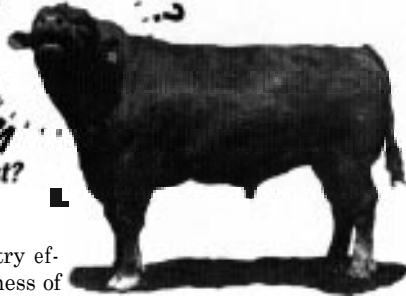


What genetic **Improvements** can be made to give consumers a consistently tender and flavorful beef product?

WHAT'S YOUR BEEF?



A long-term industry effort to improve tenderness of cooked beef should include genetic selection. Because tenderness cannot yet be evaluated in live cattle, progeny testing is the only way to evaluate the genetic merit of sires.

Progeny testing, however, is time consuming and expensive. It should involve at least two sires per contemporary group in a herd. Sires should be mated at random to cows in the herd and 25 progeny per sire is desirable.

When the progeny are processed, a rib steak must be obtained at the processing plant and sent to an institution certified to cook and determine Warner-Bratzler shear force (tenderness). Certainly, it will be five to ten years at minimum before significant genetic improvement is made for tenderness using current animal breeding procedures.

While definite progress could be made genetically, 60 to 70 percent of the variation in tenderness is determined by environ-

mental factors including feeding regimen; age at slaughter; carcass electrical stimulation; aging time postmortem; mechanical, enzyme or calcium chloride tenderization; and cooking procedures.

Each of these environmental factors should be considered "critical control points" in providing consumers with tender beef. Intervention at these points can result in improvement in the tenderness of beef.

Research is now being conducted to rapidly and efficiently measure tenderness in carcasses rather than determine Warner-Bratzler shear force.

Perhaps breakthroughs in gene mapping to accelerate genetic progress and/or ways to measure tenderness accurately in carcass as well as live animals will be made in the future. In the meantime, cattle breeders must take responsibility for intervening at the critical control points under their control to improve the tenderness of beef.

— **Michael Dikeman, Extension meat scientist,
Kansas State University, Manhattan**

WE WELCOME YOUR INPUT!

"What's Your Beef?" column serves as a forum for Angus breeders and industry experts to express their opinions on current issues and topics of breed improvement and performance programs.

If you'd like to respond to the topic above, or would like to address another, please contact the Angus Journal editorial office at 1-800-821-5478 or fax (816) 233-6575.