



UNDERSTANDING MARBLING

ABOUT QUALITY GRADING

Established in 1927, the United States Department of Agriculture (USDA) meat-grading system sets standards of quality used in buying and selling of meat. Quality grading provides consumers an assurance that the product purchased conforms to expected standards of tenderness, juiciness, and flavor when cooked, generally referred to as palatability. The eight quality grades for beef are **Prime, Choice, Select, Standard, Commercial, Utility, Cutter, and Canner**. Some quality grades are further broken down as high, average, or low.

When assessing quality grade, a number of factors are evaluated, including **carcass maturity, firmness, texture and color of lean, and the amount and distribution of marbling within the lean**. Marbling, also known as intramuscular fat, is the small flecks of white fat within beef muscle. The **degree of marbling is the primary determinant of quality grade**, as carcasses with a greater amount of marbling have an increased likelihood of being more tender, juicy, and flavorful. Carcass maturity also impacts quality grade as younger animals produce higher quality beef than older animals.

The quality of U.S. beef has gradually increased over the last 20 years with the latest USDA report finding that 5.4% of the beef supply graded Prime, 72.9% graded Choice and 21.6% graded Select.

Each of the photographs below illustrate the degree of marbling necessary to qualify for one of the three quality grades typically found in U.S. retail and foodservice markets. They have been developed by USDA to assist government, industry, and academia in the proper application of official grade standards.



MODERATELY ABUNDANT
USDA AVERAGE PRIME



SLIGHTLY ABUNDANT
USDA LOW PRIME



MODERATE
USDA HIGH CHOICE



MODEST
USDA AVERAGE CHOICE



SMALL
USDA LOW CHOICE



SLIGHT
USDA SELECT



Funded by the Beef Checkoff.

Find out more about beef quality grading by visiting:
www.beefresearch.org/usdagradingmodulesimulation.aspx