

## **Small Farm Series: Handling/Working Facilities**

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So far in this series, several management practices have been mentioned that require restraining each animal individually. Many other health and management related practices that are not addressed in these articles also require a way to restrain individual cattle. Even low-input operations need at least basic handling facilities to load cattle for transport to market or to treat health issues. Handling facilities can be as basic as a rope or as complex as a remote-controlled hydraulic system. The important thing for small scale and average size producers is selecting facilities that do the job safely and efficiently at a cost that is appropriate for the scale.

Most cattle handling facilities consist of a standard layout of: catch pen(s), crowding pen (or “tub”), alley and chute. There are many additional features that can enhance the efficiency of the system. But, for producers operating a small to average size herd for our state, a basic setup is sufficient. The overall objective when deciding where to place the working facility and how to design it should be that it will be safe and efficient while being easy to use.

The catch pen is an area where the cattle can easily be gathered and sorted. For example, calves can be sorted before a group is moved through the rest of the facility to reduce the possibility of small calves being injured or unduly stressed. The catch pen can also be used as a temporary holding area provided there is ample shade and a water supply. For a small farm operator, two pens in this area might be sufficient. But, consider putting them in a place where additional pens can be added for future expansion. Each catch pen should be large enough to provide approximately 18 square feet per animal.

The crowding pen, often referred to as the tub, directs cattle from the catch pen and funnels them into the alley. The most common design for many years has been the sweep tub. A sweep is a semicircular tub with a solid walled gate that pivots on the axis to direct cattle through a funnel into the alley. More recently, a design called the “Bud Box” (named after the late Bud Williams, a cattle handling consultant) has become more popular for directing cattle into the alley. The Bud Box design is relatively simple, often less expensive and – when used correctly – is extremely effective and efficient.

The alley is designed to move cattle in single file to a desired location, such as a holding pen, loading chute or squeeze chute and headgate. Like the crowding pen, the working chute and its gates should be constructed of durable material at least 5 feet high. Making the alley solid-sided and curved has been a trend for many years. But, more recently, producers have been opting for a partially or fully open-sided design to allow them to use the cattle’s line of sight and point of balance to move them down the alley. If an open-sided design is chosen, pay special attention to obstructions or visual distractions outside of the facility. A curved or “S” shaped alley is often not practical for a smaller operation but the alley should be long enough to hold four or five head to make the work flow more efficient.

The width of this alley varies depending on the size of the cattle being processed. It should be wide enough for cattle to move forward without much resistance but not wide enough for them to turn around. A good width for calves is 18 inches, but this will not accommodate larger cattle. Some commercially available working alleys are adjustable. However, for smaller scale producers, it might be more cost-effective to build a 22 to 26 inch wide alley and hang spacers over the sides when working smaller calves.

The chute (aka: squeeze and headgate) are where most of the work on cattle is performed. These devices safely restrain cattle so management practices can be administered without difficulty. Commercially available squeeze chutes and headgates come in different designs with a wide range of prices. Some homemade squeeze chutes are affordable for a small producer and work as well as purchased ones. Whatever the situation, their function should be to provide restraint that is safe to both cattle and workers.

Some things to consider when building or purchasing a chute and headgate are: being able to reach the neck to deliver injections “the BQA way”, having access to the sides, legs and hooves of the cattle and calves and adding a palpation cage to the back. A palpation cage is a door that swings in and across the alley, latching to stop the next cattle from coming into the chute and allowing access to the rear of the cattle already in the chute. This makes it much easier to palpate for pregnancy diagnosis or accomplish other reproductive management techniques.

Addressing all the specific features of a working facility is not feasible in a single popular press article. But, hopefully this discussion will lead you to more investigation about good, safe and efficient working facilities for small farm beef cattle production. For more details, consult your Tennessee Master Beef Producer Manual (Chapter 9; written by Clyde Lane) or contact your local UT Extension Agent. Several basic design plan drawings, with details and dimensions, can be found on the UT Biosystems Engineering & Soil Science Extension publication webpage (<http://bioengr.ag.utk.edu/Extension/ExtPubs/PlanList97.htm>).