

Calf Areas, Pens, or Pastures: a Case Study

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During the winter in Kentucky, cow-calf producers must contend with mud. Variations in weather mean more mud is created in some years than in others. The winter of 2018-19 created a staggering amount of mud and associated production losses for beef producers. The ripple effect from above-average rainfall continued to have negative impacts on production the following year. Production issues that impacted beef-cattle producers the most were mortalities

(both calves and cows), body condition score loss, wasted feed, erosion, torn-up fields, poor hay quality, poor feeding areas, and weak calves. One possible production solution that could address several of these issues is the implementation of creep gates to create calf pens and pastures. A local farm implemented this solution to test its viability for producers. This case study explains the management decisions, implementation, and results of the creep area.

Creep gates are traditionally used to provide access to supplemental feed for calves. Creep gates are designed to exclude cows and large stock but allow calves, which are smaller, access to a feeder, pen, or pasture. The implementation of a creep area, pen, or pasture can provide calves a dry area to escape mud, a place to lie down, while reducing the risk of being trampled by adult cattle. Within a creep area, a stockman could provide access to a sheltered area with a roof or without. The concept is to provide a well-drained area for calves with or without supplemental feed and without their moms having access. The area should provide a dry, comfortable area, possibly bedding or grass cover, a heavy traffic pad, or any surface that provides comfort and insulation to the calves. More flexibility is obtained by providing multiple options, which also increase the benefit-cost ratio. Calves have the instinctive behavior to seek dry places to camp. These camping places typically are in the wasted hay around feeding areas (Figure 1). Lying down in feeding areas occupied by cows can lead to injury or death of a calf. A calf area, pen, or pasture should provide a safe place to camp that is away from mud and larger, inattentive stock that could accidentally step on calves.



Figure 1. Cows and calves with full access to round bales.

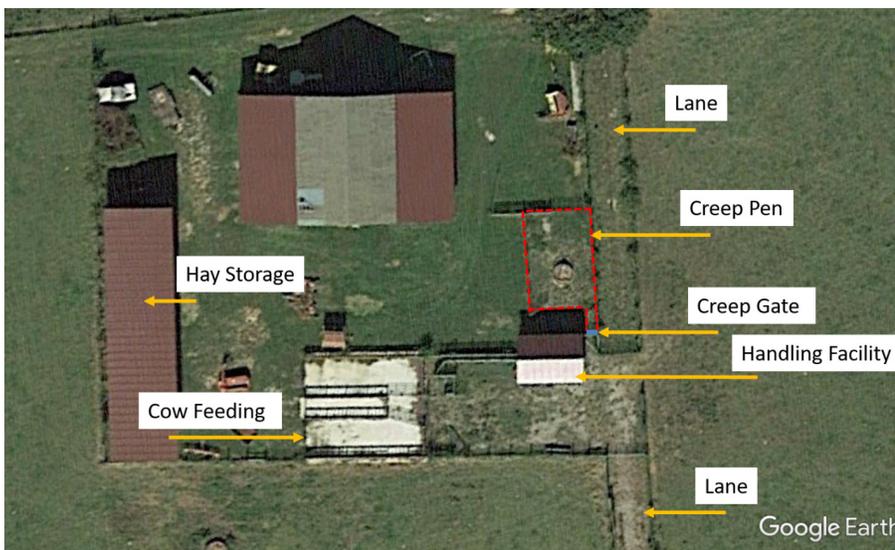


Figure 2. Aerial view of the layout used for the case study.

Figure 2 is the case-study layout used for a cow-calf operation that incorporates a centralized feeding area. The incorporation of lanes or animal trails and gates allows these feeding areas to be accessible by six different pastures. The incorporation of hay storage, handling facilities, and a feeding structure creates a centralized operations hub, which provides organization, efficiency, and simplicity. Fuel, time, and labor savings are achieved by the close proximity of machine and hay storage to minimize travel distances. Equally important is that the layout provides a creep area for calves adjacent to the winter-feeding structure for cows (figures 2 and 3). This means that as cows come up to feed, the calves have

the opportunity to cleave off and go into their own area, which allows the stockman the ability to feed cows without the presence of calves (Figure 4). Increased efficiency can be gained by incorporating a handling facility, hay storage, and machinery storage. The benefits of this type of layout are the reduction of travel distances to feed cows and calves. This also reduces wasted hay, fuel, and time since the cattle travel to the hub rather than the stockman going out to the field. The all-weather surfaces reduce mud, which can decrease maintenance requirements, drudgery, and disease compared to a feeding area in the field. Hardened surfaces also facilitate the removal of manure and wasted bedding, which can be land-applied to improve fertility, soil organic matter, and yields. Lastly, water quality can be improved with this type of layout. These practices have been used at Eden Shale, a 950-acre farm in Owenton, Ky., operated by the Kentucky Beef Network, with success.

When the cows leave the centralized feeding area, the calves instinctively re-join their mothers to return to one of the six pastures via the lane (Figure 5). An added bonus to this type of layout is the opportunity to reorganize and remove accumulated equipment and junk (if repurposing an unused area), which could possibly be sold for scrap to fund the implementation of the project. Aesthetics, or a pleasing appearance, along with the organization this type of layout can improve the productivity and health of the stockman, because neatness and organization create efficiency and instill pride in the accomplishment.

Implementation

Design components should include a dry, well-drained area. The area may provide supplemental feed, which could be a part of a pre-conditioning or pre-weaning program. Ideally, the structure should be accessible to multiple pastures to increase utilization and management options. At the very least, it should be accessible from the pasture that is typically used for calving or where calving is planned as part of a new layout. Providing access using a lane with an all-weather surface is not only ideal, but a necessity when multiple gates are located in close proximity. The lane should be designed to be as short



Figure 3. Creep pen for calves with supplemental forage.



Figure 4. Cow feeding area using state-funded feeding structure.

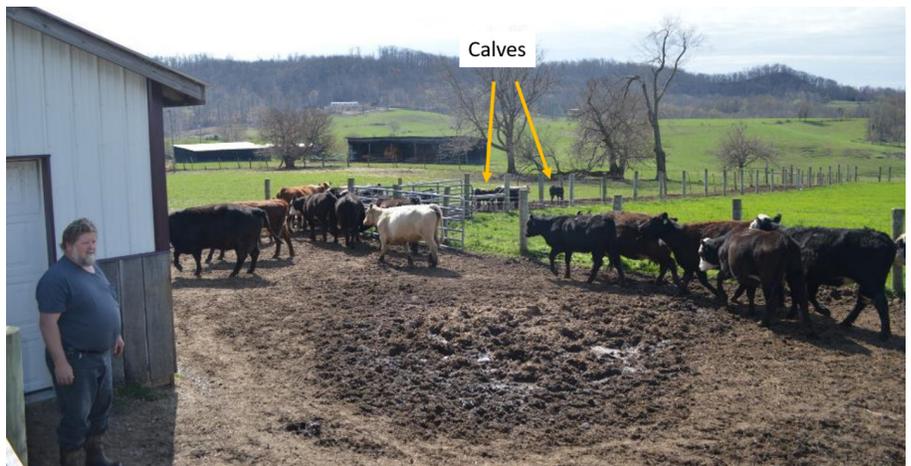


Figure 5. Cows and calves returning to pasture after feeding.

and as narrow as possible to economize on the gravel and geotextile fabric used to construct the heavy traffic pad. Some of the materials you may decide to invest in to implement your creep area include: gates, fencing, geotextile fabric, gravel, and extra feeders/waterers.

Summary

The creation of a creep pen or pasture area can be accomplished using various methods and materials. Using what is on

hand and/or revitalizing an unused area of the farm that has infrastructure may reduce expenses. The cost of one fallen calf could pay for the implementation of the practice. This practice may benefit spring calves over fall calves, so that might be a consideration when choosing a time to plan construction of your creep area. The stockman for this case study saw improvements in injury reduction, growth and development of calves, and increased safety. The stockman in this

case study suggested that calves using this system got off to a good start that would benefit them over the long term and that calves that did not use this system might not recover through compensatory gains.