



Livestock Farming

Handout 12

Cattle Handling Yard Plan by TLB Hilliar

Cattle Handling Yard Plan Design

The cattle handling yard plan designed by Mr T L B Hilliar, a leading beef farmer in the Eston area of Natal who built the prototype of the design in 1979 is a prototype used by many

This yard can easily be adapted to handle from 50 to 1 000 head of cattle, so it can suit any enterprise. As can be seen from the plan, the cattle enter a curved corridor from which lead any number of holding pens, radiating from a circular forcing pen. Each holding pen can accommodate 100 animals comfortably (2,32m²/animal). The combined circular forcing pen and crush also hold 100 animals, but under forcing pen conditions (1,67m²/animal). As a result, a holding pen can be emptied, and be ready for re-use by the same group of cattle, after they have been handled. Owing to the long-tapered shape of the holding pens, 100 animals can easily be moved into the circular pen by one man.

A farmer who has a small herd can also use this design of handling yard.

Siting and Design Of Handling Facilities

The handling yard is sited below an existing cattle corridor, or in a corner formed by two corridors.

A site with a fall of 2 to 3% is desirable. The first section to be laid out is the draining races for the plunge dip or spray race. This is give a fall as indicated on the plan. The crush is then laid out parallel to the draining race, and from there the rest of the layout can be completed using a rope and tape. If laid out as above, the cattle movement is always up-hill, except when returning to the holding pens. If neither a spray race not a plunge dip is required, then allow a fall of 350mm in the crush from the neck clamp to the crush entrance.

The Forcing Pen

The forcing pen is circular, with the lower fence of the crush running into the centre of the circle. Animals entering the pen move round the circle to reach the mouth of the crush. The final part of the circle is straightened in order to create a fence angled at 45° to the crush entrance. The first two-metre length of the crush is tapered from a width of 1,20m to 760mm. This section can be useful when treating large bulls, which otherwise would not fit into the crush. They are backed out into the forcing circle after treatment.

The Crush

The crush is long, so fewer batches of animals have to be handled. A neck clamp is fixed at the exit, and a scale is situated alongside the crush, for use only when needed. Note that there are no obstructions along the entire length of the lower fence of the crush. This allows for quick dosing, or pregnancy testing. The upper gate of the loading ramp pen should be of strong construction, so that

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it can double as a sorting gate to the loading ramp pen. This pen can also be used as an extra sorting pen.

The Dip Or Spray Race

Cattle are diverted from the circular sorting pen into a separate race by swinging the 3-metre heavy-duty gate to block off entry to the handling race. The cattle then pass through a single, long foot-bath to the dip, or to the spray race. The double draining race can accommodate about 16 animals on either side, and allows an almost uninterrupted flow of cattle, provided that the entry swing gate and the exit gates are used correctly. The draining race shown on the plan is for a spray race. If a plunge dip is used, the draining race will be shorter, but wider, to accommodate the same number of cattle.

Calf Separation

Calves can be separated from the dams by incorporating a small, strong gate in the crush where indicated. The camp into which they are separated should have heavy-gauge netting wire fixed around the perimeter to contain the calves.

Suitable Materials

Fencing for the holding pens, and the entry corridor:

Cable or twisted plain wire should be fixed through holes drilled in the upright poles. Pressure can then be taken from either side. Instructions are given on this plan for making cable from wire if reject cable is unavailable from the mines, lift companies or Eskom.

All poles shown are standard sizes, so no cutting should be necessary, and every vertical pole required is actually drawn on the plan to assist the farmer when he is ordering materials. Note that joints of horizontal poles are lapped up and down, alternatively, instead of being half-cut and lapped, because the latter method bares the untreated core wood, resulting in early deterioration. Cup square bolts are very expensive, so all joints are fixed with mild steel round bar and wire.. It is recommended that the standard size gates used should be of the more robust, sale-yard type. The sorting gates/crush at the neck clamp should be constructed of 50mm ϕ , G & F, round tubing with 3mm thick walling, and with horizontal spacing, the same as in the crush.

Creosoted poles (S.A.B.S. standard) or C.C.A. treated poles should be used. (The latter types are not recommended in areas with a dry climate because cracking can occur under such conditions). The C.C.A. treatment involves the use of copper sulphate and arsenic, and poles thus treated should otherwise last as long as creosoted poles.

For herds of up to 200 beasts, the smaller handling yard with two or three 50-animal holding pens should suffice, provided that batches of 100 animals are handled at a time. Herds substantially larger than 200 animals can be handled in 100-animal holding pens, the number of holding pens being proportionate to the number of animals being handled at one time.

The attached bill of quantities gives the material required for a complete, full-sized handling yard with one 100-animal holding pen. Quantities for every additional 100-animal holding pen are given separately. A separate bill of quantities is given for the smaller handling yard with one 50-animal holding pen, and quantities are given for every additional holding pen.

The materials for any section that is to be omitted can be left out when making out a list of total requirements.