



## UGC technician answers commonly asked questions about collecting ultrasound data.

by **Brett Setter**, UGC ultrasound technician

When I first became an Ultrasound Guidelines Council (UGC) ultrasound technician I wanted to have a company slogan or phrase that exemplified what it means to scan cattle. I wanted it to be short, sweet and to the point. I thought about it for a few weeks.

One day my wife and I were driving, and she came up with a simple catch phrase that captured the entire ultrasound process in three simple words — “scanning your future.” It was perfect, and I’ve used it as my business motto ever since.

Cattle producers plan for the future. They breed for it, they cull for it and they come to depend on it. Let’s face it; what they do today in their herds has implications for years to come.

The decisions they make must be well thought out and fit into the goals of their individual program. With all the factors to consider, it’s sometimes hard to make heads or tails of what direction to go.

The daunting task of bull selection every year is a frustrating process for many. The endless hours of studying pedigrees and crunching “numbers” is something producers endure. And how about all the expected progeny differences (EPDs) to consider? How do those fit in a program and how can they help improve the overall quality and marketability of cattle?

The American Hereford Association (AHA) now has 11 different EPDs and four \$Profit Indexes that are considered management, breeding and selection tools. Each one has its own merit, and when consistently used in a program, changes can be made in a relatively short period of time to achieve many individual goals.

Whether you are trying to reduce birth weight, increase yearling weight or improve carcass attributes, using EPDs can certainly assist in reaching those goals.

During the past few years, more and more purebred and commercial producers have been paying attention to one particular set of EPDs — ultrasound. Ultrasound measurements are indicators of the grade and quality of beef an animal possesses.

Just like selecting bulls for low birth weight or females for udder quality, ultrasound characteristics are heritable traits that are passed from generation to generation. Thus the demand for having and using scan data has gone from a select few to the mainstream of cattle production.

Since its establishment in 1998, the National Centralized Ultrasound Processing (CUP) Lab in Ames, Iowa, has processed ultrasound data on more than 1 million head of cattle. According to Mark Henry, CUP Lab director of operations, the number of cattle scanned and processed every year continues to increase by 10-15%. In 2006 alone, Mark estimates that 15-20% of the cattle scanned were

from ranches that haven’t collected ultrasound data previously.

It’s no longer just the progressive breeders who are doing it. Producers are utilizing ultrasound technology and using it for genetic evaluation — EPD calculations.

Knowing the genetic makeup of your herd and utilizing the scan data and EPDs can help improve your program. That’s why many breeders continue to ultrasound year after year. It’s a breeding and selection tool and, for some, a culling tool.

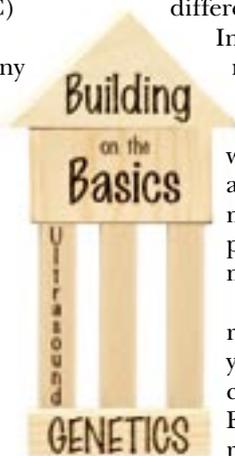
So what are the benefits of scanning your cattle and how do you go about getting it done? How can you use the data to change the future composition of your cattle? Here, I’ll tackle those and a few more of the common questions I’m asked by new and old breeders alike.

### For what traits do you ultrasound?

There are four objectives we focus on when scanning cattle — %IMF or intramuscular fat, rib fat, rump fat, and the total ribeye area or size.

**%IMF** – Not to be mistaken for tenderness, %IMF is directly related to the overall juiciness and tastiness of the beef. This data allows you to make solid breeding decisions to help improve the quality of beef you’re trying to produce. Collected parallel to the spine over the 12th and 13th rib, %IMF EPD is established from this set of data. The heritability estimate for this trait is .26.

**Rib fat** – Rib fat is a solid indicator of the end or retail product. The larger the fat cover



is, the lower the percent will be on the yield grade. A percentage of this measurement goes into fat EPD and the heritability of this trait is slightly higher at .30.

**Rump fat** – Collected between the hooks and the pins, this measurement is used in calculating the fat EPD. Just like the rib fat, rump fat affects the overall grade. Since every ranch is operated differently, breeders should determine what levels of fat they have and want in their herd.

**Ribeye area** – This image is collected between the 12th and 13th rib and is normally the most challenging image to collect. The area is measured in square inches, thus giving a total ribeye size. The ribeye EPD is established from the image taken, and the heritability factor is .26; therefore, it's very likely that this trait will be transferred to progeny in a short period of time.

### **Why should I ultrasound my cattle, and how can I use the information in my program?**

For starters, the information is used to calculate EPDs. Having ultrasound data is important in today's marketplace. Ultrasound information gives producers marketing tools and allows them to plan their future breeding program.

Breeders should focus on EPDs, not actual data. Actual and adjusted data are too dependent on the management, field tech, lab tech and software used to interpret them. Focusing on unbiased data and EPDs gives the breeders the best chance of leveraging the data to their advantage. The scan information can also be used to make sound breeding decisions regarding heifers that can help improve traits that are lacking or behind breed average.

Many breeders are using ultrasound to cull the bottom end of their replacement females that are not meeting the carcass goals of their operation. Remember, all the traits scanned are very heritable; thus, vast improvements can be made in only a few breeding seasons.

### **Who can ultrasound my cattle?**

Only certified UGC ultrasound technicians can scan your cattle if you want the data utilized in genetic evaluation. Both technician and equipment must be certified every two years by the UGC to remain active. A full list of technicians can be found on the CUP Lab Web site [www.cuplab.com](http://www.cuplab.com).

Using a technician that has experience and good references is always recommended.

### **When should I ultrasound my cattle?**

Cattle are scanned as yearlings and must be within the prescribed age limits set by the UGC. To qualify for Hereford genetic evaluation, calves must be scanned between 301-530 days of age. Thirteen months of age is a good benchmark to have as a goal, and it's easy to remember, but sale or breeding dates may dictate when to scan.

### **What facilities are needed to scan cattle?**

A full working squeeze chute is a must for normal range cattle, while show animals can normally be scanned in a fitting or blocking chute. A safe, grounded 110 outlet or a power generator is also needed.

### **What paperwork do I need prior to scanning?**

Breeders should receive a "barnsheet" after submitting weaning weights to the AHA. A full or partial list of your animals that are eligible for scanning will be on it. The barnsheet must accompany the images when the technician submits the data to the lab.

### **Do the animals need to be weighed, and can I use the scan weight as my yearling weight?**

All animals must be weighed within seven days of scanning. Using the scan weight as your yearling weight really depends on the breeder and the timing of the scanning session. If you ultrasound your cattle early in the scanning window, I would recommend bringing them back at a later date to collect the yearling weights.

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### **What should be the condition of my cattle?**

Under good management, your bulls should be gaining 2.5 or more lb. per day. Rarely do I see Hereford bulls that are not gaining fast enough to be in adequate scanning shape. However, heifer conditions do vary from ranch to ranch. I recommend they be gaining 1.5-2.5 lb. per day and be in solid "breeding condition" on scan day.

It is believed that having your bulls and heifers gaining adequate weight will help them express their genetic potential for REA, Fat and %IMF. You can over feed

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and get animals too fat. This can negatively affect milk production and reproduction.

**Do the animals need to be clipped in the scanning areas?**

Yes. Clipping allows for close contact between the scanning probe and the animal's skin. Clipping helps clear the area of dirt and debris and gives the technician a nice clean surface to work with. Evidence has shown that clipping greatly improves image quality, thus giving you more accurate results.

**How long does it take to scan an animal?**

Quality is everything when it comes to image interpretation. Some cattle scan very easily while others can be challenging. But under normal conditions, you can expect each animal to take 2-5 minutes to complete.

**Does the technician measure or interpret the ultrasound results?**

No. All UGC technicians must submit the images to a central ultrasound lab. The lab has certified interpreters on staff, so we leave interpretation to them. Beyond an experienced staff of interpreters, the most important service a lab offers is an unbiased interpretation of your images. Just like your scale used for measuring weights, your lab shouldn't be biased by who owns the cattle, what breed they are or who scanned them.

**How long does it take to get scan results?**

The images are sent to the lab by the technician. The lab then forwards the results to the breed association, and it sends the final results back to the breeder. From start to finish, it usually takes seven to 14 days to complete the process.

**How long in advance do I need to contact a technician to set up a scanning date?**

During the scanning season, schedules fill-up quickly. If you need the data back for marketing purposes or for your sales catalog, you would be wise to make an appointment as soon as you are aware of your need. In most cases, a few weeks notice should be adequate.

**How much does it cost to scan cattle?**

Scanning fees vary. The location and number of animals scanned play a part in determining final costs.

One thing is sure. There are many tools out there for producers to utilize. Everyone has different goals, and the road to improvement can be different for each producer. But in the end, I've found there's always one common thread that brings all producers together. And it goes beyond any breed, pedigree or EPD. We are all trying to produce quality, marketable cattle. **HW**