



# Repackaging Heifers

*Lighter target weights may yield more economical results when developing breeding females.*

by Kindra Gordon

Traditionally, the golden rule in heifer development has been to develop heifers to 60-65% of their mature weight by the start of the breeding season. But new research suggests producers reconsider that recommendation.

From an economic standpoint, developing heifers to 50-55% of their mature weight may have more merit, says Trey Patterson, formerly a South Dakota State University Extension beef specialist and now with the Padlock Ranch at Ranchester, Wyo.

Patterson has reviewed research on the subject as well as worked with the Padlock Ranch crossbred herd in producing replacement females with lighter development weights. Of the concept, he says, "I think we can build a better young cow that will have lower inputs."

## Reasons for change

Patterson bases his support for smaller heifer development weights on economics. He points out that for most beef producers their goal with heifers is to get as many bred as possible — often without much regard for cost.

"Maybe the goal should shift from maximum to optimum reproduction," says Patterson. And, he adds, "Spending more money to get maximum females bred can actually decrease profits on the ranch."

Instead, Patterson says more cost-effective heifer goals should be to: generate necessary replacements, get heifers bred early and minimize calving difficulty. He says research indicates those goals can be met when a heifer is at 50-55% of her mature weight.

Specifically, data from a three-year study conducted in Nebraska by Rick Funston showed heifer pregnancy rates were not statistically different between heifers that were developed to either 53% or 58% of mature body weight. Average weight between the two groups was 638 lb., and pregnancy rates were 88% and

## “Maybe the goal should shift from maximum to optimum reproduction.”

— *Trey Patterson*

92% respectively. Additionally, there were no differences between the two groups in pregnancy rates with their second, third and fourth calves.

In another three-year study, two groups of heifers were developed to 50% and 55% of their mature weight. Again, there were no significant differences in heifer pregnancy rates (87% and 90% respectively). And, there were no differences in pregnancy with the second calf, which averaged a 91% rate.

### Is it too small?

For those who argue that 50-55% of mature weight is just too small for heifers, Patterson says, “Cattle have changed so much since that initial target (60-65%) was set.”

As an example, he points out that if the average mature cow weighed 1,200 lb., 65% of that is a 780-lb. heifer. But more realistically, Patterson says most cows today are more likely 1,400 lb., with 65% of that being a 910-lb. heifer. “That’s pretty big, and is it necessary?” Patterson questions.

What about bigger heifers being necessary to initiate puberty and minimize future calving difficulty? Here, Patterson hedges a bit.

He says, “There’s no question weight of cattle influences puberty and age of puberty is also affected somewhat by breed.” The studies he has reviewed were conducted with crossbreds, so he cautions that heterosis may be a factor.

Patterson says, “There may be more risk — and dystocia — with different biological types. Some breeds may need to be developed larger.” But he adds that dystocia can be manageable with proper bull selection.

### Other considerations

If you are considering developing heifers to lighter target weights,

Patterson says there are some additional factors to evaluate:

1. There is more risk of lower pregnancy rates with decreasing levels of development. Thus, Patterson says, be sure you have enough animals to generate the necessary replacements.
2. Because this system will likely produce some open heifers, you need to watch the cattle cycle. Patterson says in some years it can be a paying proposition to sell open heifers in the fall, but in some years it may not be profitable.
3. Don’t forget to pay attention to second calvers. Patterson says economic analysis shows selling open 2-year-olds is not profitable. Thus, additional supplement to achieve improved pregnancy may be justified for these young cows.
4. Smaller heifer development weights may mean smaller cows, but Patterson says that can be a plus. “It means maintenance requirements will be lower,” he says. **HW**

## Reduce heifer costs by developing on native range

For producers looking to cut heifer development costs, recent South Dakota research shows heifers can be effectively developed without spending a lot of money on feed.

A study was conducted in South Dakota range country (West River) that evaluated developing August-weaned heifers on native range versus November-weaned heifers in a drylot.

The heifers were all weaned on grass hay and a wheat middling/soybean hull-based weaning pellet for 30-45 days. August-weaned heifers were turned out onto ample winter range in September and remained on pasture all winter. November weaned heifers remained in the drylot after weaning and were fed grass hay and a wheat middling-based range pellet.

Both groups of heifers were managed to achieve 65% of mature weight (about 860 lb.) at breeding in June. To achieve the desired average daily gain for the heifers on range, dried distillers grains were fed daily in feed bunks. The rate of feeding was initially 2 lb./head and gradually increased to 7 lb./head by February. The rate was decreased in the spring.

All heifers were turned onto summer pasture on May 18 and were exposed to a bull on June 14.

Initial heifer weights were 461 lb. for the early-weaned heifers and 605 lb. for the heifers weaned in November. The weights in May were 859 and 830 respectively, which was not statistically different. Additionally, pregnancy rates were also similar between the two groups (91% for the range-developed heifers and 88% for the drylot heifers).

Of the study, former South Dakota State University Extension beef specialist Trey Patterson says, “Native range for heifer development works.” He admits that in some years when there is excess snow, it may not work. But in most years, he says it is an economical alternative.

He points out that in this study, heifers on native range and fed distillers grains gained about 2 lb./day in the spring. All total it cost 53 cents/day to develop heifers on the range; whereas, the drylot developed heifers cost 76 cents/head/day. **HW**