

## Limousin Producers, Commercial Users Benefit From New Multibreed Evaluation

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Earlier this year, the North American Limousin Foundation (NALF) and Angus Genetics Inc. (AGI) entered into a service agreement whereby, beginning with the recently completed fall 2008 analysis, AGI would provide genetic evaluation services for NALF and the Canadian Limousin Association (CLA). The agreement includes calculation of expected progeny differences (EPDs) and accuracies for birth, weaning weight, yearling weights, milking ability and scrotal circumference.

NALF went to a private entity to conduct its evaluation in response to an announcement by the University of Georgia (UGA) that it plans to shift resources toward research and development and away from providing routine evaluation services.

On the surface, Limousin and Lim-Flex® breeders and commercial customers are unlikely to notice any differences in the new EPDs and accuracies. That is because AGI has leased software and obtained genetic parameter inputs from UGA, making the technology that drives the analysis identical to past evaluations conducted for NALF.

Under the surface, however, there are a couple of distinct differences with the AGI evaluation that make for more timely and reliable genetic predictions, especially for breeders and commercial users of Lim-Flex genetics.

### Synchronized Systems

In past Limousin genetic evaluations, UGA accounted for the genetic merit of the Angus parents used to produce Lim-Flex animals by including the parents' EPDs from the American Angus Association (AAA). Because NALF and AAA historically have conducted their evaluations at the same time each year, the most current Angus EPDs available for UGA's Limousin evaluation always were behind by one evaluation.

For example, the spring 2008 Limousin genetic evaluation incorporated the fall

2007 AAA EPDs because the spring 2008 AAA EPDs were not yet available.

While that practice had virtually no effect on the reliability of genetic predictions for Lim-Flex animals that were from relatively proven Angus parents, it did mean predictions for those from Angus parents with changing EPDs were not as accurate as they could have been. Now that AGI (a subsidiary of AAA) is conducting NALF's evaluation, it has mitigated that shortcoming.

In fact, rather than rely upon older EPDs from AAA to account for the genetic merit of Angus parents, AGI is using the actual performance data that accumulates before each breed's cutoff date for data submission, making for the most timely and reliable predictions of genetic merit for Lim-Flex animals. For those from Red Angus parents, AGI will continue to use the most current EPDs and accuracies from the Red Angus Association of America (RAAA).

### Genetic Links

Another difference in the evaluations that AGI conducts for NALF is the incorporation of more Angus pedigree information. Historically, when Angus animals entered NALF's database, the association recorded only their parents and grandparents for genetic evaluation. Now AGI can construct and use complete Angus pedigree information in the analysis. That more fully accounts for the genetic relationships among animals and provides more comprehensive knowledge about connectedness for genetic comparisons across herds.

During the 40-year history of Limousin in North America, upgrading of Limousin breed composition predominantly has occurred from Angus-based animals. A more accurate accounting for past and present-day Angus genetics enhances predictions for purebred and fullblood

Limousin animals and will evaluate better the associated heterosis among animals.

It follows that using AGI for the NALF evaluation represents a win-win for straightbred Limousin animals and Limousin-Angus hybrids. Arguably, no other multibreed genetic evaluation in the world more thoroughly incorporates performance information from two populations with the scope of animals included in the Limousin and Angus breeds in North America.

### Better Together

Aside from the technical aspects of the new genetic evaluation, the collaboration between NALF and AGI will help evolve the model for public and private beef cattle genetics research and animal evaluation, which will benefit producers in other ways. With its resources more fully concentrated on research, discovery and advancing beef cattle genetic evaluation, UGA will be able to provide more comprehensive and timely enhancements to prediction methodology and, ultimately, selection information for producers. That will be especially important as the need to incorporate genomics information into animal evaluation escalates in the future.

The arrangement between NALF and AGI is unique in that two major beef breed associations are working closely together with the best interests of commercial producers squarely in mind.

NALF and AAA are the first breed associations to respond actively to the universities' announcement that they wished to redirect their attention to research and development and away from routine computation of EPDs. The new relationship between breeds and with research institutions will be a catalyst for greater industry-wide cooperation and productivity to benefit commercial producers.