Working Together to Make Beef Better

Carcass 101

Volume 17

By Terri Queck-Matzie

A change in leadership at two premier beef science entities holds potential for an enhanced collaborative relationship between the two.

"We've always worked closely. Now we have the opportunity to take that even further," says Dr. John Pollak, as he exits the Executive Directorship of the National Beef Cattle Evaluation Consortium (NBCEC) and takes the helm of the Roman L. Hruska U.S. Meat Animal Research Center (USMARC). Aside from making the move from Cornell University in Ithaca, New York, to the plains of central Nebraska, Pollak moves from academia to a branch of the USDA with 250 employees and six research departments.

"It's been quite an education," Pollak says as he acquaints himself with personnel, budgets, and strategic planning.

Through it all, runs a message of collaboration – a concept familiar to Pollak from his years at NBCEC. USMARC is working to establish relations with the National Animal Disease Center in Ames, Iowa, and functions in partnership with the University of Nebraska, whose employees undertake the hands on care of the largest cattle herd available to a research entity. Pollak takes pride in the USDA Animal Research Service's (ARS) tradition of partnership with the nation's land grant universities, including Cornell, where his path crossed with Dr. James Stouffer, an early ultrasound pioneer who worked with Iowa State University on the research project that would ultimately become The CUP Lab®.

It's four land grant universities that form the foundation of NBCEC, which was founded on the premise of cooperating to eliminate research duplication, along with validating genomics research and distributing information relating to beef cattle improvement.

Taking the reigns at NBCEC is Dr. Dorian Garrick, Professor of Animal Science and Jay Lush Endowed Chair in Animal Breeding and Genetics at Iowa State University. Garrick is no stranger to the NBCEC concept. He participated in the development of the original prospectus for the group in 2000 and has served on its board of directors since 2002.

Garrick, too, is looking forward to continuing the invaluable collaboration with USMARC, and supports a movement to further formalize relations by changing funding of NBCEC from an annual earmark grant to a USDA-ARS budget line item.

"The way things are now, it is very difficult to implement any long-range planning," explains Garrick. "With more secure funding, we can more effectively look to the future." As an example, he points to dairy improvement research that holds USDA budget item status; while Pollack points to proposed federal budget items that would enable the use of metagenomics (the study of a pool of organisms) in research on microbial populations distribution in the rumen similar to studies on the diversity of ocean life.

"The genotyping technology central to metagenomics can be applied to animals to help solve the problem of improving difficult to measure traits," says Garrick. "The technology landscape is changing all the time. A few years ago, efforts were focused on developing EPDs for economically

relevant growth and carcass traits. Now that focus has changed to a suite of traits that includes longevity, disease resistance, reproductive performance, and the 'healthfulness' of beef."

But, even though genomic science has advanced to the point where a DNA test that measures 500,000 genetic markers will soon be readily available to producers, both Garrick and Pollak stress that does not make ultrasound obsolete. "Combined with genomics, ultrasound enables us to use commercial herds, not just seedstock, to collect data and track animals all the way through the production system despite transfer of ownership," adds Garrick.

"The two technologies will run parallel to each other as ultrasound continues to advance with more accuracy and higher frequencies," adds Dr. Stouffer, who cites the importance of raising awareness of the technology's potential.

The greatest benefit of the collaboration between NBCEC and USMARC may in fact be the dissemination of the burgeoning cache of information: A benefit to NBCEC because it is a crucial part of its mission and to USMARC because it is *not* central to the mission of USDA-ARS.

"We need the extension arm of NBCEC," says Pollak. USMARC consists of microbiologists, ag engineers, and research specialists that study animal health, genetics and genomics, environmental issues, meat safety and quality, nutrition, reproduction and food safely, all in great micro-bionic detail; but it lacks the mechanism for placing practical information in the hands of producers who need it.

NBCEC, on the other hand, has developed an extensive outreach program. It provides articles about validated science and ongoing research on its website, offers a *Brown Bagger* series of web-based seminars, and full-blown issue-oriented industry symposiums. Its *Sire Selection Manual*, a popular classroom resource, is about to print its revised second edition.

"Some of our topics verge on the controversial," says Garrick, "but we're not a top down organization. A producer could call tomorrow with a topic of interest and it might ultimately become the next symposium." NBCEC utilizes focus groups at different levels of industry to flush out and refine topics.

"We can't lose sight of the breed associations as part of this outreach," Garrick points out. "They are a crucial part of the chain of information." This applies not just to technical advancements, but to EPDs. "The EPD is the information that can really change the selection process on a day-to-day basis."

And that's central to the collaboration needed for production of a quality beef product to feed a growing world.

"Food safety and quality will continue to be a national priority, as it should be," says Pollak. "Two additional priorities of the current administration are obesity in children and global food security: the need for a safe, reliable, available protein source. No one research entity or industry organization can address such broad objectives, hence the necessity for greater collaboration among us all."