

Carcass EVALUATION

Suffolks are one of the most impactful sheep breeds on the U.S. commercial sheep industry. It is estimated that over 50% of western range lambs harvested in the United States have some degree of Suffolk influence. Suffolks are a preferred terminal sire breed due to the breed's contribution to an especially lean, heavy-muscled carcass and excellent growth without negatively impacting meat quality. Additionally, Suffolk-influenced lambs can be fed to heavier weights of more desirable carcass composition (lean/fat ratio) than other breeds. Including Suffolk genetics as a part of a sheep breeding system can help to meet consumer lamb preferences that may prefer larger chops by positively impacting the amount of lean carcass muscle.'

HERITABILITY OF CARCASS TRAITS

Carcass traits are some of the most highly heritable traits in sheep. This is extremely important to note as Suffolks are the go-to terminal sire and can quickly improve growth and carcass characteristics in just one generation. Suffolk rams are the perfect complement to "maternal trait" ewe flocks as they positively improve the carcass quality of their lambs. Tools exist within Digital Suffolk that allow a breeder to select and evaluate genetic progress in these areas.

LAMB GRADING

In the United States lamb carcasses are marketed based on two evaluations – USDA Quality Grade and USDA Yield Grade. Official USDA grades are assigned by USDA AMS Graders or approved electronic in-line camera grading systems.

QUALITY GRADE

PREDICTS EATING QUALITY — TENDERNESS, JUICINESS + FLAVOR

Conformation (carcass shape, leg score) and quality (physiological age and lean color) are the two factors taken into consideration to determine the quality grade of a carcass.



QUALITY

USDA Prime and Choice grades are preferred as carcasses have a moderate amount of fat covering and good conformation – attributes the Suffolk breed can contribute to a breeding program. Several factors are evaluated when determining carcass quality in the cooler. The leg shape will be thick, plump, and evenly fleshed. Fat streaking in the exposed flank areas is assessed when determining quality grade.

Lamb Carcasses: Exhibit At Least 1 Break Joint
Mutton Carcasses: 2 Spool Joints

As the animal ages, the lower joint of the front shank changes from a cartilage joint (break joint) to an ossified bone (spool joint).

Other Maturity Factors: Lean Color & Rib Shape



Break Joint

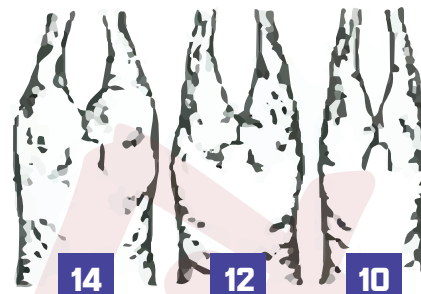


Spool Joint



CONFORMATION

Carcass conformation is determined by shape, especially leg score.



14

12

10

*Source: Lamb Carcass Evaluation, B. O'Rourke et. al.



YIELD GRADE

PREDICTS CUTABILITY/YIELD OF BONELESS, CLOSELY TRIMMED RETAIL CUTS

Fat cover is the major factor taken into consideration to determine yield grade.

$$\text{YIELD GRADE} = 0.4 + (10 \times \text{ADJUST FAT THICKNESS, IN.})$$

1

0-0.15 INCHES

2

0.16-0.25 INCHES

3

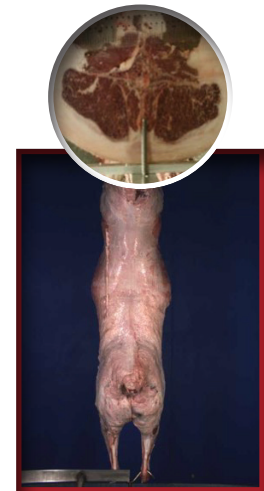
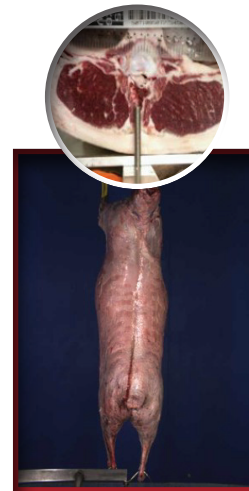
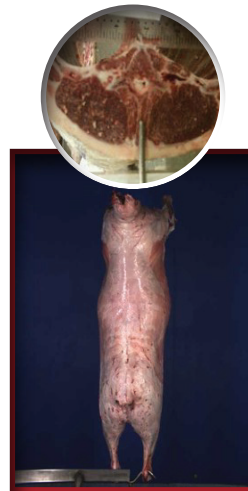
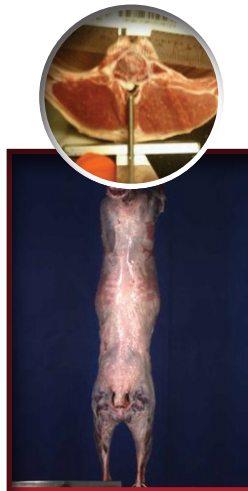
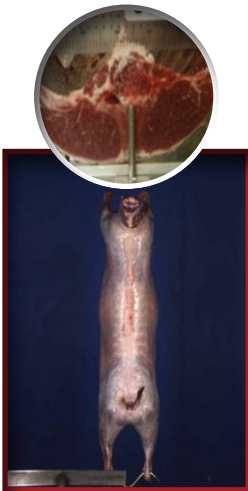
0.26-0.35 INCHES

4

0.36-0.46 INCHES

5

0.46+ INCHES

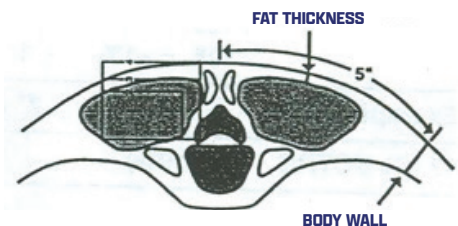


LEANEST
MINIMAL FAT COVER, LITTLE TO NO INTERNAL FAT, WIDEST PART OF THE CARCASS IS ACROSS THE LEGS

FATTEST
EXTENSIVE FAT COVER, CONTENT AND INTERNAL FAT, MORE BOAT-LIKE SHAPE (WIDEST PART OF THE CARCASS IS ACROSS THE 12/13TH RIB)

- YG 1 carcass has the least trimmable fat but may not have sufficient to keep the carcass from drying out while it hangs in the cooler for any length of time.
- YG 5 carcass has the most trimmable fat (waste) which lowers the value of the carcass in terms of total red meat yield.
- “Bluing” can be used to interpret the amount of fat over muscle on the carcass – the more bluing, the less fat.
- The percentage of fat increases as the yield grade increases. In most instances, the industry prefers yield grade 2 and yield grade 3 carcasses as the carcass has adequate fat cover but minimal trimmable fat.
- YG 4 & YG 5 carcasses have less value due to waste (fat that must be trimmed). It also costs the producer more when sheep are overfed. Body composition impacts both the cost of feeding and reproductive efficiency.
- Muscles are curved, not square. Some excessively thick sheep with a “squared off appearance” are therefore carrying more body condition. When this accumulates between the muscles it adds more shape but it is not muscle shape.

EVALUATION OF A RIBBED CARCASS



- USE A GRID TO MEASURE THE RIB EYE MUSCLE (IN2)
- FAT DEPTH IS MEASURED (MM) ABOUT 2/3 OF THE WAY DOWN THE RIB EYE
- BODY WALL FAT CAN ALSO BE MEASURED

*Source: Lamb Carcass Evaluation, B. O'Rourke et. al.

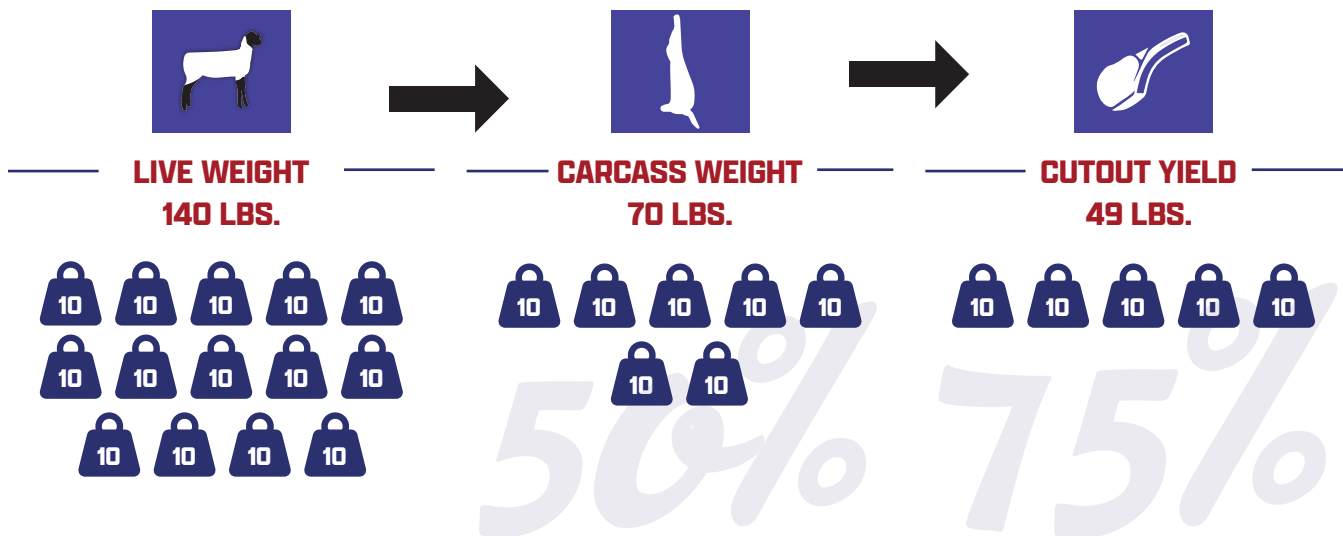


CARCASS YIELD

DRESSING PERCENT - PERCENTAGE OF LIVE ANIMAL WEIGHT THAT IS THE CARCASS.

The average dressing percent of lamb is 50%. Factors such as yield grade, gut fill and pelt can affect dressing percentage. As a common rule, the higher the yield grade (fatter the animal) the higher the dressing percentage and lower percentage of usable product due to trimming.

$$[\text{HOT CARCASS WEIGHT} / \text{LIVE WEIGHT}] \times 100 = \text{DRESSING PERCENT}$$



ANIMAL GROWTH

A key to lamb value is determining the optimal time of harvest without negatively impacting Yield Grade and Quality Grade. Numerous factors can affect this - environmental factors such as nutrition and weather and genetic factors such as breed to name a few.

THE SUFFOLK BREED IS KNOWN FOR ITS ABILITY TO EXCEL WHEN COMPARED TO OTHER BREEDS IN TERMS OF LEAN MUSCLE GROWTH, THUS SUFFOLKS OFFER MORE MARKETING OPTIONS.

A SUFFOLK MARKET LAMB CAN OFTEN BE MARKETED AT A HEAVIER WEIGHT THAN OTHER BREEDS AND STILL BE WITHIN AN ACCEPTABLE RANGE OF BODY CONDITION.

