

Ready to Rebuild



Heifer program ready for challenge, delivering quality herd replacements.

Story & photos by
JOANN PIPKIN

It's been a rough two years. Drought has plagued the heart of cattle country, forcing many farmers to liquidate their herds. The nation's cow herd is the smallest since the 1950s. Record input costs have only added fuel to the fire.

Yet, as we turned the calendar to 2014, we saw feeder-cattle prices hit all-time highs. Fed cattle topped \$150 in some areas of the country before the first of February. With inventory numbers still low and pasture conditions improved, the light ahead is nothing but green. Livestock economists agree on one thing: Cow-calf producers are in the driver's seat.



From a marketing standpoint, the SMS program offers the industry an added-value heifer through both overall performance and productivity — immediately and long-term.

As the beef industry finds solid ground and presses onward, the real challenge comes to heart: How do we replenish the nation's cow herd? All eyes are on replacement heifers to get the ball rolling. Recognized as one of the most

successful statewide, on-farm beef heifer development and marketing programs in the United States, the Missouri Show-Me-Select (SMS) Replacement Heifer Program is poised to become a major player in cow herd rebuilding over the course of the next several years.

According to David Patterson, SMS state-wide coordinator and reproductive specialist for the University of Missouri (MU), technologies such as fixed-time artificial insemination (FTAI) and heat synchronization are spilling over into cow herds across Missouri. The result is a growing interest and appreciation for reproductive management and genetic improvement — and ultimately quality replacement heifers — ready to help grow the nation's cattle inventory.

So many factors related to reproductive performance in cattle are influenced by management, Patterson says, noting that many components of fertility that affect calving and reproductive performance later in the cow's life are not highly heritable.

"The Missouri Show-Me-Select Replacement Heifer Program was designed to improve reproductive efficiency and increase herd profitability," Patterson explains. A pilot project of the SMS program began in the fall of 1996 in northeast and southwest Missouri. Since then,

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— Eldon Cole

the program has grown statewide, with more than 111,000 heifers enrolled through the fall of 2013. Of those, nearly 27,000 head have sold to more than 2,900 buyers from 18 states, according to MU data.

From a marketing standpoint, the SMS program offers the industry an added-value heifer through both overall performance and productivity — immediately and long-term. Patterson says these programmed heifers give the buyer the opportunity to more rapidly improve the genetic makeup of their herds, modify existing breeding programs, and

ultimately enhance end-product quality and uniformity.

The right tools

As cattlemen consider the herd rebuilding process, it's essential they work out a plan for their farm and give consideration to age, management and marketing strategies for both the short and long term, according to MU Extension Livestock Specialist Eldon Cole.

"Some aspire to expand aggressively, while others will go about it rather cautiously," explains Cole. "There's a place for both."

Producers need to assess the genetic component with which they are working, Cole says. "Are they comfortable with their base cow herd? If not, they may need to bite the bullet and pay some steep prices to put their desired genetic package together."

One thing is certain, though, says Cole. "Without question, the use of technology will play a greater role in herd-building than ever before — artificial insemination, embryo transfer, heat synchronization, expected progeny differences (EPDs), DNA testing. They are all going to be there to use."

Reproductively, the SMS program is aimed at improving the performance of heifers during the first breeding period and minimizing the incidence and severity of

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dystocia at calving. The ultimate goal is the delivery of healthy, vigorous calves followed by successful rebreeding of the females in future breeding seasons, according to Patterson.

Under the watchful eye of a veterinarian, heifers enrolled in the SMS program are developed under stringent guidelines, including those for vaccinations, parasite treatments and reproductive measurements. Selection of known calving-ease sires is a must for the heifers at breeding time. Pregnancy status is guaranteed for 30 days beyond sale date.

Cole believes the SMS program indirectly introduced cattle producers to the world of EPD understanding.

“The use of, first, low-birth-weight bulls, and then calving-ease-EPD bulls has resulted in producers’ understanding EPDs for criteria other than calving ease,” he says, explaining cattlemen discovered how EPD numbers really work. “Thus, they’ve developed confidence in other EPD values and accuracies, and they are now more accepting of genomic-enhanced EPDs (GE-EPDs).”

The use of ultrasound for pregnancy diagnosis is becoming more widely used, as well, Cole says. “The program has enabled some veterinarians to offer

services for synchronization and AI to customers. This can be a valuable preventive-medicine approach rather than a person just calling the vet when there is a dystocia problem.”

Fostering an understanding of animal breeding and genetics, reproduction, nutrition, animal health and economics all are essential in making sound management decisions that sustain a farm economically, Patterson says. He adds that the developing phase of the replacement heifer is one of the largest problem areas for cow-calf operations.

“The SMS program incorporates all available tools to support long-term health, reproduction and genetic improvement of replacement heifers,” Patterson continues.

El Dorado Springs, Mo., cow-calf producer Scott Casey estimates he’s purchased more than 100 head through the SMS program in 10 different sales. He recognizes the value of his investment. “You know you are buying the cream of the crop,” he says of the SMS heifers. “The heifers are well-qualified for replacements.”

The SMS program has helped Casey build a strong foundation for raising his own replacements. “That’s one of



PHOTO BY STEVE SUTHER

When compared to other decisions made by cow-calf producers, reproductive management of replacement females has one of the greater long-term effects on herd profitability, says Dave Patterson.

the reasons why we think raising our own replacements is now an option,” he explains. “Our genetics are so much better now than before we started purchasing the SMS heifers.”

In essence, the SMS program helps Angus breeder Richard Eggers fill a niche

market. The Jackson, Mo., cattleman has been a program participant since its inception.

“A lot of the heifers have some carcass value in their genetics,” he explains.

“Their steer herdmates are being fed out,

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At a glance: Missouri Show-Me-Select Replacement Heifer Program

Here’s an inside look at the basic requirements for the Missouri Show-Me-Select (SMS) Replacement Heifer Program.

● **Prebreeding evaluation.** A prebreeding reproductive evaluation is required for all heifers. Individual animal identification (ID), pelvic area measurement and reproductive tract score are required. Prebreeding exams are encouraged six weeks prior to breeding. Heifers with a pelvic area less than 150 cm² at prebreeding may be remeasured at the initial pregnancy exam within 90 days from the start of the breeding season and must have a minimum pelvic area of 180 cm² at this examination.

● **Minimum vaccination requirements:** A comprehensive herd health vaccination program starting at weaning age or before should be administered under the advice and guidance of a veterinarian.

- Calthood vaccination against brucellosis (Bang’s disease) must be given according to state and federal regulations by an accredited veterinarian.
- For weaning vaccinations, heifers must be vaccinated and boosted for infectious bovine rhinotracheitis (IBR), bovine viral diarrhea (BVD), parainfluenza-3 virus (PI₃), bovine respiratory syncytial virus (BRSV), leptospirosis (five-way), vibriosis and clostridia (seven-way). Heifers must be 5 months of age or older at the time of vaccinations.
- To maximize protection against reproductive loss, prebreeding vaccinations to protect against leptospirosis (five-way) and vibriosis

must be given between 60 and 30 days prior to breeding. A booster vaccination against IBR and BVD is required between 60 and 30 days prior to breeding. Modified-live virus (MLV) vaccines for IBR and BVD are recommended.

- Initial pregnancy examination must be performed within 90 days from the start of the breeding season. Individual animal ID, pregnancy status and fetal age (in days) are required. Any heifer that fails to become pregnant during (or loses a pregnancy following) the original breeding season is no longer eligible for the program.

Sale eligibility requirements

To qualify for the SMS Program sale, heifers must be enrolled prebreeding. In addition to that, they must meet the following criteria:

- **Pelvic measurement.** Pelvic rechecks are to be done at pregnancy check and cannot be done more than twice in the heifer’s life to be qualified for the sale.
- **Parasite control.** All heifers must be treated for internal and external parasites within 30 days of the sale.
- **Surgery.** Horns and scurs must be removed and heifers must be completely healed by sale day.
- **Implants and melengestrol acetate (MGA).** SMS officials recommend heifers not be implanted. If heifers are implanted, it is required that only FDA-approved products for replacement heifers be used and administered according to label guidelines. Long-term use of MGA is prohibited. Use of MGA for periods of up to 14 days to synchronize estrus is permitted.

● **Blemishes.** Heifers with active pinkeye or scars resulting from pinkeye are not eligible for sale. In addition, heifers with rat-tails, bobtails, frozen ears or other physical blemishes or deformities are ineligible.

● **Weight and body condition.** Bred heifers on the day of sale must weigh a minimum of 800 pounds (lb.) and receive a body condition score (BCS) within a range of 5 through 8 using a 9-point scale (see www.cowbcs.info for more information on condition scoring). Heifers are sold on a per-head basis.

● **BVD-PI (persistent infection).** Heifers offered for sale must be tested and guaranteed negative for BVD-PI.

● **Inspection.** A certified USDA grader evaluates all heifers for frame, muscle and body condition prior to sale. Heifers must meet a minimum projected frame score of Medium using the USDA system for grades of cows and a muscle score of 2 using the USDA feeder cattle scoring system (see www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELDEV3060890).

● **Pregnancy.** A confirmed pregnancy examination must be performed within 30 days prior to sale. Consignor guarantees bred heifers to be safe in calf at the time of sale. If a heifer is proven by veterinary exam within 30 days after sale not to have been pregnant, the consignor will replace the heifer or make financial settlement with the buyer.

In addition to the above requirements, heifers must be bred to known calving-ease sires that meet certain EPD criteria.

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and we do receive carcass data back on them.”

Eggers is adamant that herd rebuilding doesn't begin with just any run-of-the-mill heifer. “We have got to be diligent in the kind of females we work with in the herd-rebuilding process,” he notes. “You don't want to keep just any female. You have to start with quality.”

Long-time SMS program consignor Doug Crooks would agree and says the program has helped improve his cow herd through the use of AI genetics.

“It's also helped our customers that have purchased our SMS heifers. [They] are getting cattle with better genetics,” he says.

Crooks notes that his customers report quicker breed-back time from the heifers. “Both the cows and their calves perform well.”

Crooks, who farms near Leeton, Mo., in partnership with his father and brother-in-law, says the SMS program heifer has longevity built into her. “You can buy with confidence that you are getting a quality animal that's guaranteed to be bred to a calving-ease bull with quality genetics and accuracy behind him,” he says. “So, you have a better chance at getting a good, live calf on the ground.”

Even if a consignor chooses not to market his heifers through the sale, Crooks says the SMS program has set precedence. “It can be a tool to help producers who are just wanting to raise replacements for themselves.”



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Efficiency is key

Purchasing SMS heifers may be more economical and faster than raising heifers to expand the beef herd, Cole maintains. The SMS program can give buyers greater assurance that they are putting a good, long-lived replacement heifer in

the herd, he says. “The prebreeding, early pregnancy testing and visual evaluation by a third party contribute to that assurance.”

For buyers like Casey, the SMS program is a win-win, offering superior-quality genetics and opening the door of opportunity for him to expand his herd.

“It's a good program to help replenish the nation's cow herd,” Casey says simply.



Editor's Note: Joann Pipkin is a cattlemaster and freelance writer from Republic, Mo.

Heifer program designed to aid in building healthy Kansas beef herds

A new program aimed at supporting beef cattle producers by improving the reproductive performance of replacement heifers may have come at an opportune time.

The Sunflower Supreme program developed by Kansas State University (K-State) and the Kansas Department of Agriculture addresses dystocia, or calving difficulties in heifers, as well as whole-herd health and successful breeding techniques.

This may be an especially good year to launch this program, says Jaymelynn Farney, animal science specialist with K-State Research and Extension. Recent drought conditions and related market forces pushed the number of cattle in U.S. herds to 90.8 million head as of Jan. 1, 2013 — the lowest level since 1952, according to the USDA, but there are signals some producers are beginning to expand their herds.

“At this point we are starting [the program] in southeast Kansas, but hope to make it a statewide program by next fall,” says Farney, who is based in Parsons. “As part of this program, producers adopt effective health protocols and use some of the latest technologies and genetic tools with the end goal of improving herd health.”

Ways to manage for dystocia concerns include using expected progeny differences (EPDs). Two valuable EPDs to use with first-calf heifers are calving ease and birth weight.

“All breed associations report birth weight, and

several report calving ease,” Farney says. “Calving ease is a better indicator of dystocia concerns in first-calf heifers because it indicates the influence of the sire on calving ease in purebred females calving at 2 years of age.”

Calving ease (CE) is reported as a percentage, so producers should select sires with a higher calving-ease value, which should indicate a higher percentage of unassisted calving among first-calf heifers. Calving ease combines multiple measured traits of a bull's progeny, including birth weight, calving score of first-calf heifers and genomic values, to provide an easy-to-understand EPD to further improve dystocia concerns.

For some producers, being involved in the program will mean more recordkeeping, but they will be surprised how beneficial that can be, Farney says.

Meetings on heifer health, breeding success, nutrition, genetic evaluation and marketing are planned for those who enroll. A quarterly newsletter and videos will provide practical, day-to-day management tips.

The Sunflower Supreme program also aims to improve relationships between producers and veterinarians to identify a whole-herd health-management program, she says, with a focus on respiratory and reproductive health. Vaccination guidelines that are part of the program can be adapted to any operation with guidance from a veterinarian about type and booster requirements of each vaccine.

The program requires participants to receive Beef Quality Assurance (BQA) training, which encourages correct management techniques, Farney says. This also helps guide producers as they start livestock welfare programs and can open marketing opportunities.

Heifers that breed earlier in life have a more productive lifetime and greater profitability, Farney says. By choosing a breeding strategy and synchronization protocol, the program aims to help producers improve reproductive success. To that end, a breeding soundness exam must be completed 45 days prior to breeding to further evaluate heifers and provide enhanced reproductive success.

“We designed this program to be an educational tool for producers,” Farney says, adding that all of the guidelines can be adopted in any operation that raises replacement females. “With expanded collaboration between producers, extension and local veterinarians, this program will add value and additional revenue to Kansas cow herds and provide quality replacement heifers to increase the demand for Kansas cattle.”

Producers interested in participating in the program should contact their county or district K-State Research and Extension agent or visit www.sunflowersupreme.org for additional information.

— by **Mary Lou Peter,**
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