



Vet Call

► by **Bob Larson, DVM**, University of Missouri-Columbia

Culling considerations

How beef producers manage culling strongly influences their herds' productivity and economic return.

A reason to cull

Income from cull cows has been reported to account for 15%-20% of the income for commercial herds. And, the genetic progress for a herd is strongly influenced by which cows are being culled and for what reasons.

A survey done by the U.S. Department of Agriculture (USDA) National Animal Health Monitoring System (NAHMS) identified four major reasons for culling:

- 1) age or teeth,
- 2) pregnancy status,
- 3) economics, and
- 4) poor production.

In the USDA survey, about 40% of cull cows were selected for culling because of old age or bad teeth, and another 24% were sold because they were open or bred late in the breeding season.

Overall, about 19% of cull cows were sold due to economic reasons such as herd reduction or forced culling due to drought. This category was strongly influenced by region of the country and would be expected to vary from one year to the next based on forage availability due to regional year-to-year rainfall variation.

About 12% of cull cows are selected for a variety of reasons such as bad attitude, udder or eye problems, foot and leg problems, and other health problems. Only 5%-6% of cull cows were culled because of poor production.

For progress

I define involuntary culling as culling for reasons of reproductive failure (being open) or health problems. Open cows and cows that don't wean a calf will generally be culled to meet the goal of having every cow produce income every year. Cows with structural (eyes, teeth, udder, feet and legs) or health problems must be culled to maintain the health of the herd and to salvage cows before they lose body condition or become a risk to be condemned or an animal welfare problem.

A sound herd health and reproductive program will minimize the number of cows that are culled due to being open, and a comprehensive breeding program —

emphasizing selection of replacement bulls and heifers that have sound legs and udders that will thrive in the local environment — will minimize the number of cows culled due to structural problems.

Voluntary culling is the removal of otherwise healthy and pregnant animals from the herd, generally because their production is far below

the herd average. High voluntary culling relative to involuntary culling will result in the fastest genetic progress. Voluntary culling can only be maximized when involuntary culling is held to a reasonably low level.

In general, I recommend that older cows (greater than 10-12 years) be culled because they are less productive (wean lighter calves), and because if the herd is making genetic progress, older cows as a group have the lowest genetic worth on the ranch.

Cows with severe eye damage, feet and leg problems, or udder problems (for example, less than three functional quarters or large teats) should be culled. Almost all open cows should be culled. Any older open cow (greater than 7 or 8 years of age) should be culled because she does not have very many potential calves left, and it will be two years before she can have another weaned calf.

Open cows that are thin should be sold because they will require a larger investment in feed cost to reach breeding weight, and being thin is an indication that a cow's milk or maintenance requirements exceed that provided by the ranch's forage base.

If an entire age or management group has a lot of open cows, it is an indication that there is a management (nutrition, forage or genetic selection) breakdown, and the humans making the decisions are to blame. In these cases, you may choose to keep young open cows if management changes are made.

If, however, the age group has few open cows, which indicates management of the

group is adequate, those individual open cows are to blame and should be culled.

For profit

Once a ranch has developed a system for identifying individual cows for culling, the nutritional management, as well as the timing of marketing, should be planned. Proper cow culling will reduce the chance for animals being condemned at the packing plant or selling a low-weight carcass.

The cull cow market is extremely seasonal, with highest weekly average cow harvest levels occurring from late October to early December every year. Not surprisingly, cull cow prices are at annual lows during the same timeframe. Spring-calving cow-calf producers who have the feed resources and

facilities to retain ownership of these cull cows for an additional three to five months can have low cost of gain and sell at a higher point in the price cycle.

Older cows and cows with structural problems should be sent to market before they become too thin. Cows that are losing weight will have

progressively lighter carcasses that are worth less per pound (lb.) because they have small ribeye areas and poor red meat yield. In addition, cows that are losing weight are at risk of becoming "downers" during transit. These cows have very little monetary value and are a welfare problem that should be avoided.

The number of cows that should be voluntarily culled each year will depend on forage availability (drought conditions); the cost, value and availability of replacement heifers; and where we are in the cattle cycle.

Harlan Hughes from North Dakota has pointed out that because it takes two years from the time a weaned heifer is held back as a replacement until she has a weaned calf ready to sell, a heifer born when cattle numbers are low and prices are high will have most of her calves during the part of the cattle cycle with high cattle numbers and low prices. Therefore, many experts recommend that you should cull more deeply when calf prices are low — thereby removing poorer-producing cows and replacing them with less expensive replacement heifers — then practice little or no voluntary culling and keep few replacement heifers when calf prices are high to maximize the value of the calf crop.

E-MAIL: larsnr@missouri.edu