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Solid Footing

American Angus Association collecting hoof scores to generate expected progeny differences.

Story & photos by **Shauna Rose Hermel**, editor

The American Angus Association is accepting hoof scores in anticipation of developing an expected progeny difference (EPD) to assist in selection decisions, Dan Moser told cattlemen gathered for the breed improvement breakout session at the Angus Means Business National Convention & Trade Show Nov. 4-6, 2014, in Kansas City, Mo.

As of March 9, 2016, foot scores had been submitted on 4,730 animals representing 615 sires. That’s a start, but a ways from where the Association needs to be to generate a genetic prediction, making Moser’s comments as pertinent today as they were in fall 2014.

“Folks are making significant investment in your genetics, and they expect them to last,” he noted, pointing out that proper hoof structure plays a significant role in an animal’s longevity.

Moser encouraged those in attendance to start collecting and submitting hoof scores as he unveiled a foot-scoring system the Association will use to evaluate the trait in Angus cattle.

“Our goal is to come up with a simple system that characterizes the cattle well enough that we can build tools to help with your decision-making in the future,” said Moser, who serves as president of Angus Genetics Inc. (AGI) and director of performance programs for the American Angus Association.

Moser said two main issues have been identified: (1) foot angle, or set to the pastern; and (2) claw set.

Cattle that don’t have the proper pastern set often tend to have shallow heels, he noted. As they sit back on their heels, they don’t get as much wear on their toes, so the toes tend to grow out. This can cause lameness in especially the rear limbs, though the front limbs can be affected, too.

Problems with claw set often show up as scissor or corkscrew claws in which the toes don’t stay separated and sometimes curl in, even crossing in some cases. Moser said this more often affects the front feet, but can occur with the back feet, as well.

“Those are real issues that impact soundness of cattle,” Moser emphasized, noting that the Association intends to develop EPDs that will assist producers in evaluating seedstock for their ability to propagate sound hoof structure.

Your data needed

Developing that selection tool depends first on gathering data, said Moser, adding that the Association is building the framework to collect that information for use in future evaluations.

Emphasizing that doing so is strictly voluntary, he encouraged Angus breeders to submit foot scores on two traits — foot angle and claw set, scoring both on a 1-to-9 system, where 5 is the ideal (see Figs. 1 and 2).

Looking at foot angle, Moser explained, the ideal to score a 5 would have a 45° angle to the pastern. Animals that are extremely weak in the pastern, very shallow in their heel and extremely long on their toes would score a 9.

Fig. 1: American Angus Association scoring system to evaluate foot angle, where a 5 is ideal



Source: American Angus Association, 2014. Illustrated by Craig Simmons.

Fig. 2: American Angus Association scoring system to evaluate claw set, where a 5 is ideal



Source: American Angus Association, 2014. Illustrated by Craig Simmons.

“Animals that are extremely straight in their front end and up on their toes, having no set to their pastern, would be a 1,” Moser said, noting that you don’t see very many modern Angus cattle at that end of the spectrum.

For claw set, the ideal to score 5 would have some space between the toes, and the toes would be basically straight and symmetrical, Moser described. Toes that tend to curl in a little would score 7 or 8, while toes that curl to the point they cross over would score a 9. Toes that spread out more would score lower on the scale, with widely open and divergent toes scoring a 1. Again, few modern Angus animals would fall on the low end of the scale.

For both foot angle and claw set, animals at either end of the spectrum, scoring a 1 or a 9, would be animals you would typically cull, Moser said.

Working with a similar scoring system, the Australians have found reasonable heritability

of both foot angle (0.13) and claw set (0.16), meaning there is opportunity to identify differences among sires.

Tips for scoring

Moser offered these things to keep in mind when scoring feet:

- ▶ Score animals prior to trimming hooves.
- ▶ Where there is variation from front to rear, score the worst foot.
- ▶ Score animals at a year of age, using the same age window and contemporary grouping as for yearling weights and ultrasound.
- ▶ Submit basic ration information along with the hoof scores.
- ▶ Animals may be scored as they come out of a chute or as they mill in a pen.
- ▶ Data submission forms are available through AAA Login.

Sale time provides a deadline by which breeders must score the bulls they raise, he

noted. However, there may be multiple opportunities to score females as they age.

“Some of these conditions become more severe as animals get older,” Moser said. “If you have groups of 3-year-olds, 4-year-olds, 5-year-olds, and you would like to score them as a group, we would happily receive that data, as well.”

These age groups will be maintained in their yearling contemporary groups, to allow for differences in management from one year to the next, he explained. “So your 4-year-olds as a group would be a contemporary group, but they wouldn’t necessarily be compared to your 5s.”

Through AAA Login, Angus breeders can enter foot scores online or download a spreadsheet that can be completed then uploaded into the system. To access the two options in AAA Login, drill down choosing My Herd > Registration/Transfer/Performance > AHIR/Performance > Foot Score.

“As soon as we feel there’s enough data from enough members to give a reliable and useful EPD, that’s something we’ll implement,” Moser said. The end goals, he concluded, are to describe the variation that exists in the breed and to provide a tool to members that they can use to apply selection pressure for foot conformation if they choose to do so.

In the meantime, he added, “it encourages people to look at the cattle’s feet a little more closely, and that may be the most powerful thing of all.”



Editor’s Note: This article is updated from an article that originally ran in February 2015. Moser spoke at the breed improvement workshop at the Angus Means Business National Convention & Trade Show. To listen to his presentation, access his PowerPoint or read summaries of other presentations at the convention, visit the Newsroom at www.angusjournal.com/NCnTS/2014/index.html.



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