

For Immediate Release
7/26/13

Principles for Heifer Development
By Gene Schmitz, MU Extension Livestock Specialist

Earlier this year, I had the opportunity to attend the annual meeting of the Beef Improvement Federation in Oklahoma City. This national program is unique in that it brings together both animal scientists and beef cattle seedstock and commercial producers to discuss beef cattle breeding and genetic issues relevant in today's production environment.

One interesting talk was from Dr. Jack Whittier, Extension Beef Specialist from Colorado State University. His presentation was on heifer development. He identified seven principles for heifer development based on data from over 1,400 cows, 1,200 heifers and over 8,500 head of calves produced by research projects conducted in Montana (1973), Nebraska (2012), and Colorado (2013).

Dr. Whittier's seven principles summarized from the above mentioned research projects are as follows.

- Heifers that conceive early as yearlings during their first breeding season appear to be "programmed" for productive lives.
- Early-born calves performed better than later-born calves.
- Release of dominance expressed as heterosis in reproductive traits is real.
- Heifers born early in relation to herdmates, increase the likelihood that they will conceive early in their first breeding season.
- Early-born heifers tend to have early calves themselves.
- Steer progeny from early calving cows produce higher value carcasses than late calving cows.
- Yearling heifers that respond to estrus synchronization and conceive early to AI produce greater lifetime revenue than heifers that conceive to natural service.

Dr. Whittier suggested one approach, when resources allow, is to retain a high percentage of heifer calves, develop them at a modest, but adequate, less expensive rate of gain, synchronize and AI them, and use no clean up bulls. The heifers should be examined for pregnancy early and open heifers can then be sold or managed as stocker heifers. This results in selection for fertility and helps program heifers to be productive cows.

Developing replacement heifers requires management and attention to details. A sound breeding program needs to be in place in order to effectively manage this task. The breeding program can include timed AI, which enhances the genetic merit of the herd and simplifies crossbreeding programs.

To further enhance the ease of timed AI programs, I have a portable AI breeding barn that is available for rent. Contact me at the Extension Center in Warsaw at (660) 438-5012 or by e-mail at schmitze@missouri.edu for more information on heifer development or AI barn rental. University of Missouri Extension is an equal opportunity / ADA institution.