds varies. Frame and capacity are two different portions of total size. Frame is the height and length of an animal. Capacity is the depth and width of the animal's body. A larger animal is not always more desirable than a smaller one. But, the animal should be large enough to grow and produce efficiently and should meet the breed standards for size.

### Soundness

Soundness (skeletal correctness) in mouth, feet, legs and fleece are important in breeding sheep. The lower teeth should hit even with the upper pad. (See Figure 6.) Straight, strong legs and adequate bones are also desirable. The legs should be set squarely on the corners of the body. (See

and their vulvas should be well developed and relatively flat, not tipped. Compare each animal against the others in the class.

Sentences added.

## Breeding Animals

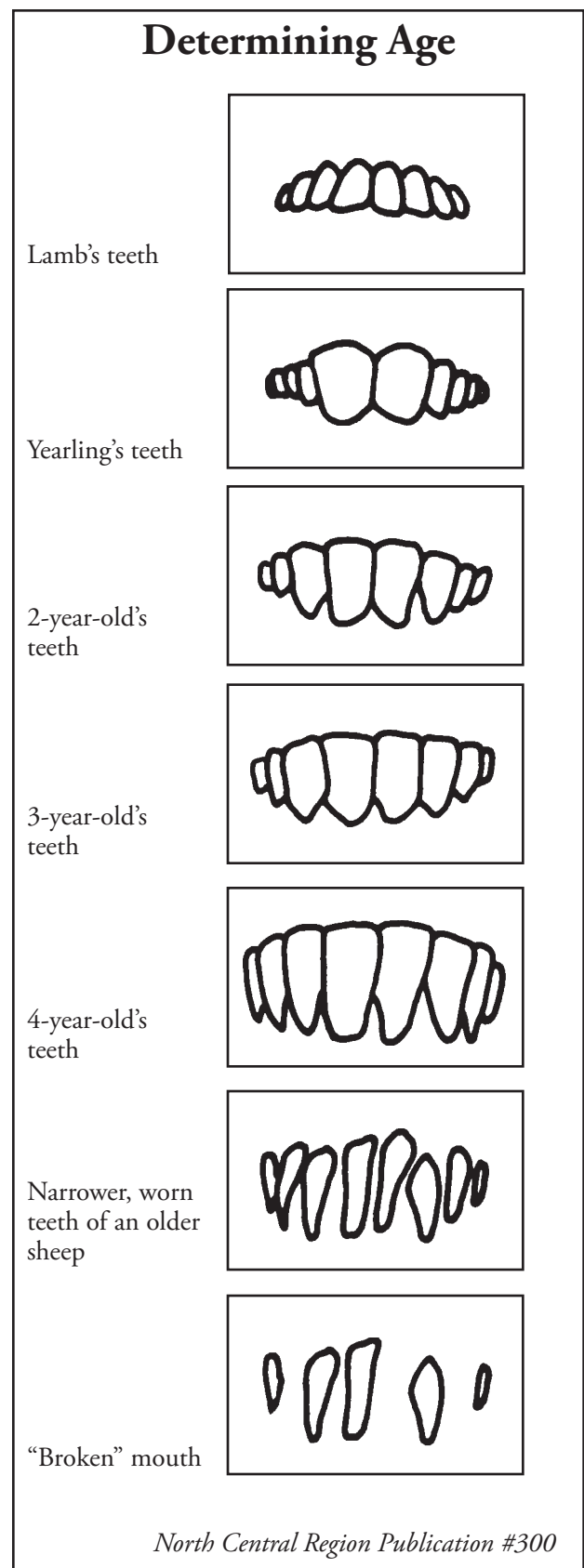
In selecting breeding animals, consider the requirements to meet your needs. Set goals for the market for which you intend to produce, and then select breeding sheep to meet that goal. You might be trying to produce elite breeding stock for purebred operations, or perhaps to produce competitive wether lambs for exhibition, or perhaps to produce market lambs for direct marketing to consumers. Heredity and environment will affect the animals' ability to meet these requirements.

When selecting breeding animals for your flock, define your objectives. Know what you want to do with your 4-H breeding sheep before you start buying animals. Ideal breeding sheep should be structurally correct (check the mouth for age and soundness, the testicles of rams to make sure they are correct in size and development), have adequate frame size and weight for their age, be in good body condition, and have correct breed and sex characteristics. (See Figure 8.)

Sheep can be approximately aged by the number of permanent incisors on their lower jaw. Lambs have eight temporary incisors. (See Figure 9.) Once a lamb reaches about one year of age, the center teeth are replaced by two permanent ones. The sheep then gets two more permanent teeth each year (one on each side of the center) until they reach four years of age. At age four, the sheep have all their permanent incisors.

### Things to look for:

- Long life with reproductive efficiency.
- Efficient conversion of feedstuffs to meat and wool products.
- A type or pattern that will reproduce desirable carcass traits, fleece characteristics, or performance capabilities.



**Figure 9**

ingredients like soybean meal, cottonseed meal, etc. Collective terms denote a general classification of ingredient origin which performs a similar function, but do not imply equivalent nutritional values.

The list of ingredients can be very enlightening. For example, if the product is supposed to be a high-quality protein supplement and the first item on the list is “Processed Grain By-Products”, the product may contain high levels of low cost, inferior carrier.

6. Directions for Use. Each product tag should provide information on how the product is to be used. Warnings or precautionary statements should be included. For example, any product containing monensin must carry the warning that it should not be fed to horses. Ingestion of monensin by equines has been fatal.
7. The name and mailing address of the company responsible for making or distributing the feed. (XYZ Feed Company Sheep Division, Anytown, USA 12345)
8. Net Weight Statement. This may be listed in pounds or kilograms. Many companies are listing net weights in the metric system. A kilogram is equal to 2.2 pounds, thus a 50 pound bag may be listed as 22.6 kg (kilograms). (Net weight: 50 lbs.)

Read the tags on the products you intend to use and fully understand what you are doing before you start using a product. Many potential problems can be avoided if you make sure that you are getting a suitable product and are feeding the correct amount to your livestock. Make sure that withdrawal times are noted and that they will not prevent you from showing or selling your animal as planned.

## What about Hay?

For proper digestion, a sheep must have a certain amount of roughage in its ration. Hay should be fed in adequate amounts each day to keep the rumen of the lamb functioning properly. Breeding ewes will need more hay than market lambs. Roughage should be high in quality and fine-stemmed. Good quality roughages are those that are cut early. Feed a good quality legume hay (alfalfa). Green grass is not always a good idea because it contains too much water and does not provide enough fiber to the lamb. Additionally, many believe that a ground, pelleted form of hay in a complete ration or feed is enough. The addition of long stem (not ground) forage improves stimulation of the rumen even more through an event commonly referred to as scratch factor. This helps ruminal health and maximizes buffering capacity, reducing acid in the rumen. In other words, a certain amount of long stem forage is necessary at each feeding, regardless of the stage of production.

Depending upon the stage of production of the ewe flock, different amounts and qualities of hay can be fed. Ewe flocks on a maintenance diet can be fed a poorer quality hay than in late gestation.

# Carcass Evaluation and Meats

**Carcass evaluation** is an important part of determining the success of lamb production. The ultimate goal of a market lamb project is to produce a wholesome, high-quality carcass that is trim and has a high degree of cutability.

Sentence updated.  
Sentence added.

## Quality Grade

Quality grades are used to predict palatability characteristics such as: tenderness, juiciness, and flavor. The quality grade of an animal is based on two general considerations that influence carcass excellence: conformation and quality. Quality includes fatness, maturity, and other indicators of differences in palatability of the lean flesh such as flank streaking and firmness of the lean.

Conformation is the degree of total muscling in the carcass in relationship to the skeletal frame size and degree of finish, especially in the leg, rack, loin, and shoulder. Maturity is the age of the animal. The lamb is an immature sheep usually under 12 months that has not cut its first pair of permanent incisor teeth, or the meat is classified as mutton. The evaluation is based on physiological maturity (bone maturity), and not chronological maturity (actual age). When a lamb is physiologically mature, cartilage in the growth plate ossifies and turns to bone, meaning the animal is now classified as mutton. Flank streaking is the amount of fat on the surface of the flank muscle. (See Table 6.) Firmness of lean and fat is measured at the flank and is an indicator of carcass fatness. The lamb also must have a minimum amount of external fat (0.15 inch) covering the carcass to protect it from shrinking and drying out in the meat cooler.

The USDA quality grades for lambs and yearling carcasses are Prime, Choice, Good, and Utility.

The majority of all quality graded lamb carcasses are Prime or Choice.

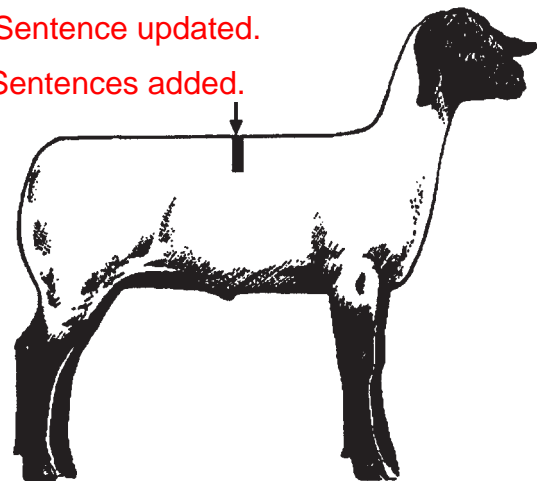
The quality grades for slaughter (mutton) carcasses are Choice, Good, Utility, and Cull.

Paragraphs updated.

## Yield Grade

Yield grade refers to the expected yield of boneless, closely trimmed retail cuts. The five yield grades are numbered 1 through 5. Yield grade 1 is more desirable because it represents the highest yield of meat from the retail cuts, while yield grade 5 represents the lowest yield.

The amount of external fat plays the primary role in determining yield grade. The amount of fat is measured at the 12<sup>th</sup> rib above the loin eye muscle (Figure 58). As the amount of external fat increases, the percent of retail cuts decreases, with yield grade moving closer to 5.



**Figure 58**

Side view of a lamb which shows the location of the 12th rib site for backfat and loin eye area estimation.

If the carcasses are not ribbed, the muscle size can be estimated by evaluating the muscling in the leg and the width and fullness over the rack and loin.

The amount of external fat at the 12<sup>th</sup>–13<sup>th</sup> rib determines yield grade. To find yield grade use the following equation:  $YG = 0.4 + (10 \times \text{adjusted fat thickness over the loin eye})$ . Using this equation, the fat thickness range for each yield grade is as follows:

<u>Yield Grade</u>	<u>Adjusted Fat Thickness</u>
1	0.07–0.15 inches
2	0.16–0.25 inches
3	0.26–0.35 inches
4	0.36–0.45 inches
5	0.46 inches and greater

Note added.

Note: If a lamb does not have at least 0.07 inch fat over the loin eye, it cannot be U.S.D.A. graded (neither yield nor quality). An ideal fat thickness meeting the desired fatness for the lamb industry is 0.12 to 0.25, a very tight margin. Lambs that are leaner, less than 0.12, are considered to be ultra-lean and are not desired by the meat packing industry because they dry out in the cooler.

## Dressing Percent

Dressing percent =  $\frac{\text{chilled carcass weight}}{\text{live weight}} \times 100$

The average dressing percent for lambs is 52 percent. (Four of the most common things that affect dressing percent are amount of fill, pelt, muscle and fat.)

Dressing percentage refers to the relationship between carcass weight and live animal weight. Factors which influence dressing percentage are:

- Heavy-muscled lambs generally dress higher.
- Fatter lambs dress higher.
- An increase in fill (feed in the digestive system) will lower the dressing percentage.
- As pelt weight increases, dressing percent decreases.
- A lot of mud and manure decreases dressing percent.

- Shorn lambs will have a higher dressing percent.

NOTE: Lambs with extremely high dressing percentages, greater than 56%, are usually exaggerated as a result of extreme feed deprivation or restriction from water. Withholding feed or water is not in line with good animal (livestock) care and handling and should be avoided at all costs.

Note added.

## Finish

Finish refers to the thickness and distribution of external fat. In the ribbed carcass, the degree of finish can be determined by observing the fat thickness directly over the top of the two loin eye muscles at the center of the longissimus muscle. This usually is an indication of the total fatness of the carcass. The ideal finish on a lamb is 0.12 to 0.25 inches of fat.



Figure 59

The arrow on the left indicates where fat thickness is measured over the top, along the midpoint of the longissimus (loin) muscle.

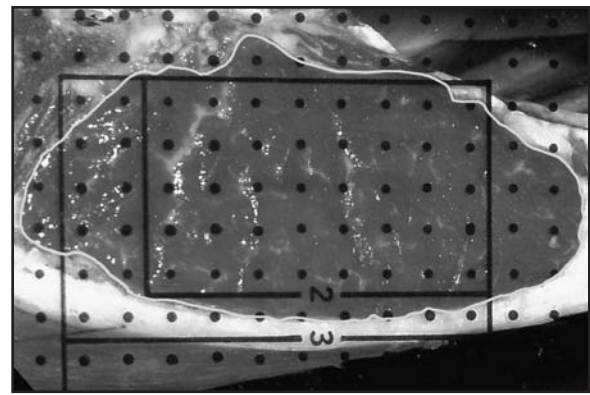
## Loin Eye Area

Direct measurement of the size of the loin eye muscle is possible if the carcasses are ribbed, cut so the loin eye muscle is visible (between the 12<sup>th</sup>



Sentences added..

and 13<sup>th</sup> rib). Then the loin eye area can be used as an indicator of muscling. The loin eye area can be measured using a plastic grid which has 20 dots or squares for each square inch. Place the grid on the cut surface of the loin eye and count all of the dots which touch the lean of the longissimus muscle, being sure not to include the small muscles which surround the longissimus. (See Figure 60.) Divide the number of dots by 20 and the result is loin eye area in square inches. The loin eye area should be recorded to the nearest 0.1 square inch. The normal range of the size of the loin eye is 2.0–3.0 square inches. Some extremely heavy-muscled lambs exceed 3.0 square inches in loin eye area. The industry average across commercial lambs, show lambs, and lambs marketed locally or through direct market channels is about a 2.7 square inch loin eye.



**Figure 60**

*Picture of loin eye with grid over it. Actual size of this loin eye is 3.0 square inches.*

NOTE: Some exhibitors believe increasing the live weight of lambs for the show ring results in more product to the consumer. However, we have seen an increase in live weights over the last 25 years and no real significant change in loin eye area.

Note added.

## Goals for Lamb Production

1. Average daily gain of 0.68 pounds or better.
2. 54 percent dressing for shorn lambs.
3. 50 percent of carcass in hindsaddle.
4. 2.5 square inches of ribeye area per 50 pounds of carcass.
5. 0.12–0.25 inch fat over center of the ribeye.
6. Choice quality grade or better.
7. Yield grade equals 1 or 2.

Goals 1 and 5 adjusted.

		Young lamb	Older Lamb	Yearling Mutton	Mutton
<b>Degrees of Flank Streakings</b>	Abundant				
	Moderately Abundant				
	Slightly Abundant				
	Moderate		<b>Prime</b>		
	Modest		<b>Choice</b>		
	Slight		<b>Good</b>		
	Traces		<b>Utility</b>		
	Practically Devoid				<b>Cull</b>
			Young Lamb	Older Lamb	Yearling Mutton
		<b>Maturity</b>			

**Table 6**



## Callipyge Gene

In recent years, a new heavy muscling trait has been identified in sheep. Many sheep producers have been referring to the trait as “double muscling.” Meat scientists say this trait is not like the double muscling found in cattle and hogs which is actually an increase in muscle cell number. In sheep, extreme heavy muscling or muscle hypertrophy is an increase in muscle cell size. Observations have suggested the muscle

hypertrophy is of genetic origin and is capable of being passed from parent to offspring. Researchers have named the gene “callipyge” meaning “beautiful buttocks” (x=normal, X=callipyge). Lambs with the callipyge gene have much more muscle and less fat but also have tougher meat. This gene is undesirable because the meat for the loin muscle is so tough and unpalatable that it is not wanted by consumers.

## Wholesale/Retail Cuts of Lamb

### Wholesale Cuts of Lamb

Foresaddle = 50 percent

Cut	Percent of Weight
1. Shoulder	25
2. Rack (rib)	11
3. Breast	10
4. Foreshank	4
<b>Total</b>	<b>50</b>

Hindsaddle = 50%

Cut	Percent of Weight
5. Leg	33
6. Loin	17
<b>Total</b>	<b>50</b>

The hindsaddle composes 50 percent of the carcass weight, but approximately 65 percent of the carcass value.

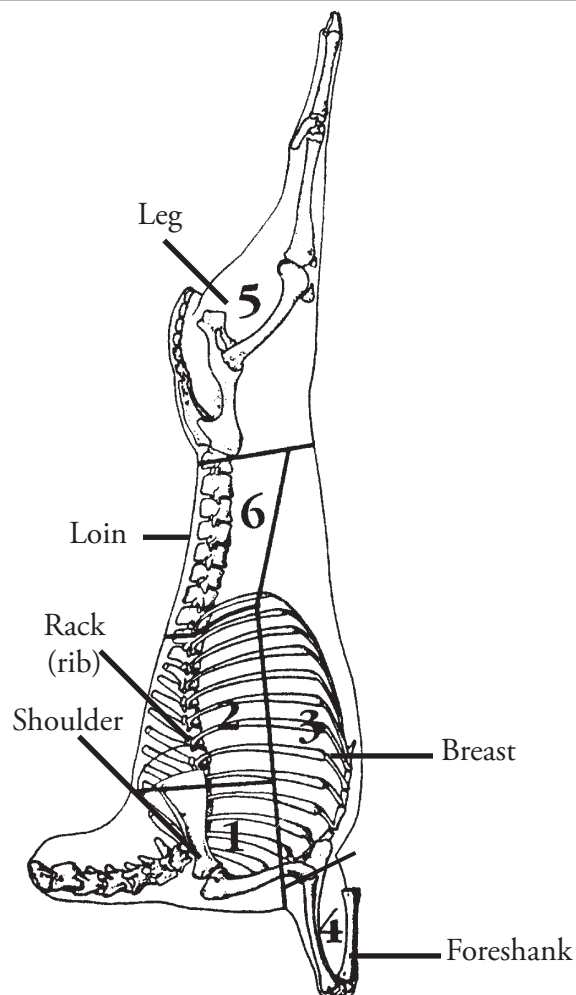


Table 8

## Percent of Boneless, Trimmed, Retail Cuts from Each Yield Grade

Yield Grade	% Boneless, Trimmed Cuts from Leg, Loin, Rack and Shoulder
1	47.3 >
2	45.4 to 47.2
3	43.7 to 45.3
4	41.9 to 43.6
5	< 41.9

Table 9

## Specifics

Due to the diversity of the sheep industry, a wide range of specific requirements are acceptable depending upon the local lamb market for which a sheep producer is producing lamb.

### Weight of Live Market-ready Lamb

Range: 100–150 pounds  
Ideal: 115–140 pounds\*\*

← Range updated.

### Dressing Percent

Range: 46–58 percent  
Average: 52 percent

### Carcass Weight

Range: 45–85 pounds  
Ideal: 55–75 pounds

### Fat Thickness

Range: 0.10–0.50 inches  
Ideal: 0.10–0.20 inches  
Average: 0.20 inches

### Rib Eye Area (REA)

Range: 2.0 inches<sup>2</sup> and higher  
Ideal: 2.6 inches<sup>2</sup> and higher  
(For 50 pound carcass weight)

### Yield Grade

Average: 2–3  
Range: 1–5 (lower is more desirable)  
Ideal: 1.5–2.9

← Ideal added.

**Fat thickness at the 12<sup>th</sup> rib is the one and only factor used to determine yield grade.**

\*\* Ideal live weight range should have factors such as frame size and finish of the live animal taken into consideration.

## Lamb Production and Consumption

U.S. consumption of lamb is 1.0 pounds per person per year on a carcass weight basis. Most lamb in the United States is consumed in the Northeast and in the western coastal states. New York and California are the top two states in lamb consumption.

### Top U.S. states in sheep and lamb production (heads):

1. Texas	820,000
2. California	660,000
3. Wyoming	420,000
4. Colorado	410,000
5. South Dakota	305,000

Ohio ranks 13<sup>th</sup>–largest sheep producing state east of the Mississippi River. Ohio also ranks 6<sup>th</sup> in the number of sheep farms.

### Top sheep-producing countries (heads):

1. China	146 million
2. Australia	85.7 million
3. India	64 million
4. Iran	53.8 million
5. Sudan	50.9 million

Many people think of New Zealand as an international force in sheep production. Although New Zealand is not in the top five, it does have the highest per capita sheep population, with 9.4 head of sheep per person.

Reference: American Sheep Industry (ASI) Association, www.sheepusa.org, January 2010.

Table 10

← Table updated.

# Sheep Products

You will probably find it interesting and perhaps useful to see how a market lamb contributes to the Consumer Market.

## Meats

The illustration below (Figure 61) shows the location and names of the main or “wholesale” cuts of lamb that come from a market lamb. Remember, you are looking at one side of this lamb. There are two of each of these main cuts in a lamb. Blade chops come from the shoulder. Lamb chops come from the loin or rack. Crown roast comes from the rack. Everyone enjoys a roast leg of lamb.

Paragraph updated. →

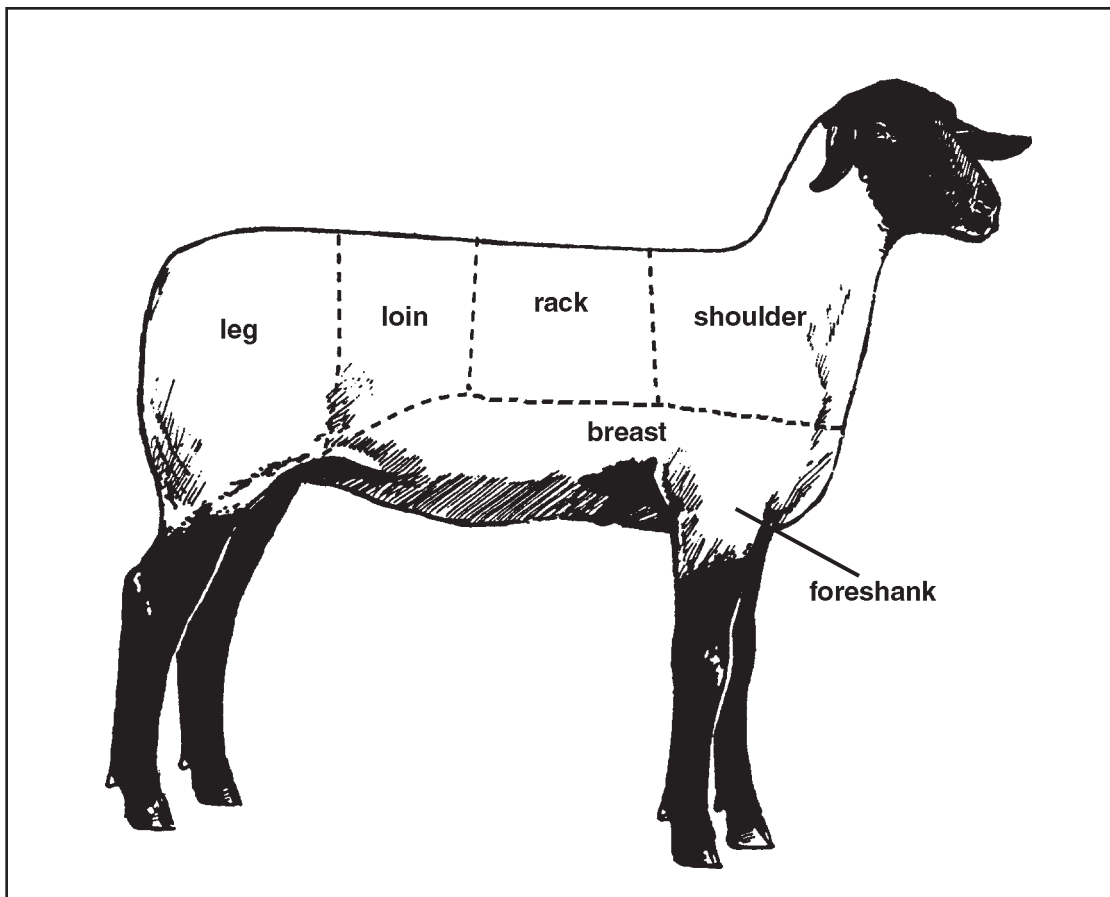


Figure 61