

2007 Beef Improvement Federation 39th Annual Meeting

Coverage by Angus Productions Inc



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Genetic Opportunities

by Eric Grant

FORT COLLINS, COLO. (June 8, 2007) — Do opportunities exist to improve the healthfulness of beef through genetic selection?

That's a question scientists at Iowa State University (ISU) hope to answer. Preliminary results of their research demonstrate opportunities may exist for genetic selection to make beef a more healthful product, ISU's Richard "J.R." Tait told attendees of the Emerging Technologies Committee meeting during the 2007 Beef Improvement Federation (BIF) annual conference in Fort Collins, Colo.

Already, competitive meat and poultry industries are touting healthful aspects of their products. Chicken, for instance, sports packages that tout boosts in Vitamin E or Omega 3 and reduced levels of saturated fat.

While beef contains many healthful attributes, it also has relatively high levels of

saturated fatty acids, which can be detrimental to the health of consumers, Tait said.

Between 2001 and 2004, ISU researchers evaluated more than 916 head of Angus-sired steers and bulls to determine the heritability of saturated fatty acids and beneficial fatty acids. They discovered that saturated fatty acids had a relatively high heritability: 0.49 for myristic acid (the most detrimental fatty acid to human health) and 0.43 for palmitic acid. At the same time, there were similar levels of heritability for desirable fatty acids, such as palmitoleic acid (0.49) and oleic acid (0.38).

This means that producers could potentially select for good fatty acids and against undesirable ones. But the industry will need to be cautious in determining if selection against detrimental fatty acids could reduce product acceptability, Tait said.

More research needs to be done to answer this and other questions. The industry should look at developing EPDs or identifying genetic markers for these traits as a way of determining breed decisions and producing healthier products in the future, but balance these developments with an understanding of how they affect product acceptance.



► Cattlemen may be able to genetically select for a more healthful fatty acid profile in the beef they produce, said ISU's J.R. Tait.

"What we don't have a very good handle on at this point is how this will impact the consumer acceptability of our product," said Tait, who reiterated the need for more research on this matter in the future.



Look for the PowerPoint and audio file for this presentation in the newsroom.

Do opportunities exist to improve the healthfulness of beef through genetic selection?



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