

## *The Beef Cow Replacement Decision*

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“The Beef Cow  
Replacement Decision”

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**B**EEF CATTLE OPERATORS can improve the efficiency of their operations by knowing when to replace their cows. The cows have an expected productive capacity and produce calves that provide revenue. Cattle operators maintain this productive capacity by replacing aging cows and cows not producing a calf every year. This analysis considers the effects of selected replacement decisions on the expected value of the beef cow over her life. Since these effects vary over price cycles, we examined how those price cycles affect expected values. Our findings include:

- The timing of decisions made during the cattle cycle influences the efficiency of their operations. Variable net replacement and culling rates are sensible because of the effects that cyclinal inventories and prices have on net present values of cows in the breeding herd and their replacements.
- A cow is unlikely to recover the revenue lost if she fails to produce a calf in even 1 year. Culling a cow that has not weaned a calf is optimal, except when the next price peak would be 7 years later.
- Incorporating genetic improvement into the herd increases the probability of an older cow's being replaced.