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# To Creep Or Not To Creep?

by Jeri Lynn Gilleland

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**T**o creep or not to creep? That is a question for many purebred producers. Breeder awareness of problems associated with creep feeding nursing calves is at an all-time high.

Not only is the cost factor a major consideration, but a camouflaging of maternal effects is of great concern to performance-minded cattlemen everywhere. Sure, everyone wants high weaning weights. But when those weights come from creep feed instead of mother's milk, total production efficiency as well as reliability of cow production records is questioned.

Dr. Doug Hixon, beef cattle extension specialist at the University of Wyoming, says producers need to determine objectives of a creep feeding program. "I don't believe in creep feeding just to wean heavy weights. I think that is the wrong objective," Hixon says. "If there is a drought situation where creep feeding becomes a survival practice then we certainly have to consider creeping." Hixon also sees creep feeding of value in minimizing postweaning stress and adjustment to a new feeding program. He says, "I think putting some feed out that last 3 to 4 weeks prior to weaning and getting calves used to eating is a good practice."

But Hixon would like to go on record as "philosophically" opposing the creep feeding practice. "We need to develop cattle that do not require creep feeding. If we are doing a good job of selecting maternally strong females, they ought to be able to do a good job of raising that calf themselves," he says.

Yet another factor in the creep feeding dilemma, and one with which Hixon has been involved, has come to the forefront in recent years: Possible negative effects on lifetime productivity of creep-fed heifers.

## Negative effects on productivity

Reports from land-grant universities as early as the late '60s documented creep feeding effects. Research work done at Colorado State University and reported in the *Journal of Animal Science* in 1971 stated high preweaning nutritional level and heavy weaning weights of heifers were negatively

evaluated to determine long-term relationships between creep feeding of replacement heifers and cow productivity. Creep-fed replacement heifers showed detrimental effects on their performance as measured by number of calves weaned, calf birth weights, calf 120-day weights, calf 210-day weights and lifetime productivity.

The researchers advised: If creep feeding is used, it should be used only for male calves or those calves entering the feedlot after weaning and not for replacement heifers.

Hixon's Ph.D. work at the University of Illinois dealt with creep feeding. His findings were congruent with those at Purdue: Replacement heifers should not be given access to creep feed as it apparently interferes

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correlated with subsequent cow productivity (as measured by most probable producing ability).

Oklahoma State University reported in 1972 that cows creep fed as calves produced .88 lb. per day less milk than cows that were not creep fed as calves.

Probably the most popular and most quoted experiment is a 21-year study conducted at Purdue University. Phase one of the study evaluated creep feeding effects on weaning weights of 831 Angus calves. Results showed creep-fed heifers lost their weaning weight advantage by one year of age. Creep feeding adversely affected postweaning gain of heifers but had no significant effect on bulls. In the cow productivity phase, 1,306 calves from 210 cows were

with development of subsequent milking potential. (Most scientists are in agreement that increased fat deposition in the udder causes milk secreting cells to become non-functional and that this process is generally nonreversible.)

Other studies have shown similar results. However, some studies have also shown conflicting results.

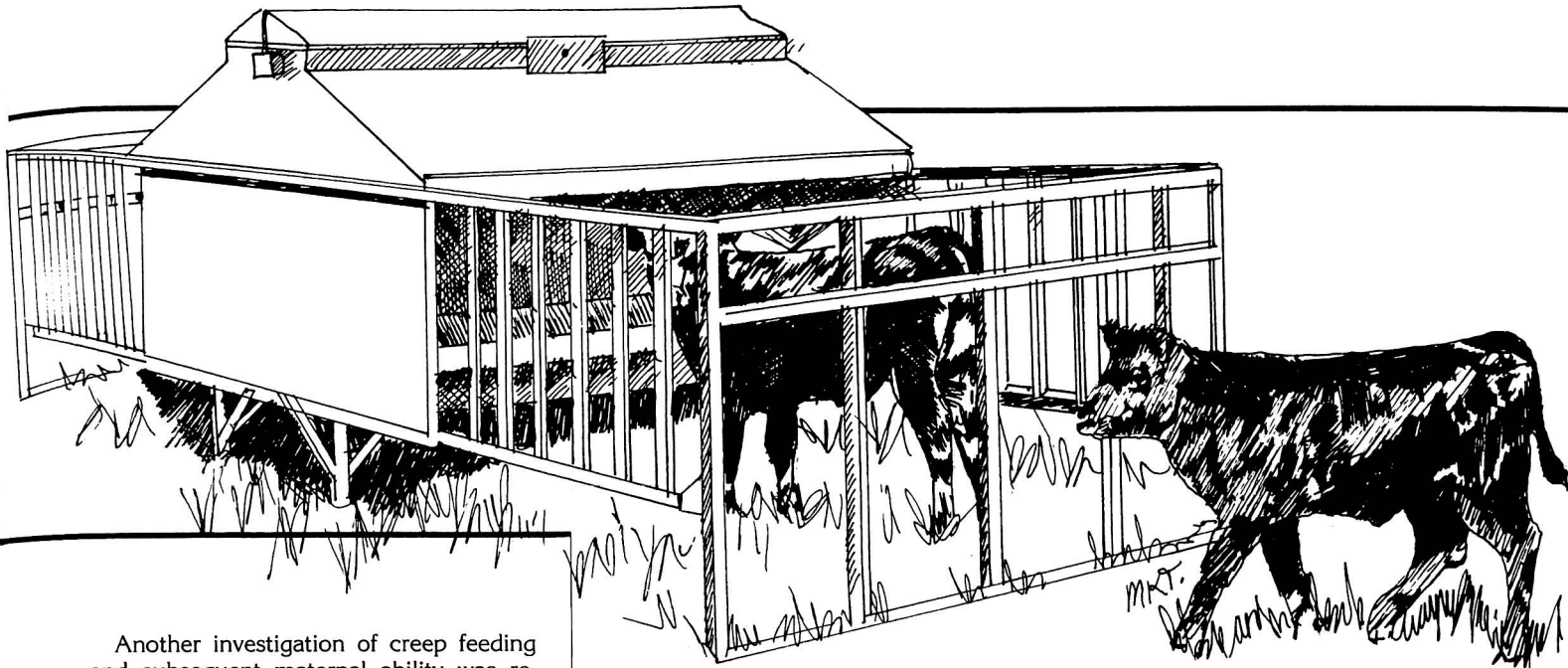
## Conflicting data

One such study was done at Auburn University. Results of their 6-year project concluded: Creep feeding neither increases nor decreases maternal performance of heifers kept as brood cows. Their study involved 252 Hereford, Charolais x Hereford and Simmental x Hereford dams bred to Angus bulls. Cow performance was evaluated through two calf crops.

Dr. Troy Patterson, one of the Auburn researchers, has his own thoughts on why some research is indicating detrimental lifetime productivity and other research is not. "A lot of the creep work that has been done back over the years was done when we had smaller, faster maturing cattle. Those cattle started laying down fat in their udder much earlier than cattle would today," he reasons.

Cattle in the Auburn study were slower maturing cattle and creep feed simply allowed them to perform up to their genetic capabilities, Patterson believes. "The heifers in our study were not depositing fat in the udder because they hadn't reached the stage of maturity where they would start laying down fat. So, there simply was no damage to the mammary system in those cattle," says Patterson. He adds, "I have no proof of this. It just seems logical to me. We didn't have any control groups of the short, squatty cattle that we used to have."

Hixon agrees, "I think results could be dependent upon the genetic potential of the cattle involved and the nutritional level they are on. If nutritional level does not fulfill their genetic potential to grow, then quite possibly supplemental feeding is not going to have a detrimental effect."



Another investigation of creep feeding and subsequent maternal ability was reported by Montana State University researchers in 1975. Field records supplied by the American Simmental Assn. on 11,740 calves were analyzed. They found creep feeding heifer calves prior to weaning had not adversely affected subsequent maternal ability.

#### Still skeptical

Even though the Auburn research indicates no detrimental effects on subsequent productivity of creep-fed heifers, Patterson still would not advise it for replacement heifers. "In a purebred herd where you are trying to produce the kind of cattle you want to perpetuate, I don't think you want to

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mask the maternal effects. And this has nothing to do with what our research was about. In our modern day Angus that really grow fast and are frame 6 or frame 7, I don't think creeping will hurt those kind of cattle as far as maternal abilities. But you don't know whether that calf was big because the mother gave a lot of milk or because the calf ate a lot of creep feed," states Patterson.

Hixon sums it up, "Hopefully, we should be looking at anything we do in the beef cattle business in terms of economics. Blanket recommendations, no matter what you are talking about, usually aren't going to work very well. We have to analyze individual situations and make decisions accordingly."

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## Points to Consider

*Blanket statements about the profitability of creep feeding are inappropriate. Each cattleman's situation is unique and his decision of whether or not to creep feed calves should be based on many factors. Some of these might include the availability of quality forage, milking ability of cows, when and how calves are to be marketed, market forecasts or if heifers are to be retained for breeding purposes. The following points, reprinted from a University of Missouri Beef Cattle Research Report, highlight some factors for producers to consider when making creep feeding decisions.*

**1** How calves are to be managed after weaning is very important. Weight advantage of creep fed calves will diminish with time after the creep feeding period, particularly if calves are maintained on largely all forage diets.

**2** Only weight advantage from creep feeding remaining at sale time is convertible into income. For example, if fall born calves are grazed through the summer after weaning, half the weight advantage of creep fed versus noncreep fed calves may be lost after 3 to 4 months.

**3** Bull (or steer) calves will make more effective use of creep feed than heifer calves. It would be beneficial to separate cows with bull calves from cows with heifer calves and creep feed only bull calves.

**4** There is some evidence that creep fed heifer calves kept for breeding animals will not milk as well as those that have not been creep fed. Large-frame heifers with potential for rapid growth without putting on excessive fat will be able to utilize creep feed more efficiently than small frame, slow growing heifers. If heifers are to be calved at 2 years of age, some supplemental feeding may be needed to get them to the desired weight at breeding. British breeds should weigh 600 to 650 lb. when bred, and European breeds 700 to 750 lb.

**5** Calves on high-quality forage or good milking cows do not benefit as much from creep feed as calves on poor quality forage or poor milking cows.

**6** Grain in creep feed is a high-cost item while pasture and milk may have little or no alternative value. However, some research results show carrying capacity of pastures can be increased where creep feed is fed.

**7** Fall born calves appear to make more efficient use of creep feed than spring born calves. This can be attributed to lower quality forage available during the winter which would also cause a reduction in cow milk production. Feed requirements for animals on a maintenance ration are higher during the winter; increasing about 1 percent for each 1.8 degree F. decline in effective temperature (wind chill effect—but not the same as wind chill index for humans) below a base of 60 to 75 degrees F. Creep fed calves, because of higher production, would produce more heat as a by-product of production and consequently require less energy for maintenance.

**8** Creep feeding calves during prolonged periods when quantity or quality of forages is low may be a good policy. If the period is expected to be short, the calves would gain more rapidly (compensatory gain) when conditions improve so benefits from creep feeding would be reduced.