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Carcass Ultrasound 101

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Accurate Data Means Dollars in the Pocket

Dr. Mike Tess and the UGC

“Our goal is to help improve economic opportunity for people in the beef industry using ultrasound – from technicians collecting the data to the breeder using the EPDs,” says Dr. Mike Tess, Executive Director of the Ultrasound Guidelines Council. Tess took the helm of the UGC last September, culminating a 21-year career as professor of Animal Science at Montana State University. “So far, so good,” he says of working with the UGC folks, and overseeing day-to-day operations.

Mark Henry, Director of Operations for the National CUP Lab™ & Technology Center, is pleased to see Tess take on the new role. “Dr. Mike Tess is a welcome addition to the UGC with his background in research and teaching. He has a scientific and common sense approach to that is very helpful to making the UGC a better organization,” says Henry.

Tess describes the UGC as the “gateway for ultrasound data,” a mission that places a high premium on accuracy, and one he feels privileged to shoulder. “Producers are making crucial breeding decisions based on the assumption this data is accurate,” he says. “It’s our job to make sure it is.”

In that vein, Tess says he sees oversight of the beef ultrasound industry as three-fold: field technicians, processing labs, and the breed associations; ensuring each is held to strict quality standards.

For field technicians, the UGC is *the* source for training and certification. “UGC certification enables the field technician to say ‘Yes, we know what we’re doing,’” explains Tess. To obtain certification, field techs undergo stringent training and testing to ensure they obtain valid images with a high level of quality and accuracy. “Consistency is key,” according to Tess. Certification must be renewed every two years and the UGC Board of Directors is committed to providing continuing education for technicians. Efforts to utilize new technology to make training more accessible are also under discussion.

At the lab level, the UGC concentrates on certification of lab technicians, who are held to the same standards as field technicians, and operations software. It’s an area where evolving technology provides ongoing challenges. “Labs are always looking at ways for technology to make them faster and more efficient,” says Tess. Operating systems, software, and electronic communication methods are always under development. “It’s the American way,” says Tess. As each new product or approach becomes available, it must be tested against actual carcass data to measure its consistency and accuracy. As Tess says, “It must predict what it sets out to predict.”

“It’s an expensive and time-consuming process,” explains Tess, with the expense borne by the lab. “But it must be statistically accurate or it isn’t usable. Again, the data has to be reliable.”

“The UGC serves a vital role in this process by giving credibility to the science,” says Henry. “Its validation of software, along with its certification of field and lab technicians, is invaluable to ultrasound.”



For Tess, the UGC's role as a pipeline for communication to the breed associations is just as important. EPDs must be based on accurate and reliable data, and must be calculated using approved and tested methodology. "For ultrasound to be beneficial to producers, the data used by the breed associations to compute EPDs must be as accurate as it can be," says Tess. "They're buying bulls and semen, and ranking females based on that data. Most don't understand the statistical methods used to create those EPDs; they take them on trust. It's imperative that all parties involved do everything they can to maintain that trust."

"There is competition among the breeds, among the labs and technicians, and among the producers. That's part of the capitalistic system we live in, where everyone is always striving to get better. It's up to the UGC to look after the common interests and maintain a level of standardization and quality," Tess explains. "Accuracy of the data shouldn't be something the producer worries about. He should be able to take that for granted."

Rapidly changing technology and scientific progress are concerns for the overall industry, and Tess is keenly aware of the pressure to keep ultrasound relevant and dependable. "There's a lot of heartburn and uncertainty in the ultrasound field right now," says Tess. "If ultrasound becomes obsolete, a lot of people lose their livelihoods."

From full-time field technicians, to labs that exist solely for that purpose, gathering and processing ultrasound images and data has become its own industry. Tess says the number of certified technicians in the field has held steady at about 150 for the past few years. Some are part-time and perform the service as supplementary income. Others are from research facilities, or are veterinarians who provide scanning as a compliment to their business. But many are full-time technicians, scanning thousands of cattle each year and relying on ultrasound as their sole source of income.

The number of cattle being scanned has decreased slightly in recent years, according to Tess, who ascribes the trend to economic factors. "Producers are struggling to survive," he explains. "They're cutting back on costs." Still, Tess stresses, ultrasound is "a tremendous tool, a way to provide individual measure of carcass traits while the animal is still alive."

"An animal's not much good for breeding after harvest," Tess laughs. He continues to emphasize the "tremendous economic value" in being able to measure traits like IMF that correlate to consumer identified preferences like marbling.

From an organizational standpoint, Tess hopes to make the UGC operate more efficiently. "I would like everyone (technicians, labs, and breed associations) to feel like they're getting more bang for their buck," Tess says. And by doing that, he hopes to help the industry stay profitable. "Everyone along the chain needs to be economically viable," he adds, "and the UGC should help them do that."

But for Tess, the real mission of the UGC comes back to an even higher calling: "Our ultimate goal is to provide better quality data to the beef industry."