Relevant Research

Genetic discovery and accessing data.

*by **Shane Bedwell,** AHA director of breed improvement and COO*

Meaningful genetic benchmarking and progress requires accurate collection of relevant data. That's true whether the desired information relates to known traits or new ones.

Consider the pioneering collaborative research project being conducted by the American Hereford Association (AHA), Colorado State University and AgNext. Goals of the research include documenting genetic differences for traits related to greenhouse gas (GHG) emissions and nitrogen excretion. Data amassed through AHA's Whole Herd Total Performance Records (TPR™) and the National Reference Sire Program (NRSP) make this research possible.

The AHA has collected individual feed intake for more than a decade from calves produced in the breed's mainstay NRSP herd, Olsen Ranches, Harrisburg, Neb. Feed intake units were upgraded at Olsen Ranches this summer. In-pen weighing systems were also installed, enabling collection of individual water intake and daily partial body weights. Individual methane emissions are collected via GreenFeed systems, which were installed when the collaborative research project began last year.

Results from the AHA project so far confirm that sire differences account for a significant amount of variation when it comes to individual cattle methane emissions and nitrogen excretion. Based on early assessment, these traits are moderately heritable, similar to weaning weight.

All of this suggests individual cattle methane emission and nitrogen excretion can be reduced through genetic selection and that selection tools can be constructed for that purpose, be it an expected progeny difference (EPD), selection index or something else.

These units at Olsen Ranches, Harrisburg, Neb., collect individual methane emissions for the collaborative research project between the AHA and Colorado State University.

Helping learn more about late-day feedlot mortality

Cattle producers have long associated bovine pulmonary hypertension (BPH) in cattle with high altitude — typically 6,000 feet and higher — and High Mountain Disease (HMD), also referred to as brisket disease. In simple terms, the pulmonary arterial pressure (PAP) of affected animals is abnormally high. The right side of the heart works harder to push blood against the pressure, PAP increases and so on until the heart can fail.

Increasingly, BPH is also being found in feedlot cattle at lower elevations, dying late in the feeding period. Much remains unknown. What is known is that heart scores of those succumbing to the malady are higher than those of healthy animals.

Hearts are scored after harvest using a scale of 1 (normal) to 5 (excessively abnormal). Heart scores of 3-5 are most commonly associated with BPH.

Industrywide, it appears 13-14% of feedlot cattle have heart scores of 3-5. Based on 1,110 heart scores collected from fed animals in the Hereford Feedout Program, approximately 10% had a heart score of 3-5.

MyHerd offers convenient data access

Commercial users of Hereford genetics and Hereford breeders have accessed data, such as individual animal EPDs, pedigrees and breeder information through the HerfNet system. Now, producers have even more searching power at their fingertips with the MyHerd system, which replaces HerfNet on Dec. 1. MyHerd is already up and running.

"I use the new search feature to make lists of specific groups of cattle and the EPDs stay current as I enter weights, DNA gets processed, etc.," explains Emilee Holt, NJW Polled Herefords, Decker, Mont. "With the ability to turn columns on and off for everything in a search, I can now look up exactly what I want to see and sort the columns even further, which will save me a lot of time."

Users unfamiliar with the new search tools on *MyHerd.org* can find tutorials on the *Hereford.org* website by clicking the "EPD Search" button in the upper right-hand corner of the screen and then selecting the option "Take Me to the Resource Page." There is also a previously recorded webinar with active demonstrations of new features.

Commercial users who are not members of the AHA can log on as a guest user at *Myherd.org/web/USHF/AnimalSearch/List*. AHA members can log in with their *MyHerd.org* account to take advantage of even more search options.

If you have questions about using the system, please contact AHA customer service representatives at 816-842-3757. **BA**