

Who Needs Cows?

Colorado State University's George Seidel overviews a beef production system for heifers only.

Story & photo by **Troy Smith**, field editor

'My idea is to get rid of the cows," said Colorado State University research scientist and cattleman George Seidel during the Applied Reproductive Strategies in Beef Cattle Symposium (ARSBC) in Davis, Calif. Seidel said he is studying the feasibility of an unconventional beef production model involving only heifers and no mature cows.

Why buck convention? Well, according to Seidel, only about 30% of feed nutrients used by the entire beef production system go toward growing and finishing young animals destined for slaughter, with 70% of all feed consumed by the cow-calf herd. About 70% of those nutrients go toward cow maintenance. Therefore, about half of all feed in the system is used to maintain the mature cow herd.

Seidel proposed an alternative commercial beef production system where a breeding herd of heifers is bred with sexed semen. Theoretically, they would be bred to produce females so that each first-calf heifer replaces herself with a heifer calf.

Each bred heifer's first calf would also be her last, because after their calves are early-weaned at about 3 months of age, the young

dams go to a feedyard. The objective is to have the heifers finished and ready for harvest at about 30 months of age.

Seidel said his "All Heifer-No Cows" (AHNC) system would not be economically viable unless the carcasses of the 28- to 30-month-old heifers could be marketed for similar value as other finished cattle. Typically, heifer performance is slightly less efficient than steers, but use of anabolic implants should compensate for most of the difference. A potential drawback exists if carcasses of 28- to 30-month-old heifers are discounted for exhibiting hardened bones as a result of pregnancy.

There would be alternatives to marketing 2-year-old heifers as finished animals, however. These include marketing bred heifers or selling pairs after calving. Another option would be to market calves and cows separately after weaning. Seidel sees marketing flexibility and the ability to enter and exit the program at many life-stage points, as feed and cattle prices dictate, as advantages of the AHNC model.

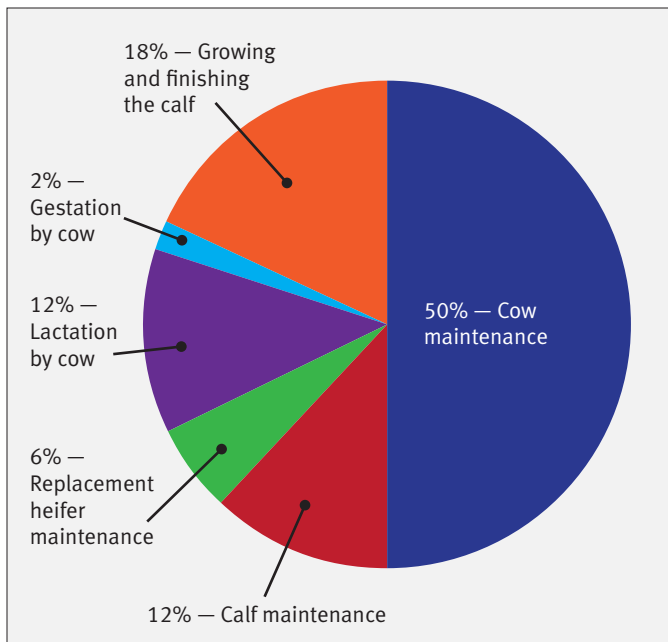
Also advantageous is the fact that no first-calf heifers, with calves at side, have to be rebred. Seidel noted how pregnancy rates for first-calf heifers are notoriously low, and associated culling rates can be high, unless first-calvers receive supplemental feed. He sees another benefit in the absence of age-related problems associated with old cows.

Seidel said some additional cost would be incurred because of the lower fertility rates associated with use of sexed semen. However, sperm sexing procedures



► "This system promises to greatly reduce the amount of feed needed per pound of beef produced, while also decreasing water use and production of greenhouse gases, as well as manure," said Colorado State University research scientist and cattleman George Seidel.

Fig. 1: Conceptual illustration of units of energy devoted to various physiological functions in a traditional beef production system in the United States, by percentage of intake energy



are improving rapidly, and the fertility gap is narrowing.

Currently, sexed semen offers 90% accuracy, so up to 10% of bred heifers could deliver bull calves. That, along with some heifers failing to become pregnant and the inevitability of some animal deaths, means some replacement heifers probably would have to be sourced annually.

"If the system worked perfectly, it would be entirely self-sustaining. It is not," admitted Seidel. "However, the AHNC system could be 75% to 80% self-sustaining, thus requiring only a small percentage of heifers from outside of the system to be added each year."

Seidel said the AHNC model could be a way to increase beef production, since much of the beef produced would come from calves born to heifers that otherwise would have been finished and slaughtered without having a calf. This would help remedy the current overcapacity experienced by both the feedlot and beef-packing industries.

"This system promises to greatly reduce the amount of feed needed per pound of beef produced, while also decreasing water use and production of greenhouse gases, as well as manure," added Seidel.

The AHNC model is not for everyone. Launching this kind of enterprise would require a large initial outlay of capital. With

the bulk of income generated by 28- to 30-month-old finished heifers, money would be returned much later than for a conventional cow-calf operation marketing 6- to 7-month-old calves.

Seidel spoke during Tuesday's ARSBC session focused on the future. Visit the Newsroom at www.appliedreprostrategies.com to view his PowerPoint, read the proceedings or listen to his presentation.



Editor's Note: Troy Smith is a freelance writer and cattleman from Sargent, Neb. Comprehensive coverage of the symposium is available online at www.appliedreprostrategies.com. Compiled by the Angus Journal editorial team, the site is made possible through sponsorship by the Beef Reproduction Task Force.

Fig. 2: All heifers, no cows production system

