BY THE NUMBERS

by Esther Tarpoff, director of performance programs

Mitigated Risk Ahead of Breeding Season

Maximize the information available for you and your customers to mitigate future risks.

Approximately 75% of calves reported by American Angus Association members are born in winter or spring. As many members are gearing up with anticipation for the next calf crop, calves reaching yearling age are at a critical stage for collecting of several traits.

After animals pass the yearling age window, many of these phenotypes cannot be collected again for that individual. After collection of the records, submitting those to the Association allows for the information to be included in the genetic selection tools.

By the time an animal reaches breeding age, data collected at birth, weaning and yearling should be submitted to the Angus Herd Improvement Records (AHIR®) program. This allows the genetic selection tools, expected progeny differences (EPDs), to leverage maximum information to minimize selection risk by improved accuracies on the selection tools.

As heifers are evaluated as potential replacement females and bulls are selected for sales and turned out for breeding, minimize the risk by providing as many data points for each animal as possible.

From the start

For data to be utilized to its maximum potential, animals need to be in proper contemporary groups starting as early as birth. A proper contemporary group allows animals to be compared to other individuals of a similar age that have been managed within the same environment with access to equal resources.

The size of a yearling contemporary group will never be larger than the birth or weaning contemporary group, because groups are established starting at birth. Bulls and heifers are separated and ratioed within sex along with being separated by any other management codes provided. Those animals then move together as a contemporary group through the different stages of growth. This means if an animal is in a single-animal contemporary group at birth, it will be in a single-animal contemporary group at weaning and yearling. If one individual animal is sent to a bull test after weaning, that animal should be removed from its weaning contemporary group and placed in a single-animal yearling contemporary group.

Birth and weaning

When an animal is born, there is an opportunity to collect a calving-ease score and birth weight measured with a scale for the calf, and teat size and udder suspension scores for the dam. All of this information should be recorded within 24 hours of the calf's birth. If a calf dies at birth or before weaning, the cause of death should be recorded with a birth disposal code.

At weaning, calves should have weaning weights recorded by a scale between 120 and 280 days of age. For animals to be eligible for the same contemporary group, weights must be collected within a three-day time frame. Dams should have their mature weights recorded with a body condition score (BCS) within 45 days before or after the calf's weaning weight is measured. Any measures collected outside the age or time guidelines will not be used in the genetic evaluation.

Yearling weights, heights and scrotal circumference

Yearling weights should be collected between 320 and 440 days of age. For animals to be eligible for the same contemporary group,

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weights must be collected within a three-day time frame. Yearling heights should be recorded during the yearling age window as well. In addition, individual scrotal circumference measures should be collected at this time to be included in the genetic evaluation.

Even if bulls have a breeding soundness exam (sometimes referred to as a BSE) closer to sale time, only scrotal measurements taken between 320 and 440 days of age are used for predicting the scrotal circumference EPD.

Ultrasound data

While it may take place on a different day, ultrasound data must be collected in the yearling age window. Carcass ultrasound data allows the opportunity to evaluate ribeye area, rib fat, rump fat and percent intramuscular fat. These measures are used as indicator traits for true carcass measures obtained from harvested animals.

For breeding animals, carcass ultrasound is the best obtainable measure for assessing carcass potential on the individual. As harvest data is available on progeny, those records are also included in the estimation of carcass EPDs.

For carcass ultrasound data, bulls must be scanned between 320 and 440 days of age, and heifers between 320 and 460 days of age. Scan weights must be taken within seven days of the technician's visit. Contemporary groups for ultrasound are based on the weaning contemporary group, so the submission of weaning weights is required for ultrasound data to process.

Foot scoring

The youngest an animal can be scored for claw and angle is yearling time. For many, this is the last time young bulls will be with their contemporary group to have scores included in the genetic evaluation. One person should score all animals in a group for consistency. Animals must be scored prior to any hoof trimming. It is important to score the feet as they naturally are, not how they can be shaped. If culling, score animals prior to culling.

Foot scores should also be recorded on mature animals. Females remaining in the herd can be scored on an annual basis and the scores collected over her lifetime can be used for better predictions.

Docility scoring

Yearling docility scores are used to predict differences in docility in the population and should be collected in the yearling age window. Animals are scored on a 1-to-6 scale, and one person should score all animals in a group for consistency. These scores are designed to evaluate disposition differences when processing animals through the chute, including how animals enter, exit and react while being handled.

DNA collection

Whether or not you choose to DNA profile your animals, having a DNA sample on hand for future testing is a good idea. Whether it would be used to sire-verify a commercial customer's calves in the future, or a female becomes a donor and her calves need parentage SNPs to be registered, it is good to have access to a sample.

If you plan to genomic test your sale offering, remember to submit your samples a minimum of four weeks prior to the sale book deadline to allow time for processing.

Genetic predictions increase in accuracy as more information, from phenotypes to genotypes, is provided on an animal. Data collection and submission takes time and effort, but adds value by providing the best possible data for the genetic evaluation. Give yourself and your customers an advantage in mitigating future risks while making selection decisions by maximizing the information available. AJ

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