Building Better Replacements

K-State's winter ranch management seminar addresses replacement females.

by ***Stephanie White***

Cattle producers have faced a diversity of issues, all leading to a decline in herd numbers. Looking back, why did herd numbers dwindle and why have they been slow to bounce back? Kansas State University Beef Systems Specialist Jaymelynn Farney addressed the issue during K-State's Winter Ranch Management Seminar Series, hosted Jan. 9, in Mound City, Kan..

"Producers dealing with drought over more than one year have had a hard time bouncing back," said Farney. "A main reason for this is the high price of replacement heifers, which has been a more recent issue. When building or rebuilding a herd, recognizing best management practices for developing replacement heifers becomes key."

She said looking at why cows are culled from the herd will help identify the best place of focus for an operation.

"Generally, 15.6 % of cows are culled before five years of age," said Farney. "This is not ideal because it takes approximately five calves to recover the initial investment and development cost of a heifer."

Farney stated that first-calf heifers statistically are one of the hardest to keep in a herd. To keep heifers in the herd long-term, she said getting replacement heifers to 55-65% of mature weight at breeding is ideal.

"Replacement heifers have to hit optimal targets when it comes to body weight and condition. It is simply focusing on nutrition," said Farney. "When your heifer is ready to calve she should have achieved 85% of her mature weight and be at optimum body condition, with a score of 6."

Using the cattle body condition scoring system, the physical attributes of a body score of 6, are having no visible ribs or spine. The hooks and pins are visible with some fat on the tailhead and the brisket, and full muscling can be seen.

Farney stated that a body condition score of 5 is acceptable, which is a slight decrease in fat cover, but a score of 4 is low. This low score will make it hard for the heifer to reach her full potential in size after she has calved, causing problems down the road. Farney adds that a score of 7, which would mean the heifer has more cover, is still acceptable but a score of 8 means the heifer is well past the target for condition and is an added feed cost.

"With three set targets: body score 6, breeding weight 55-65% and calving weight at 85% you should have enough cushion to know that the easy keeping heifers will not be over conditioned and the heifers that will need constant attention will not be too thin," she said. "Applying the idea of group weight distribution to your prospect herd will pay in benefits down the road and in breeding seasons to come."

Farney said one mistake many producers make is underestimating the average weight of a cow in the herd.

"It is very important to know what that ideal weight for a cow in your herd will be, and in the past 23 years cow weight has gone up a substantial amount," she said. "In 1990 cows were averaging 1,228 lb., but in 2013 cows were at an average weight of 1,423 lb. This is a difference of 195 lb., but this weight difference can impact productivity if not monitored."

She shared that figuring the target weight for cattle is an equation that can be done when ideal weights for heifers and cows are known.

1,400 lb. mature cow

55% of mature body weight at breeding = 770 lb.

65% of mature body weight at breeding = 910 lb.

Example

600 lb. heifer, 200 days, 840 lb. (60%)

840-600 = 240 lb.

240 lb./200 days = 1.20 lb. per day

"There are many different roads to get your heifers to develop into that optimal weight range, and it really does not matter which road you take as long as you are at the desired weight and body condition score in the end," said Farney. "Because the road ultimately does not matter, you have a lot of latitude as a producer and you can get creative with your feed source because you are hitting the goal and setting up the operation for a successful breeding season.

She said that making the base for your heifer is important but also reaching the 85% body weight mark at time of calving will determine the overall health of the fetus.

"To get the heifer to 65% at breeding season and to 85% body weight when calving what does the heifer have to do?" asked Farney. "She has to grow and she has to gain weight. If she is not growing and gaining weight the first thing that will be affected is the growing fetus and embryo."

Fifteen percent of heifers have calving difficulty, according to Farney. Out of that 15%, 20% of those heifers will not rebreed.

"If you have 100 heifers you should expect to have problems with 20 heifers. This means the next breeding season you are going to have four open cows. Which, in todays market, will cost you about $6,000," said Farney. "This is where recognizing your heifers' potential is important and making sure she reaches it by keeping her in an ideal breeding state during her first calving period. Adding this knowledge to understanding EPD (expected progeny difference) numbers and selecting a bull with calving ease will help with risk of birthing problems."

She added that using a bull with good EPD numbers allowing for calving ease, combined with a well-nourished heifer, would take calving difficulty numbers down from a 15% to a 12% calving difficulty. In return, the number of heifers that will not breed back the next season will drop from four to one.

Farney shared that knowing proper heifer development, nutrition and bull EPDs will push a stagnate cow herd to proper growth and successful calving seasons for years to come. **HW**

"With three set targets: body score 6, breeding weight 55-65% and calving weight at 85% you should have enough cushion to know that the easy keeping heifers will not be over conditioned and the heifers that will need constant attention will not be too thin."

— Jaymelynn Farney