



## Is it time to rebuild the cowherd?

### Upcoming Events

#### 4-State Beef Conference

January 12-13  
[www.extension.iastate.edu/feci/4stbeef/](http://www.extension.iastate.edu/feci/4stbeef/)

#### Tri-State Cow/Calf Symposium

January 29  
 St. Francis, Kan.

#### Seedstock Showcase

February 7  
 Phillipsburg, Kan.

#### Northwest Cow/Calf Conference

February 15  
 Quinter, Kan.

#### Cattlemen's Day

March 4  
 Manhattan, Kan.

*Rodney Jones*

*livestock production economist*

Improving forage conditions and continuing high calf prices have prompted many producers to consider rebuilding cowherds that were de-stocked because of drought conditions for the past several years. The issue of whether or not it is time to rebuild the cowherd really boils down to the question of the price of replacements relative to their economic value. Are they too high, too low or priced about right? The decision to rebuild should not be driven by whether one is planning to raise and keep their own replacements or purchase young females. That is a separate issue resolved by comparing the producer's cost to develop replacements with the going market value. For the cowherd rebuilding decision, replacements need to be valued at going market prices, because even if individuals choose to raise their own, there is an opportunity cost associated with not selling these animals to someone else.

A number of studies have suggested that there are certain times in a cattle cycle when it is more profitable in the long run to build the cowherd. The consensus is that if cows can be added to the herd during a time when the first few calves will be marketed into relatively strong calf markets, then those cows have a higher economic value than cows that are

added to the herd during a time when the first few calves will be marketed into relatively weak calf markets.

The economic value of a replacement is the sum of that replacement's future annual net incomes (including cull value) discounted to today's dollars (because the money to buy her is spent today). Calf revenues in the early years of the replacement's life are valued higher than revenues in the later years because of the time value of money invested. The ideal time in the cattle cycle to add replacements is when the economic value is high relative to the current replacement market price. It is relatively easy to go back in time and identify times in previous cattle cycles when it would have been economically attractive to add replacements. It is not as easy to look forward and make replacement decisions because future calf (and cull cow) price streams are uncertain.

To calculate the expected economic value of a replacement you will need to obtain a set of planning prices, including both calf prices and cull cow values, for the next seven or eight years. The next step is to prepare cash flow budgets and calculate expected revenues, cash expenses, and net cash flows per cow for the next several years. After choosing a discount rate, the "net present value" of the projected

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### Contributors

#### Dale Blasi

Stocker, Forages Nutrition & Mgt.  
 785-532-5427  
[dblasl@oznet.ksu.edu](mailto:dblasl@oznet.ksu.edu)

#### Joel DeRouchey

Livestock Production  
 785-532-2032  
[jderouch@oznet.ksu.edu](mailto:jderouch@oznet.ksu.edu)

#### Ron Hale

Livestock Production  
 620-275-9164  
[rhale@oznet.ksu.edu](mailto:rhale@oznet.ksu.edu)

#### Larry Hollis

Extension Beef Veterinarian  
 785-532-1246  
[lhollis@oznet.ksu.edu](mailto:lhollis@oznet.ksu.edu)

#### Sandy Johnson, Editor

Livestock Production  
 785-462-6281  
[sandyj@oznet.ksu.edu](mailto:sandyj@oznet.ksu.edu)

#### Twig Marston

Cow-Calf Management  
 785-532-5428  
[tmarston@oznet.ksu.edu](mailto:tmarston@oznet.ksu.edu)

Table 1. *Calculated economic values of beef cow replacements (bred heifers) based on alternative assumptions*

Reproductive Management	Calf Price Pattern Expectation		
	High	Medium	Low
High	\$1,537	\$986	\$903
Average	\$1,391	\$922	\$879
Low	\$1,281	\$870	\$858

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net cash flow stream over the next several years can be calculated using standard discounting techniques. Finally, the sensitivity of the result is evaluated for varying assumptions regarding future calf values, different reproduction rates, and other factors that can affect the net cash flow stream over time. Computer spreadsheet software is an ideal analysis tool.

The economic value of young replacements (2-year-old heavy springers) was calculated using this technique and several alternative assumptions concerning calf price patterns and reproductive performance. Cash operating costs associated with maintaining a cowherd were \$400 per cow per year. The results were sensitive to calf price pattern projections and reproductive performance of the cowherd. They are shown in Table 1.

The base assumption was that each replacement would produce seven calves, and then be sold as a cull animal. The *high* calf-price pattern expectation is based on the assumption that we have reached a new plateau in cattle prices, and that average steer and heifer calf prices will be strong for the next three years, then taper off as the overall herd expands but will not dip to levels as low as those experienced in previous cattle cycles. This price projection is consistent with the projections used by Harlan Hughes, emeritus professor from North Dakota State University, in his recent article on bred-heifer retention published in *BEEF* magazine. The *medium* calf-price pattern expectation is consistent with cattle-price patterns projected by the Food and Agricultural Policy Research Institute (FAPRI), a widely used source of agricultural price projections. The *low* calf-price pattern expectation assumes high prices will remain for two years (fall of 2005 and 2006) before falling to lower levels, following previous cattle price-cycle patterns.

The reproductive management scenario assumptions for the *high* category were rebreeding rates of 90 percent for the first two years, and 95 percent thereafter until the cow is sold after the seventh calf. In addition, a 1 percent female death loss for first-calf heifers, and a 0.5 percent death loss thereafter was used. For the *average* category, a rebreeding rate of 82 percent for the first two years and 90 percent thereafter, with a female death rate averaging 1 percent per year throughout the seven-year

analysis period. Assumptions for the *low* category were a 75 percent rebreeding rate for the first two years, and 90 percent thereafter, and a female death rate averaging 1 percent per year.

So, how do these results compare with recent sale prices for young bred females? Sale results vary, but it has not been uncommon to see high-quality bred heifers bringing from \$1,100 to \$1,300 per head or more. These results indicate that one either has to have a relatively optimistic calf-price outlook for the next several years, an expectation of good reproductive management, or much lower than average cash annual per-cow operating costs in order to view the current replacement market as a good opportunity to expand. The same analysis technique can be used to evaluate options for purchasing “running age” cows. The number of expected offspring produced obviously will be less, but the evaluation process is the same. Preliminary calculations based on a few recent auction prices of 4 to 5 year old bred cows suggest that a similar degree of optimism regarding prices and management ability may be needed in order for the investment to pay off. The fundamental difference is that one does not need to be optimistic regarding calf prices for nearly as long. Pursuing a strategy of purchasing older bred females to restock at least a portion of the herd is one lower cost, and perhaps lower risk, way to gradually rebuild the cowherd.

The projected economic value for each of the above scenarios was compared with the projected economic value of a bred female two years from now. Based on any of the three calf-price pattern projections used, the analysis suggests that replacements have a significantly higher economic value today than the value projected two years from now. In other words, holding off to rebuild the cowherd may result in calves that are produced and sold in the downturn of the cattle price cycle. Will better opportunities present themselves in the future (will replacements get cheaper)? No one knows for sure. As always, cow-calf producers face tough choices. One thing is for sure, well-managed, low-cost herds will have a much better chance of recouping replacement investments in any market.

## Prepare now for calving season

Larry C. Hollis, DVM, M.Ag  
beef veterinarian

With calving season just around the corner, now is the time to prepare. Here is a checklist to consider:

- Review notes from last calving season. What problems occurred and how can you prevent them? Do you need to vaccinate your cows before calving to ensure that they produce colostrum with the necessary antibodies?
- Calving groups – do you know which heifers/cows will calve first? Do you have them grouped so that you can manage calving more easily?
- Calving pastures – are your pasture fences, corrals, pairing-up pens, round bale feeders, etc., in good shape? Do you have an alternate calving pasture to move uncalved females to in case of scours? Do you have an alternate pasture to move pairs away from a disease-contaminated calving pasture?

## Tri-State Cow/Calf Symposium

“Focus on Information and Opportunities” is the theme of this year’s Tri-State Cow/Calf Symposium. This event will take place Jan. 29 at St. Francis High School in St. Francis, Kan. Producers will get an update on the National Animal Identification Program from Kansas Livestock Commissioner George Teagarden. Bill Mies from E-Merge Interactive will talk about *Turning Animal ID and Information Into Profit*. Producers can then attend two of five breakout sessions: *What Producers Need to Know about Foreign Animal Disease*, *Rebuilding the Cowherd: Options for Replacements*, *Selecting Genetics for Today’s Market*, *Carcass Evaluation 101*, and *Technologies and Tools for Implementing Individual Animal ID*. The program will finish with an economic outlook for cow/calf producers for 2005 and beyond by Jim Mintert from K-State Research and Extension. Registration is \$20 before Jan. 25. Contact Tye Faulkender at 785-332-3171 or [tfaulken@oznet.ksu.edu](mailto:tfaulken@oznet.ksu.edu).

• Calving equipment – is it in good shape? Do you have enough supplies?

- Fetal extractor
  - OB chains
  - OB sleeves
  - OB lube
  - Disinfectant
  - Sanitizable bucket
  - 7% iodine/tamed iodine to dip navels
  - Colostrum and esophageal feeder
  - Ear tags/record system to use for source and age verification
  - Scours vaccine/medication
- Game plan – have you discussed intervention points with your employees and veterinarian so everyone knows when it is time to seek professional help?

Better planning will make the calving season go more smoothly and result in more live, healthy calves to sell at weaning time.

## Northwest Cow/Calf Conference

Harlan Hughes, North Dakota State University professor emeritus will be the featured speaker at the NW Cow/Calf Symposium at 9 a.m. on Feb. 15 at the Q-Inn at Quinter, Kan. His presentation is titled *Profitable Drought Repopulation Strategies: Economics of Rebuilding the Cowherd*. Hughes retired as NDSU extension livestock economist in 2000 and now writes the *Market Advisor* monthly column in *BEEF* magazine. Other topics to be covered include, BVD control plans for cow/calf operations, an update on Johne’s and Chron’s diseases, minimizing winter feed cows, and opportunities for use of reproductive technologies in rebuilding cowherds.

A registration fee of \$15 is due by Feb. 8. For more information contact Cathy Musick at [cmusick@oznet.ksu.edu](mailto:cmusick@oznet.ksu.edu) or 785-938-4480.

**Synchronization Planner...provides research-based guidelines for implementing successful synchronization programs.**

## Are calf scours a problem in your herd?

Several agents can cause calf scours including bacteria, viruses, protozoa and fungi. The “big three” – rotavirus, coronavirus, cryptosporidia – rapidly contaminate the environment during the calving season. Dave Smith, extension veterinarian with the University of Nebraska suggests that producers should focus on environmental management to prevent scours. A system has been developed that prevents calves from making contact with pathogens in a large enough dose or for a period sufficient to cause disease. Prevention strategies incorporated into the Sandhills Calving System include segregating calves by age to prevent direct and indirect transmission of pathogens from older to younger calves and routinely moving pregnant cows (heavies) to new calving pastures to minimize pathogen dose-load and contact time.

In contrast to more traditional calving management that includes moving pairs out of one static calving pasture, this method ensures that for the duration of the calving

season calves are not born into an environment with an increasingly heavy pathogen load. Several pastures are required throughout the calving season to make the system work. The effect is to restart the calving season each week by having new calves born on a new calving pasture without exposure to older calves.

To learn more about this approach to scours prevention, attend the Seedstock Showcase at the Phillips County Fairgrounds on Feb. 7 where Dr. Smith will review the concept and system in detail. Contact Kent McKinnis at 785-543-6845 or [mckinnis@oznet.ksu.edu](mailto:mckinnis@oznet.ksu.edu) for meeting details. Another opportunity to learn about this system will be on Jan. 4 at the Gudmundsen Sandhills Laboratory in Whitman, Neb. For details, contact Sharon Clowser at 402-472-8550 or [sclowser@unlnotes.unl.edu](mailto:sclowser@unlnotes.unl.edu). To see the presentation and materials from Dr. Smith’s presentation on this topic at the Range Beef Cow Symposium go to: <http://rangebeefcow.com/speakers/Smith.html>.

## Updated Estrus Synchronization Planner available

The Iowa Beef Center at Iowa State University has released an updated version of the Estrus Synchronization Planner software, Synch04. The Estrus Synchronization Planner is a Microsoft Excel© application that assists with the planning and implementation of recommended synchronization systems. The new version of the program was a cooperative programming effort between the Iowa Beef Center and the North Central Region Bovine Reproductive Task Force. The Task Force provides research-based guidelines for implementing successful synchronization programs.

Users can select the amount of heat detection desired for their operation (heat detect and AI, heat detect for three days and cleanup AI at the end of the third day, or a single fixed-timed AI). Within each of these categories, specific synchronization protocols are recommended for either cows or heifers. After these selections are made, the producer determines when heat detection and/or AI will begin. The program indicates what day and, when it is critical, the time of

day for each of the necessary treatments in the protocol. A calendar of activities can be printed to ensure the proper treatments are administered on schedule.

Input costs of semen, labor, treatments and more can be entered in another portion of the spreadsheet. Based on the inputs, cost per AI pregnancy for a range of estrous responses and conception rates is calculated.

The CD also contains supporting material describing each of the major types of synchronization systems, diagrams of each system, information on proper heat detection and tips for a successful program. For each of the 22 systems included in the planner, suggestions for proper application and appropriate use situations are provided.

The cost of the CD is \$35, which includes shipping and handling. It can be ordered from the Iowa Beef Center at [www.iowabeefcenter.org/content/estrussynchplannermain.htm](http://www.iowabeefcenter.org/content/estrussynchplannermain.htm), by phone at 515-294-BEEF, or from members of the task force. In Kansas, contact Sandy Johnson at 785-462-6281 or [sandyj@ksu.edu](mailto:sandyj@ksu.edu).