ULTRASOUND – Proven, Timely and Well Understood

It is what is under the hide that counts

Over the last 20 years the beef industry has gone through significant structural changes that have dramatically changed the profit driver matrix in the beef industry. Over this time, the industry has moved from an almost exclusively cash market to one that is now value-based, so the need for cattle to have the potential to excel in end product characteristics has become paramount. This means whether commercial cow-calf producers are selling reputation feeder cattle for a premium or retaining ownership in their calves through the feedlot, they must breed and market cattle that have proven carcass potential. This has put a spotlight on seedstock producers to supply genetics to their commercial customers with the potential to excel in carcass traits, and ultrasound plays a key role in accomplishing this goal.

The Centralized Ultrasound Processing Lab

CUP

The Gold Standard®

www.cuplab.com

Carcass Quality is a major profit driver in the Feedlot

The data from Decatur County Feed Yard, which is a 40,000 head capacity custom lot that has tracked 200,000 head through their system, highlights the need for carcass excellence. When they objectively analyzed their data, they found that the top profit drivers in the feed yard are feed efficiency and grid performance (Yield and Quality Grades) followed by carcass weight and animal health.

Dan Dorn, Oberlin, Kansas,
Supply Development, Decatur Co Feed Yard

"We utilize ultrasound to sort cattle into outcome groups shooting for a constant carcass backfat at processing. We cannot control how much ribeye area an animal has or what marbling potential an animal has after it is in our feed yard. Once a producer feeds cattle and finds a baseline for their herd, finding out where the strengths and weaknesses are in their cattle, we can work with the cow-calf producer to change their herd's genetics and management to maximize profit. This often means the need for improvement for carcass potential. To do this we rely on the most accurate carcass genetic predictions possible in the form of EPDs (expected progeny difference) and indexes to make the needed changes."

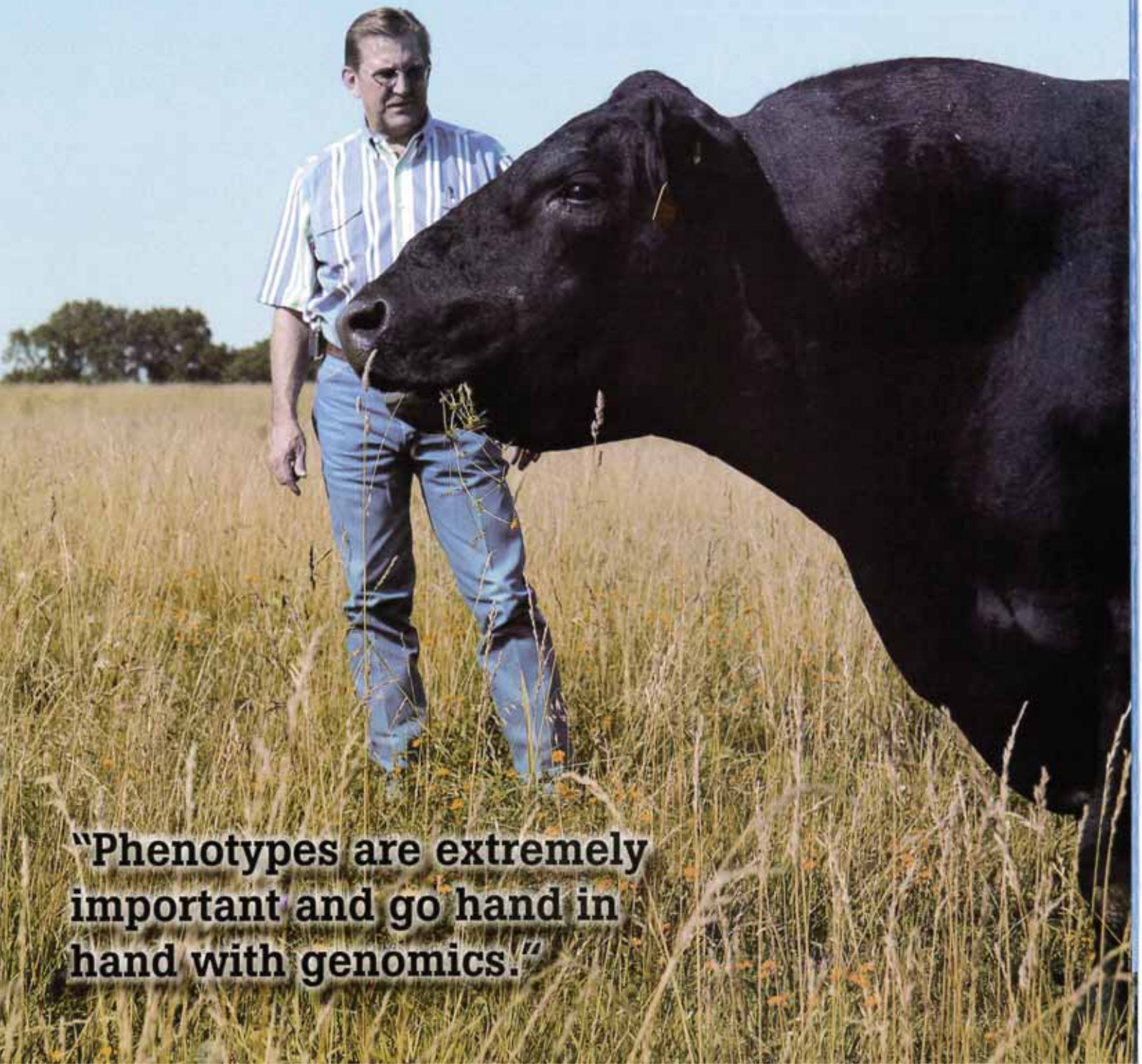
"The target for seedstock at Nichols Farms has not varied in the last 50 years, and that is to produce commercial calves that are Choice, Yield Grade 2. Although we use all the tools available to us, we rely heavily on ultrasound to hit this target. This is especially true because we use a lot of yearling bulls and feel that the farther you get from the genomic training population, the lower the efficacy of the panels. We also feel that ultrasound is more accurate than carcass marbling because ultrasound measures total intermuscular fat and not just the fat that can be seen with the human eye. We also find the CUP software does an outstanding job of finding outliers, which we are looking for to move our program forward. We are very excited about the future of ultrasound because people with any herd size can take advantage of the technology. It also allows us to select for heavy muscled, high marbling cattle with optimum fat thickness."

Nichols Farms is a leading performance herd of purebred Angus, Simmental and composites marketing 800 bulls a year, and they rely on ultrasound to identify outstanding carcass potential genetics.

Dave Nichols, Performance Pioneer
Nichols Farms, Bridgewater, Iowa, Past President of American Simmental Association, Past President of Beef Improvement Federation, Pioneer Award BIF, President of National Beef Cattle Evaluation Consortium

Ben Eggers is a leading voice in the production of performance Angus cattle. According to Ben, "We use all the tools available to us to produce Angus cattle with outstanding carcass potential. We scan every bull and female in a contemporary group, and also collect actual carcass data and use genomics. It is important to remember that phenotypes in the form of ultrasound are necessary to validate and continually retrain genomic panels. We feel that phenotypes in the form of ultrasound are extremely important and go hand in hand with genomics. We find genomics most useful on cattle that are outside of contemporary groups and on certain yearling sale cattle. We also find that a portion of our customers want to see the ultrasound phenotypes when making purchasing decisions. We are very pleased with the service we receive from the CUP Lab™ and their turnaround time when interpreting our ultrasound scans."

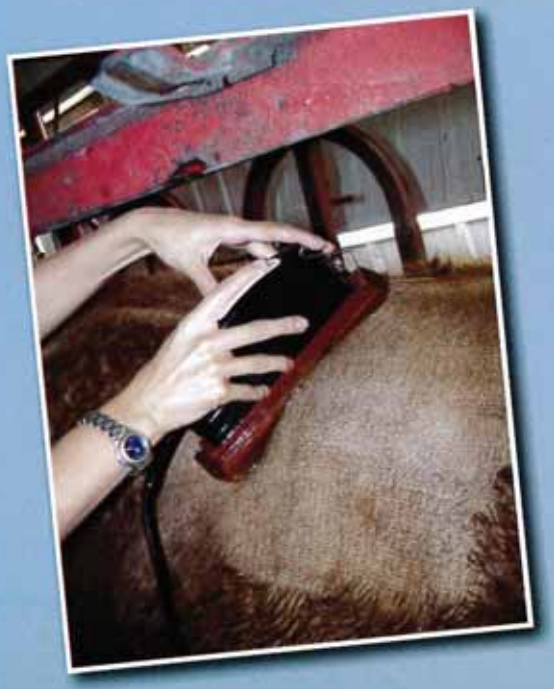
Ben Eggers,
Sydenstricker Genetics, Mexico, Missouri,
Past President of American Angus Association,
Past President of Beef Improvement Federation



"Phenotypes are extremely important and go hand in hand with genomics."

"In terms of collecting data, we use all the tools but rely most heavily on ultrasound, and we have been getting our best results from the CUP Lab™ in terms of accuracy."

Lee Leachman
Leachman Cattle of Colorado, Past President or Red Angus Association of America, Board Member of Beef Improvement Federation



Seedstock producer Lee Leachman echoes that quality is a major driver in the profit matrix, and his company works with indexes to simplify the selection process. According to Lee, "Our indexes take into account all segments of the industry, from reproduction and cow maintenance through feed efficiency and value based marketing. All our models show that end product is one of the major profit drivers." However, how to improve these traits can vary widely. "Carcass data is expensive to gather and the information comes two years too late. We also use a lot of young sires, so we feel that collecting ultrasound phenotypic data instead of DNA is critical. EPDs based on ultrasound are in general a very good predictor of end product value as has been shown at the US Meat Animal Research Center. With that said, we feel that to build a profitable herd, producers should use indexes to simplify selection, and the indexes must contain carcass as a major component. You simply need all the phenotypic data possible based on ultrasound to prove sires, and we are in the business of marketing the most predictable genetics possible to our commercial customers. You also need ultrasound and other phenotypic data to retrain the genomic panels on a regular basis. Therefore, I feel it is a major mistake for seedstock producers not to continue to collect ultrasound data."

Mark Henry, President
The CUP Lab™, LLC
Managed the lab since May 2001
Original member of the Ultrasound Guidelines Council formed in 2001

"We find the outlier cattle better than anyone! That is what you want if you are trying to select breed and industry changers for marbling."

Having been in the ultrasound business since 2001, we have seen millions of ultrasound images come through our lab. Each image is interpreted one at a time, all in an effort to describe each animal with regard to their specific carcass traits. All of those images allowed us to learn and grow over time to the point where we abandoned old software in favor of new and improved models. Software models that more accurately identified Percent Intramuscular Fat (IMF or marbling) when compared to the hanging carcass.

Put simply, The CUP Lab™ has the best software to describe IMF in live cattle available today. How did we do it? We worked at it and we learned over time what the problems were with other prediction software. We noticed that the software models we used in the beginning years of The CUP Lab™ did not spread the data very well. In other words, it tended to lump all the cattle in the middle of the IMF range rather than identifying the true outliers. We then developed new models to more accurately describe the low, the high, and all the cattle in between. As a breeder, the end cattle are exactly the ones you need to identify. Those outliers, both low and high, help you cull and select your breeding animals.

As you can see, using The CUP Lab™ with our exclusive software, gives you the best possible ultrasound data for you to make your selection decisions.

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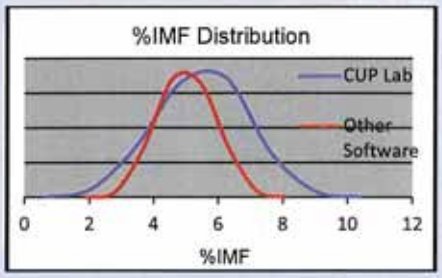
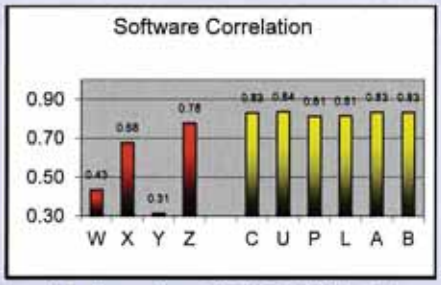
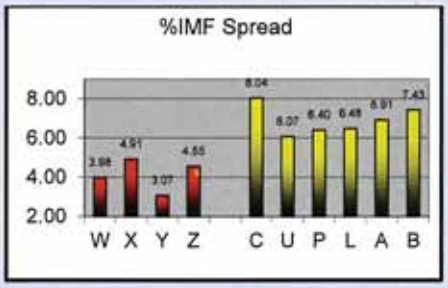


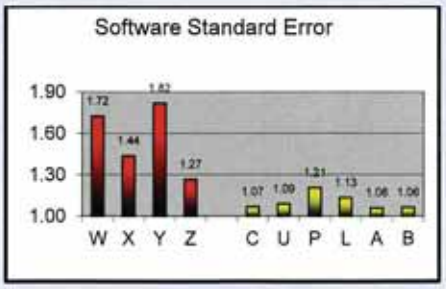
Graph 1 depicts our software when compared to our competition. Notice the dramatically larger spread that gives you more meaningful difference between animals.



Graph 2 shows how CUP Lab™ IMF software models more accurately correlate to carcass data when compared to competitors. Spreading the data is great, but you need to be accurate too. Each model depicts a different ultrasound machine and frame grabber combination.



Graph 3, %IMF Spread indicates the range in the %IMF predictions. Again, enabling the accurate identification of outlier animals with either high or low levels of marbling.



Graph 4 is perhaps the most important of all. It demonstrates error of software predicted %IMF when compared to actual carcass %IMF. Lower error means a more accurate prediction.