



Heifer Prep

Heifer development should include grazing experience prior to breeding.

by **KINDRA GORDON**, *field editor*

Readying heifers for breeding season often focuses on proper body condition scores, vaccination protocols and reproductive tract scoring. Yet, researchers are finding grazing experience may also be important to a heifer's successful transition during the breeding process.

Specifically, when preparing replacement heifers for their first breeding season, special consideration should be given to giving heifers grazing experience on pasture before breeding season begins. That's the advice of South Dakota State University (SDSU) Extension Cow-calf Field Specialist Robin Salverson.

She explains that grazing experience is important because studies have shown when heifers move from being fed in a drylot to a pasture, most lose weight before becoming accustomed to their new environment.

If heifers are naïve to grazing, they will experience a negative plane of nutrition, which can impact weight and pregnancy success.

Salverson cites one study that found heifers lost on average 56.3 pounds (lb.) during their first two weeks on pasture — about 4 lb. per day. Additionally, she says 60% of those heifers were found to become anovular — not ovulating — within 13-15 days of the diet change.

Additionally, Salverson and her SDSU colleagues have studied heifers developed in feedlot and pasture situations and found that the heifers developed in a drylot had a higher percentage cycling prior to breeding, but the heifers developed on grass actually had a higher pregnancy success. Salverson attributes this to a negative energy crash experienced by the feedlot-developed heifers after the transition from the feedlot to grass immediately following breeding.

Salverson says researchers believe when cattle are introduced to a novel environment, they try new feedstuffs a little at a time before increasing intake. This period of adjustment can result in a negative gain on heifers.

Energy expended

It's not just the diet change that causes the heifers' weight loss. Salverson says foraging behavior is also a factor. She explains that when initially put on pasture, heifers expend a great deal of energy moving around and exploring the space.

To document this, SDSU researchers placed pedometers on heifers to track and compare the number of steps they take in a drylot vs. a pasture setting. Prior

to artificial insemination (AI), heifers in the drylot averaged about 2,500-3,000 steps daily. Meanwhile, heifers on pasture averaged about 6,000 steps per day.

After breeding, when the two groups were both turned onto pasture, those that had been in the drylot took nearly double the amount of steps on the first day on pasture. Specifically, heifers with grazing experience had about 10,000 steps on the first day on pasture, while those coming from the drylot had about 18,000 steps.

Salverson says by about the fourth day on pasture, both heifer groups were averaging 8,000 to 9,000 steps daily. However, she notes that the extra steps the drylot group took during the first few days expends a lot of energy, which may impact weight gain and the pregnancy rate for those heifers.

According to Salverson, the bottom line from this research is this: If heifers are naïve to grazing, they will experience a negative plane of nutrition, which can impact weight and pregnancy success.

Recommendations

Therefore, in heifer development she recommends to producers, “If you are able to allow heifers some access to pasture before breeding, it gives those heifers knowledge and ability to graze.”

Salverson notes that access to just 40 acres can be beneficial.

“Anything so heifers are allowed to graze,” she states.

That said, she emphasizes that heifers do not have to be on a full grazing diet while gaining this experience. They can be supplemented with hay, dried distillers’ grain, wheat midds or other supplements.

How far in advance should heifers be put on pasture before breeding to ensure they are back on a positive plane of nutrition?

“If you get heifers on grass at least 30 days prior to breeding, reproductive success should not be affected,” says Salverson.

For producers who breed in a drylot, she suggests producers adapt heifers to grass for up to a month before breeding. Then heifers could be drylotted and supplemented for 10 days while AIing. When they are turned out to grass post-AI, they should not go through the negative gain period.

For producers who do not have the option of getting heifers onto pasture before breeding, Salverson advises breeding in the drylot and then maintaining them there another 30 days after breeding, or supplementing them on grass if they are immediately put on pasture after breeding.

Salverson underscores that the ultimate goal is developing heifers so they stay in the herd and have a long, productive life. Minimizing energy crashes as heifers transition to pasture by managing nutrition before and after breeding appears to be integral to pregnancy success and a heifer’s transition into the cow herd, Salverson concludes.

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