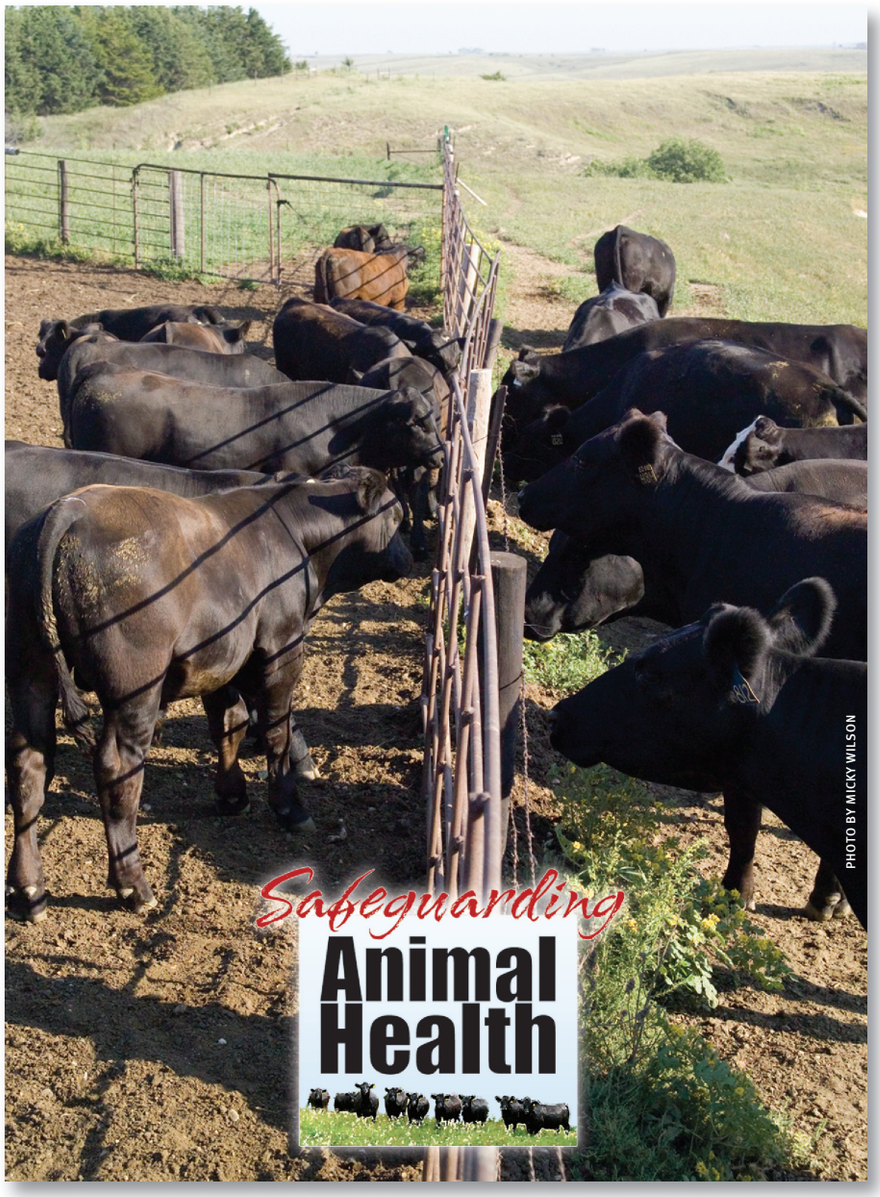

Fenceline Weaning:

Less Hassle, More Money

Research confirms that if you are not fenceline weaning you are probably leaving money on the table.

by ***Ed Haag***

►**Above:** With fenceline weaning, calves and cows are kept in the same pasture. A permanent or portable fence separates the dams and calves who can hear and see each other.

If you are a commercial beef producer who weans calves at the time of sale and you are looking for a way to put extra money in your pocket, look no further. Glenn Nader, University of California livestock farm advisor, has a deal for you. "Most producers view weaning as a chore and not as an opportunity to improve their bottom line," says the longtime advocate of fenceline weaning. "That view has to change."

Studies conducted at the University of California, Davis (UC Davis), and University of Idaho show that calves weaned while remaining in ear- and eyeshot of their dams are, on the average, 20 to 25 pounds (lb.) heavier after 10 weeks than calves that are physically removed from the site. "For the cow-calf operator, treating weaning as an important part of marketing is one of the most effective ways to increase profitability," says Nader, adding this applies to both increased weight gain and receiving a premium at sale.

He attributes the better weight gain in fenceline-weaned calves to reduced stress. He is quick to point out that the conventional weaning method of separating the calves and moving them into a drylot exposes the young animals to several stress-producing changes at the same time. "In one day they are separated from their mother, introduced to a new diet and probably moved from a pasture to a pile of dust," he says. "Any one of these factors could impact weight gain and animal health."

With fenceline weaning, calves and cows are kept in the same pasture. A permanent or portable fence separates the dams and calves who can hear and see each other. Calves graze on pasture grasses and are sometimes supplemented with long grass or alfalfa hay.

Unlike conventional weaning scenarios that often involve physically removing and hauling the calf to another location, Nader notes fenceline weaning produces very few behavioral signs of distress, even during the first two days of separation. He adds that animals do initially congregate along the fenceline but gradually form into groups to graze more choice areas of the pasture. Hay placed away from the fenceline encourages this behavior.

One week after separation, cows and calves can be observed to be operating in two independent groups. "Fenceline weaning introduces changes one at a time," Nader says. "This keeps the stress level to a minimum and allows calves to get on with their feeding and weight gain."

Data support premise

To confirm these observations, Ed Price and his research team from UC Davis

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conducted a study documenting and comparing the physical effects on calves of five separate weaning options. These included:

1. fenceline separation from dams on pasture;
2. total separation from dams on pasture;
3. total separation from dams in a drylot (corral), preconditioned to hay;
4. total separation from dams in a drylot, not preconditioned to hay; and
5. nonweaned controls on pasture.

One hundred Angus-Hereford-cross calves were randomly assigned to the five treatments for one week. This process was repeated three years in a row.

To document the effects of each treatment, calves were weighed before being placed in their respective environments. Monitors were then assigned to each treatment group to observe calf behavior. Behaviors that were recorded included eating (grazing or eating hay), walking (pacing), lying down, and vocalizing.

In addition, monitors were required to make a note of each time a cow and her calf were within 3 meters of each other in the fenceline group and nonweaned control group. Because of the difficulty involved in determining which calf in a group was responsible for vocalizing, sounds were attributed to the group rather than individual calves.

After the seven-day postweaning period, all calves were placed on pasture in larger groups. The five treatments were assessed for short- and long-term effect by weighing the calves every week for 10 weeks after the initial seven-day study period.

Once all the data were collected and analyzed, Price and his researchers confirmed what had been believed by fenceline weaning advocates. Calves that had visual and auditory access to their dams spent more time eating (grazing or eating hay) than those that experienced total separation. Separated calves that were not preconditioned with hay spent more time walking (pacing) and less time lying down than the other four groups. Groups that were totally separated from their dams spent much more time vocalizing than the fenceline animals. It was also noted that the greatest discrepancy in behavior among the groups occurred during the first two days.

The study also found that the fence-weaned calves spent 60% of their time within 3 meters of the fence, while their dams spent 40% of their time at that same distance over the same time period.

The most dramatic results in the study were the differences in weight gain between calves that had visual and audible contact with their dams and those that did not (see Fig. 1). At Week 2 of the study, fenceline calves had gained 95% more weight than the average calf in the three treatments that involved total removal. Ten weeks after the beginning of the study the calves that experienced total removal had not compensated for these early losses in weight gain and were still lighter than the fenceline-weaned calves.

Calf purchasers recognize difference

Nader believes the benefits of fenceline weaning extend well beyond weight gain. "The calf's health has got to be compromised when it is taken from the mother cow, off a pasture and stuck in a drylot," he says. "When they are bellowing all day in a dusty environment, they are bound to get bacteria into their lungs."

Angus producer Lynn Drewien of Ketchum, Idaho, who practices fenceline weaning, agrees that the risk of lung infection does increase when agitated calves bellow and stir up dust. "They are a lot calmer when they can see their mothers," she says, adding the warning that this does not mean that you can skimp on fencing. "We use the corrals in our feedlot [so] calves can see their mothers but can't push their heads through."

Nader notes that it isn't just the researchers and producers who are aware of the weaning issues. During the last few years calf buyers have steadily increased the premium they are willing to pay for calves that have been weaned for 30 days. "Stockers are no longer willing to take on the losses associated [with] high-stress weaning," he says. "They would rather pay more money for animals that have gone through the weaning process."

A survey conducted by UC Davis shows that the premium paid for calves weaned 30 days jumped from 64¢ per hundredweight (cwt.) in 1997 to $1.58 per cwt. in 2003 (see Table 1).

In response to this rise, the share of calves sold in the video market that were weaned more than 30 days moved from a single-digit percentage in 1997 to around 30% of the sales in 2000 through 2003.

Learning the tricks

For Nader, the currently popular method of fenceline weaning — where the calves are placed in a dusty pen and the cows in an adjacent meadow — is far from perfect. He and his colleagues have made an effort to convince producers to, at the very least, place the cows in the dusty pen and the calves in the outside pasture.

"If they are going to have a set of animals sucking dirt, it should be the cows, who are a lot bigger, a lot stronger and can handle more stress and dust than the calves," Nader says. "Producers have reported that when they put the cows in the pen and the calves on the pasture they did have healthier calves at weaning time, but they also had a greater increase in maintenance costs for the corral facility."

He points out that one of the most recent developments in fenceline weaning has emerged out of studies conducted by the University of Idaho.

"Rather than placing calves in a dusty holding pen, where they are susceptible to all sorts of respiratory diseases, a pasture is

Table 1: Price premiums for value-added calves, $/cwt.

Year	Preconditioned	QAP	Implant	Wean length	Natural
1997	0.51	-0.33	0.29	0.64	
1998	0.86	0.02	1.03 ***	2.17 *	
1999	0.95 *	-2.28 **	0.13	0.80 **	2.08 ***
2000	0.02	1.15	-0.68 *	1.13 ***	0.52
2001	0.31	1.36 ***	0.11	1.29 ***	1.11 *
2002	0.66 **	0.30	-0.20	1.27 ***	1.20 **
2003	1.57 ***	1.73 **	-0.18	1.58 ***	1.84 ***

Note: The values reported here were estimated using statistical regression analyses. Positive values are price premiums for the attribute, negative numbers are price discounts. These values are statistically significant (different than zero) only when indicated by *, ** or *** (respectively, 90%, 95% and 99% confidence level). Thus, a value with no asterisk is essentially zero, meaning there is no real price premium or discount.

Source: Cattle Marketing Study, Department of Animal Science, University of California, Davis.

divided in two by an electric fence," he says, adding that two to three strands of charged wire have proved effective in segregating cows and calves.

Nader warns that using electric fence does take some preparation. He recommends at least a week of fence preconditioning prior to weaning. "Put a small electric fence partially around a watering area the cattle use every day," Nader says. "That way they will come in contact with it and learn to avoid it."

Fence installation is also important. "Make sure when you install your fence it is properly grounded," he says. "The number one reason why electric fences fail is because they are not grounded well enough to deliver the full charge to the animal."

He warns that grounding might be particularly tricky in the fall when soil moisture is minimal.

Nader recommends one of the newer low-impedance systems that produces a minimum of 4,000 volts.

Those who are already involved in intensive grazing are particularly well-suited to fenceline weaning. "They usually have all the resources on hand," Nader says. "It is just a matter of applying them to another purpose."

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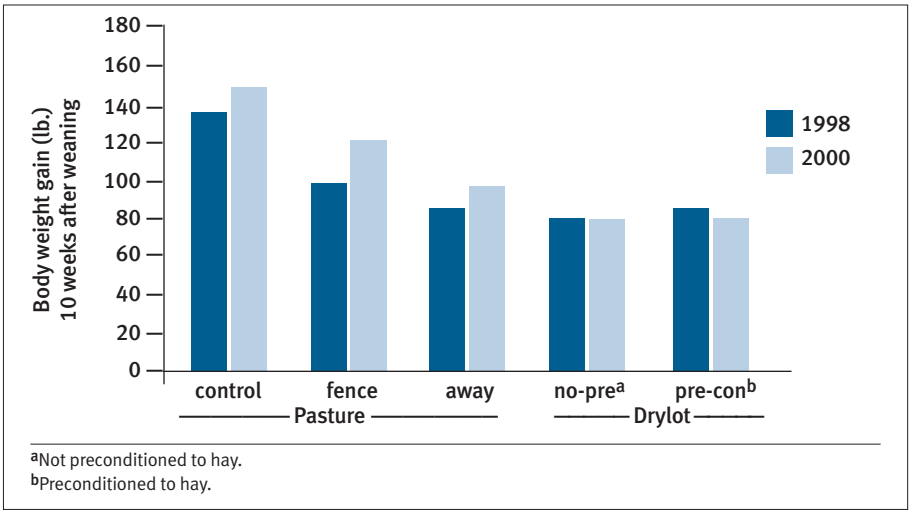
Fig. 1: Average weight gain, lb., of the calves in the five treatments after 10 weeks



[a]Not preconditioned to hay.
[b]Preconditioned to hay.

Source: Data from "Fenceline Weaning of Beef Calves," by Edward Price, Department of Animal Science, University of California, Davis

Final suggestions for fenceline weaning

- Make sure cows and calves are fully trained to the electric fence before attempting to separate them.
- Use a minimum of two wires on your fencing system. Anything less could invite trouble.
- Make sure your system has ample power and it is properly grounded.
- Do not rely on touch to determine whether or not it is transmitting enough juice.
- Use a voltage meter to check your system. This not only allows you to test the actual system but allows you to determine how well it is grounded.
- Check your fence every day. Electric fences are not infallible, and not catching a problem soon enough could prove costly and time-consuming.