



PHOTO BY SHAUNA HERMEL

Reduce annual feed cost and harvest more pounds of gain per acre.

by Wes Ishmael

The cow-calf business is a low-margin business, not because of the revenue potential, but because of our lack of control on the cost side,” says Eric Bailey, University of Missouri (MU) state beef extension specialist.

Consider the current Southern Missouri beef cow-calf planning budget Bailey shared during the Southwest Missouri MU Extension Beef Cattle Conference in February.

Total estimated operating costs for this year are \$908.20 per cow for a spring-calving herd and \$926.70 for a fall-calving one. Feed costs represent the lion’s share in both cases. Total estimated feed cost for the spring herd is \$358.37 per cow; \$397.44 for the fall one.

“Stored feed cost represents 62% of total annual feed cost. The more we can reduce that cost, the more

profitable we can be,” explained Wesley Tucker, MU Extension field specialist in agricultural business, who was also a conference presenter.

He pointed out that the stored feed cost percentage mirrors that of the Kansas Farm Management Association (www.agmanager.info/kfma), which is based on actual annual data.

Tall fescue — the production volume and timing of it — offers cow-calf producers ample opportunity to reduce that cost.

For those unfamiliar, tall fescue is a perennial that encompasses approximately 10% of the U.S.

Above: Tall fescue is so productive in the first 60-90 days of the growing season that it outpaces livestock demand. Historically, producers harvest the surplus as hay to feed during the winter, although that approach forgoes some opportunities.

landmass, according to researchers with USDA’s Agricultural Research Service (ARS). Based on a 2012 survey of Extension specialists and researchers, ARS estimated there were 11.7 million beef cows in the Fescue Belt. That was 39.1% of the nation’s beef cow herd based on the Jan. 1 inventory that year.

Notwithstanding the unique animal health challenges endophyte-infested fescue poses, such as fescue toxicity, the grass is known for its heavy spring production, its resistance to insects and nematodes, and its tolerance to poor soil and climatic conditions.

Exploiting the yield curve

“The yield curve (see Fig. 1) of tall fescue is undoubtedly our greatest advantage in cattle production as a whole,” Bailey

explained. “In most other states and with most other forage systems, you’re talking about one long period of growth each year. In the Fescue Belt we get a spring flush, but we also get fall regrowth.”

Typically, tall fescue is so productive in the first 60-90 days of the growing season that it outpaces livestock demand. Historically, producers harvest the surplus as hay to feed during the winter, although that approach forgoes some opportunities.

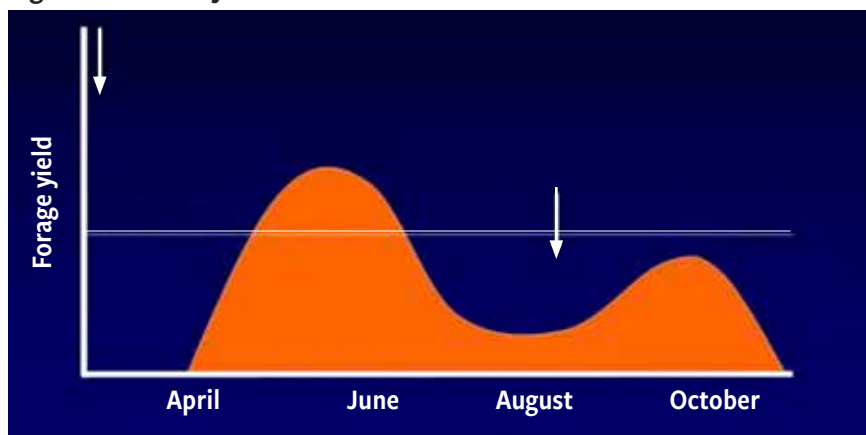
“When we allow the spring flush to get ahead of us and mature, and then harvest it later on, we’re taking a product that had substantial feeding value in April and May, leaving it in the field until June or July and harvesting it at much lower quality,” Bailey explained.

He used research from the University of Tennessee (UT) to illustrate the fast and significant decline in forage quality.

UT researchers harvested one-third of a fescue pasture on three different dates, 11 days apart, starting May 3. They cured and stored the harvested forage and then fed it to heifers. Forage yield in terms of pounds (lb.) was the least for the earliest harvest (see Table 1), but the early-harvested forage also provided the most nutritional value. Gain was 1.39 lb. per day for heifers receiving the earliest harvest vs. 0.42 lb. for those consuming forage harvested just 22 days later.

While low-quality fescue hay

Fig. 1: Tall fescue yield curve



SOURCE: Wesley Tucker and the Missouri Grazing Schools.

provides adequate nutrition for spring-calving cows during the winter months, when their maintenance requirements are the lowest, Bailey says it’s inadequate for fall-calving cows.

Rather than harvest as much low-quality hay, Bailey and Tucker suggest matching the cow stocking rate to fall fescue production, and then harvest more of the spring production through cattle by introducing a short-season stocker enterprise of roughly 90 days.

In other words, lower the annual feed requirement, especially for stored feed, by swapping out some cows for stocker cattle.

Double up

Bailey champions the notion of producers extending gains and potential by using an intensive early-stocking system. Think here in terms of turning stockers out in late March or early April and

grazing for about 90 days. It’s much like the early-season double-stocking system common to Flint Hills graziers.

Clenton Owensby, professor of range management at Kansas State University (K-State), and his colleague, Ed Smith, began to pioneer the early-season strategy for the Flint Hills in the 1970s.

“Two-thirds of the gain occurs in the first half of the season, and one-third in the last half of the season,” Owensby explained, in K-State Extension news a few years ago. “The idea was to increase gain per acre and also maintain individual animal gain. Stockers gain the same whether stocked at light, moderate or heavy rates during the first half of the grazing season. Stocking at heavy rates will cause reduced gains in the last half of the season.”

Bailey shared results of a 10-year study conducted by Owensby. It compares a season-long stocker grazing system in the Flint Hills (May 1-Sept. 30) with the intensive early-stocking system (May 1-July 15).

Cattle gained 299.4 lb. per head in the season-long system, compared to 199.4 lb. per head in the early system. However, the gain per acre

Table 1: Fescue quality vs. maturity

Stage of harvest, date of cutting ^a	Feed intake, lb./day	Yield, lb./acre	Gain, lb./day	%TDN
May 3	13.0	1,334	1.39	68
May 14	11.7	1,838	0.97	66
May 25	8.60	2,823	0.42	56

SOURCE: University of Tennessee, reported in AGR-62, Quality Hay Production.
^aMay 3 = late boot to head; May 14 = Early bloom; May 25 = early milk/seed forming.

Continued on page 40

was 74.9 lb. in the season-long system, compared to 99.8 lb. per acre in the intensive system.

“So, you got 25 pounds more gain per acre. You got 33% more gain per acre in half the time by running twice as many animals and harvesting forage when it was at peak quality,” Bailey explained.

“The competitive advantage a fescue stocker system has is that the spring flush is so substantial that we can stock at rates others can’t,” Bailey said.

For perspective, he explained that the stocking rate for the early-season Flint Hills system is about 2 acres per stocker. In Missouri, it’s 1.5 to 2.0 stockers per acre.

Bailey’s research suggests stocker cattle grown on fescue post solid gains. For instance, in a two-year study, calves turned out the first week of April and grazed for 57 days gained an average of 1.55 lb. per day — just grass, no supplement.

Bailey noted the intensive early-season stocker system also means stocker cattle are removed from grass before the growing season slump, when forage quality means cattle gain little, if any, and when the ergot alkaloids responsible for fescue toxicosis are at their peak.

Moreover, Bailey said, employing the system on leased ground and custom grazing for others offers new producers a low-barrier entry to get started in the cattle business.

Multiple benefits

Besides reaping more pounds per acre, Tucker said, a short-season stocker enterprise on fescue means producers are adding pounds to calves when value of gain is usually much higher than the cost of gain, compared to the rest of the year.

Value of gain is the value of additional pounds, accounting for the fact that average price per hundredweight (cwt.) declines as weight increases. It is the gross sale price of a head of cattle minus the gross purchase price, divided by the pounds of gain.

Incidentally, value of gain increases as feed costs increase and grass becomes more valuable, times like now.

Tucker figured the value of gain for starting cattle at different weights each month of the year, using data from 2010 through 2019.

Over those 10 years, with a 90-day stocker season in mind, starting in March, the market paid an average of \$105.89 to grow a calf from 450 lb. to 550 lb. (value of gain about \$1.06 per lb.). The market paid an average of \$90.27 to grow the calf another 100 lb. That amounts to about \$200 for 200 lb. of gain, or about \$1 per lb. value of gain.

Value of gain is typically even higher in the fall months.

Tucker pointed out spring-calving herds typically choose replacement heifer candidates at weaning time in the fall, when calves have the least value. Those heifers are at feeder weight the next summer, when pregnancy is checked and when feeder-cattle prices are at their highest.

Consequently, replacement candidates that fail to make the breeding herd can receive the highest feeder prices of the year. Tucker figured the value of gain, growing a heifer from 450 lb. in October to 850 lb. in August. Over 10 years, the average value of gain

11.7 million beef cows
in the Fescue Belt. (Source: ARS)
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for those 400 lb. was \$1.18 per lb. Take out the high year and the low year, and it was \$1.12 per lb.

“For a cow-calf producer, the reality is I can put additional weight on the calves I’m already producing, and do it at a time of year when the market will pay me the most for that gain,” Tucker says.

A drought strategy

Plus, Tucker says, lowering the annual stocking rate by matching fall forage production to fewer cows, and adding a short-season stocker enterprise, provides drought management.

“Everyone needs some disposable animals that can be shipped immediately when it gets dry to alleviate stress in your grazing operation, without having to send your good cows to market,” Tucker says.

Suppose you identify and put wheels under some of the later-calving cows, those producing the smallest calves, Tucker says. The calves could be early-weaned and added to the stocker enterprise. If it’s a spring-calving herd, the cows would head to town at a time of year when cull-cow prices are usually some the stoutest of the year. |

Editor’s note: Wes Ishmael is a freelance writer from Benbrook, Texas.