



MEAT EDUCATION



MEAT QUALITY

During fabrication, a healthy cow will produce beef retail cuts that will turn from a dark purple to a bright cherry red within minutes of being processed.

MYOGLOBIN

The substance within meat that reacts with the oxygen in the air and turns beef bright red

This color change is called

BLOOMING

BEEF GRADING SYSTEM

Beef carcasses are graded for yield and quality grades, based on the degree of maturity and the degree of marbling

YIELD GRADE

An estimate of the percent yield for the four primal cuts of beef: chuck, rib, loin, and round (also referred to as cutability).

QUALITY GRADE

An important factor in consumer satisfaction. Color and texture affect meat palatability, flavor, and juiciness.

MATURITY

As the animal ages, the cartilage becomes bone, the lean meat darkens, and the texture becomes coarser. Maturity refers to the physiological age of the carcass. Maturity indicators are bone characteristics, ossification of cartilage, and color/texture of the rib eye muscle.

MARBLING

The intramuscular fat in the lean is the factor on which quality grading is based. This can be evaluated between the 12th and 13th ribs. The amount and distribution of the marbling in the rib eye is evaluated at the cut surface.



USDA YIELD GRADING

To describe the amount of boneless, high quality beef from a carcass, the USDA gives each carcass a yield grade. **YG1** is the highest and **YG5** is the lowest.

To find YIELD GRADES, a carcass is evaluated on the following factors:

- 1. Amount of External Fat:** Measured at the 12th rib (measuring the thickness of fat $\frac{3}{4}$ the length of the rib eye from the chine bone).
- 2. Hot Carcass Weight:** The weight taken at the harvesting facility before the carcass is chilled.
- 3. Amount of Kidney/Pelvic/Heart (KPH) Fat:** The amount of KPH is evaluated and expressed as a percentage of the carcass weight.
- 4. Area of Rib Eye Muscle:** Determined by using a dot-grid. This measurement is taken at the 12th rib.

USDA QUALITY GRADING

The purpose of the quality grade is to communicate to consumers the palatability of the beef they purchase. **Palatability** is the degree to which people like a cut of meat based on visual appearance and other sensory-based factors. Three components that determine palatability are

JUICINESS + TENDERNESS + FLAVOR

Marbling is the primary factor used to determine the quality grade of each carcass, but the lean meat is also evaluated on these 4 factors:

1. Muscle Firmness
2. Color of the Lean Meat
3. Texture
4. Maturity

As a general rule, the more fat beef contains the more flavorful the meat will taste.

There are 6 quality grade names. Consumers easily recognize the top 3, which are commonly used in retail beef sales:



HIGHEST



2ND HIGHEST



3RD HIGHEST