When Sooner is Better

Consider what cows and systems fit early weaning.

Story by

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Early weaning and drought strategies have been married in the marketplace of ideas. It's a union of convenience — perhaps the easiest place to track benefits, and almost universally accepted.

Most experts agree forage shortages provide the perfect time to move weaning up, but divorcing those ideas could help producers explore other angles for their herds.

"Drought is just one example of a broader situation that lends itself to early weaning strategies," says Steve Loerch, animal scientist at Ohio State University (OSU).

He suggests cattlemen faced with high land values, stocking for the "summer slump" or with heavy-milking herds take a second look at the practice.

"Any time you have scarce pasture, it's appropriate to contemplate early weaning, and the benefits on the cow side will be realized," Loerch says. Those advantages include higher body condition score (BCS), reduced forage consumption and lower winter feed costs (see "Think Early," June 2009 *Angus Journal*, pages 54-55).

Stocking rates are typically based on the number of cows the forage base can support during its least productive point in the growing season. Producers with a mix of warm- and cool-season grass varieties often make that decision based on a late summer drop in productivity.

"If I early-wean, then it reduces the nutrient needs of my cow herd by more than half when I dry those cows off," Loerch says. "If I use early weaning strategies with the same acreage, I can increase my cow herd by 20% to 30%."

That scenario is magnified in areas like the Corn Belt, where land values are soaring and the most productive acres are used for row crops.

"That's going to limit the amount of pastureland I want to have on my farm," he says. Instead of managing fewer cows on that given acreage, a producer could early-wean and maintain or increase female numbers.

K.C. Olson of Kansas State University (K-State) says Western and High Plains producers are just as likely to see benefits.

"If we can wean and reduce nutrient requirements at times when forage quality is bad, we reduce the animal's requirements, and we can extend the grazing season," the animal scientist says. "If an operator has a heavy reliance on native range to get cows fed, then very definitely an adjustment to the production calendar would be advantageous."

"In an effort to increase the growth performance of feedlot cattle, we simultaneously increased the mature size of our cows when we kept replacement heifers out of those same sires selected for high growth traits."

— Bryan McMurry

Herd factors

Geography is not the only factor. Indeed, herd makeup might play a larger role.

"In cow herds that are really genetically driven toward high levels of productivity, early weaning probably should receive higher priority compared to a cow herd with limited genetic potential for milk production or growth," Greg Lardy, North Dakota State University (NDSU) animal scientist, says. "Milk production is a key nutrient demand on the cow. Early weaning is one strategy to help lessen those potential shortfalls in nutrition that you have."

Loerch describes those candidates as the "real heavy milkers; big-framed, big-eating cows."

"Those cows take a tremendous amount

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of feed while they're in lactation," he says. They also tend to cost more to maintain through the winter.

By weaning as little as 60 days earlier, they could regain body condition and winter at a lower cost than traditionally weaned contemporaries, as one University of Illinois study pointed out. That work looked at early-weaned advantages comparing British, Continental and Wagyu crosses.

"It seemed to favor heavier-milking and reasonably sized cows," says Dan Faulkner, Illinois Extension beef specialist. "I don't say 'larger-framed cows,' because our cows are about the industry average, and it works well for us."

►Loerch suggests cattlemen faced with high land values, stocking for the "summer slump" or with heavy-milking herds take a second look at the practice of early weaning.

The study showed some marked differences in the calves. Early-weaned Angus-Simmental cattle were heavier, gained better and had higher dry-matter intake (DMI) than the Angus-Hereford and Angus-Wagyu calves. Overall, 93% of the early-weaned calves had enough marbling to qualify for the *Certified Angus Beef*® (CAB®) brand, and 15% were Prime. That's compared to those weaned at 200 days, which were 68% average Choice and no Prime.

Loerch says similar calf benefits are seen with creep-feeding, but it does not lessen the forage pressure much.

"You're not going to impact milk production. You're not going to impact the cow's nutrient requirements," he says. "As far as marbling and early onset of adipocyte development, creep-feeding works pretty good for the calf, but it doesn't help the cow."

Angus producers may not think of their herds as the real high-production types that fit this model, but Faulkner would disagree.

"With the amount of milk and growth in the Angus breed, it fits well," he says, noting that has probably changed in the last few decades as those traits have increased.

The progeny of these cows are better-suited for early weaning, too.

"With today's genetics and growth rates, you're more likely to have calves that are going to weigh up better even under an early-weaning scenario than you would have [had] even 10 or 15 years ago," he says.

The poorer-performing calves might need that added growth period on the cow or should be placed in a stocker program, Loerch says.

"If you feed it too much energy early in its life you can knock 100 or 200 pounds (lb.) off its final weight," he says. "Faster-growing calves will allow you to put more calories to them earlier in their life and still realize the end composition you're looking for."

A different beast

Dan Buskirk, Michigan State University (MSU) animal scientist, saw those results when they bred small-framed Angus heifers to calving-ease bulls not selected for growth.

"The offspring of those animals had significantly lower carcass weights, compared to normal-weaned calves," he says. "It wasn't really economically feasible, lacking the growth genetics."

Many other studies have pointed to heavier carcasses for early-weaned calves, so Buskirk concludes their results were based on the genetic combination.

Growth and production have gradually improved throughout the decades, causing some calculation confusion for today's producers, Lardy says.

"When you take a bigger cow, a faster-growing calf that's going to consume more forage, higher levels of milk production — those things all contribute to cows that are going to need more nutrients," Lardy says. "As a consequence, you can't run the same number of cows on a given piece of ground as you could with the cows of 30 to 40 years ago."

►"When you take a bigger cow, a faster-growing calf that's going to consume more forage, higher levels of milk production — those things all contribute to cows that are going to need more nutrients," says NDSU's Greg Lardy.

Mature size increases can be subtle. That's why cattlemen tend to underestimate what their females weigh. Producers often tell Lardy their cows range from 1,200 to 1,300 lb., but few sale barn reports confirm this.

"As a consequence, they tend to overestimate what that piece of land, native range or other forage can support," he says.

Bryan McMurry of Cargill Animal Nutrition notes as steer weaning and finishing weights have trended upward, cow weights have followed the same upward diagonal.

"This is not surprising; after all, they are the mothers of these steers," he says. "In an effort to increase the growth performance of feedlot cattle, we simultaneously increased the mature size of our cows when we kept replacement heifers out of those same sires selected for high growth traits."

Documentation shows a 146-lb. increase in cow carcass weights from 1975 to 2005. McMurry estimates mature cow weight has risen more than 300 lb. during that timeframe to about 1,350 lb. today.

"Obviously, the entire population is heavier, but the cows that are one standard deviation heavier than the average are the real problem," he says. "One standard deviation is 200 pounds. Those cows that weigh 1,550 pounds or more make up 16% of the population; that's over 5 million cows."

►The bottom line is, many more producers have large-framed, high-production cows than they think, says Bryan McMurry of Cargill Animal Nutrition.

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Replacement considerations

Regardless of herd type, many scientists agree that younger females benefit from early weaning.

"It's one of the best things we can do for first-calf heifers, and the reason doesn't have anything to do with the first calf," Loerch says. "It has to do with being able to get that heifer rebred after she has her second calf."

Those heifers typically go into the fall thinner than their older herdmates and take more feed to get into shape during the winter. If their calves are taken off earlier, they can regain condition and have fewer subsequent breeding problems.

"You want to make sure you're managing those younger cows as best you can to try and keep them in the herd," Lardy says. "They should be your best genetics; the genetics that are going to represent the future of your herd. So we need to make sure they're going to have the optimum chance for success."

Producers also have put significant dollars into this phase.

"If you look at an excessive fallout rate, you really start to dramatically increase your heifer development costs," he says.

Tracking the economics of the whole system will help producers who commit to an early-weaning strategy to remain flexible.

"It's a management decision that needs to be made every year in terms of what is the

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optimum time to wean the calves," Loerch says. Producers should consider the cost of calf feed and winter supplementation of cows, along with the condition of the pastures and the herd.

Many cattlemen find they can manage more cows on available forage, but Buskirk says using it in other ways helps keep options open from year to year.

"That may mean selling more hay or maybe running stocker calves," he says. Buskirk sees many producers in his region simply moving the calendar up a month or two.

"The normal weaning is getting earlier than it used to be," he says.

Making changes each year might make it hard for producers to see what works best.

►Marketing fears comprise a hurdle to the adoption of early weaning, says Dan Buskirk, MSU, noting the hesitation of feedlots to buy early-weaned calves. He suggests producers retain ownership or coordinate management with a specific feeder.

"When you build flexibility into the system, you're also building variability in terms of how to evaluate that response," Lardy says. Research can help producers by eliminating some of that variation.

Although there are many situations that call for early weaning, it's not a widely adopted practice.

"It's partly tradition," Lardy explains. "You've also got cash cost in that calf from a feed and a labor standpoint. If you leave it on the cow and do nothing, you're paying for that indirectly, in terms of lost body condition or beating up those pastures. That's not a cost that you write a check for; it comes out of next year's productivity."

Buskirk says marketing fears are another hurdle.

"Feedlots just aren't used to dealing with early-weaned calves, not that it's necessarily that much tougher," he says, suggesting producers retain ownership or coordinate management with a specific feeder.

Weather, breeding, feeding — these are all considerations to take into account when changing a production calendar. Moving weaning earlier could make the outlook on all three a bit brighter.

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