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COOPERATIVE EXTENSION

DEVELOPING A HEIFER ENTERPRISE

Kevin Heaton and ***Dale ZoBell***
Utah State University

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INTRODUCTION

Improving economic returns is important for sustainable cow-calf operations. Traditionally, heifer calves have returned $5.00-10.00/cwt less than steers of the same quality. Livestock producers must evaluate opportunities to enhance the value of their heifers. Many producers are creating new opportunities through innovative management, improved genetics and better marketing. There are various means by which producers have the potential to add value to heifers intended for breeding. These marketing strategies could include: raising purebred or crossbred heifers or developing a certification program. In addition, new technology such as sexed semen, cloning, and timed breeding may increase the opportunity for producers to specialize by developing a bred heifer enterprise. Each producer must determine which enterprise yields the greatest revenue per dollar invested.

CROSSBRED HEIFER ENTERPRISE

Several crossbreeding programs have been developed for heifer enterprises and each relate to demand for the type, quality and breed of heifers. Matching crossbred livestock to the environment is essential to take advantage of available resources without negatively impacting performance. Systems that work well in extensively managed operations in the western states, produce heifers that perform well on limited feed, are moderate-framed, moderate milkers and easy fleshing. All of these traits are a necessity for producers who utilize arid and semiarid rangelands throughout the western U.S.

Ranchers who raise their own replacement heifers tend to select for maternal traits in their replacement heifers. While maternal traits are very important to the cow calf operator, terminal traits provide the growth and carcass quality needed in feeder calves. Although there has been an effort to combine terminal and maternal traits into individual animals and breeds of livestock, the greatest revenue returns come through specialization in either maternal or terminal breeding systems. Ranchers purchasing replacement heifers desire quality genetics with desirable maternal traits which maximizes production through a terminal crossbreeding program.

SINGLE HERD OF PUREBRED COWS WITH TWO BREEDS OF BULLS

A system is available for the producer who wants to raise crossbred heifers and his/her own replacement heifers. This system is maintaining a purebred cow herd while utilizing two different breeds of bulls, one of which is the same breed as the mature cows. Advantages of this system are: the ability to raise purebred replacement heifers, and time and extra management are minimized. By maintaining one cow herd, fencing, supplemental feeding and monitoring herd health will be minimized. Producers who chose this system can also maintain control of their herd's replacement genetics. One of the disadvantages is that the best calves might not be the breed or sex that the producer wants to market or keep for replacements. An additional disadvantage is that straightbred calves will not have maximum heterosis. Also, one breed of bull may dominate the breeding season, thus providing a disproportionate number of calves and potentially forcing the producer to buy replacement heifers from a purebred source.

TWO HERDS OF PUREBRED COWS WITH TWO BREEDS OF BULLS

This system is most practical for an operator who has the capacity to maintain two separate purebred cow herds (eg. Hereford and Angus) that are bred to bulls of the opposite breed, thus producing similar F1 offspring. F1 offspring result from the mating of a purebred (straightbred) bull crossed to a purebred (straightbred) female of another breed. This system generally produces calves consistent in color, frame and type, and offers maximum flexibility in selecting heifers for market. Additionally, all calves should exhibit heterosis. Maintenance of two separate cow herds during the breeding season, inability to retain replacement heifers and reduced control of the genetics of the cow herd are disadvantages of this system. Another challenge, is finding a consistent and reliable source for herd replacements.

At weaning time, crossbred replacement heifers from these types of operation can yield a $5.00-10.00/cwt premium. This equates to about $25 to $65.00 per head, which provides income similar to steer price for heifers with little or no extra cost. Marketing, however, is critical.

PUREBRED HEIFER ENTERPRISE

In the above systems, operators may find it is difficult or impossible to raise their own replacement heifers, thus relying on outside sources of replacements. Cull cows or heifers from purebred operations may be ideal replacements in a commercial operation. Purebred operators typically produce more quality heifers than they need as replacements. There may be a good opportunity for purebred producers to obtain greater profit from heifers and cull cows by marketing them to heifer producing enterprises rather than through the local livestock sale barn.

HEIFER CERTIFICATION PROGRAM

A heifer certification program is a state-wide or region-based program for heifers that fit certain criteria. Examples include Kentucky Certified Replacement Heifers and Missouri Show-Me-Select. These programs were developed for producers to obtain greater returns from their heifers. Both programs have very stringent requirements.

The “Show-Me-Select” heifer program includes the following: all heifers must be calfhood vaccinated for brucellosis in the fall. Heifers are also vaccinated for IBR, BVD, BRSV and 7-way Clostridia. Label directions must be followed for initial vaccination and boosters. The use of implants is discouraged. If implants are used, only products approved by the FDA are allowed. Long-term use of MGA is prohibited but may be used for up to 14 days to synchronize estrus. Internal and external parasite controlled is required. Heifers must be polled or dehorned and completely healed by sale day.

In the spring, pre-breeding reproductive exams are performed. Reproductive tracts are scored, pelvic measurements are taken and heifers are weighed. Heifers are also vaccinated for IBR, BVD, leptospirosis and vibriosis between 30 and 60 days prior to beginning of the breeding season. Internal and external parasites are controlled as required. Heifers must be bred to bulls with birthweight EPDs not greater than the guidelines established by the respective breed associations.

The following fall, all heifers are examined for pregnancy and breeding dates are confirmed for artificial insemination or determined for natural service pregnancies. The calving period cannot exceed 45 days. Heifers are treated with approved products for control of external and internal parasites within 30 days of sale date. A final screening committee examines the animals on sale day to eliminate heifers with blemishes, such as scarred eyes, frozen ears or short tails. Heifers must have a minimum body condition score of 5 (on a 1-9 scale) on sale day.

These criteria are used as an example to show producers what it takes to develop a quality heifer enterprise. In 1999, the Show-Me-Select program had 8,750 heifers enrolled. Over 6,000 were kept on the farms where they were raised and 2,058 were sold at an average of $824/head. Heifers sold through this program have returned producers approximately $100.00 per head after all expenses.

There are opportunities for heifer certification programs in the West. Producers need not require a formal program such as the Show-Me-Select Program to raise certified heifers. Ranchers could certify heifers by adhering to strict quality control standards developed on the ranch, in consultation with their veterinarian, livestock Extension specialist or county Extension agent. Examples would include a guarantee to calve in a 45 day period, artificially inseminated to a low birth weight bull, pregnant, sexed fetus via ultrasound, vaccinated, etc. Your guarantee is linked to your reputation and future success.

TECHNOLOGY AVAILABLE TO BEEF PRODUCERS

Artificial insemination (AI) is one of the greatest strides taken by the livestock industry. AI was developed in the 1930's, but was not commercially utilized until the 1950-60's. Estrous synchronization products are commercially available and this practice has been used in combination with AI to yield excellent results. For additional information on artificial insemination and/or estrus synchronization programs, contact a beef Extension specialist, county Extension agent, or the local artificial insemination technician. Today there are additional technologies in the development stages that may have significant impacts on the livestock industry. Sexed semen, cloning, and timed breeding are just a few of the technologies which will increase the opportunity for producers to specialize in either maternal or terminal production systems. Sexed semen is commercially available in Europe and has been used to produce over 500,000 calves. It is anticipated to be commercially available in the US in the near future. Eventually, the cost is expected to be slightly more than regular frozen semen, but initially the

price will most likely be 3-4 times higher. Producers should realize that there will be a reduction in conception as compared to frozen semen due to approximately 90% fewer viable sperm in each straw.

If commercially available, cloning has the potential to dramatically improve the consistency of beef products. However, cloning is still being researched and is not commercially available due to the high cost and ethical concerns.

CONCLUSIONS

Many producers have started very successful heifer enterprises. The systems, breeds, certification and genetics may be different, but the end result should be quality, trust and repeat buyers. New technology will change the way ranchers do business in the future and may create niche markets for heifers. In the future, developing a heifer enterprise may increase the revenue per cow and create niche marketing opportunities.

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