

# Producing Better Beef & Industry Professionals

**The Beef Carcass Research Center at WTAMU partners with industry leaders to make a difference.**

*Story & photos by Lindsey Sawin, editorial intern*

**W**hen driving through the Texas Panhandle, it is not uncommon to pass by a sea of cattle or a packing plant every few miles. Cattle producers send large numbers of cattle to the Panhandle each year.

West Texas A&M University (WTAMU) sits smack-dab in the middle of that Texas Panhandle, making it ideally situated to connect packers, feeders, ranchers and students. That's where you'll find the university's Beef Carcass Research Center (BCRC), which draws on its close proximity to all those sectors.

The BCRC is just as it sounds, a research center focused on beef industry collaboration to work toward the betterment of the beef industry.

## The history

The BCRC began in the mid-1970s when the late Ted Montgomery, professor of animal science and better known as "Doc,"

reached out to packing plant managers with an offer to collaborate, says Ty Lawrence, WTAMU professor of animal science and current director of the BCRC.

IBP, now known as Tyson, was the first to take him up on that. They were having liver abscess issues and wanted to find answers, Lawrence explains. Montgomery began his research in the plant and eventually took it to the feedlot.

About the same time, Elanco began marketing Tylan®, an antimicrobial feed additive to reduce liver abscesses. The events happened almost simultaneously, beginning the collaboration of feedlots, packing plants, pharmaceutical companies and a "meat head," says Lawrence.

"So it begins right there, in figuring out the problem and working together on solutions with all of these entities," he says. "That very instance blossomed into what we know as the BCRC."

The university officially recognized the





Miles Cranmer establishes a preliminary yield grade (PYG) while working for the BCRC.

BCRC as a center in 1992, and it has continued to grow since then.

### Growth and changes

At the beginning, there were only a handful of employees who worked at both the meat lab and the BCRC. They picked up research projects here and there, says Lawrence. Today, BCRC employees work on multiple projects continuously and spend several hours a day at the plant collecting data.

The BCRC efforts provided have evolved as live-cattle marketing has given way to more value-based carcass marketing, notes Lawrence. Over time, grid marketing dominated.

“As people started selling carcasses and stopped selling live animals then, all of the things we do became real important,” says Lawrence. “The health of the animal, the grading of the animal, the weight of the animal, the dressed yield of the animal.”

As one graduate student said in her thesis defense, BCRC employees have seen thousands of carcasses, collected thousands of samples and driven thousands of miles.

### Research, research, research

Lawrence received his undergraduate and master’s degrees at WTAMU, then a doctorate at Kansas State University. He eventually returned to his original *alma mater* when Montgomery retired.

When he took over Doc’s position, he had a few goals. The first was to make WTAMU a well-known meat science program. The second was to train 50 graduate students and publish 100 papers — the latter a goal he has accomplished.

Lawrence knew early on the best way to put the university and the meat science



Students working for WTAMU’s BCRC spend time in packinghouses capturing data on carcasses, including assessing quality grades.

program “on the map” was through research.

“I could reach more people, gain more exposure; and research was the most likely method to build a program to national recognition,” he says. “The entire focus was to burn the candle at both ends and build a research machine.”

The BCRC works with many clients from all over the United States, Canada and Mexico, including beef processors, feedyards, pharmaceutical companies, feed companies, commercial cattlemen and seedstock producers. Lawrence says he rarely tells a potential client “no.”

“Industry collaborations are absolutely paramount when it comes to the success of a research program,” says Tyson Brown, global food safety research and scientific services lead at Cargill Inc. and former BCRC employee.

To collect the data, BCRC employees are at the packing plant for long periods of time, working at the speed of commerce, says Lawrence.

“The BCRC is known worldwide for what we do, the research we collect, without stopping production at chain speed in a commercial facility,” he says. “Not individuals or tens of cattle, but thousands or millions of cattle for real data.”

Lawrence and the team have collected data that most would assume unthinkable.

“We’ve collected, sampled, labeled, evaluated, scored every single piece of the beef animal — from the kill floor through the grading cooler, through fab (fabrication), through rendering, hides. There are few stones unturned,” says Lawrence.

That time at the plant gives employees plenty of space to think and create new

*Continued on page 118*

research ideas. One of those moments led to a set of cloned calves. The animals were the product of collecting tissue samples from Prime Yield Grade 1 carcasses.

### Better beef

The overarching goal of the BCRC is to make improvements in the beef industry.

Brown works with the BCRC on a regular basis in his professional career, and is currently partnering with them on multiple projects funded by the National Cattlemen's Beef Association (NCBA) and the Alberta Beef Council.

BCRC employees get a front-row view of the improvements in the industry, including pharmaceutical trials, management studies and genetic improvement work.

"It is like an infinite number of management changes and how they affect the animal, the health, the dressed yield, the quality grade, yield grade, the value," he explains. "So we have helped the cattle feeders and the beef processors learn a ton about the joint system of putting cattle into

the feedlot and fed cattle into the plant."

### The faces of BCRC

The BCRC employs about 25 undergraduate students, as well as master's and doctoral students who work alongside the three meat-science faculty members.

The students and faculty spend late nights and early mornings at the packing plants. They go before classes start or after they have finished for the day. They travel to other states, other countries and even spend some weekends at the plant.

"If you aren't careful, students can find themselves shoulder-to-shoulder with Dr. Lawrence at 11 o'clock on a Friday night sorting through rumen contents and enjoying every minute of it," says Brown.

What makes it worthwhile for students is the ability to learn along the way.

"We (the faculty) are boots on the ground, in the blood and the guts and the mud and the muck. We're not just sending the students out by themselves," says Lawrence. "There is a lot of learning. They

can ask us questions and we can say, 'hey look at that' or 'watch this' or 'see that,' so there is so much more learning than if they were by themselves."

The BCRC prepares students for jobs in cattle feeding, meat processing, nutrition, ranching and everything in between.

"With the industry touch points of the BCRC and Lawrence's research approach, students come out of this program armed with the knowledge and skills necessary for an expedited transition to careers within the industry," Brown says.

As the industry advances, so does the BCRC. They will be right beside the best in the business to ensure that the cattle industry is always getting better, says Lawrence.

"There is a tremendous improvement and knowledge growth in 'why' and 'why not' all the way through the beef production system," he says. **ABB**

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Editor's note: Lindsey Sawin was the *Angus Beef Bulletin* 2022 summer intern.