

Comparing Present and Proposed Beef Grades

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Beef production in the United States has totaled around 22 billion pounds in recent years. About three-fifths of the quantity produced has been officially graded by U.S.D.A. Of that graded, about 80 percent was Choice, 12 percent Good, and 6 percent Prime with the remainder falling into processing grades. The Choice grade has long been considered an assurance of high palatability to consumers and a target for producers.

A change in grading

standards has been proposed which would change the marbling and maturity requirements for the higher grades of beef, eliminate the use of conformation as a factor in determining quality grade, narrow the requirements for the Good grades, and require that all beef graded for quality also be yield graded. The greatest impact of the change would be on the Good and Choice grades which have accounted for over 90 percent of all beef officially grade-marked by U.S.D.A. in recent years. This article examines the proposed grade changes with respect

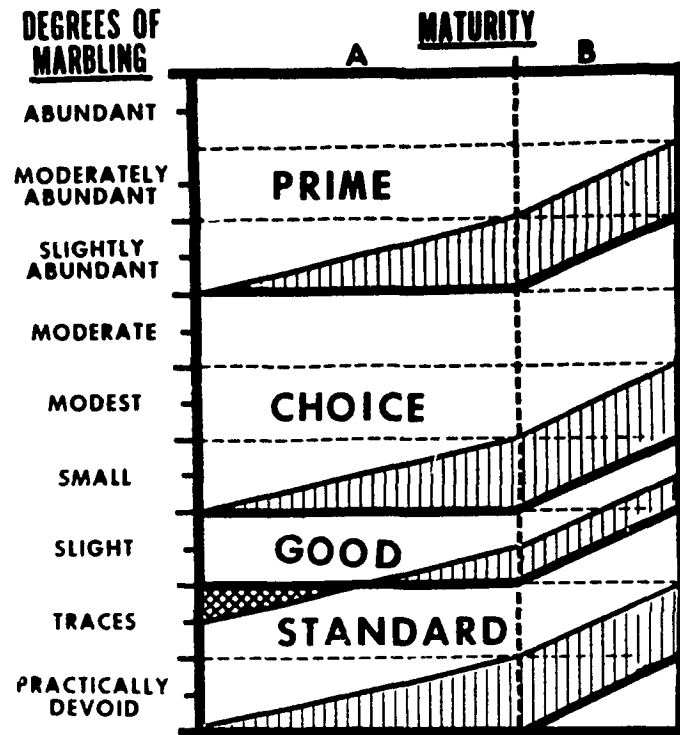
to stated objectives and functions of grades and possible effects on industry segments.

BEEF GRADING

USDA's voluntary grading system has long been an institutionalized part of the beef industry in the United States. Most fed beef is examined for grade, though not always grade marked. Both government and private agencies report prices by USDA grades, and most livestock and meat transactions involve USDA grades in price negotiation.

There are eight quality grades included in the present standards. Prime,

PROPOSED CHANGES IN THE RELATIONSHIP BETWEEN MARBLING, MATURITY, AND QUALITY GRADE



||||| Areas which would be included in the next higher grade.
 ■■■■ Area which would be changed from Good to Standard.

Choice, and Good are the most familiar to the public and most relevant to fed cattle.

Present quality grading standards involve palatability indicating characteristics, combined with conformation to form a final grade. Marbling and maturity have the greatest bearing on the quality grade. Conformation considers the proportion of meat to bone and of high to low value cuts. Marbling in excess of the minimum necessary for a grade can compensate for a lack of conformation, and conformation can compensate for marbling except in the Choice and Prime grades. Yield grading is available on an optional basis to identify cutability differences among beef

carcasses.

Controversy still exists regarding the relevance and value of the different components that comprise USDA beef grades. Nevertheless, research and experience over the years have resulted in increasing agreement.

Marbling and maturity: Marbling is the factor longest considered an important palatability attribute. It has been associated with juiciness, tenderness and flavor. As animals mature, muscle tends to become dryer, darker in color, coarser in texture, stronger in flavor; and, at least at ages beyond 30 months, tougher. Marbling tends to improve palatability, particularly juiciness and flavor.

Although many studies have sought to identify the relationships among marbling, age, tenderness, and flavor, this has proven to be a very complex field. Positive correlations have been found, but only in weak and vague terms. Marbling has more influence on palatability as animals mature. However, in the case of young animals, such as those within the "A" maturity group of 9 to 30 months, increased marbling associated with maturity has less effect on palatability.

Conformation: For many years conformation has been considered to be an indicator of the ratio of meat to bone and of high to low value cuts. Research has shown that conformation is not a significant factor in palatability. In addition, some researchers have questioned its bearing on cutability.

Yield grade: Yield grading was introduced on a voluntary basis in 1965 and an increasing proportion of carcasses have been yield graded since that time. The specifications state that a carcass typical of its yield grade (yield grades number 1 through 5) will cut out about 2.3 percent more retail product from the round, loin, rib, and chuck than the next lower (highest number) yield grade. The measures or estimates used in the yield grade equation are hot carcass weight; percent kidney, pelvic and heart fat; fat thickness at the twelfth rib; and ribeye area. Research has generally supported the use of yield grades when trimming of carcasses is uniform. The final trim on retail cuts, however, has a large effect on the actual realized cutout on a given carcass.

Other factors: Color, firmness, and texture of the meat affect grade only if they are unusual for the maturity of the carcass being graded.



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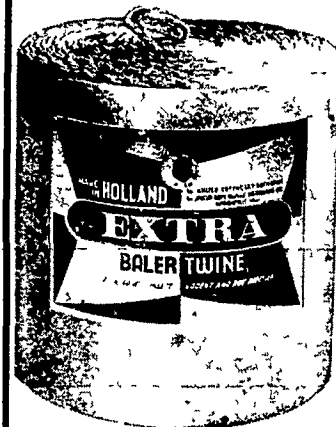
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