Deciding what type of equipment to put into the corral.

by Jim Hartmann

In the last article we discussed the different types of working alleys. This time we will take a look at how we can go about getting the buffs into the working alley. There are basically two types of crowding pens, the funnel and the circular, or half circle.

To discuss the differences in the two types of crowding pens we also need to look at the supporting alleyways and holding pens leading into the crowding pen.

With either system the holding pen leading to the crowding pen should be funnel or triangular in shape. The exit gate going from this holding pen, which leads into the funnel crowding pen or into the running alley leading into the half circle crowding pen, should be in the corner having the smallest inside angle. This angle should be no less than 30 degrees and not more then 40 degrees inside. You don't want this holding pen too large and you don't want it too small either. Too large a holding pen and you may have problems with the buffalo running around you and not up into the alley. Too small a holding pen and you will not have the holding capacity for effective working. This holding pen, when in a small corral, may be the only holding pen in the pre-working area but in a larger corral it may be one of several.

In a larger corral system you may want to build this pen large enough that you can use a motorized hazing device. Motorized hazing can be done in even small corrals. I have used a small skidsteer loader very successfully. I will discuss hazing equipment in a later article entitled 'Little things to make working buffalo easier.'

The holding pen should have gates that come into it from all of the other holding pens, both pre-working and post-working, that border it. There should also be one or two gates that come into it from outside of the corral.

Let's look at the funnel type crowding pen (see illustrations #1 & 2). As I stated earlier, the exit gate that leads out of the holding pen should be in the corner of the holding pen with the smallest inside angle. This exit gate may either lead into a running alley leading to the crowding pen or it may go directly into the funnel shaped crowding pen. Actually the funnel type crowding pen is little more than an extension of the funnel shaped holding pen with a series of gates that progessively work the buffalo into the working alley.

Some disadvantages of the funnel type crowding pen are: It is a long straight type of system (see illustration #1) without a turn around and may require a very large area to work properly and is usually placed in the center of the corral. Depending upon the layout of the design of the corral and how it lays with the surrounding lots and vehicle access, the funnel type crowding pen leading into the working alley usually will not be able to serve as the crowding pen for the loadout too. Thus in most cases two crowding pens have to be constructed in two different parts of the corral one for working and one for loading out.

If you wish to use one funnel crowding pen for both working and loading out, the working area will have to be placed on a corner of the corral system (see illustration #2). When using that type of design you will be releasing your buffalo from the squeeze chute on the outside corner of the corral and not in the center as you would be with a half circle crowding pen. In order to be able to sort coming out of the squeeze chute you will have to construct a long return alley alongside a row of post-working area holding pens. This type of system may work well with a large crew but if you work your buffalo alone or with just a couple people, you will get your exercise.

With the half-circle-type crowding pen (see illustration #3) you again use the same type of funnel or triangular holding pen. The exit gate also being in the corner of the holding pen with the smallest inside angle. Ideally this should be 35 degrees. The exit gate will lead into the running alley, the alleyway that leads from the holding pen to the crowding pen. The size of the corral will determine the length of the running alley. I have found that in this alleyway there should be a series of cross gates, gates that can be swung across the alley as the buffalo move up through the alley. This prevents them from turning around and running back and forth. The spacing of these cross gates should be no greater than one gate for every three times the width of the alley. In a ten foot wide alley the cross gates should be spaced no farther than 30 feet apart and in a twelve foot wide alley no farther than 36 feet. The last cross gate should be one and one half times the width of the crowding pen from the entrance of the crowding pen. With an eight foot half circle crowding pen the last cross gate should be twelve feet back from the entrance of the crowding pen and a twelve foot half circle crowding pen the distance should be not more than eighteen feet.

The width of the alley is determined by the size of the crowding pen. The alley leading into the half circle should be two feet wider than the radius of the crowding pen. When using an eight foot half circle crowding pen the alley leading into the crowding pen should be ten feet wide. And with a ten foot half circle crowding pen the alley leading into the crowding pen should be twelve feet. Never build a running alley wider then twelve feet wide. Wider than twelve feet and the buffs have too much room and you have too wide of a distance to cover from one fence to the other. Under ten feet you are getting too narrow and the buffalo get a little hard to drive up into it. Return alleys coming from the squeeze chute may be as narrow as eight feet. The last twelve to eighteen feet of the running alley should taper down in width to the opening width of the half circle crowding pen.

When building my corral I chose to go with a half circle crowding pen for several reasons. With the half circle you have what I would call a turn-around in the system. In other words the half circle crowding pen gives you a place for the buffalo to change direction of movement and enables you to return them to the same general area of the corral from which they came. It places the squeeze chute toward the center of the corral which gives you the option of sorting out of the chute. It places the crowding pen on the outside edge of the corral thus enabling you to use the same crowding pen for both working and loading out and thus reduces the overall cost of the corral. And with the squeeze chute leading into the center of the corral, the system saves a lot of time and steps when working buffalo.

When I built my corral I chose to go with an eight foot half circle crowding pen, (see photos) simply because it happened to work out well to use an existing strip of concrete that was the right width for that size of crowd-

Illustration #1

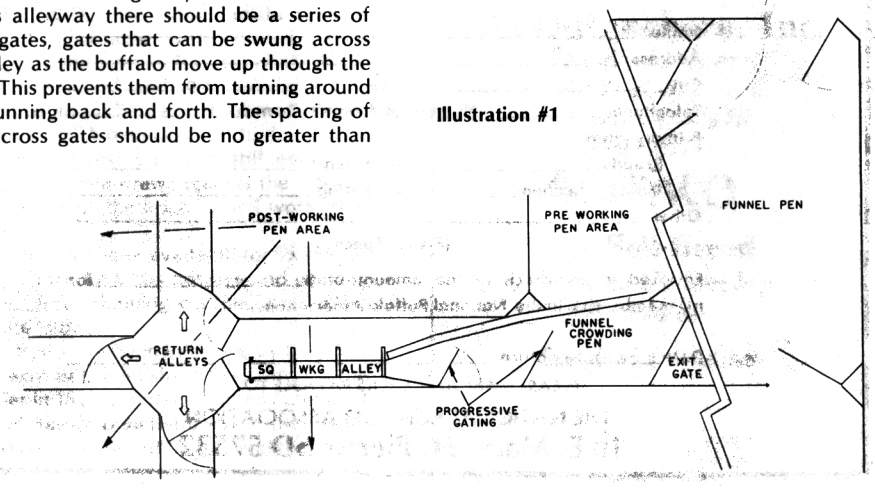
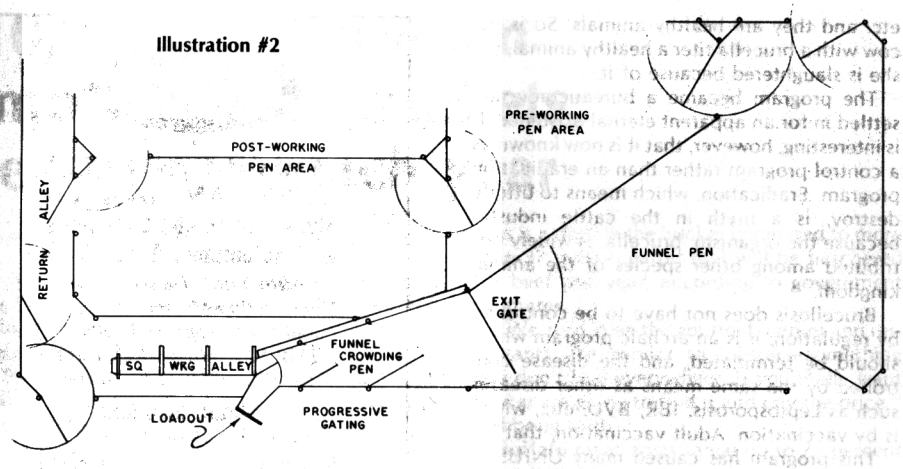


Illustration #2



ing pen. I chose to build the half circle crowding pen out of steel rather then wood because the life expectancy of steel is longer, maintenance is much lower and the relocating ability of wood is not as good as steel. The half circle crowding pen could be built from wood but the cost in time and material coupled with the upkeep and the fact that once you build a wooden one, it is there to stay, really makes it more expensive than you realize. I feel that steel is the way to go.

The design that I decided on has the following features: A solid crowding gate constructed of high strength square tubing and formed sheet metal that swings 270 degrees from the open to the closed positions and follows the curve wall of the crowding pen. Mounted on the crowding gate is a spring loaded friction drag latch that slides along the wall and holds the gate wherever it stops and keeps it from sliding back open. Under extreme wet or dry-dusty conditions the drag latch may creep back so I added a short strip of narrow metal strap welded vertically in the center of each panel for the drag latch to catch on. The side panels of the crowding pen are constructed with 3 inch channel for the horizontal members placed at the top, center and bottom. These channels are form, bent in a gentle curve to the radius of the size of the crowding pen, with the weld to the outside. I decided to use 3/8 x 3 inch flat steel for the verticle on each end of the panel. They have a series of slotted holes punched in them for bolting them together. I bent the bottom end of the flat at a right angle to form a foot for the panel to stand on and for bolting to a concrete floor. The panels are covered with 14 gauge sheet steel. The panels stand seven feet tall with the bottom of the solid panel four inches off the ground and the panels are four feet in length.

I built a dual exit gate system so that I could use the same crowding pen for both working and loading out of buffalo. To change from working to loadout I simply swing a three foot solid gate 90 degrees, opening or closing off either the working alley or the loadout alley.

On the outside of the curve wall of the crowding pen I have a catwalk that is sixteen inches wide and a little over three feet off of the ground.

The entire system bolts together and bolts to the concrete floor. I have found that it is much easier to pour a flat slab of concrete, then assemble and adjust the crowding pen to a proper working position and then drill in anchor bolts. Also if I ever want to relocate the system and/or reverse it, all I have to do is unbolt it. There is nothing buried in concrete that has to be jack hammered out or cutoff with a torch.

Both systems cost more than a little to build but I feel that the little bit extra that the half circle cost me to build I actually saved, because of the minimum amount of running alley and return alley. With the turn around that I get with the half circle crowding I have the loadout with the same unit and the sorting ability out of the squeeze chute and accessibility to any one of the pens with a minimum amount of steps. I have also found that the system works real well for treating or testing, followed by immediate loadout. You simply release the buffs from the squeeze, either down the return alley with the gate closing off the pen and opening into the running alley, or open the gate into the running alley at the front of the squeeze. Once in the running alley, it's back into crowding pen and out the loadout.

In the next article we will look at fences, gates and a few things to make there construction a little easier.

Illustration #3