

USDA Research - Final Report

By Patricia Pruitt

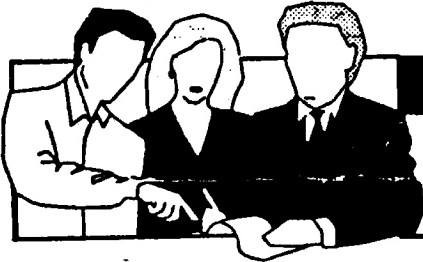
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GALLOWAY BEEF: TOP CHOICE OF USDA RESEARCH PANEL

The flavor and juiciness of Galloway beef has won the recognition of a 'sensory panel' research study conducted by the USDA. Using Agricultural Marketing Services guidelines, the panel placed cooked Galloway rib steaks at the top of the chart (shown on page 14) according to a published progress report.

The research began in 1986 with semen from thirty different US, Canadian, and Scottish Galloway bulls being represented in the project. The USDA Meat Animal Research Center (MARC) in Clay Center, Nebraska conducted extensive testing of multiple traits, during the period of 1986 to 1990. The results of their Cycle IV Germ Plasm Evaluation Program, including the Galloway, Orig. Hereford-Angus x, Cur. Hereford-Angus x, Charolais, Gelbvich, Pinzgauer, Shorthorn, Longhorn, Nellore, Piedmontese, and Salers, were published in 1990. All of the offspring tested were crossbreds, utilizing MARC Hereford and Angus cows with semen from the all of the above-listed breeds.

The results of the over-all study, indicated that no one breed excelled in all the traits important to the beef industry,

indicating that each breed may contribute different and potentially valuable genetics to cross-breeding programs.

What the research did reveal, was that the Galloway excelled in the beef quality trait areas of Flavor and Juiciness...meaning that Galloway beef ranked first in taste. This outcome is of significant importance in itself.

Now, in a recent Consumer Satisfaction research project, professional sensory panelists have found that, to the consumer, flavor is more closely related to the overall "liking" of beef, than tenderness. This research project, developed and coordinated by the National Live Stock and Meat Board in cooperation with Texas A & M University, was completed and the findings were published in September of this year.

The value of the data from these two research studies is apparent in that, the fundamental purpose for producing beef cattle is that of providing meat for human consumption. Now, research reveals that flavor and juiciness are most important factors in determining consumer preference in selecting beef products.

Galloway cattle producers know that their purposes for breeding Galloways, are much the same as those about which historians wrote of in the days of old. In 1573, it was written, "In the Galloway section of Scotland are oxen of large size, whose flesh is tender, sweet and juicy." Throughout history, the Galloway was noted for it's fine-textured meat, it's hardiness, foraging ability, and was considered less quarrelsome than other breeds. Today's Galloway breeders almost instinctively extol the virtues of Galloway beef and

dare anyone disagree with them! The economics of inherent Galloway traits hardiness and ability to produce quality beef from forage is considered even more important today than ever before.

Flavorful, juicy, fine texture is a heritage embodied in Galloway genetics, and within it lies breeder responsibility identifying the best gene within the breed. While further research will be necessary, carcass EPDs will prove invaluable and future gene mapping of the Galloway may provide

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Research Final Report



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Continued from Cover
 researchers with a window for studying the genetics that produces excellence in flavor and juiciness.

The Galloway cattle industry has long anticipated the time when 'taste' research would be seen as the ultimate test for determining quality of the beef carcass. Viewing the potential significance of this research trend, Galloway breeders can expect to attain a 'credibility' within the cattle industry, that they have not previously experienced. They have earned just claim to their breed slogan, "Galloways are on the move!"



Beef Quality Characteristics of Steers in the first three of five calf crops in Cycle IV of the Germ Plasm Evaluation Program of MARC.

Breed Group	Flavor	Juiciness
Galloway	4.89	5.14
Orig.HAx	4.87	5.12
Pinzgauer	4.88	5.10
Shorthorn	4.89	5.08
Piedmontese	4.78	5.05
Longhorn	4.84	5.04
Cur.HAx	4.84	5.02
Charolais	4.86	4.93
Gelbvieh	4.75	4.93
Salers	4.83	4.93
Nellore	4.78	4.75

Sensory panel scores: 1= extremely bland or dry.
 8= extremely intense or juicy.

(Chart edited from MARC original, for reasons of space and for more clearly showing flavor and juiciness data)

The final results are in for Phase IV of the MARC (Meat Animal Research Center) germ plasm research program. In the February issue of *The PRESS* we published the preliminary report that showed the Galloway scoring very well in the meat quality research findings. We are pleased to be able to publish the final results as sent to us directly from MARC. Once again, these results show Galloways at or near the top of the charts, further reinforcing that which our breeders have always said about the quality of Galloway beef.

All of the animals used in this research were crossbreds. Hereford and Angus cows were mated by A. I. to purebred bulls of each breed. Semen from thirty different Galloway bulls was available to MARC and this number is, no doubt, comparable to that of the other breeds. This data has not been officially published by MARC, so you are seeing it here...first!

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(Copies of original research data are available upon request from The Press by sending \$2.00) ■

Breed Group	Flavor	Juiciness	Tenderness
Galloway	4.84	5.12	
Shorthorn	4.84	5.12	
CU Hereford-Angus	4.82	5.07	
AI Hereford-Angus	4.81	5.11	
CU Pinzgauer	4.80	5.14	
Longhorn	4.79	5.11	
CU Charolais	4.78	5.03	
AI Charolais	4.77	4.94	
Salers	4.76	5.00	
Nellore	4.71	4.81	
CU Gelbvieh	4.70	5.00	
Piedmontese	4.70	5.08	

- Tenderness of cooked beef - judged by an 8-person professional panel.
- Clean-up (CU) sires represent "new" sires, but have not had the same level of as intensive a selection as AI sires...thus data from their programs were reported separately.