

ABSTRACT

**FREE AMINO ACID CHANGES IN DIFFERENT AGED BOVINE MUSCLES AND THEIR RELATIONSHIP TO SHEAR VALUES**

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Univ. of Wyoming Agric. Expt Station Journal Article No. 468. This investigation was a contribution to the Western Regional WM-33 Project.

**SUMMARY** Free amino acid analyses were conducted on the longissimus and biceps femoris muscles from carcasses aged 2, 7 and 21 days to determine the relationships between these muscle constituents and palatability. Many of the free amino acids increased during aging. Shear values for the longissimus decreased faster with increased aging time than did shear values for the biceps femoris. Nevertheless, no significant interaction between aging period and muscle existed for any of the free amino acids. This indicates that proteolysis progressed at about the same rate in both the longissimus and biceps femoris muscles. The greater tenderness increase in the longissimus than in the biceps femoris during aging was probably due to greater amounts of connective tissue in the biceps femoris rather than to changes in free amino acids. Relationships between free amino acids in muscle and tenderness and flavor were low.