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North America

From Results to Action: Applying HD 50K for Angus Technology

Transforming HD 50K results from paper to breeding decisions is the critical step that impacts selection, mating and the value of resulting progeny. When taking decisive action, HD 50K-driven Molecular Value Predictions (MVP[®]) for 13 traits and an economic index provide a new level of clarity for progressive breeding programs.

HD 50K for Angus empowers more confident and comprehensive selection and mating decisions says Pfizer Animal Genetics Associate Director, North American Technical Services, Dr. Kent Andersen. He says that while seedstock producers may choose to emphasize different traits, there are two significant ways producers are turning HD 50K results into action:

1) **Risk management.** For young or relatively unproven animals—such as yearling sires or sires with only small numbers of progeny—HD 50K MVPs supplement lower accuracy expected progeny differences (EPDs) and help to more confidently identify genetically superior animals for more aggressive propagation in the herd's breeding program. MVPs also help identify sires that should be used more strategically and/or sparingly,

based on less favorable predictions for specific traits. Given that most females typically have low accuracy EPDs, HD 50K MVP information can drive a lifetime of better mating decisions, as well as aid in the selection and mating of elite females in embryo transplant programs.

2) **Knowledge about additional traits.** A portion of the traits currently described by MVPs—average daily gain, dry matter intake, net feed intake and tenderness, as well as the beef industry's first genomic economic selection index, \$MVP^{FL} (feedlot)—are not currently evaluated with EPDs. HD 50K MVPs enable more comprehensive selection for these economically important traits that are often difficult, time consuming and costly to measure.

Real-life Application

These two approaches have been put into practice by producers as they select potential herd sires and mate females. Willie Altenburg, Beef Marketing Manager with Genex Cooperative, shares that HD 50K results have been especially important to customers as they make bull selections.

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From the Expert

DR. KENT ANDERSEN
PFIZER ANIMAL GENETICS



How do I get started with High-Density (HD) 50K for Angus?

I'm often asked by breeders "Which animals should be tested with HD 50K?" Strategically testing key animals has the potential for immediate *and* long-term benefits.

Test important sires and sire prospects. Influential A.I. sires are the drivers of genetic improvement and seedstock success:

- Sires with significant numbers of calves and daughters in your herd. MVP[®] for influential sires identify genetic strengths and weaknesses propagated in offspring. For these sires testing is especially valuable for hard-to-measure and time-consuming traits, including feed intake, tenderness, carcass merit, maternal calving ease and milk.
- Unproven young sires and cleanup sires with low accuracy. MVPs

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Female Testing Takes Long-term Approach

Taking advantage of multiple resources to determine the best females within your herd is critical to identifying and propagating leading genetics. HD 50K for Angus allows you to learn more about your females at a younger age and utilize this information to meet your herd's breeding and management goals.

Low Accuracies with EPDs

In her lifetime the average female will produce five to seven calves. With so few offspring—compared to bulls that can have hundreds or thousands of progeny—the accuracy of her expected progeny differences (EPDs) is relatively low.

“Historically, we have had limited genetic information on the maternal side because the dam produces a relatively small number of offspring. Until now that has meant that breeders have had their hands somewhat tied. After all, you can only make decisions based on the information available,” says Dr. Mark Allan, Pfizer Animal Genetics Associate Director of Global Technical Services. “Because of this limitation, producers make decisions with less precision resulting in greater variation in expected outcomes.”

“HD 50K is the ticket to the future of the producer's breeding program and can have a much greater impact on the herd when incorporated into the female selection process.”

— Don Nicol

Investing in the Future

Because of the low accuracy of female EPDs, raising females is a big investment in both time and money. “When you consider that raising a female is over a three-year endeavor—from the time she is conceived and born to the time she produces offspring old enough to merchandise—it is critical to your bottom line that you capitalize on her genetic merit as soon as possible. Other than EPDs and genomic predictions, there are no other ways to know if keeping her in your herd is in the best interest of your business,” says Dr. Allan.

HD 50K technology allows you to gather more reliable information earlier in life, equipping you to make critical selection and mating decisions. The technology can also be used to help determine which females might be flushed, which ones will mother the next generation and which animals will be sold.

Dr. Allan notes that breeders are ultimately trying to move their population forward utilizing the genetics that best match their individual goals and those of their customers. “How ranchers are making selection decisions is the key. Using HD 50K leads to a lifetime of better mating decisions.”

A Long-term Vision

While the result of a mating selection can be seen in the short term, the long-term results of these decisions may take three to four years to be fully realized.

“Testing with HD 50K helps us look to the future as we select the elite females in the herd,” explains Don Nicol, a consultant who works with Pfizer Animal Genetics in Australia. “The industry will look vastly different in five to 10 years and HD 50K can help select the elite females that will



ensure genetic improvement on a multi-trait basis for the future. To be at the forefront of your breed will require elite females with a full EPD and HD 50K profile, as well as proven maternal performance and productivity in the herd.”

While today's female selections may not result in immediate return, the return on investment will be seen over time and into future generations. “If we only test bulls with HD 50K, we can be missing the target,” explains Nicol. “HD 50K is the ticket to the future of the producer's breeding program and can have a much greater impact on the herd when incorporated into the female selection process.”

News from Around the Globe

NORTH AMERICA

Bovi-Shield GOLD® FP® 5 L5 HB Now Available in 5-Dose Vial

Product line offers 5-way viral protection and prevents Lepto hardjo-bovis

Producers have a new vaccination management option with the introduction of a 5-dose vial for Bovi-Shield GOLD® FP® 5 L5 HB. Pfizer Animal Health now offers the vaccine in convenient 5-, 10- and 50-dose vials. Bovi-Shield GOLD FP 5 L5 HB helps provide superior protection against five major viral pathogens: IBR, PI₃, BRSV, and BVD Types 1 and 2, and prevents Lepto hardjo-bovis.*

“It is important for each producer to work with his or her veterinarian to develop an individualized vaccination program that protects cattle from Lepto hardjo-bovis and other important reproductive diseases,” says Glenn Rogers, DVM, MS, DABVP, Veterinary Operations, Pfizer Animal Health. “The new 5-dose option gives producers expanded flexibility within their vaccination programs.”

For more information on Bovi-Shield GOLD FP 5 L5 HB, producers should contact their local veterinarian, animal health supplier or Pfizer Animal Health representative.



*LABEL INDICATIONS: The Bovi-Shield GOLD line and PregGuard GOLD® FP® 10 are approved for use in pregnant cows and calves nursing pregnant cows, provided the cows were previously vaccinated according to label directions with any Bovi-Shield GOLD FP or PregGuard GOLD FP 10 vaccine. Please see label for complete details.

AUSTRALIA

New Australian Team Members Offering Customers More Support

The Australian sales, technical service and customer service teams have recently been expanded to provide timely and efficient service to our customers.

Many of our customers will already know Terry Farrell, who will be covering southern QLD and northern NSW. Deb Collins will also be familiar to many customers. She will continue to be based in southern Australia and will cover VIC, SA and WA. Two new faces are Steve Parker, covering NSW, and Charlotte Fox, who will look after customers in northern QLD and NT.

Matias Suarez also joins Pfizer Animal Genetics as Technical Services Manager for Australia. Matias has an extensive background in livestock genetics and spent the last five years with BREEDPLAN®.

In customer service Kelly McGrath, Kimberley Coughran and Andrea Daley have joined the team. Some customers may know Andrea from her previous role with the University of Queensland.

NEW ZEALAND

New Zealand Introduces HD 50K for Angus

Pfizer Animal Genetics is excited to be providing Angus HD 50K, the first commercially available test providing MVP® derived from a DNA-marker panel with more than 50,000 DNA markers. Two things are for certain:

- Technology is moving fast and holds much opportunity.
- The onus is on the technology providers to help breeders and commercial farmers alike deal with new technologies and exploit all available opportunities.

If you are a commercial bull buyer and want to learn more about how DNA technology will positively influence your breeding programme, contact us at www.pfizeranimalgenetics.co.nz. Influential innovation is but one ‘click’ away.

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“Producers are reviewing and utilizing the HD 50K MVPs available for young sires in our lineup,” explains Altenburg. “The information on young sires is being utilized to get a better grasp on how they can fit into a mating program, including their strengths and weaknesses. A lot of our customers are utilizing the results as they select A.I. sires for their herd.”

Altenburg also says leading seedstock customers are utilizing HD 50K MVPs to speed up genetic progress as they select the next generation of parents.

“Seedstock producers are utilizing HD 50K to select cutting-edge genetics within their herd, both on the bull and female side of the pedigree,” says Altenburg. “HD 50K results help the operation more effectively select these animals to achieve greater genetic progress faster.”

From the Expert: Getting Started with HD 50K for Angus

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help manage selection and mating risk associated with less-proven EPDs. The technology enables genetically superior young sires to be more confidently identified and more widely propagated earlier in life, speeding genetic improvement.

Test important cows and replacements. Influential cow families that have produced or hold the potential to generate impactful sons and daughters are primary candidates:

- **Donors and donor prospects.** Testing these females helps mitigate genetic and financial risks associated with investments in embryo and E.T. calf production, contributing to smarter, more profitable flushes.
- **Promising young cows and replacements.** By more accurately determining the genetic merit of females earlier in life, their potential to produce valuable seedstock may be more fully exploited through strategic mating decisions.