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Facts about

Today's Beef Steer

J. C. Miller and J. J. Ney

The ideal meat-type steer would be an animal that is economical for producers to raise, for packers to process, for retailers to merchandise and for housewives to use.

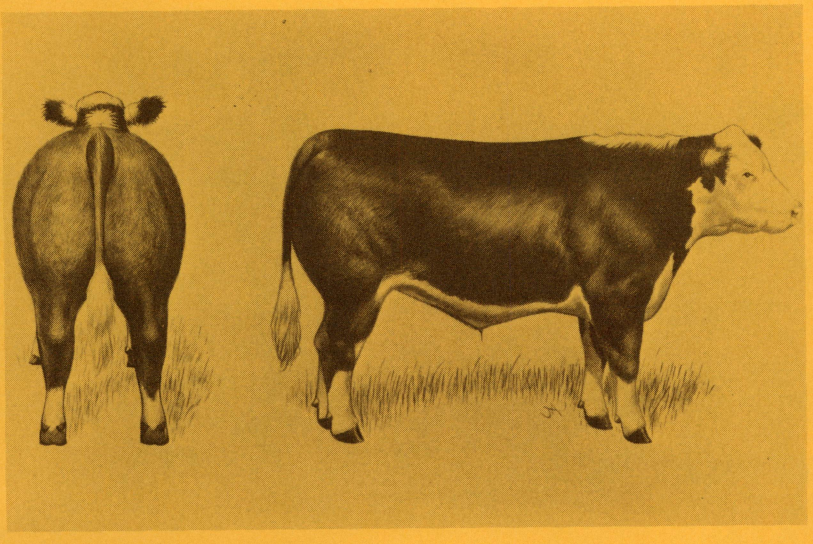
To meet the consumer's preference for more lean and less fat, modern meat-type steers must produce cuts of meat which are tender and flavorful. To be economical, they must also yield high percentages of weight in trimmed retail cuts. Some of the biggest challenges facing the cattle industry today are to select and raise efficient meat-type cattle and to market and process these cattle so they reach optimum quality and yield at a competitive price.

All the individuals who buy and sell beef from the time of conception to consumption have one primary objective in mind—to receive a fair return for the number of pounds they have produced, processed, merchandized and purchased. Selling animals by the pound rather than by the head was the beginning of an era when live animals and carcasses would be bought and sold for what they were really worth. USDA meat quality grading and yield grading programs are additional steps that reflect more accurately the true market value of each animal.

The following sections include some of the basic facts about the modern meat-type steer.

USDA Quality Grade Facts

1. USDA quality grades for beef are Prime, Choice, Good, Standard, Commercial, Utility, Cutter, and Canner.
2. Quality grading is voluntary and was established to help identify palatability. Do not confuse this with USDA inspection which is mandatory and is designed to indicate wholesomeness.
3. Quality grades are determined by conformation of carcass and quality characteristics (marbling, maturity, texture, and color of lean).
4. The final quality grade is based on the interrelationship of maturity, marbling, and conformation. The greater the marbling, the higher the USDA



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economical for producers to raise,
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quality grade. Carcasses from older animals require more marbling to reach the same quality grade as younger animals.

5. Approximately 80% of the quality-graded fed beef are graded choice.

Facts About Dressing Percent

1. The term dressing means removal of the hide, head, lower legs, and viscera at slaughter.
2. Fat and fill influence dressing percentage. As an animal fattens beyond its optimum cutability grade, extra weight is added to the carcass without addition to muscle, bones, and internal organs.
3. The average dressing percent for a choice steer is 60%. Packers can pay higher prices for a higher dressing steer unless the dressing percent is high because of excessive fat.
4. Dressing percent is not the best marketing tool. It can be misleading and erroneous since it primarily depends on fill.

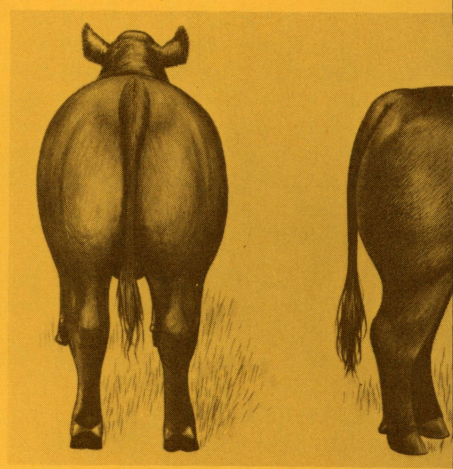
Yield Grades and Cutability

1. Yield grading, a relatively new concept in marketing, was established to help both the producer and packer receive the true market value for the animals they produce and sell. Presently about a third of the fed beef that is quality graded is also USDA yield graded.
2. Yield grades (numbered 1 through 5) reflect quantity of saleable meat. Yield grade 1 has the highest percentage of retail yield.
3. Yield grades reflect the percent of closely trimmed boneless retail cuts from the round, loin, rib, and chuck.
4. Excess fat and lack of muscling are two factors which decrease the yield of retail cuts and are the main reasons why there are value differences between animals of the same weight and quality grade.
5. Marketing on the basis of quality and cutability is the best way to determine the true market value of an animal.
6. Yield grading and quality grading may be obtained by anyone associated with marketing livestock or livestock products by contracting the packer and grader before slaughter. A fee is charged for this service.

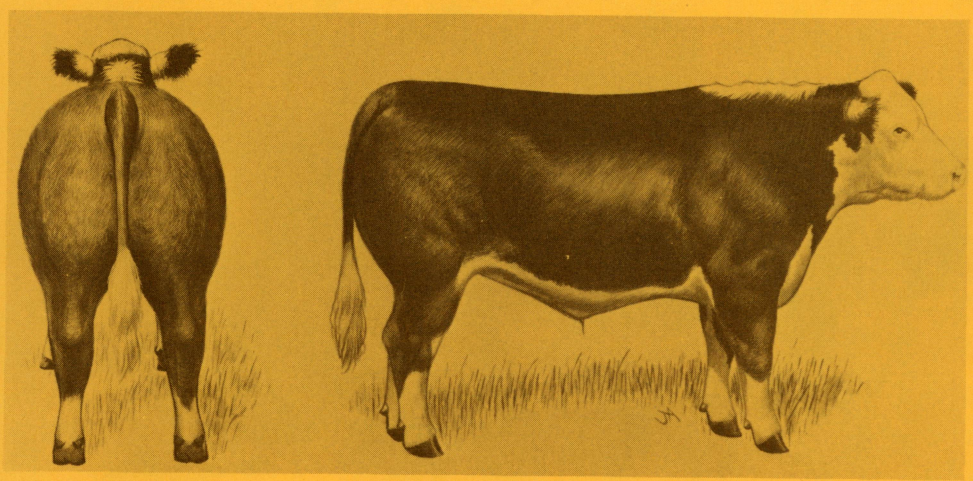
Note this comparison between an overdone steer (A) and a meat-type steer (B). The steers are similar in live weight, carcass weight, and carcass grade—yet steer

U.S. Yield Grades for Slaughter Steers

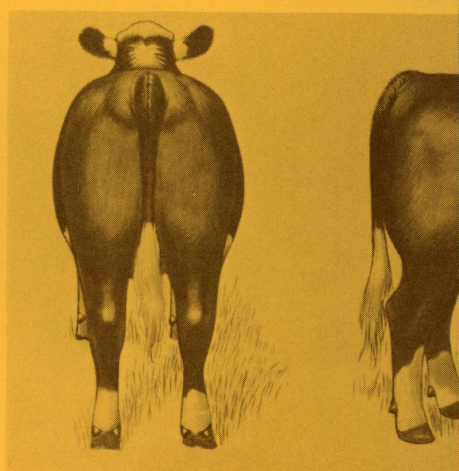
Yield grades reflect the quantity of saleable meat – the percent of closely trimmed boneless retail cuts from the round, loin, rib, and chuck. Yield grade 1 is the highest percentage of retail yield; yield grade 5, the lowest.



Yield



Yield Grade 1



Yield

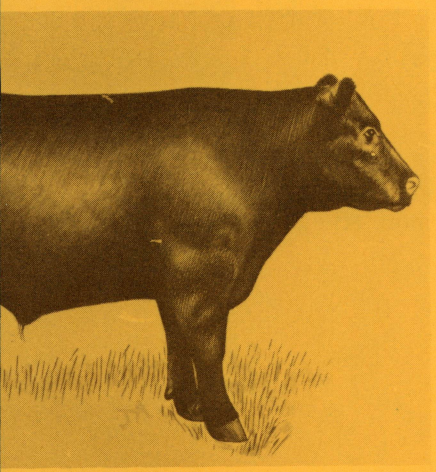
B is actually worth about $38 more. Differences of this nature are not uncommon and larger differences often exist. The two major factors responsible for the differences in values are the amount of fat and amount of lean.

	Steer A	Steer B
Live weight (lb.)	1100	1100
Carcass weight (lb.)	682	682
Dressing percent	62	62
Quality grade	choice	choice
Yield grade	4	2
Cutability percent (percent of closely trimmed retail cuts of the round, loin, rib and chuck reflected by numerical yield grade—given by USDA yield grade chart)	47.7	52.3
Cutability percent x carcass weight = pounds retail cuts (lb.)	325.31	356.69
Value of retail cuts @$1.21/lb.*	$393.63	$431.59
Live price/cwt. adjusted for grade and yield (true market value)	$35.78	$39.24
Live Market price/cwt. based on dressing percent and eyeballing	$35.00	$35.00

* Prices Fall 1972

Composition of a Meat-Type Steer Carcass

1. A beef carcass can be physically separated into fat, muscle, and bone.
2. A typical beef carcass is about 30 percent fat, 55 percent muscle, and 15 percent bone.
3. Most of the fat is located just under the skin, with some around the kidneys in the pelvic region and between the muscles.
4. The fat found between the muscle fibers is called marbling.
5. Muscles usually contain 15 to 20 percent protein, 5 to 30 percent fat, and 50 to 75 percent water. As the animal fattens the proportions of protein and water decrease.



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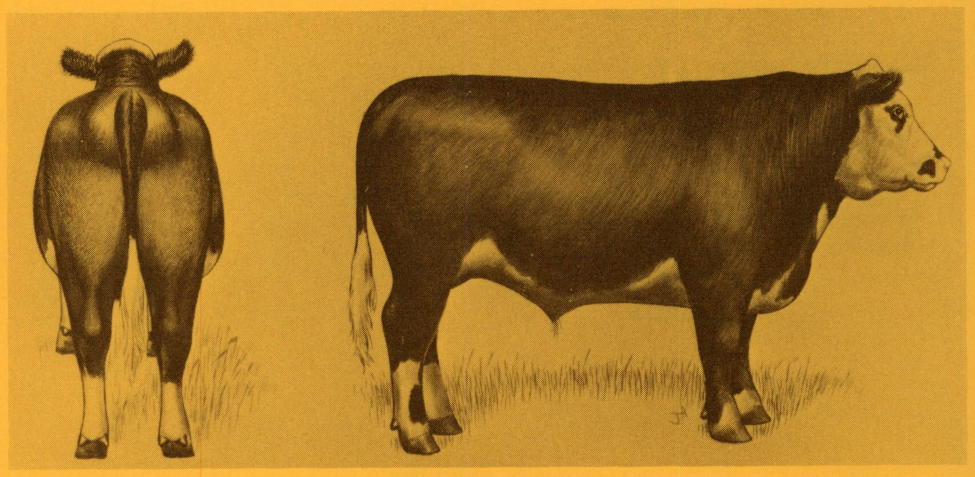
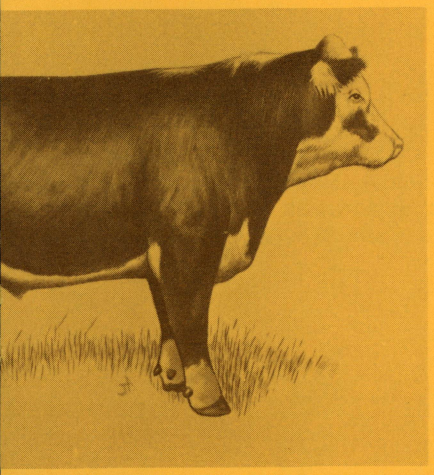


Yield Grade 4



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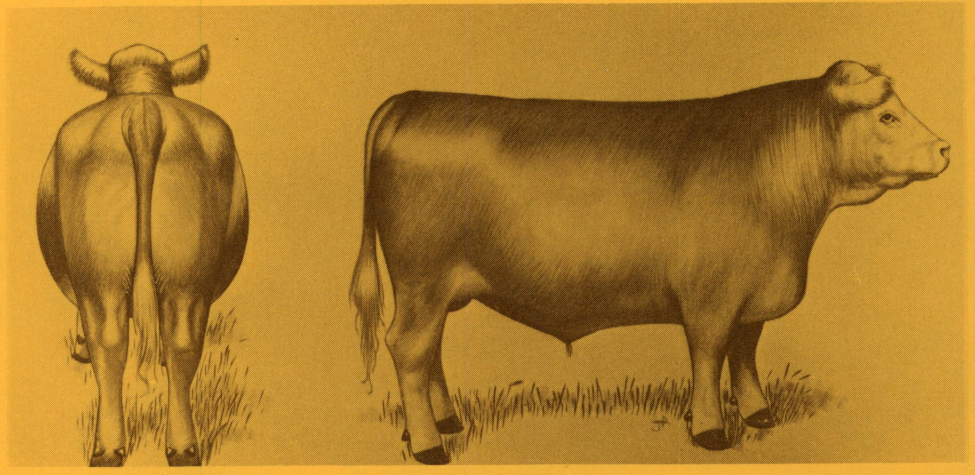

Yield Grade 5

6. Amount and distribution of fat depends on the breed, inheritance, nutritional state, and physiological age (maturity) of the animal. This is why we see animals grading differently at different weights and ages.

7. Under our present marketing systems some fat is required to minimize carcass shrinkage and maximize shelf life in the retail display case.

Here are some guidelines for identifying and selecting meat type animals.

1. Follow a breeding program that emphasizes selection for economically important traits. For example, these are heritability percentages for some of these traits:

Adjusted 205-day weight	.30
Adjusted 365-day weight	.40
Retail product weight	.65
Ribeye area	.70
Feedlot gain	.45
Fat thickness	.45
Marbling	.40
Tenderness	.60

These are necessary considerations in designing a breeding program that will consistently help produce the modern meat-type steer. For further information, secure a copy of "Idaho Beef Cattle Improvement Manual," BCI-1, from the county Extension office.

2. Thrifty, fast-growing steers should wean at a weight heavy enough to go directly into the feed lot (600 pounds or more at 7 to 8 months of age).

3. Feed lot gain should be high (2.5 to 3 pounds per day) and steers should gain efficiently (6 pounds of dry matter per pound of gain). There is a high correlation between gain and efficiency which indicates fast-growing steers should be efficient gainers.

4. The area of the ribeye muscles should be 2.0 to 2.4 square inches with 0.075 inches or less of outside fat per 100 pounds of carcass.

5. Yield grades should be 1.0 to 3.0 or over 50% of the carcass weight in boneless, closely trimmed retail cuts from the round, loin, rib, and chuck. Such a steer should have no more than 2.0 to 2.5% of the carcass weight in the form of kidney, pelvic, and heart fat.

6. Retail yield per day of age should be .68 pounds or more for a fast-growing steer. Again looking at Steers A and B from the previous example:

	Steer A	Steer B
Live weight (lb.)	1100	1100
Carcass weight (lb.)	682	682
Cutability percent	47.7	52.3
Retail cuts from the round, loin, rib and chuck (lb.)	325.31	356.69
Age at slaughter (days)	480 days	480 days
Retail yield/day of age (lb./day)	.67	.74

Economically speaking, Steer B will make more money because of a more efficient gain and greater yield of lean meat.

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