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Beef Cow Replacement Decisions: Is Keeping Open Cows Possible?

Trenton T. Bohling  
*University of Nebraska-Lincoln, trenton.bohling@huskers.unl.edu*

Darrell R. Mark  
*University of Nebraska-Lincoln, dmark2@unl.edu*

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Beef Cow Replacement Decisions: Is Keeping Open Cows Possible?

In the past few years, some cow-calf producers have encountered abnormally large numbers of open, or unbred, cows in their herd. A couple of years ago, trichomoniasis, a venereal cattle disease spread by bulls, contributed to high percentages of open cows. This year, open cows are again showing up in herds, hypothesized to partially be the result of difficult winter conditions last winter and “washy” grass early last summer. In some cases, 40-70 percent of a cow herd has tested open, leaving producers to determine how best to replace these animals. Typically, options considered to replace these open cows are retaining heifers from within the herd, or purchasing bred heifers or cows.

When an otherwise fertile and productive cow becomes open, keeping the open cow has rarely been considered an option. In agreement with normal industry practices, research highlighted by Azzam and Azzam (1991), and Frasier and Pfeiffer (1994), has disregarded the potential of keeping an open cow and recommended culling any open female. However, Ibendhal, Anderson, and Anderson (2004), recognized that price differentials between cows and replacement heifers, when incorporated with calf income and feed costs, may influence the feasibility of keeping an open cow and rebreeding it the following year.

Recent trends in cattle prices have created a unique situation that suggests the need for an updated analysis on the best replacement options for large percentages of open cows. Five-year discounted cash flow budgets are useful in determining the feasibility of a particular decision. In this project, budgets were created to calculate the annual costs of retaining replacement heifers, purchasing bred heifers or purchasing cows, as well as the alternative of keeping an open cow. The latter
Purchasing bred cows has a substantial long-term profit advantage compared to purchasing bred heifers, given the productivity assumptions made and the relative prices used in this study. However, it does result in the producer having a more mature herd. This has both positive and negative implications that must be considered on a case-by-case basis.

Keeping the open cow is profitable in the 5-year case study at the 50 percent open cow rate or lower. Note that even in the alternative of keeping open cows, normal culling and replacement with bred cows is still occurring, so fewer open cows are kept than implied by the percent open. Thus, Alternative 4 is typically similar to Alternative 3 when lower levels of cows are open. The margins between Alternatives 1, 3 and 4 suggest that either of these replacement strategies, or combinations thereof, could be a profitable alternative at open cow rates of less than 50 percent. When open cow rates are at much higher levels, keeping open cows is less attractive, relative to the other replacement alternatives. The annual cash flows of Alternatives 2, 3 and 4 in the fifth year of analysis are at profitable levels, suggesting the herd has returned to normal, but the average return for the first five years is negative for these alternatives (Figure 1).

This case study of a Nebraska Sandhills herd suggests there is some merit in considering keeping open cows and foregoing a year’s production, versus purchasing or retaining bred stock. When less than 50 percent of the herd is open and normal culling and replacement still occurs, keeping open cows is not the lowest return replacement strategy. As the price difference between cull cows and purchased cows/heifers narrows, relative returns to Alternative 4 will increase. There are additional implications for herds with a high genetic investment (e.g., a seedstock operation), in that higher valued cattle may further improve the attractiveness of keeping an open cow. Additional research related to the decision to keep open cows will be forthcoming.

References:


Figure 1: Total 5-Year Discounted Cash Flow Values for all Alternatives at Differing Open Cow Rates, 100 Cow Herd

Trent Bohling
Graduate Research Assistant
Dept. of Agricultural Economics
University of Nebraska-Lincoln
trenton.bohling@huskers.unl.edu

Darrell R. Mark, (402) 427-1796
Extension Livestock Marketing Specialist
Dept. of Agricultural Economics
University of Nebraska-Lincoln
dmark2@unl.edu