

# BY DESIGN

## Weaning pen layout review

by Erin Cortus, University of Minnesota



Weaning, when done well, gives a calf a strong base for growth. A recent study<sup>1</sup> found calves

gained better following fenceline weaning compared to other weaning approaches. Regardless of approach, pen layout for weaning calves deserves forethought and review for this short, but important, transition period.

During the design process, we seek ideal conditions that maximize calf comfort and worker efficiency, and that minimize environmental effects. However, when working with existing lots, available equipment or weather conditions, revisiting layouts to make the most of what is available is still beneficial.

Because there is no one-size-fits-all approach to pen layout for weaning calves, consider the following guiding principles<sup>2</sup>.

► **Smaller is better than larger.**

Calves need a minimum of 100 square feet (sq. ft.) per animal if there is good footing in the lot, or more space if not. Keep group sizes to 60 head or fewer.

► **Easy-to-find feed and water.**

Feed and water along the fenceline will be easy for the calves to find. Adding alternative locales within the lot can help break the habit of fenceline walking, or provide space for timid animals.

► **Calf-size and calf-accessible.**

Feedbunk heights should be less than 30 inches (in.) from ground level. This can be accomplished with fill dirt around existing bunks

designed for mature cattle. Bunk space depends on feed type and frequency, ranging from 10 in. per calf for self-fed roughage, 8-11 in. per calf for twice-daily feeding, and 18-26 in. per calf for once-daily or limit-feeding. For water, sufficient space is 1 ft. of tank per 20 head, or one waterer or drinking bowl space per 25 head.

► **Strong and visible fence.** The fence should safely restrain cattle on both sides, but calves must recognize the fence is there. A plank at calf eye level is recommended if using smooth-wire and cable fences.

► **Good footing.** Good drainage away from the feedbunk and good footing in other high-traffic areas, like the fenceline, support cattle movement.

► **Biosecurity.** The fenceline will initially be a popular place. Aside from the cows, the fenceline should minimize contact with other animals — wild and domestic.

### Final thoughts

This relatively short time period may make use of temporary fencelines, bunks and water sources, providing some flexibility. Sometimes a fresh perspective, like an aerial photo, illuminates new options or layouts, or identifies well-worn paths that may be worth building up or altering, depending on the behavior they promote.

Writing this article reminded me



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of when my children started walking, able to explore spaces on their own, and the adjustments we needed to make to our home. Small changes, like the movement of a waterer vs. a full-scale renovation can have a positive effect on young stock. |

Editor's note: "By Design" is a regular column of the *Angus Beef Bulletin* featuring facility and homestead design for cattlemen. Erin Cortus is an assistant professor and Extension specialist in the Bioproducts and Biosystems Engineering department of the University of Minnesota. Resources used for this column include:

<sup>1</sup>Taylor, J.D.; Gilliam, J.N.; Mourer, G.; Stansberry, C. Comparison of Effects of Four Weaning Methods on Health and Performance of Beef Calves. *animal* 2020, 14, 161–170, doi:10.1017/S1751731119001228.

<sup>2</sup>Bicudo, J.R.; Burris, R.; Laurent, K.; Akers, J.; Turner, L. *Handling Beef Cattle*. 2003. University of Kentucky College of Agriculture, Food, and Environment.