

For: Around the County
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Heifer Development: Keeping Cost in Check

Profitability in the cow-calf sector varies each year. Even in a good year it is critical to explore opportunities to reduce costs while keeping your production goals in mind. Management can have a direct impact on profitability and one area producers should consider reviewing is their replacement heifer program because raising replacement heifers is one of the largest expenses a cow-calf producer will incur.

It has routinely been recommended that heifers be developed to 65% of their mature weight before the start of the breeding season because puberty in beef females is a function of weight. In addition, in most cowherds the highest non-pregnant rate occurs in females that are asked to get pregnant with their second calf. Underdeveloped heifers at first breeding may be ones that are in a continual catch-up mode and can be challenged in their next pregnancy.

Since the replacement heifer enterprise does not generate much or any income, costs for this enterprise are borne by the cow/calf enterprise. Replacement heifer costs can add a significant amount to the annual cow costs. These costs are from the time the replacement heifer is weaned to the beginning of her first calving season. The more economical the replacement heifer program, the greater the profit potential of the cow/calf enterprise as long as reproductive performance of the heifers is not compromised.

Inconclusive results exist regarding the appropriate target weight and also the appropriate time heifers should be placed with bulls in relation to the mature cowherd. It is a common practice to breed heifers before the rest of the cowherd so they have a longer post-partum period before the start of their second breeding season. This management strategy requires additional resources if heifers are developed to the same target weight because an accelerated rate of gain is needed to reach the target weight earlier.

Researchers at the Gudmundsen Sandhill Lab, near Whitman compared developing heifers at different target weights as a percentage of their mature weight and found that for calving and weaning of the first calf and reproduction, high-gain heifers as cows were heavier at calving and weaning. These differences in heifer development weights carried over through the fourth pregnancy diagnosis. Average calf birth date, calf birth weight, calving difficulty, and calf losses were similar for both groups through three calf crops. Calf gain and adjusted 205-day weights were also similar for both groups of cows, indicating milk production was probably similar. Percentage of cows rebreeding for their second, third, and fourth calves were similar for both groups. There were no differences in pregnancy or calve production data when heifers were developed at either 53 or 57 percent of mature weight. However, costs were increased for the high-gain group.

Corn residues are a relatively inexpensive feed resource, but are low in protein and energy. This is especially true when growing calves backgrounded for entry into the feedlot or for summer pasture or for replacement heifers. It's important to know the amount of a supplement to feed to calves grazing corn residues in order to achieve a desired level of daily gain.

Due to their high energy and high protein content, distillers grains fit well as a protein and/or energy supplement in many grazing situations. Distillers grains were fed to weanling steer calves grazing nonirrigated corn residue to determine daily gain response and residue intake response to increasing levels of the grains. Grains were fed individually using Calan electronic gates. Daily gain increased from 0.9 to 1.8 pounds per day. Forage intake decreased from 11.3 to 8.3 lb/day. These results provide information for selecting a dried distillers grains supplementation level to achieve a target gain.

These data would suggest that heifer development costs can be reduced by designing feeding programs to target heifers to 55 to 60 percent of their mature weight before the start of the first breeding season. Heifers developed to lighter pre-breeding weights maintained adequate breeding performance during the second, third and fourth breeding seasons. When considering this type of heifer

development program, try retaining more heifers (20 to 25% more heifers) into the program in case low rebreeding performance is incurred and overall cow numbers can be maintained. Recently females that do not get pregnant in their first breeding season have not been costly as the price of yearlings sold after the grazing season has been good.

Finally, developing heifers using crop residues may be a means to reduce development cost and not reduce reproductive performance. Replacement heifers developed on crop residues will need to be supplemented to achieve targeted average daily gain as residues are low in protein and energy. Also, train heifers to an electric fence so that corn residue can be grazed successfully. These management strategies can impact profit potential of the cow/calf enterprise.

For more information on developing replacement heifers, please contact your local Nebraska Extension office.