DNAge

Pfizer Animal Health
Animal Genetics

In this issue …

July 2009 | Volume 2, Issue 2 North America

DNA-marker assisted management: Putting results into practice

GeneSTAR® MVPs™ (Molecular Value Predictions) offer producers new insight into the genetic makeup of key animals in their herd so more precise selection decisions can be made for traits of economic importance. GeneSTAR MVPs utilize a 56-marker panel to predict the genetic potential of an individual animal for feed efficiency, marbling and tenderness with an associated reliability value.

Results into action

"In today's economic environment having as much useful information as possible to make well-informed breeding decisions is crucial for success," says Dr. Mark Allan, associate director of global technical services with Pfizer Animal Genetics. "GeneSTAR MVPs provide an additional tool that complements the genetic selection tools already in use. To adequately implement DNA-marker technology results, it's imperative producers understand the information MVPs provide so they can effectively apply results."

Marker-assisted selection

MVPs allow producers to make selection decisions when an animal is very young for traits that are difficult or costly to measure, or that can only be collected much later in life. Producers can make better-informed decisions at all levels of the beef supply chain using a combination of existing selection tools, management information and GeneSTAR MVPs. For example, MVPs can help identify young bulls for progeny testing and heifers for herd replacements when all other factors appear to be equal.

Selection further along the supply chain

Increasingly, the MVP technology will enhance profitability in the backgrounding and feedlot phases of production. The MVP for tenderness will allow producers to participate in a branded program that uses tenderness as a selling point. The MVP can be part of selection criteria used early in the animal's life to determine if it will fit the branded program guidelines. While still early, Pfizer Animal Genetics R & D is clearly focused on delivering the right products right to the consumer.

Committed to MVP results

"We're committed to helping producers make sense of and fully implement GeneSTAR MVP results derived through marker-assisted technologies,"

continued on back page

Producer Profile

As a leading Charolais ranch, Stipe Charolais of Moise, Montana, began using GeneSTAR technology five years ago to make more-informed breeding and management decisions. Today, GeneSTAR MVPs are providing more information than previously available, allowing the Stipe family to properly promote their bull sales and reap greater benefits.

From the Expert

DR. RONNIE GREEN
PFIZER ANIMAL GENETICS

How can I best utilize GeneSTAR MVP results in designing and improving the management of my herd?

GeneSTAR MVPs provide more information about individual animals, and more information means greater opportunity to enhance genetic progress. MVPs can help make decisions when all other selection criteria are equal, or when little information is available. For example, animals can be tested at a very young age for marbling and tenderness to determine if they qualify for a branded program.

GeneSTAR MVPs: The next frontier in beef cattle refinement

Early adopters within the beef industry include those who accept and utilize the latest technology for precise decision-making. When it comes to identifying genetically superior animals Sam Johnson of Summitcrest Angus, an early adopter in his own right, has relied on collecting, understanding and utilizing data to create an elite seedstock herd representing some of the most sought-after genetics in the world.

Summitcrest Angus was founded in 1938 by Sam's grandfather when he purchased a small ranch in Ohio. The family later expanded their herd by purchasing ranches in Iowa and Nebraska. Today Summitcrest Angus encompasses four ranches in three states with over 2,000 registered Angus cows. It is also a founding member of ORIGen, a producer-owned commercial bull stud in Billings, Mont.

In 1987 Summitcrest Angus expanded its Nebraska ranch to include a feedlot, where performance testing and carcass data collection is handled. This provided the ranch with more information than existed previously on individual animals to speed genetic progress within their herd.

As industry innovators, Summitcrest Angus has received some of the most prestigious industry awards, including the Beef Improvement Federation Seedstock Producer of the Year, Certified Angus Beef LLC Commitment to Excellence, the NCBA Cattle Business of the Century and the NCF Beef Industry Vision Award.

A new era of information with DNA-marker technology

Continually searching for new tools to provide even more information about their herd, Summitcrest Angus began using DNA-marker technology in 2004 to learn more about economically relevant traits.

"We identify real industry value for our customers using the GeneSTAR technology ..."
Sam Johnson

"GeneSTAR® results were exciting because we had the opportunity to manage traits that we were not able to manage before," says Sam. "We identify real industry value for our customers using the GeneSTAR technology, which translates to a higher quality and more efficient product for producers and consumers."

With the release of GeneSTAR MVPs™ this past spring, Sam explains that the expanded 56-marker panel shows that the technology is continuously improving and providing more and new opportunities.

"GeneSTAR MVPs validate the work we've been doing over the past 25 years with carcass data collection and performance testing," says Sam. "It's also providing an opportunity to improve our seedstock herd further and help us accumulate more favorable alleles to advance our breeding program."

As the marker panel has increased in size, so has the number of animals tested with GeneSTAR MVPs at Summitcrest Angus. Since they first began testing, Summitcrest Angus has tested more than 3,000 animals,

including 100 percent of their bulls sold through annual sales over the past three years.

"We are now able to use an animal's genotype to predict the specific phenotypes of its offspring in an effort to produce the types of cattle our customers need to be successful in their businesses," Sam says.

Advice for other beef producers

For other producers considering the use of genomic technology, the first decision is to choose the company that will supply the DNA-marker technology product, says Sam.

"I will continue to work with Pfizer Animal Genetics because of their commitment and dedication to research and development," Sam explains. "Pfizer is going to have more innovation and product development over the long term and I'm impressed with their investment in economically relevant traits as well as their product integrity."

The genomic future looks bright

As Sam looks to the future of DNA-marker technology, he excitedly shares how his customers are using results today, and how new markers may mean even greater opportunities for the beef industry as a whole.

"I've been amazed to see the opportunity GeneSTAR and now MVPs provide our customers to help identify added value in niche markets. Our customers are buying a genetic profile that matches their marketing goals, something they couldn't do otherwise with generic cattle."

And for this innovator, one idea continues to ring true: more information means more opportunity.

"Whether it's improved feed efficiency in the feedlot or more tender grass-fed beef, knowing more about these traits is providing our customers with an advantage in delivering a high-quality product to consumers," says Sam. "By finding animals that fit the niche markets, producers will be rewarded for taking the associated risks. I think this is as exciting an innovation as any in the beef industry."

"GeneSTAR MVPs validate the work we've been doing over the past 25 years with carcass data collection and performance testing."
Sam Johnson

SAM JOHNSON
SUMMITCREST ANGUS

Pfizer Animal Health
Animal Genetics

P.O. Box 134
Hartland WI 53029-0134

DNA-marker assisted management: Putting results into practice

continued from front page

adds Allan. "This is a great opportunity for producers to make decisions regarding the grouping of animals according to management needs or the selection of genetically superior animals to serve as parents for the next generation."

"DNA-marker technology will play a role in the future of the beef industry and we're just at the beginning," says Allan. "The earlier adopters of genomic technology have the opportunity to gain a head start on their competitors and improve genetic progress at a faster pace."

The Pfizer Animal Genetics Technical Services Team is dedicated to helping you incorporate the latest in genomic technology and effectively manage each animal. To learn more about GeneSTAR® MVPs™ visit our Web site at www.pfizeranimalgenetics.com or contact us at 1-877- BEEF DNA.

An update on genetic defect testing

Pfizer Animal Genetics is now accepting samples for the genetic defects Neuropathic Hydrocephalus (NH) and Osteopetrosis (OS). Tests for NH and OS were created through industry collaboration, and our testing procedures have been validated by Dr. Jon Beever. Pfizer Animal Genetics has been approved by the American Angus Association as an NH-testing laboratory and the Red Angus Association of America as an OS-testing laboratory.

NH is a lethal genetic defect that affects Angus and Angus-influenced cattle. OS is a lethal genetic defect that affects Red Angus cattle.

Please visit www.pfizeranimalgenetics.com for additional information, details about sample submission, or to download order forms or contact Customer Service at 1-877-BEEF DNA (1-877-233-3362).