LIVESTOCK AND NATURAL RESOURCES

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# JUST WHAT THE HECK DO THEY LOOK AT A CARCASS FOR ANYWAY?

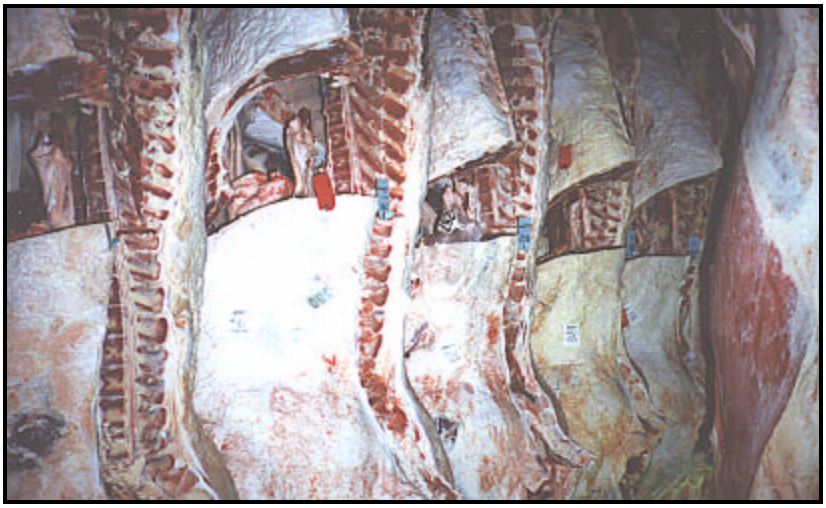
Did you know that beef going through a USDA inspected packing plant is not necessarily graded for quality and yield? In 1993, 81% of beef carcasses were inspected and graded, but 19% were not.

Inspection is mandatory because of the Federal Meat Inspection Act of 1906 and Wholesome Meat Act of 1967. It assures that the carcass is clean, wholesome, safe, unadulterated, accurately marked, labeled and packaged. This is a government funded, tax supported service.

Grading is voluntary — which means the packer has to pay for it.

For example, Alpine Packing in the Stockton area does pay for grading. Meridian Meats in Meridian does not. You do have access to carcass data from Alpine, but not from Meridian.

The difference — Alpine is a larger outfit that runs a larger volume through. However, the inspection that occurs at Meridian is what can give you the flexibility to sell direct to the consumer. To arrange to get carcass data, you must contact the packer ahead of time to purchase a USDA tag.



Grading is done by an employee of the USDA. He or she works independently of both the cattle producer and beef packer. To assure accuracy and consistency, grading is done only on site. There is a movement to go towards instrument grading such as ultrasound and other technologies.

For the present — USDA graders will continue to be used. For the future — technology will improve in capability and reach a point of cost effectiveness that it will eventually become an intregral part of the grading process.

## Dressing Percentage

Dressing percentage determines the pounds of carcass a live animal will produce. It is determined by dividing the hot carcass weight of the animal and dividing by the live weight of the animal.

For example, the 1996 Nevada County Fair steers had an average hot carcass weight of 722 pounds and an average live weight of 1184 pounds. Average dressing percentage is determined by 722 pounds divided by 1184 pounds times 100 equals 61%.

## Quality and Quantity

Carcass evaluation falls under two main categories — ***Quality*** and ***Quantity***.

***Quality*** measures predict the tenderness — the quality of the eating experience.

***Quantity*** refers to the Yield Grade. It determines how much total volume of that carcass do I have to sell.

## Quality

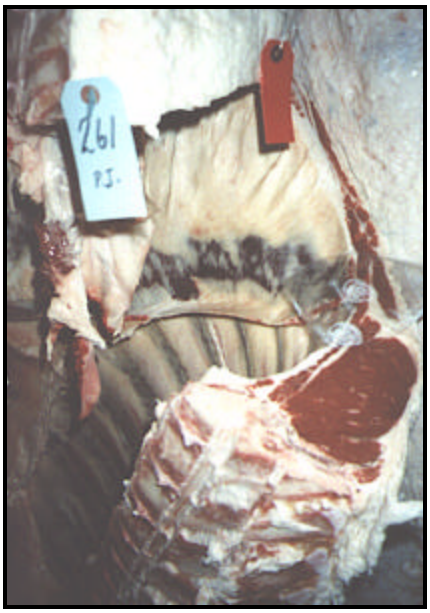
Marbling and maturity are the principle factors in determining the quality grade. Texture, firmness, and color of lean are also taken into account.

Marbling is the amount of distribution of small fleck of fat within the ribeye muscle between the 12th and 13th rib. It is the last thing a steer puts on. It is also the first thing an animal loses if feed is cut back.

***Quality*** grades are important in determining carcass value. USDA quality grades are as follows:

- *Prime*
- *Choice*
- *Select*
- *Standard*
- *Commercial*
- *Utility*
- *Cutter*
- *Canner*

***Quality*** grades are an important price determinant. In August, 1995 the price spread between choice and select was 15 cents per pound. In winter, the spread was only two to three cents. It



*Ribeye muscle between the 12th and 13th ribs.*

is currently running around eight cents.

As an example, let's say the spread between choice and select is 10 cents. This would mean that a 700 pound Choice carcass would be worth $70 more *(.10 cents X 700 lbs = $70)* than a 700 pound Select carcass.

Maturity grades reflect the age of the animal and range from A to E. An A maturity animal is approximately nine to 30 months of age.

For example, 4H/FFA steers are always in this group. B maturity is 30 to 42 months. E maturity is over 96 months of age. Animals over two and one-half years of age can only be quality graded commercial, canner, or cutter. The essential trend — younger animals will be more tender.

A question to ponder is how long can we continue to have a quality grade based on the one thing most objectionable to consumers — fat?

It is a Catch 22 situation. Consumers **do not** want the fat, but they desire flavor and tenderness. Some people say you need the marbling, others contend it is not necessarily essential.

Aging will go a long ways towards giving meat good tenderness and flavor. Meat is hung or aged to allow enzymes to begin breaking down tissues which makes the meat more tender.

The trick is defining that point of aging where you have the good points of aging and avoid the bad points of over-aging — spoilage and bad flavor.

Aging will also reduce carcass yield because the outside of the carcass will have to be trimmed when you finally break the carcass into retail cuts.

Custom processed carcasses might be aged anywhere from 14 to 21 days. Carcasses from the slaughter plant might be aged a maximum of seven days. The fat can help make up for less aging. Why is that important—turnover. There's not a huge amount of profit in an individual carcass, so the trick is higher volume.

A packing plant has to have carcasses moving in and out as quickly as possible. This is just a plain fact. If the packer can not make money, they go out of business. Given the dearth of inspected packing houses in Northern California, that would not be good news.

Any changes in the way beef is fed, processed, and gets to market will require an extreme paradigm shift on both consumers and the beef industry.

One principle I have learned on this job is that change is slow until reaches a critical mass — then it seems to happen instantaneously. My opinion is that change is still occurring at a slow pace. At the same time, change is happening — keep you ears and eyes open.

## Quantity

***Quantity*** is determined by the Yield Grade. They are based on the percentage yields of boneless, closely trimmed, retail cuts from the high value parts of the carcass— the round, loin, rib, and the chuck.

There are five yield grades, numbers one through five. Yield Grade 1 carcasses have the highest cutability — over 52.3%, Yield Grade 5 the lowest — less than 45.4%. These grades are applied without regard to sex of the animal or quality grade.

Yield grade is determined by four factors:

- *Amount of external fat*
- *Amount of kidney, pelvic, and heart fat*
- *Area of ribeye muscle*
- *Hot carcass weight*

The amount of external fat is the most important because it indicates the amount that may have to be trimmed from the retail cuts.

Kidney, pelvic, and heart fat is expressed as a percentage of the carcass weight. It affects yield because all this fat is removed in trimming. Fat accumulations in these regions decreases the yield in retail cuts. The average amount of kidney, pelvic heart fat is 3.5%.

Area of the ribeye is an indicator of the total amount of muscle in the carcass since all the muscles are proportional to one another. Ribeyes are measured in square inches at the 12th rib.

The idea is to have a low yield grade *(indicating high cutability)* while grading Choice — or higher *(high quality)*. This is possible, but not easy, to achieve.

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