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Low Labor, High Quality

South-Central Kansas Angus herd expands by measuring, selecting cows that work.

Story & photos by
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The Lee Ranch, Coats, Kan., tripled its cow numbers since Nathan Lee came home with new ideas and a Kansas State University degree in 1991. That's when he bought the family's first Angus bulls to convert their predominantly Hereford herd first to baldies and now to all black.

That's also when Lee Ranch sold its last weanling calf, switching to 100% retained ownership and using data to guide selection and management. The last seven calf crops were fed at nearby Pratt Feeders LLC, Pratt, Kan., a Certified Angus Beef LLC (CAB)-licensed feedlot just 30 miles from the ranch.

"We don't even have F₁ cows anymore," Nathan says, "because higher percentage Angus heifers outperformed them." Nathan monitors efficiency today as he did while expanding from 300 to more than 900 cows, and he keeps growing. "We breed every heifer and feed every steer, selling finished cattle and young cows," he notes.

Bill and Judy Lee, Nathan's parents and partners, agreed that the business had to grow to support the next generation's return to the farm.

"Full-time cow-calf producers have to keep getting larger and larger, just to live," Nathan says. "We have to look for ways to become more efficient on more land. We chose Angus cows because we don't have to watch over them, or even count them. We know that 95% of them get the job done. We don't spend a lot of time on the 5% that are probably losing money, but we do try to identify and cull them."



Expansion brings change

Expansion came in the form of 80 to 100 more heifers at a time, while inefficient and open cows exited. But 6,500 acres can only hold so many cows, and dirt-lot calving more than 200 heifers didn't work. "We calve four times as many heifers and cows as we did 15 years ago, so we had to make changes," Judy says.

Calving is exclusively on pasture, with a heifer headcount once a day. "If one is missing, we drive the pasture, find her and get her in or help her," she says. "If you are lot-calving in the mud, disease can run you into the ground, or you do the baby-calf shuffle trying to get them out before they get sick. With tightly synchronized groups, you can have a lot of cross-claiming; we minimize that now." After the switch to less-intensive management, there was no increase in death loss.

“Now we just use the home place for wintering,” Nathan explains. “We rent 12,000 acres for summer grass. It’s not cheap, but it’s not cheap to haul hay either,” he says, referring to a past of “traditionally hauling every bite to them all winter. It was all right if the weather was decent, but you look at the logistics of feeding 30 or 40 round bales and delivering grain and cake on muddy roads across 10 square miles — it got really stressful.

“A cow eats 5,000 pounds of hay in a winter, but it’s pretty inefficient to bring it to her when you can let the 1,300-pound cow go to the grass,” Nathan says. “It would even be cheaper to put her on a truck and send her someplace else. We are trying to find ways to run more cows with the same machinery and labor.”

A young herd

That requires problem-free genetics, which the Lees get from natural-service bulls from Poland Angus Ranch, Isabel, Kan.; from Fink Beef Genetics, Manhattan, Kan.; and from the best balanced Angus bulls available through artificial insemination (AI).

“We keep heifers out of heifers,” Nathan says. “That’s the only way to make rapid progress. I know a lot of low-birth-weight bulls don’t have growth and carcass and efficient daughters, but you have to find those that defeat the antagonisms.”

Including 400 heifers AI-bred in February, the Lees came home with 1,250 bred females last fall. The herd stays young, with an average female age of “2-something,” he says. “After we sold the 5s in the Superior Video Fink Influence Sale, we have 250 yearlings, 240 2s, 200 3s and 200 4s. Our cow tags are color-coded by year, with sire noted; 25% are from AI sires.”

To capitalize on their best genetics, 10% of the top-indexing cows make up a special herd that is AI-bred along with the heifers. One of the criteria is a top 20% ultrasound intramuscular fat (IMF) and ribeye area (REA) score. Special cows get to stay a little longer, but Nathan doesn’t want old cows. He can’t afford them.

“Interest and depreciation are the killers,” he explains. “In one year a cow can lose \$100 of value, and you are never going to recoup that. She can lose that between her fifth and seventh year by turning gummer or broken-mouth, so we try to avoid the loss. We don’t miss much on weaning weights, because even the heifers wean 500- to 600-pounders.”

Calf management

At weaning, calves are trucked home for four to six weeks of starting and “straightening out” before they move out to Pratt Feeders. They used to get vaccines for bovine respiratory disease (BRD) three weeks before weaning, but that ended when cows went to rented pastures. “We invest more dollars per head when we vaccinate at branding, weaning and three weeks postweaning,”

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At Left a re Judy and Nathan Lee.

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he says. The BRD shot at branding is a killed-virus vaccine and the others are modified-live-virus (MLV) vaccines.

Dirt lots are available and big enough, but they are only for receiving. “They stand for one night and bawl,” Nathan says. “Then they are out to grass with a good five-wire fence.” Last year they pulled maybe five calves for treatment out of more than 800.

“When we used the lots, they inhaled so much dirt that it was a respiratory challenge,” he explains, “and they got pinkeye. Turning them out on pasture saves a lot of labor in feeding and managing.”

Targeting the brand

A charter member of U.S. Premium Beef (USPB) — “a perfect opportunity for us,” Nathan says — the ranch has maintained a per-head premium of \$40 on more than 2,000 head since 1998. The averages are 6% Prime, 84% Choice and 34% *Certified Angus Beef*[®] (CAB[®]) brand qualified, but Nathan wants to reliably capture larger premiums. Recent groups have ranged from triple the average to barely premium.

Quality grade has varied with the weather and market temptations. Looking at historical data, Nathan notes feeding periods of 122 to 216 days and an outstanding group of 139 steers that were 47% CAB and 9% CAB Prime. But then he points out a group that was rushed to market in hot weather. They weighed 1,177 pounds (lb.) vs. the Lees’ 1,300-lb. target, and only 12% made CAB.

“No Yield Grade (YG) 4s is an indicator that they could have gone longer,” he notes. “In the last year we have had more YG 4s, but our average is generally below the plant.”

Nathan is satisfied with 43% YG 1-2. “If you have Simmental cattle, you should go for lean,” he says. “But I have to ask, ‘Where is your premium?’ Everybody wants to use Laura’s Lean as an example, but that is a really small niche. I know Angus won’t grow as fast as Simmentals, but we more than make up for it with more valuable product. And if you want to run 1,000 or more low-labor cows out in this country, Angus are the right size.

“I don’t see any reason we can’t feed pens that are 50% CAB Prime in the next 10 years,” he says, “and that’s our goal. One Prime calf more than pays for the management it takes to get him there, whether it’s ultrasound, AI, ET (embryo transfer) or other value-adding practices.” Nathan is weighing the economics of testing for DNA-based carcass potential, too, starting with bulls.

He plans to continue expansion and weighing new ideas. “We are also looking at different alternatives such as cow leasing,” he says.

Those alternatives include both running cows for other people, or contracting with others to run Lee cows. “If we are going to calve 500 heifers, we might lease some of them out, for example,” Nathan says. “And if we want to have cows that produce seedstock Angus bulls, we might lease those registered cows — as long as we have genetic control.”