

# Handling Facilities for Beef Cattle



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**B**eef cattle producers need good handling facilities if they are to perform recommended management practices (vaccinating, identifying, castrating, dehorning, implanting, deworming, checking for pregnancy, etc.) Producers planning to purchase a squeeze chute or other handling-facility components may apply for a cost-share through the Tennessee Agricultural Enhancement Program administered by the Tennessee Department of Agriculture. Premise identification and Beef Quality Assurance certification are prerequisites for applying for the funds. Approval of the request must be received before items are purchased.

A good handling facility allows for the treatment of animals, reduces the possibility of injury to both animal and producer and makes cattle handling much easier.

## Planning a Handling Facility

The first step in planning a handling facility is to inventory existing facilities (old handling facilities, barns, sheds, etc.). Some of these might be used in the new handling facility.

Consider the layout of pastures when deciding where to build a new handling facility. Build the facility so cattle in all pastures will have easy access.

Also consider the availability of labor when planning the facility. Some facilities require less labor than others to move cattle through them.

The type of operation (cow-calf, stocker, finishing, etc.) will also affect how the facilities should be constructed.

The breed of cattle to be worked will influence how the facility is to be constructed. Larger or more spirited cattle will require that stronger materials be

used in construction. Obviously, the number of cattle to be worked will affect dimensions. The materials available (wood, steel rods, etc.) will also affect facility construction.

## Selecting a Site

Accessibility should have a major influence on handling-facility location. Attaching the new facility to existing facilities (barns, sheds, old handling facilities, etc.) can reduce costs and make the handling facility a part of the total operation. If a new facility is to be built, access to existing pastures and to the road is very important.

The site selected should be on an almost level spot with good drainage. If the site is on a slight slope, be sure cattle will be moved up the slope as they are worked. Don't forget the normal cattle movement. Cattle are easier to work if they move in a direction that is normal for them.

## Components of a Good Handling Facility

The size and complexity of a beef cattle-handling facility will depend on the number of animals in the herd. A good handling facility should contain the following components: headgate, holding chute, working chute, crowding pen, holding pen(s) and scales and loading chute. These facilities need not be elaborate nor expensive. A discussion of each of these components follows.

### Headgate

The headgate is the most important part of the entire working facility. It should be sturdy, safe, easy to operate and work smoothly and quietly.

Headgates are of four basic types. These are self-catching, scissors-stanchion, positive-control and fully-opening stanchion. The self-catching headgate closes automatically due to the movement of the animal. The scissors-stanchion type has biparting halves that pivot at the bottom. The positive-control type locks firmly around the



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animal's neck. The fully opening stanchion consists of two biparting halves that work like a pair of sliding doors.

The self-catching, scissor-stanchion and the fully opening stanchion are available with either straight or curved stanchion bars. The straight-bar stanchion is extremely safe and will rarely choke an animal. The disadvantage is animals can move their heads up and down unless a nose bar is used. The curved-bar stanchion offers more control of the animal's head but is more likely to choke the animal than the straight-bar type. Both types are safer than the positive-control headgate. No matter which type of headgate is selected, proper adjustment for the type of cattle being worked is necessary to prevent injury to the animals.

## Holding Chute

The holding chute is located immediately behind the headgate and secured to it. The holding chute should generally not be any wider than 26 inches (see Table 1). The holding chute should also be adjustable for different-size animals.

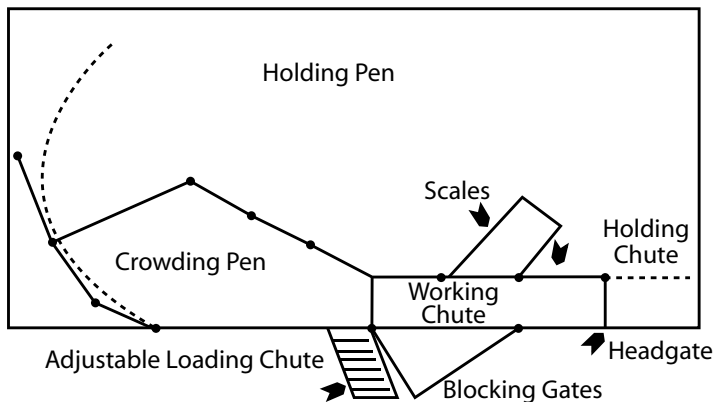


Figure 1. Sample Layout of Beef Cattle-Handling Facility.

Other desirable characteristics include squeeze action, removable side panels for easier access to the animal and a floor with a non-slip surface.

The holding chute may be hinged on one side to release the animal if the headgate is not a walk-through type. Some type of see-through blocking gate or bar is needed to prevent the animal from backing up before the head is caught. Also, this will prevent the next animal from moving into the chute before the first animal is released. A 2-foot service gate at the back of the chute is desirable when working at the back of the animal (castrating, pregnancy testing, etc.). A palpation cage can be substituted for the service gate if desired.

## Working Chute

The working chute connects the holding chute and the holding pen. It should be a maximum of 26 inches wide for a straight chute (see Table 1). It is acceptable to allow extra width in a curved chute (see Table 1). This width will be dif-

ferent if a V-shaped chute is used. The working chute should be 5 feet high for British breed cattle and 5 ½ to 6 feet high for exotic breeds. It should be long enough to accommodate four or five animals at a time. Some cattle owners prefer to have it curved so animals cannot see the headgate or holding chute ahead. It should have solid sides so cattle will not balk because of things they see outside. To prevent balking, the blocking gate at the junction of the working chute and the holding chute should allow an animal to see the animal ahead. "Back-up" bars in the working chute can be used to prevent animals from moving backwards.

## Crowding Pen

The crowding pen is located at the back of the working chute. Size should be about 150 square feet. This area will hold five or six head of cattle. The pen should form a gradual V as it approaches the working chute. If one side of the V is straight with the working chute and the other side angled out, the cattle will be less apt to bunch up. A solid crowding gate should be used to push animals from the V into the working chute.

## Holding Pens

Holding pens should be located so they fit conveniently with the rest of the facility. Each holding pen should provide approximately 20 square feet of space per animal.

## Scales

Scales should be made a part of a beef cattle-handling facility if possible. The scales should be located so cattle can be easily moved on and off. Do not locate scales so cattle must cross them each time they are worked. Locating the scales in this manner results in a shorter life and greater repair costs.

## Loading Chute

The loading chute may be optional if a trailer is used to transport animals. The loading chute should be located directly off the crowding pen, allowing easy movement of cattle. The loading chute ramp can be either sloping or stepped. The maximum incline should be 30 percent (3-inch rise per foot of incline). Adjustable ramps are convenient when trucks or trailers of different heights are used. The length of the loading chute will depend on the height required; however, it should be at least 12 feet long. (See Table 1 for suggested dimensions for different types of trucks or trailers.) The loading chute should be 26 to 30 inches wide.

**Table 1. Dimensions of Components of a Beef Cattle-Handling Facility\***

| Facility Component           | Recommended Dimensions for Cattle |               |
|------------------------------|-----------------------------------|---------------|
|                              | British Breeds                    | Exotic Breeds |
| <b>Holding Chute</b>         |                                   |               |
| Height                       | 60 in.                            | 66-72 in.     |
| Width                        | 22-26 in.                         | 22-26 in.     |
| Length w/service gate        | 5 ft.                             | 5 ft.         |
| Length w/o service gate      | 7 ft.                             | 7 ft.         |
| <b>Working Chute</b>         |                                   |               |
| If vertical sides            |                                   |               |
| Width                        | 22-26 in.                         | 22-26 in.     |
| Length (minimum)             | 20 ft.                            | 20 ft.        |
| If sloping sides             |                                   |               |
| Bottom inside width          | 16 in.                            | 16 in.        |
| Top inside width             | 28 in.                            | 28 in.        |
| Top inside width (if curved) | 28-29 in.                         | 28-29 in.     |
| Length (minimum)             | 20 ft.                            | 20 ft.        |
| <b>Chute Fence</b>           |                                   |               |
| Height**                     | 60 in.                            | 66-72 in.     |
| Post spacing                 | 6 ft.                             | 6 ft.         |
| Post depth in ground         | 36 in.                            | 36 in.        |
| <b>Crowding Pen</b>          |                                   |               |
| Space per head               | 10 sq. ft.                        | 12 sq. ft.    |
| <b>Holding Pen</b>           |                                   |               |
| Space per head               |                                   |               |
| Pen fence                    | 20 sq. ft.                        | 20 sq. ft.    |
| Height                       | 60 in.                            | 60 in.        |
| Post spacing                 | 8 ft.                             | 8 ft.         |
| Post depth in ground         | 30 in.                            | 30 in.        |
| <b>Loading Chute</b>         |                                   |               |
| Width                        | 36-40 in.                         | 36-40 in.     |
| Length (minimum)             | 12 ft.                            | 12 ft.        |
| Rise (maximum)               | 3 ½ in./ft.                       | 3 ½ in./ft.   |
| <b>Ramp Height for:</b>      |                                   |               |
| Gooseneck trailer            | 15 in.                            | 15 in.        |
| Pick-up truck                | 28 in.                            | 28 in.        |
| Van-type truck               | 40 in.                            | 40 in.        |
| Tractor-trailer              | 48 in.                            | 48 in.        |
| Double deck                  | 100 in.                           | 100 in.       |

\*Adapted from "Handling Facilities for Beef Cattle." Purdue University Publication ID-109-1976.

\*\*7-foot clear minimum below cross ties to walk under.

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The National Animal Identification program is designed to provide the capability of tracing an animal back to its point of origin within a 48-hour period of time in the case of an animal-disease outbreak. It is also supposed to identify all locations where an animal has been during its lifetime. The mechanism for tracing requires that every location (premise) where animals reside must be identified (for example: owner's farm, livestock market, order-buyer lot, fairs, shows, veterinary clinics, etc). Each animal must be individually identified with some type of electronic identification (i.e., electronic ear tags, electronic implants or similar devices). Registration of premises is currently being conducted. Premise registration forms are available at local Extension offices, Farm Bureau offices, local Farmers Cooperative stores and Farm Service Agency offices. Premise identification and individual animal identification are now voluntary except for participation in Tennessee Agricultural Enhancement programs. It is anticipated that participation in the premise and individual animal identification programs will increase as information provided by these programs is needed to market animals.

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