

Angus Genetics Inc. Update

Low-density genetic testing offers better characterization of today's Angus population.

Story & photo by **Paige Nelson**, field editor

Thanks to available and improving genetic testing systems, Angus cattle continually improve. The more cattle are tested through use of these tools, the better the entire Angus population is characterized, which has helped lower the cost of newer genetic testing options, so more Angus cattle may be tested. One might call this process a cycle of genetic and technological advancement.

"It's our job at AGI to continually make sure that the selection tools in your hands today are better than the ones you had five years ago, and what you have five years from now are better than what we have today," said Tonya Amen, former genetic service director for Angus Genetics Inc. (AGI).

She and Dan Moser, AGI president and American Angus Association director of performance programs, presented during the innovation workshops at the National Angus Convention & Trade Show in Overland Park, Kan., Nov. 3.

In the last five years, the latest selection tool, genomics, has emerged and has greatly increased the accuracy of expected progeny differences (EPDs), she said. "For some of the traits, having a genomic test is worth having 30 calves on the ground already."

Genomics have allowed animals to be evaluated at a much earlier age and have increased the number of traits that could be evaluated. For instance, she noted, some traits are very time-consuming, labor-intensive or expensive for which to collect phenotypes. Genomics can give us a picture of the animal's genetic worth for those traits.

To prove genomics' popularity, Amen cited the numbers straight from the AGI database.



► "The bottom line is that this can be complicated in the middle, but it's simple in the end," said AGI President Dan Moser. "The idea of building the genomics into the EPDs is to make it as easy as possible for you as an Angus breeder and as easy as possible for your commercial customers to use this information."

In 2012, AGI calibrated genotypes for 11,000 head of cattle. In October 2015, 167,000 animals had been genotyped.

"Short of Holstein, no one is really in the same realm of managing genotyping and just the power that we have to build accurate equations," said Moser. "In some ways, [other beef breeds] are where we were three to four years ago. ... The combination of adaptation of testing, submitting of samples into the database and combining them with the powerful performance data that you provide us, really does give us the most accurate genomic predictions in the industry."

Options available today

Several options exist for Angus producers to genetically test their animals. For \$75, producers can test cattle through Zoetis or GeneSeek using a high-density (HD) test.

Recently, AGI announced the release of a low-density (LD) test. The lower-cost option, explained Amen, ranges between \$45 and \$47 and is still offered by both Zoetis (i50K) and GeneSeek (GGP-LD).

The power of a low-density test, said Moser, is its cost-effectiveness while still producing a correlation above 0.99 between the low- and high-density tests.

"For most of you, doing the LD test, i50k or GGP-LD, is more than adequate. It's going to get you the same level of accuracy and nearly imperceptible differences in your EPDs compared to the old HD," Amen stated.

"We think this is a really cool technology that's going to allow you guys to test a lot deeper into your herds. Maybe test an entire female herd, when before it was just a few females. I think we'll be able to characterize Angus females in a way they've never been characterized before," she continued.

Moser called LD testing a way to discover genetically important bulls in the bull offering that may have been overlooked

based on pedigree and phenotype alone.

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of building the genomics into the EPDs is to make it as easy as possible for you as an Angus breeder and as easy as possible for your commercial customers to use this information," endorsed Moser.



Editor's Note: This article is part of the online coverage of the Angus Means Business National Convention & Trade Show provided by Angus Media. Visit the convention Newsroom available at <http://angusjournal.com/NCnTS/2015/index.html> to access additional summaries, PowerPoint presentations and the audio of the sessions.

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