



Managing Sacrifice Paddocks

Due to the production of corn co-products and the increasing costs of forage and hay in Iowa, there is a greater interest in developing low-cost beef cow rations. Beef producers are exploring methods to deliver these diets to cow-calf pairs or pregnant cows not only in the winter, but also during the growing season. Delivering this feed might entail supplementing cattle grazing pastures to extend production, or placing cattle in sacrifice paddocks and feeding all of their requirements while other paddocks are allowed to recover. Properly managing these feeding systems is critical to the maintenance of forage stands and protection of water quality.

Drylot

Areas where animals are held for more than 45 days total per year and vegetation is not maintained are considered feedlot areas for manure control purposes. These areas require manure and runoff control that prevents surface water impacts and complies with Iowa Department of Natural Resources (DNR) and United States Environmental Protection Agency (EPA) regulations. Consult open feedlot regulations and manure management experts for guidance.

Feeding to cow requirements

Providing 0.2 acres (8,000-10,000 square feet) per cow-calf pair is a common stocking rate for sacrifice feeding areas, but weather variation may require adjustments. Plan to rotate to an additional sacrifice area if feeding for more than 45 days or if excess rain creates excessive damage to the paddock.

Systems with large herds might require sorted groups, with younger or thinner cows with higher-energy requirements being managed separately. Multiple sacrifice paddocks might be required on more extensive systems and for longer feeding periods.

Locate sacrifice paddocks in areas with good drainage and where there is easy access for feed delivery, yet not on highly sloped fields. Rock or even concrete might be required to ensure access and to limit long-term damage.

For bunk feeding, allow 26-30 inches of feeder space for once-a-day or every-other-day feeding for a 1,300-pound cow. If roughage is offered free-choice, provide an average of 14 inches of bale feeder space per cow.

To minimize soil erosion and avoid classification as feedlots, sacrifice areas must remain covered with vegetation. Try to use sites with an established stand of fescue, or a similar type of sod-forming grass. Orchardgrass and legume-based vegetation will degrade rapidly under sacrifice paddock management. Select

sacrifice areas that can be easily reseeded or renovated without significant erosion.

To minimize the risk of contamination of surface water, locate feeding areas where manure and runoff cannot reach streams and bodies of water. Develop site-specific planned feeding to control runoff, and plan to adjust feeding areas during the season. Also, locate minerals and water where manure and runoff cannot reach streams and bodies of water.

Reduce feed waste as much as possible by utilizing bale feeders, bunks, or tires. Clean manure from feeding areas as soon as possible; prepare seedbed and renovate any damaged areas, including feed delivery ruts.

Consider the use of annuals to use nutrients and produce forage. Annual crops and seeding rates are provided in Iowa Beef Center publication [Short-Term and Supplemental Forages](http://www.iowabeefcenter.org/CowsPlows/SupplementalForages.pdf) (www.iowabeefcenter.org/CowsPlows/SupplementalForages.pdf).

Consider using the same feeding areas annually and create heavy-use area protection, or rotate sites to different locations each year or during the growing season. Benefits of these recommendations can minimize health problems and water-quality concerns, plus reduce the cost of pasture renovation.

Cattle traffic patterns and bare areas need to be monitored; feeding areas, mineral feeders, and stock tank locations may need to be adjusted to alter paths.

Shade should be provided in sacrifice areas if feeding cows during hot summer months. Select a sacrifice paddock with trees that provide shade and, preferably, trees that are distributed throughout the paddock.

Cattle may be returned to the grazing system when adequate forage growth is present. This grass will be extended longer if calves are weaned prior to removing cows from the feedlot or sacrifice paddock. It might be cost-effective to feed the dry cows longer, allowing more grass to stockpile for fall saved feed.

Supplementation on pasture

Continue the same pasture management strategies used without supplementation. Continued rotations will reduce negative impacts on grass stands from feeding.

Cattle can be fed daily or every other day with good results. With large herds, feed system selection is critical

to ensure adequate access by all animals. Limited roughage added to the concentrate mix might ensure more uniform consumption; roughage also may reduce the rate of passage and enhance grass substitution.

Cattle traffic patterns and bare areas need to be monitored; feeding areas, mineral feeders, and stock tank locations may need to be adjusted to alter the paths. Carefully observe the herd to ensure that all cattle are consuming feed. During periods when adequate forage is available, cattle may not maintain the predicted intake of the supplement mix.

If possible, feed in bunks or tires:

- If feeding in the same location for several days, move the feeding area often enough to allow the vegetation to regenerate.
- Provide adequate feeding space: 26-30 inches of feeder space per 1,300-pound cow for once-a-day or every-other-day feeding. Allow a minimum of 14 inches of feeder space for free-choice roughage systems.
- Locate feeding areas where manure cannot reach streams and other bodies of water.
- If feeding by hand, the group size may need to be limited to ensure feed access for all cows.

If feeding on the ground:

- Move to new feeding areas each time cattle are fed.
- Feed in piles on the ground rather than in a row. This will allow for better access with less waste.
- Feed waste may be acceptable while feeding on the ground with good weather conditions, but adverse weather might require moving to new feeding areas. Feeding strategy may need to be changed depending on weather conditions.
- Keep feeding areas away from bodies of water.
- Calves may be acclimated to feed if supplement is offered to pairs prior to weaning. Calves should be weaned sometime during the feeding period. Forage removal will decrease 20%-25% with lower feed requirements of cows after weaning and without calf grass consumption.

References

- DeRouche, Joel. 2005. MF-2662: *Managing stable fly production at pasture feeding sites*. Kansas State University. <https://www.asi.k-state.edu/doc/beef-tips/btmarch05.pdf>.
- DeRouche, Joel; Marston, Twig. 2005. MF-2673: *How feeding site mud and temperature affect animal performance*. Kansas State University. <https://www.bookstore.ksre.ksu.edu/pubs/mf2673.pdf>.
- Hollis, Larry; DeRouche, Joel. 2006. MF-2753: *Winter feeding sites and calf scours*. Kansas State University. <https://www.bookstore.ksre.ksu.edu/pubs/MF2753.pdf>.
- Lenahan, N.A.; DeRouche, J.M. *Animal Science*. 2005. 83:1673-1679: *Concentrations of fecal bacteria and nutrients and soil surrounding round-bale feeding sites*. Kansas State University. <https://academic.oup.com/jas/article/83/7/1673/4790863>.
- Miner, J. Ronald; Buckhouse, John C.; Moore, James A. 2004. UCCE Fact Sheet No. 20: *Will a water trough reduce the amount of time hay-fed livestock spend in the stream?* University of California Cooperative Extension.
- Ranalls, Noah N.; Green, Jim; Moore, Matt; Hansard, Roger; Young, Janet. 2001. *Grazing Livestock and Water Quality*. North Carolina State University, North Carolina A&T State University Cooperative Extension.
- Revised by Patrick Wall, beef specialist with Iowa State University Extension and Outreach.
- Photos by Iowa State University Extension and Outreach.

