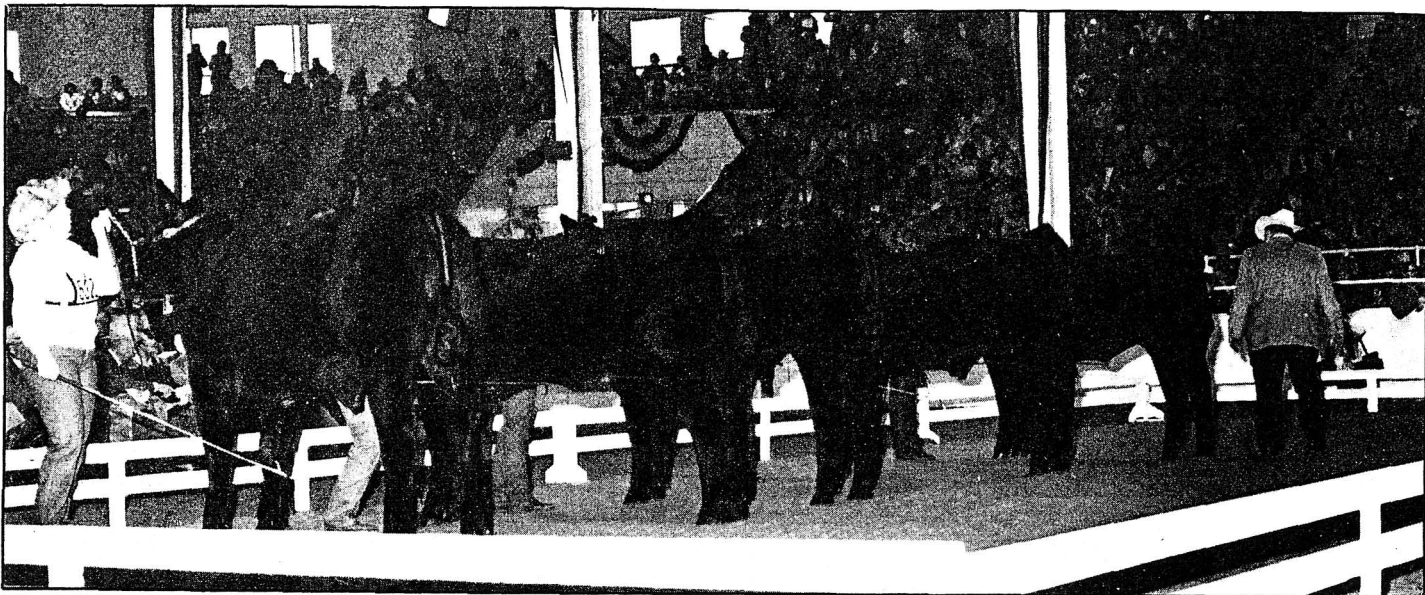


Why Don't More Show Steers Grade?

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At every steer show you hear the judge commenting on the classes. Frequently you hear "He's a little underfinished and I don't think he'll grade Choice." If this is an expert steer show judge, why does he just think the steer will not grade? Why doesn't he know for sure?

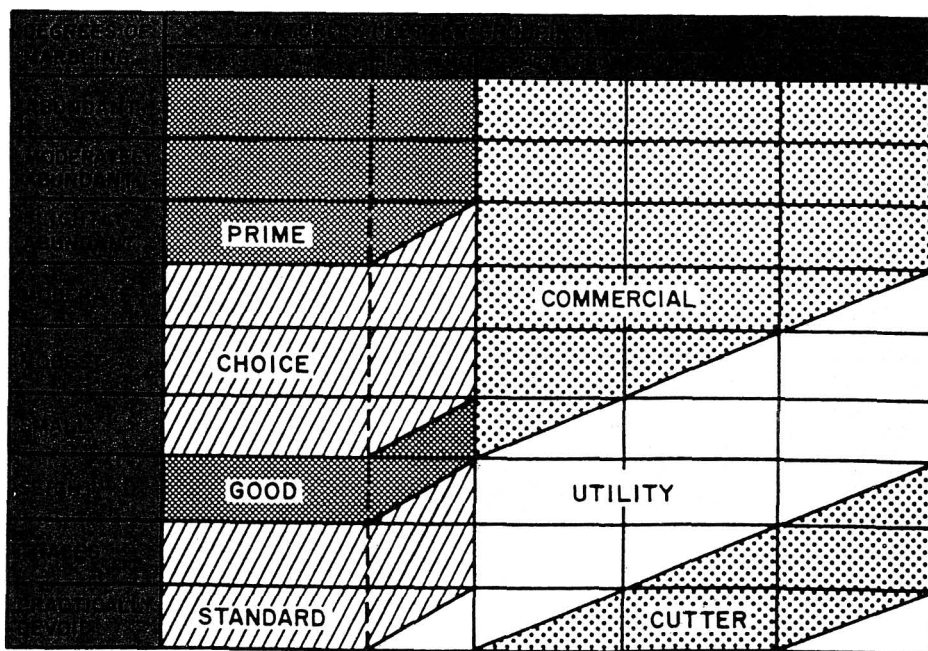
The beef carcass grading system now involves only two factors—maturity and marbling. Maturity is the phy-

siological age of the animal as determined by the color of lean, color of bones, and amount of cartilage visible in the carcass. Beef cattle must be between 9 and 42 months of age to grade Prime or Choice. Show steers are less than 2 years old (24 months), so age is **not** the reason they fail to grade.

Marbling, the other factor in beef carcass grading, is the amount of fat streaks visible within the muscles. For

beef grading, carcasses are broken between the last two (12th and 13th) ribs, thus exposing the ribeye muscle. Carcass graders compare marbling visible in the ribeye muscle to industry standards for various grades of beef.

The amount of marbling is generally related to the amount of fat in other regions of the carcass. Fat is deposited because the animal is eating energy (calories) in excess of its daily needs.



Reprinted from "Beef Production and the Beef Industry," by Robert E. Taylor.

This excess energy is stored in the body as fat. There is a certain order of fat deposition, depending on the amount already stored and age of the animal. Fat is deposited in the following order:

1. Around the internal organs.

Kidney, heart, liver and other vital organs are surrounded by a certain amount of fat which serves as a protective cushion.

2. Between the muscles. Intermuscular or seam fat is a fat deposit that begins slightly sooner than subcutaneous deposition, but both occur at the same time.

3. Subcutaneously. Deposition just under the skin begins at the front and rear ends of the animal (cod, tailhead, twist, rear flank, brisket and fore flank). The last subcutaneous fat deposit is in the middle of the animal (approximately the 12th to 13th rib region). Thus, beef carcasses have less fat over the ribeye than over the chuck or round.

4. Marbling. Intramuscular fat (within the muscle) is the last location of fat deposition.

These aspects of cattle growth and development have big implications on beef cattle feeding management and beef carcass grading. First, little fat will be deposited anywhere if the cattle are not fed relatively high energy rations—rations that provide energy in excess of requirements for maintenance of current weight plus muscle and frame growth. This type of “finishing ration” must be fed for a minimum of 90 days to cattle weighing at least 850 lb. before considerable amounts of marbling are deposited. Rates of gain for steers on such rations should be more than 2.5 lb. per day.

Marbling is the last place an animal stores fat in the body when there is abundant energy, so if energy intake is reduced, marbling is the first fat to be used up by the animal to provide energy no longer available in the feed. Therefore, “holding” or “shrinking” steers before a show influences quality grade. When steers are full-fed, then limit-fed for the last few weeks before a show, they frequently fail to grade in the cooler because marbling has been removed from the ribeye muscle. Cattle must be full-fed right up until

slaughter to have the best chance of grading.

The amount of marbling within the ribeye is related to the amount of external fat a steer has. When live-cattle graders or steer show judges make their estimates, they look for a steer with a minimum of .3 to .4 inch of fat over the ribeye in order to feel the steer should grade. However, if a steer has been mishandled prior to the show (holding or shrinking), it may have the right amount of external fat, but the de-

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gree of marbling is frequently less than that necessary to grade Choice. In such cases, it is not the judge's fault a steer fails to grade Choice. If a steer has .4 inch of fat over the rib, he should grade, but there is no guarantee.

To summarize, production of quality beef is a function of a steer's age and feeding. A "finished" steer should have been full-fed a high energy ration for at least 90 days continuously up to the day of slaughter. At the time of slaughter, the steer should have .3 to .4 inch of fat over the rib.

Feedlots try to follow these guidelines, and even so, only 65 to 75 percent of feedlot steers handled in this way grade Choice. Can show steers be expected to do this well if they have been misfed? The answer is a definite no. If a group of show steers produce 50 percent Choice carcasses, that is a pretty good set of show steers.

Only through carcass evaluation of show steers and carcass shows can the result of a steer feeding and management program be best evaluated. Only through the carcass evaluation can marbling be determined, and only then can we definitely know if a steer grades Choice or not.

Carcass evaluation and carcass shows are probably the most important part of a steer program—not the live show—in determining how good steers actually are.