

Genotyping Project Uncovers Opportunities

Igenity conducts industry-advancing research for beef supply chain.

DULUTH, GA. (Jan. 23, 2007) — In late January, Merial announced the recent completion of a 50,000-head cattle genotyping project conducted by Igenity. Data gathered and analyzed during this multiyear project showed statistically significant correlations between DNA markers in the Igenity profile and the phenotypic trait each marker influences.

"We now have up to 50 data points on 50,000 head of cattle. Never before has any group had this much information about so many head of U.S. beef cattle for the purpose of determining the significance of DNA markers and their effect," says Stewart Bauck, executive director of Igenity.

The project will help the beef industry breed, select, market, procure and manage cattle with greater confidence. He says value from the Igenity profile can be found by every segment of the supply chain, regardless of size. One example of a trait where DNA technology can be useful for all segments is improving quality grade.

"The industry has been trying to achieve a higher percentage of Choice cattle for the past 30 years. Recent data from the USDA shows that in 2006, 6.2% fewer cattle graded Choice than in 1975," Bauck says. "These data suggest that selection methods used up to this point have not been fully effective in moving the quality-grade needle. The Igenity profile can help producers make progress in

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this area since genetic markers can have a direct effect on traits."

Bauck adds that cow-calf and seedstock producers also can use this information to make progress in other areas where the industry has struggled for decades.

"This research proved that markers used in the Igenity profile are directly and highly correlated to each respective trait, therefore producers can use the information for managing antagonistic traits that plague the industry, such as quality grade and yield grade," Bauck explains.

The project also uncovered value-added marketing opportunities for those pointing cattle toward branded programs based on quality grade and tenderness. For the first time, these two traits were analyzed side by side.

"The distribution of the Igenity profile tenderness scores within the Choice and Select quality grades were almost identical, which uncovered both favorable and unfavorable carcasses," Bauck says. "About 13% of the Choice carcasses had an Igenity profile tenderness score below 3, with 1 being the least tender. On the other hand, more than 30% of the Select carcasses had an Igenity profile tenderness score greater than 7, with 10 being the most tender."

He says this shows there is room for improvement of tenderness within Choice cattle. Currently, there are a significant number of cattle that are graded Select but may actually provide a more tender product and a better eating experience than some cattle graded Choice. If quality grade and tenderness information are known, the information can be applied and used to better market beef in the meatcase.

"The value of having information about meat quality early in an animal's life, rather than postharvest, is priceless," Bauck says. "Armed with this type of inside information, along with traditional selection and marketing tools, producers can point cattle to a targeted end point — allowing for confidence and progress throughout the supply chain."

The comprehensive Igenity profile includes traits of economic importance, such as tenderness potential, fat thickness, ribeye area, yield grade and hot carcass weight, along with parentage in multiple-sire settings and a diagnostic test to identify cattle persistently infected (PI) with bovine viral diarrhea (BVD). For more information call 1-877-443-6489 or visit www.igenity.com.

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