Missouri Shows

Above: Missouri-source calves represent at least 10% of total CAB supplies today, and perhaps an even-higher share of CAB Prime. That's more than 300,000 cattle yielding nearly 40,000 tons of boxed product for the brand, CAB's Larry Corah says.

Show-Me-Select program kicks targeted high-quality beef production up to Tier Two.

Story & photos by
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You might call it the Missouri miracle, or luck, or give credit to a few highly motivated people. But neither fate nor the work of a few could achieve what a long list of Missourians have done with Angus cattle in the past decade.

In 2000, Team Angus dared to target 30% *Certified Angus Beef®* (CAB®) brand acceptance. The goal was considered bold then, but recent years have seen a parade of Show-Me producers doing more than that, with 70%, 85% and even a load of 100% CAB and Prime. The Show-Me State is home to five past CAB Commitment to Excellence honorees on the cow-calf side and the top Quality Focus Award for small feedlots for the past three years.

In fact, if you look up records and Certified Angus Beef LLC (CAB) awards for the highest-quality commercial Angus cattle, you will find most of them either in the state of Missouri or in the watershed of its namesake river.

That's not to ignore the many

excellent cattle outside of the region, but numbers are compelling. And for all the vaunted reputation of north-river Angus cattle, the carcass data seem to favor the southern watershed.

All right, so it's no miracle or coincidence. What's going on? Most observers would give some credit to the strong focus on beef quality among Angus seedstock producers there and in nearby states. And they would certainly point to the University of Missouri (MU) work in helping spread top Angus genetics across the commercial sector.

The 90,000 females developed in the MU Show-Me-Select™ Heifer Program in 13 years have begun to show a compounding effect. Stacking generations of excellence has made for more predictable and

higher quality and performance. Mike Kasten, Millersville, Mo., discovered after just a few years that three generations of females sired by registered Angus bulls with above average marbling could produce 100% CAB and Prime progeny.

Integrated effort

Neither Kasten, nor David Patterson, MU Extension beef reproductive physiologist, will accept much credit, but they can't deny the role of catalyst. Patterson's team researched synchronized artificial insemination (AI), evolving protocols now used on thousands of ranches around the world.

That's because strategies such as one called "Show-Me Synch" have overcome the primary obstacles that kept AI from being widely adopted.

Today, 73 herds and more than 7,000 cows in Missouri compose the expanding demonstration. Nearly all of them include Angus genetics.

When Patterson came to MU from Kentucky in 1996, the heifer program was his first project, and the first statewide, on-farm beef heifer development and marketing program in the nation. It also was a vehicle for driving an integrated approach to boost beef profits in the nation's third-ranked cow state. The first of three U.S. Department of Agriculture (USDA) grants was narrowly focused on developing AI protocols, Patterson says, but two successive grants have relied on all three legs of the land-grant system: research, teaching and extension education. The grants have infused $1.25 million into the state's economy since 1999.

Missouri presented a great opportunity because MU stood alone as the state's land-grant college, with a large research cow herd at Thompson Farm, near Spickard, Mo., and a strong veterinary program. "It was easier to get everybody on the same page," Patterson says. "The state's

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>
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requirements at *http://agebb.missouri.edu/select/prgmreq.htm*).

New level

A 2007 USDA integrated grant to develop fixed-time AI for the benefit of small farmers gave rise to the idea of improving genetics of the heifers over time, Patterson says.

"The whole idea was if we could increase the use of timed AI across the state, with an emphasis on high-accuracy bulls, we'd not only generate superior replacements, but more desirable carcass quality in the steers as well," he says. "We know how to control the estrus cycle in cows and heifers to where we can get 62% bred to one bull on one day. But that doesn't do much good if little thought is given to sire selection."

The approach led to development of an elite "Tier Two" level of heifers sired by high-accuracy, proven bulls. The MU focus had transitioned from crossbred research of the 1960s-1980s to straightbred Angus in the 1990s, mirroring local producers, capitalizing on the large Angus database and eliminating heterosis and other breed-effect "noise" from the data.

Using the Thompson herd for those studies in conjunction with progeny testing for research partner Select Sires, Patterson was impressed with the predictable reference sires.

"In 2005, we had 100 calves from one high-accuracy Angus sire come in from three different research herds and environments, and wow, it was like they came from a cookie cutter," he explains.

Sally Northcutt, genetic research director for the American Angus Association, which is a partner in the 2007 grant, helped the Show-Me-Select board set requirements for Tier Two. As the website details, these heifers must be sired by registered Angus bulls with accuracies on their expected progeny differences (EPDs) of 0.65 for calving ease direct (CED), 0.30 for calving ease maternal (CEM), 0.75 for weaning weight (WW) and 0.20 for both marbling (MARB) and carcass weight (CW).

"Those levels were designed to capitalize on the enormous database of nearly 8 million growth EPDs in the Angus breed for a balance of traits important to breeders," Northcutt says. "High accuracy in the growth trait requirements allows program participants to select from a large pool of balanced-trait sires."

Carcass trait accuracies of 0.20 are not extremely hard to attain, but Northcutt says they are enough to "ensure consideration has been given to the end product as well as cow-calf traits." Anyone who wants to dig deeper can "specify some target intervals for accuracy by using our possible change table at *www.angus.org/Nce/Accuracy.aspx*," she adds.

Below: "The whole idea was if we could increase the use of timed AI across the state, with an emphasis on high-accuracy bulls, we'd not only generate superior replacements, but more desirable carcass quality in the steers as well," MU's Dave Patterson says.

veterinarians really supported Show-Me-Select, and it has opened other doors to herd improvement."

Nationwide, such progress has been slow. A 2008 USDA survey indicated no more than half of all ranchers have a defined breeding season, only 34% of herds are routinely pregnancy checked and only 10% use AI. Missouri figures to move well ahead of that curve, though many producers started at a low base.

"Years ago, they'd just breed a heifer and wait nine months to see if she would live or die," Patterson says.

Veterinary-certified health and reproductive tract scoring and pelvic measurement have set the stage for heifers that showcase the world's most successful AI strategies and move Missouri beef genetics toward predictable calving ease and added value.

"We went from 10% to 15% losses at calving in the mid-1990s to 1% or 2% the last three years in the Show-Me heifers," Patterson says, citing buyer surveys. Little is left to chance, and service sires must be in the top 15%-30% of their breed for calving ease (see Show-Me-Select

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Hitting the target

The first sales of a few hundred Tier Two heifers in 2010 found them bringing nearly $200 above average program prices, Patterson says.

Meanwhile, steer mates to those heifers from the Thompson Farm herd were proving the carcass value in those genetics. Enrolled in the AngusSource® program and fed at the CAB-licensed Irsik & Doll Feedyard near Garden City, Kan., they were harvested on the U.S. Premium Beef (USPB) grid at a National Beef Packing plant. Their 86.8% CAB and CAB Prime took regional honors in the 2010 second-quarter AngusSource Carcass Challenge (ASCC), even better than the 85% CAB results in 2009.

A couple of the stops on the August 2010 Missouri Beef Tour provided further evidence of what Tier Two genetics can do to add value.

Mike Kasten has used AI and documented the results since the mid-1970s on his 4M Ranch in Bollinger County, so he can appreciate the latest labor-saving aspects of timed AI. That protocol allowed him and one helper to breed 800 females this year, including many for cooperating neighbors, while investing only an hour of their scheduled time for each dozen head.

Kasten was a regional winner in the ASCC last year, and a recent load of calves brought $100 per head in premiums on the USPB grid, with 90% CAB, including 30% Prime.

The Masters family at Cape Girardeau, Mo., pioneered the Tier Two concept a couple of years before that designation was official, according to Southeast Missouri Extension Specialist Roger Eakins. "Their GAR Predestined-sired heifers bred to SAF Connection sold in our May 2006 Fruitland Show-Me-Select sale," he reports, "and 31 head averaged $1,831. They would have qualified as Tier Two today, and this family continues to produce top-quality Angus heifers."

On the other side of those genetics, the Masters' finished cattle, 992 of them through USPB over the last 10 years, have earned $90,000 in added premiums. They

To date, there have been more than 100 Show-Me-Select Replacement Heifer sales at 11 locations across Missouri, including the Saint Joseph, Mo., sale that debuted in December 2010. Prior to fall 2010, the sales had generated more than $22 million in gross sales from 2,500 buyers in 16 states.

averaged more than 67% CAB and Prime with only four head discounted in any way. This year's 70 steers were 100% Choice or better, 83% CAB and Prime and no discounts.

Eakins, along with producers from Kasten to Masters, credit one local business for the area small producers' ability to hit so close to the bull's-eye: More than 130 of them are customers of Performance Blenders, Jackson, Mo., which also became a CAB-licensed partner this summer.

Marketing model

Arguably, any producer with Tier Two heifers in the Show-Me-Select program could point to these widespread results and negotiate a higher price for his steers. But the MU team suggests this level of achievement may be best rewarded by feeding or at least sharing in retained ownership on feed.

"You don't have to be big to retain ownership and receive premiums for superior genetics," Eakins told tour participants in August. "You can sell one or a few calves at a time."

Performance Blenders' owners Gerry Shinn and his son Geoff have been aggregating loads of cattle at the Jackson, Mo., facility for shipment to National Packing plants at Dodge City or Liberal, Kan., since 2000.

Cattle are weighed, tagged and assembled into load lots with individual identification maintained. Bills are split based on carcass weight percentages, and carcass data can be tracked all the way back to the cow. That allows focused improvement in herd genetics and management.

Gerry Shinn notes one customer improved over the course of 10 years from selling "Yield Grade (YG) 4, Select calves to selling 40% Prime with no discounts. It makes it worth getting out of bed each morning to see someone succeed like that." Although calves from several farms are on each truckload, Shinn's reports block out names while including the numbers.

"Even though they don't get to see any names, they're very competitive, and it's made them raise the bar a little bit," he says. That's evident in the quality trend among all customers. "We started out only qualifying 17% for CAB, but this year we made 44%," Shinn says. That doesn't include a rising share of CAB Prime.

"If you bred and fed them as a producer, I want you to capture the reward," he says. "And I will help fill in a piece of the puzzle that allows you to do that."

What next?

Patterson sees Shinn's example as one that could be replicated around Missouri to provide the marketing opportunity for

Missouri Extension beef specialists, including Roger Eakins (left), see Gerry Shinn's example as one that could be replicated around the state to help small producers capture the value from improved genetics.

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small producers envisioned in the current USDA grant.

"It's also significant that the MU program ties into well-established marketing channels for high-quality beef that pay dependable premiums," says Larry Corah, CAB vice president.

"When you add up all the components of the Show-Me-Select and related programs, it would be hard to stack any more strategies to empower producers of every size to hit a home run and get paid for it," he adds.

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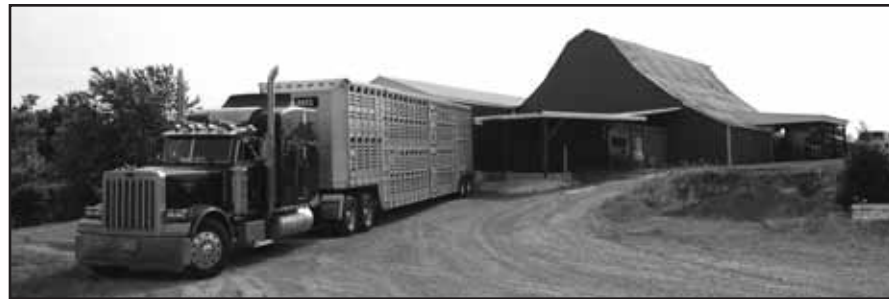
Above: Producers with Tier Two heifers could point to these results and negotiate a higher price for steers, but the MU team suggests this level of achievement may be best rewarded by feeding or at least sharing in retained ownership on feed.

Prime. That's more than 300,000 cattle yielding nearly 40,000 tons of boxed product for the brand, Corah says. That's based on at least 80% of the state's 2 million cows being Angus-influenced with a CAB acceptance rate of at least 25%.

"We can only imagine how much better this will get for Missouri producers and for our program as a result of the Show-Me-Select and Tier Two initiatives," he concludes.

"I've never been as excited about the opportunities that are out there as what we have right now," Patterson says.

He and MU economist Scott Brown, in a July 2010 USDA grant proposal, hope to further document "the economic benefits to cattle producers from empowering reproductive and genetic technologies." The plan would make use of CAB, Irsik & Doll, and Performance Blenders' databases, along with Eakins' local support.

Meanwhile, the Tier Two heifers will take over an ever-larger share of Missouri herds. To date, there have been more than 100 Show-Me-Select Replacement Heifer sales at 11 locations across Missouri, including the Saint Joseph, Mo., sale that debuted in December 2010. Prior to fall 2010, the sales had generated more than $22 million in gross sales from 2,500 buyers in 16 states. At least 70% of the enrolled heifers have stayed at home to keep making this model even more successful.

That bodes well for the continued ability of U.S. beef to compete with relative upstarts in South America, says Patterson, who has visited Brazil and hosted foreign visitors in Missouri. "They're committed to using more Angus genetics and developing grain feeding there," he says. "We've got to keep up our focus, showing the best ways for our producers to use the tools at hand to meet worldwide demand for high-quality beef."