ORIGINAL PHOTOS USED TO CREATE ILLUSTRATIONS COURTESY OF TERRY KLOPFENSTEIN

A Pasture Alternative

Drylot pairs in summer and graze crop aftermath through winter.

by ***Heather Smith Thomas***

Most beef cattle spend summer on pasture. Many are only confined for feeding during winter or after weaning, when calves go to feedlots or heifer-development pens. A few producers in farming regions are using a different tactic due to the scarcity of pasture and its higher price tag.

Terry Klopfenstein, professor emeritus for the University of Nebraska, says grass has become a more expensive feed for cattle in recent years, which sometimes necessitates a look at other options.

"This became an issue a few years ago for us when we were negotiating pasture prices for some of our university cattle. We just don't have enough grass," he says. In Nebraska some pastures and hay fields have been plowed to grow more corn.

"These last few years we've been looking at drylotting pairs in summer and turning them out to graze in winter. This has totally changed my thinking, since it's the reverse of what we've traditionally done," says Klopfenstein.

Last year, pastureland in Nebraska rented for about $60 per pair per month — a sizable increase from years earlier, he says. Last fall the price of calves dropped, and the pasture lease rate for 2016 has come down a little, to $57 per pair. Past experience has shown that it's hard to get pasture lease rates back down after they go up.

Land prices, rent and grazing fees tend to keep going up and are slow to go down.

"When the price of corn shot up because of drought, people rented and bought corn ground at high prices. In agriculture we pay a lot for land, whether renting or buying," he says.

The idea of drylotting begins to look more feasible, he says, and producers don't have to make a significant investment in land to drylot cows. That's not to say it's more economical to have them in the feedlot instead of on pasture, but producers don't have to invest millions of dollars in ranch or land resources.

Drylotting pairs

Klopfenstein is involved in a multiyear study drylotting cows year-round, feeding pairs in a pen instead of on pasture (see "Nebraska study," page 45).

"One of the things that surprised us in the drylot situation was how quickly young calves came up to the bunk to eat with their mothers," he says. Calves copy their mothers at a very young age, starting to nibble hay or grass (or a concentrate ration) with her. By contrast, a calf raised on a bottle won't try solid feed when it's offered. Lacking a role model, the calf won't eat grain or forage; you have to put the feed into its mouth, and it still may not want to eat it."

It was a wakeup call to see how much the calves learned from their mothers, Klopfenstein reports. "I talked with John Maddux — a rancher who went from early weaning to late weaning. We discussed the idea of letting pairs graze cornstalks through winter, and the advantage of having the cow teach the calf how to graze and seek out forage. This is a great opportunity for stockmen who calve in May, like John is now doing."

For the drylot study, the researchers timed calving for June and July to avoid calving in the mud.

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"We can control heat impact (with shade) better than we can control mud," Klopfenstein explains. "Our biggest concerns early on were health of the calf and whether the cows would rebreed, but neither of those things has been a problem. We try to keep moving the calving cows to a clean pen in the feedlot — similar to the Sandhills Calving System."

In this system, cows that haven't yet calved are moved away from the ones that have to minimize the chance of older calves infecting younger ones, which cuts down on scours.

Wintering out

"In general, it's been working well, but calving this time of year means calves reach weaning age about February. We are putting the pairs on cornstalks and not weaning calves until spring. When you look at those pairs in February or March, you have to look twice to see which ones are the cows and which ones are the calves," he says. The calves do well through winter on their mothers.

Even just a little bit of milk for the older calf has a beneficial effect on growth and development of that calf.

"Anecdotally, from ranchers who leave calves on their mothers through their first winter, weaning in early spring, we're hearing that those calves perform better as adults, with a more efficient rumen. They become much better at utilizing forages than calves weaned early and fed concentrates. They seem better programmed to be feed-efficient for the rest of their life, and the cow teaches her calf to graze cornstalks," says Klopfenstein.

They are still in the process of fine-tuning supplement strategies for the system, he says, noting that the pair needs more protein and sometimes a bit more energy than a dry cow.

"It's really going well, however, in spite of a bad winter this past season and a lot of mud. We'd rather see the pairs out on cornstalks than in the feedyard," he says.

"In December those calves were getting a fair amount of milk from their mothers, grazing cornstalks, but by March the cows are drying up and some of them wean the calves on their own," he says. The calf doesn't need milk by then, and weaning is a very easy process. This is Nature's way of doing it; the calf is still with mom — and content because he has mom for security and companionship — but the calf is no longer nursing.

"The cow is converting corn residue to milk through early winter. There may be a bit of cost to that, but it is energy for the calf coming from corn residue that is relatively inexpensive," says Klopfenstein. By late winter, calves have a fully developed rumen and do well on their own. When mom kicks them off, it is less stressful. The calves are not upset when you finally separate them.

Utilizing crop aftermath

"In Nebraska we have abundant cornstalk residue. Corn farming took some of our pastureland, but we have plenty of winter forage. There is much more residue than we can ever use with cattle; we just need to use it wisely," says Klopfenstein.

One challenge, he notes, is getting corn farmers to let ranchers bring cattle to graze those residues. Other issues include fences, water sources, transportation to the cornstalks and managing the cattle there.

"Whenever there are issues like that, there are also opportunities," he says. One such opportunity is for young people who may have no assets to have a career in production agriculture.

"They don't have to own any cattle, and they don't have to own the cornfields, but they could be the people to pull everything together and manage the cattle on a farmer's corn ground," he explains. "They could be the ones to fence the cornfields, figure out a water supply, and supplement with feed if there's deep snow cover." This management opportunity could bring stockmen and corn farmers together and create a beneficial situation for everyone.

"There are young people who have a love of cattle and want a career with cattle," Klopfenstein says. "They have the energy and enthusiasm, and there are some great options. Utilizing electric fences and grazing cornstalks is not rocket science, but there are opportunities to innovate. Hauling feed to cows in a drylot is not difficult, and we know how to balance diets, but it's a matter of putting it all together and making it work."

Someone who wants to raise cattle could get a start this way without having to spend millions of dollars on land.

"Nationwide we have a surplus of feedlot space. Most feedlots are located near cropland, where cattle could graze crop aftermath in fall/winter. The opportunity to maintain cow-calf production, if we lose pasture, is still available," he emphasizes.

Pastureland is rapidly diminishing in many regions. In the West, ranchland is being subdivided. Public range grazing is being reduced and sometimes eliminated as more public land is converted from multiple use to wilderness, national monuments or park designation. In farm country, pasture acres shrink as more of it goes into crops. Even cropland is being lost as farms are gobbled up by city sprawl.

"Corn acreage actually hasn't declined; it has just shifted to take away pastureland. What we've lost is acreage to grow cattle, but

since most feedlots are in areas where there's corn production and ethanol plants, there is opportunity for drylotting cattle, and there are cornfields and corn residues that can be utilized," he says.

Klopfenstein adds that one problem is that almost all corn farmers have gotten out of the cattle business because they didn't want to be feeding cattle or calving. Today there are fewer farm herds, and there are very few fences or facilities any more on these farms to make it easy to graze cattle.

"When I came to Nebraska in 1965, every farm had cows, but now we have large farms with thousands of acres of corn, and farmers are at least a generation away from having had cattle. The opportunity for young people to be the middle person and manage the cattle could be a way to make it work," he says.

Feedlots tend to be full in the winter and less full in summer, which fits this new possibility for drylotting pairs with some innovative management, notes Klopfenstein. This would be a way for feedlots to keep their yards full.

"With our project here, working with cattle in a feedyard setting, feeding cattle year-round gets pretty pricey. So we're looking at utilizing the feedyard during summer, when grass is expensive, and letting cattle graze cornstalks during winter. There may not be much grass in farm regions, but we wouldn't be using any grass. It might be possible to have pairs in the feedlot in summer and trail them to cornstalks for winter," says Klopfenstein.

In some regions there is other crop aftermath that could be utilized by cows in late summer through fall and winter. It might be wheat residue or a cover crop. There are many possibilities.

"It's a matter of using the resources available. In our area, our most economical resource is grazed cornstalks. Cattle are selective and eat the best parts, and scatter what's left on the field, reducing need for tillage. Grazing is very beneficial for the farmer. Some farmers still think that cattle will ruin their soil, but we have the data to show that's not the case," he says.

"In some areas cattle can utilize corn silage, which can be a relatively inexpensive source of energy during the drylot period. In that situation there is opportunity to come in with a cover crop after you've taken the silage off, which can be grazed."

A producer can produce more cattle on fewer acres with double-cropping and drylotting than with pasture. This is something to think about on a limited land base.

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Editor's Note: *Heather Smith Thomas is a cattlewoman and freelance writer from Salmon, Idaho.*

Nebraska study

"To produce finished beef in feedlots, traditionally about 85% of the feed that goes into that animal is forage," says Terry Klopfenstein, professor emeritus for the University of Nebraska. This includes what you've fed to the cow to produce that calf, and to the calf to get it grown up enough to go into the feedlot.

"When we're short on forage, this gets to be a challenge. One option/opportunity is to pen the cows (off pasture) and feed them something that may be as cheap or cheaper than grass. Here at the university we started a project four years ago to evaluate this option. One of our goals was to discover what point in time would be most economical to wean the calf," he says.

For many years we've thought it inefficient to feed the cows to produce milk for calves when forage is low in quality or in short supply. We've said it's more economical to wean the calf, put him in the feedlot and kick the cow back out on the low-quality forage — rather than feed her supplemental feed to produce milk and wean the calf later when he's bigger. The lactating cow requires more energy and nutrients; whereas, the dry cow can get by on what we considered cheaper feed — the low-quality pasture — with perhaps a little protein supplement.

The weaning debate has become more complicated with the price of pasture.

One of the challenges in weighing the options is that any research comparing them was very difficult to do because it was unknown how much the grazing animal is actually eating, explains Klopfenstein.

"When we started our project four years ago, we put cows in a drylot year-round. Now we know exactly what and how much they are eating. One of our objectives was to determine whether it was more efficient to wean the calves and feed them separate, or keep them with the cows and feed them together," he says.

"We used a high-quality diet that could be eaten by both the cow and the calf. In past research people have fed the cow hay or pasture grass, putting the calf in the feedlot on grain. We needed to determine the energy value of both diets, which is difficult. So our plan was to feed them both the same diet and then we didn't have to compare energy values of different kinds of feed, just the amount," he explains.

The dry cows — with calves weaned early — were fed a limited amount of that diet, about half of what they would normally need if they were lactating. He explains that one group of calves was weaned at 90 days of age and fed that same high-energy diet, and the other group was left on the cows (cow and calf eating the same diet, together) and weaned at 205 days of age (average weaning age).

"We fed these groups the same amount of feed. The calf that was early-weaned could eat as much as it wanted, and the cow was limited. We added those two amounts of feed together and that was how much we fed to the pair that was still together," Klopfenstein explains.

The only difference for the unweaned calf was that he had the benefit of his mother's milk along with the high-quality diet he shared with the cow. They got the same amount of feed as the cow and calf that had been separated.

Through the course of the study, calves from each group weighed about the same at 205 days of age, whether they were weaned early or not. The early-weaned dry cows were slightly heavier, even on the limited amount of feed, because they weren't lactating. However, statistically they were not different from the other group.

"Our conclusion is that it didn't make much difference, for the cows or the calves, whether they were weaned early or not," he says.