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# *Evaluation and Judging of Beef Cattle*

Current trends in meat merchandising, consumer preference, and carcass evaluation studies have created an active interest in carcass contests and methods of on-foot identification of carcass differences. Indications of muscling, amount of fat, skeletal structure, and other visible traits are used to evaluate the potential carcass value and lean meat in the steer. Steers are placed using these visible traits.

in the twist. He carries muscling well down on the leg, stands wide, and has a thick frame.

Market steer judging is a visual method of evaluating and placing steers based on the ratio of lean red meat to fat, indications of carcass quality, and total lean meat in the steer. The most valuable carcasses are produced by meat-type steers and grade Choice or Prime without being too fat. Because these carcasses yield a high proportion of

## **IDEAL BEEF STEER**



The meat-type steer shows muscling when viewed from any angle, plus the necessary minimum outside finish. Muscling is indicated by bulges and creases rather than the smoothness seen in the overfinished or the less muscular steer. The top line is strong and shows muscle working when he moves. The forearm is large and muscular. The meat-type steer is long bodied and trim through the middle and brisket.

Viewed from the rear, the well-muscled steer appears rounded over the loin and rump like a quonset hut, bulges, and is widest through the middle of the round and may be somewhat cut up

the more desirable cuts of beef, they are said to have high cutability.

Cutability means carcass cutout value or yield of saleable meat. The USDA now designates cutability as "Yield Grade," which provides a nationally uniform method of identifying quantity of trimmed retail cuts in beef carcasses. Variations in yields of retail cuts are accounted for chiefly by (1) the thickness and fullness of the muscling, and (2) the amount of fat that must be trimmed from the carcass in making the cuts. The quality and cutability or yield grades of the live animals relate directly to the quality and cutability or yield grades of the carcasses they produce.

**YIELD  
GRADE 1**  
Heavy Muscling  
Minimum Finish  
Trim Brisket  
and underline  
Stands Wide



**YIELD  
GRADE 2**  
Above-Average  
muscling  
Desirable  
Finish

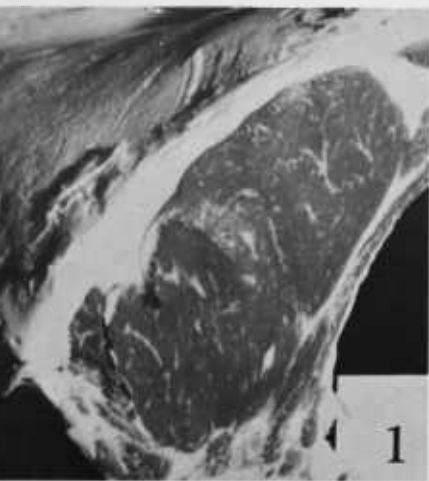


**YIELD  
GRADE 3**  
Average  
muscling  
Slightly  
Over-Finished

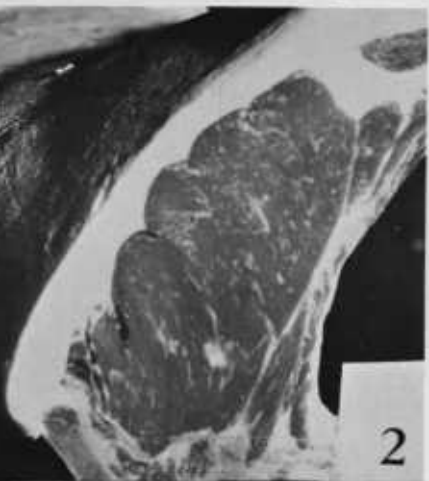


**YIELD  
GRADE 4**  
Below-Average  
muscling  
Excess  
Finish  
Heavy Brisket  
Stands Close

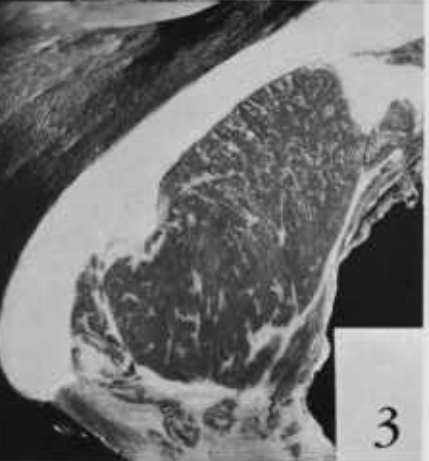




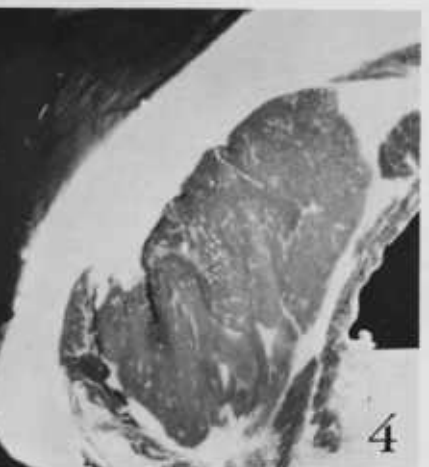
USDA CHOICE  
YIELD GRADE 1  
Carcass Wt. 650 lb.  
Thickness of fat 0.3"  
Rib eye area 14 sq. inches



USDA CHOICE  
YIELD GRADE 2  
Carcass Wt. 650 lbs.  
Thickness of fat 0.4"  
Rib eye area 13 sq. inches



USDA CHOICE  
YIELD GRADE 3  
Carcass Wt. 650 lbs.  
Thickness of fat 0.6"  
Rib eye area 11 sq. inches



USDA CHOICE  
YIELD GRADE 4  
Carcass Wt. 650 lbs.  
Thickness of fat 0.9"  
Rib eye area 10 sq. inches

### Carcass Merit

Carcass Merit or value receives much attention and is influenced by quality grade and yield grade.

The three main USDA quality grades for beef—Prime, Choice, and Good—serve as nationally reliable guides to the eating quality of beef. Approximately 80 percent of our fed beef grades USDA Choice, 6 percent Prime, and 14 percent Good.

In a beef carcass, excess fat greatly reduces the cutability or percent yield of closely trimmed retail cuts. However, under present marketing methods some fat or finish is required to minimize carcass shrinkage and maximize shelf life in the retail market display case.

As an animal fattens, cutability percent decreases because excess fat is trimmed from retail cuts.

There are five yield grades numbered 1 through 5. Carcasses in yield grade 1 have the highest cutability, while carcasses in yield grade 5 have the lowest cutability. Yield grade 5 carcasses have been practically eliminated due to excess fat, so these illustrations show only yield grades 1 through 4.

The *yield grade* shows the percentage of the carcass weight in *boneless, closely trimmed of fat* retail cuts from the round, loin, rib, and chuck.

Yield Grade 1 .....	has over	52.4%
Yield Grade 2 .....	from	50.1 to 52.3
Yield Grade 3 .....	from	47.8 to 50.0
Yield Grade 4 .....	from	45.5 to 47.7
Yield Grade 5 .....	less than	45.4

There is approximately \$30 difference in carcass value from one yield grade to the next. All segments of the beef industry need to know these differences in order to merchandise cattle according to true value.

Identification of breeding stock that will produce the most desirable market animals for all segments of the beef business is a major problem confronting the industry. The fast-growing, high-gaining, well-muscled animal that will yield a quality carcass of popular weight with a minimum of waste fat trim is desired by the breeder, feeder, processor, retailer, and consumer. Fortunately for producers, the larger-framed, heavier-muscled kind also make faster and cheaper gains.

Cattle differ widely in their lean-to-fat ratio, even when the same age, on the same feed, and fed to the same slaughter weight. Degree of marbling largely determines quality grade. Some cattle will marble to Choice grade with less than one-half-inch fat cover over the rib, while others may have an inch of outside fat by the time they reach Choice. These differences are largely hereditary, which means the lean-fat ratio can be improved by selection. This also means that cattle producers should follow their slaughter cattle through the packing house in order to see carcass merit.

When judging live cattle, the point of the shoulder is probably the easiest area to feel in order to determine the amount of finish. Also the hip bone and the back bone or vertebral column are all bones that have only a small amount of connective tissue and skin covering over them. As an animal fattens, a layer of fat forms between the connective tissue and skin layer, so by feeling these areas, it is possible to feel fat or the lack of it. The ribs, the loin edge, the flank, the elbow pocket, the brisket, and the cod are all areas that can be used to determine the amount of finish a beef animal is carrying.

In addition to growth rate and carcass merit, other areas of real economic concern to the cattle industry are fertility of breeding stock, reproductive and mothering ability of cows, skeletal and structural soundness, longevity of production, and freedom from inherited defects.

*Prepared by W. D. Frischknecht, Extension Animal Scientist, Oregon State University, Corvallis.*



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