



# Cattle Producer's Handbook

Management Section

735

## Culling the Beef Cattle Herd

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Cattle are culled or removed from a beef cattle herd for two basic reasons—physical impairment or culling policy. Physical culls in order of volume have normally consisted of cows suffering from cancer eyes, prolapses, poor udders, stifles and other injuries, and poor feet and lump jaws.

Normally less than 1.5 percent of the herd will be culled annually as physical culls. The remainder will be culled because of the culling policy adopted in that herd. Culling policy is the course of action or criteria used within a herd to determine which cattle will be removed.

A University of Idaho study indicates that the average culling rate is about 13.5 percent of the beginning cow inventory (Loucks 1991). In most herds, death loss accounts for an additional 1 to 1.5 percent of the herd. So enough replacement heifers need to be saved to replace about 15 percent of the cow herd annually. High-profit herds retained enough replacements to replace 18 to 22 percent of the cow herd, while low-profit herds retained only enough replacements to replace 11 percent of the cow herd (Loucks 1991).

### Culling Policy

Culling policy considers whether cows will be culled for some specific reason such as: terminal age, not raising a calf, being non-pregnant (open), not producing some specified level of calf weight, disposition, or other reasons determined by the herd manager. Evaluating various culling policies for biological efficiency is relatively straightforward.

Unfortunately, economic evaluation, since it is confounded by the relative prices of cull cows and calves and seasonal price cycles and seasonal changes in cow grade, is not quite so simple. Fair to say, however, is culling policies that maximize biological efficiency often do not maximize economic efficiency.

### Open Cows

For spring calving herds, most studies of economic culling policy have concluded that open cows should be culled from the breeding herd at pregnancy check time. Whether the cows should be marketed at the time they are culled from the herd or fed and marketed at a later date depends on price and availability of feed (also see 737), potential slaughter grade changes, and the expected price differentials between the two dates. In the Idaho study, about 4 to 6 percent of cows on a ranch were culled for being open or breeding late (Loucks 1991).

### Pregnant, But Did Not Wean a Calf

Studies are in general agreement that if a cow is sound, under the terminal age desired, and pregnant to calve within the established calving season that economic efficiency is maximized by retaining the cow. Note the higher nutrient requirements for a heifer and her potential calving problems make a pregnant cow more economical to keep.

The odds of a mature cow losing a second calf are much less than of a heifer losing a calf, and an older cow will usually wean more pounds of calf than a heifer. A cow should not be culled at pregnancy test time solely on the basis of not having weaned a calf.

### Terminal Age

Pounds of calf produced per cow peaks at about age 8 and declines thereafter. The rate of decline is primarily a function of feed quality and availability due to teeth condition and metabolism changes. Most studies are in agreement that the optimum economic culling age is somewhere between 8 and 10 years of age with normal price spreads between cull cows and calves, and there is little economic difference within that age range.

When calves are high priced in relation to cows, the optimum culling age increases. When calf prices are low,