

# *Designing a "Bud Box"*



Ron Gill, Ph.D., Rick Machen, Ph.D., Professor and Extension Livestock Specialists

There is nothing magical or mystical about a Bud Box. It is a facility design that allows the handler to position themselves correctly to facilitate cattle flow out of the box into either the crowd alley leading to a chute or to a trailer load out. Always keep in mind that the Box is a flow-through part of the facility. Cattle should never be stored in the Box waiting to be sent into the crowd alley or to a trailer. Bring them in and let them flow back out immediately.

Dimensions are important to successful use of a Box but not as critical as handler position in relation to the stock leaving the Box. Without proper position and attention to detail a Box will only confuse the stock and frustrate the handler.

The Box should be large enough to accommodate a volume of cattle to fill the crowd alley or fill a trailer compartment. A crowd alley to a squeeze chute should hold a minimum of 4 cows and might need to hold 20 head depending on the speed of processing. Crowd alleys on cow-calf operations will typically hold 5 to 6 cows. Facilities working calves or yearlings routinely need crowd alleys for 12 to 20 head of cattle.

Remember, the crowd alley will normally not be empty when additional cattle are brought through the Box. To maintain flow it will be necessary to add additional cattle while one or two stand in the crowd alley awaiting processing. Consequently the length of the crowd alley is important. Ideally the crowd alley would be long enough to hold an adequate number of cattle for processing while more cattle are brought through the Box - without disrupting flow. A short crowd alley may result in frequent interruptions of cattle flow and processing.

For some reason the industry has migrated toward the crowd alley starting to curve at the entrance from the tub or Box. The exit from a tub or a Box and entrance into the crowd alley should be straight for at least two mature cow body lengths. This allows flow to become established without the appearance of entering a dead end crowd alley. Keep it straight for at least 12 feet and then start a curve if warranted (ex. space is limited). Otherwise a long straight crowd alley works very well for processing cattle.

Most cow-calf operations will need a Box that is **at least** 12 feet wide and 20 feet deep. It can be 14 feet wide and should be if the handler will be horseback. Depending on the size of the cattle being worked it could be 16 feet wide if the handler in the Box will always be horseback. Both the 14 and 16 foot widths are too wide for comfortably working most stock on foot.

A Box can certainly be wider than an alley leading up to it. In fact, going from a 10 or 12 foot alleyway into a 14 foot wide Box will normally allow the cattle entering the Box to do so faster

setting up the transition even better. Do not let the width of an alley dictate the width of the Box.

The length/depth needed is determined by the size of the group handled. Again, group size is dictated by the capacity of the crowd alley or trailer compartment being loaded. The Box needs to be deep enough to allow the cattle to flow to the back of the Box, let the handler close the gate and get in position before the cattle transition out of the back of the Box. Just like a tub system never overfill the Box. Success depends on the flow into, transition, and flow out of the Box.

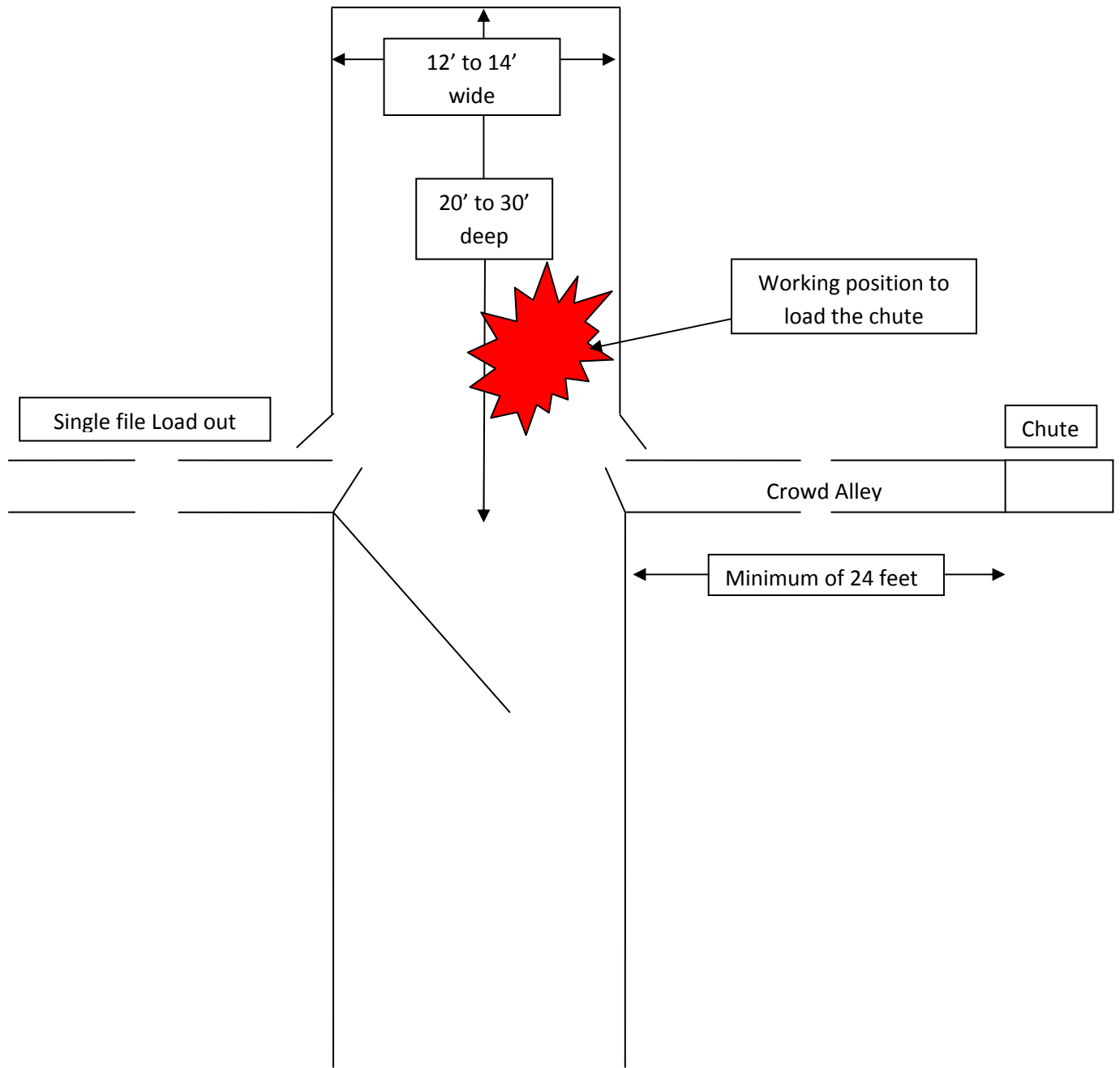
For most crowd alleys a 20 to 24 foot Box is adequate depth. Any deeper may force the handler working in the Box to move too deep in the Box to initiate flow. As the handler returns to the correct position, their movement with the cattle will stop flow and turn the cattle back. Going with movement slows it or stops it. Neither response is desirable in getting cattle to flow out of the Box.

Other aspects of a Box design that are critical to success relate to whether or not the sides are enclosed. It is absolutely essential to have the end of the Box open sided so cattle are going to light and will build speed as they enter the Box. Entry speed facilitates the transition and correct flow out of the box. Solid (opaque) panels should be limited to the Box's entry gate and the sides of the box closest to the crowd alley and load out exits. Note - solid sides in these areas are not required but may minimize distractions. Load out and crowd alley exit gates must open back flat against the sides of the Box.

A Box used in loading semi-trailers may require additional depth (30 feet maximum) to facilitate filling compartments quickly. If using this same large box for a crowd alley, the addition of a block gate in the Box to shorten it might be a good solution.

In summary, a Box needs to be 12 to 14 feet wide for most operations and 20 to 30 feet deep depending on the number of cattle needed to flow through the system at any given time. Leave the back open (translucent); cover the sides and entrance gate if necessary.

For additional information on cattle handling and facility design look for ***Cattle Handling Pointers*** at <http://beef.tamu.edu>. Go to Publications and look for the Facilities and Equipment section.



Bud Box Dimensions		
Handler	Width	Depth*
Always on foot	12'	minimum 20'
Afoot and horseback	14'	20-30'
Always horseback	16'	maximum 30'
*Dictated by size of groups handled.		