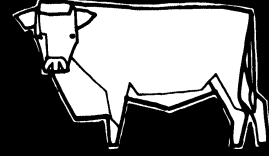




BRITISH
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Ministry of Agriculture, Food and Fisheries

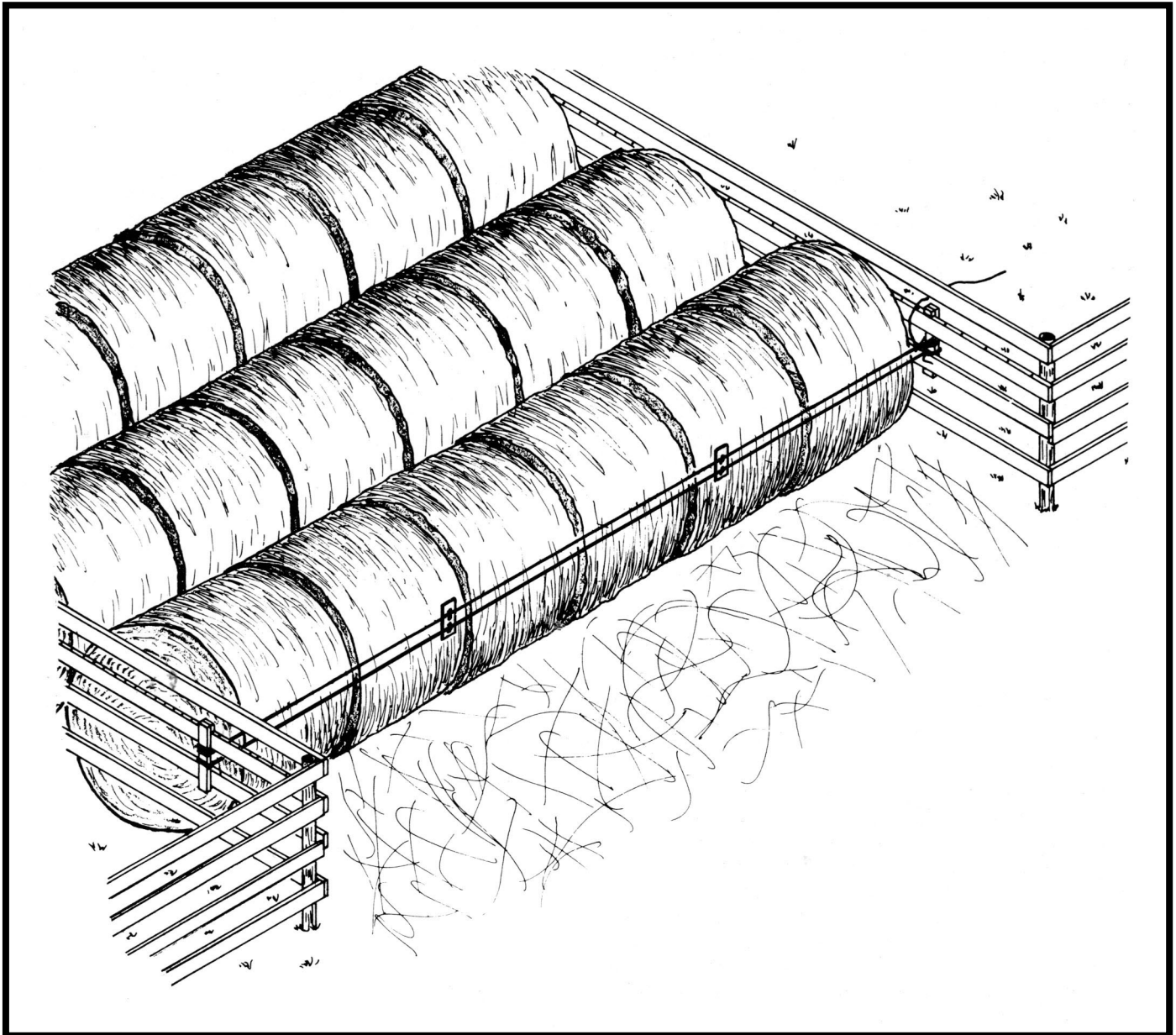
Agricultural Building Systems Handbook



PLAN

314-05

ELECTRIC TWO WIRE FEEDING FOR ROUND BALES



DEVELOPED BY CANADA PLAN SERVICE

314-05

TWO – WIRE FEEDING OF GIANT BALES

CPS
PLAN Q-1641 REV. 83:09

(SASKATCHEWAN PLAN S-181)

Cattle can be fed forage without having to move feed to the animals. Feeders that use electrically charged retraining wires have proven to keep wastage to a minimum. Feed handling is reduced and manure is spread over a larger area, not confined to one feeding location. The feeder uses large round bales, stored in a well-drained area. This area should slope away from the feeding face so drainage is away from the stored forage. The cattle then eat into the face of the roughage, rather than the operator having to move the feed to the cattle.

Where space is available at the feeding site, allow:

- 500 to 600 mm of feeding fence per cow or heavy steer (350-500 kg)
- 400 to 500 mm of feeding fence per yearling (up to 350 kg)
- 300 to 400 mm of feeding fence per 225 kg calf

Proper positioning of the wire can limit feed and ensure that the cattle clean up the feed with minimum waste. Keep the wire about 900 mm above ground level. The feeding fence should be back far enough so the shock wire will not short to the earth through the hay. A few minutes spent trimming the overhanging hay will help keep the shock wire from shorting. Initially, set the feeding wires about 150 mm from the hay. This allows the cattle to eat free choice with no fear of getting shocked, so they will not shy away from the electric wire. The wire is moved only when the cattle have cleaned up the forage on the ground. The adjustment distance will depend on how much feed the cattle are to get and how well they clean up under the wire.

The wires are kept taught by tighteners (insulated springs or a piece of rubber inner tube that attaches the wire to the anchor supports at the fence rail). Tractor tubes that have contained calcium chloride are not recommended, since the salt will ground the current, thus reducing the effectiveness of the shock. If the feeding width is greater than 18 m, additional wire supports are necessary. Either barbed or smooth wire

gives an adequate shock when ground conditions are moist and unfrozen. In cold weather, the forage usually keeps the ground from freezing so that a satisfactory shock is maintained.

If the natural ground is not conducting the shock well enough, install a second wire (as a ground-wire) about 150 mm below the shock wire as shown in the drawing. This extra ground-wire is connected to the 'ground' terminal of the fence and charger, and is separated from the shock wire with plywood or insulated dividers to keep the two wires from touching. Tension must be maintained on both wires to ensure they remain separated. When the animals touch both the shock wire and the grounded wire they get a shock.

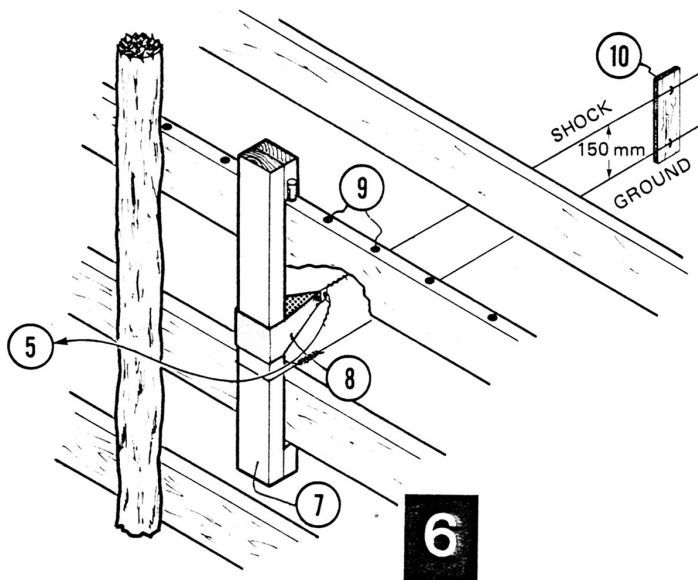
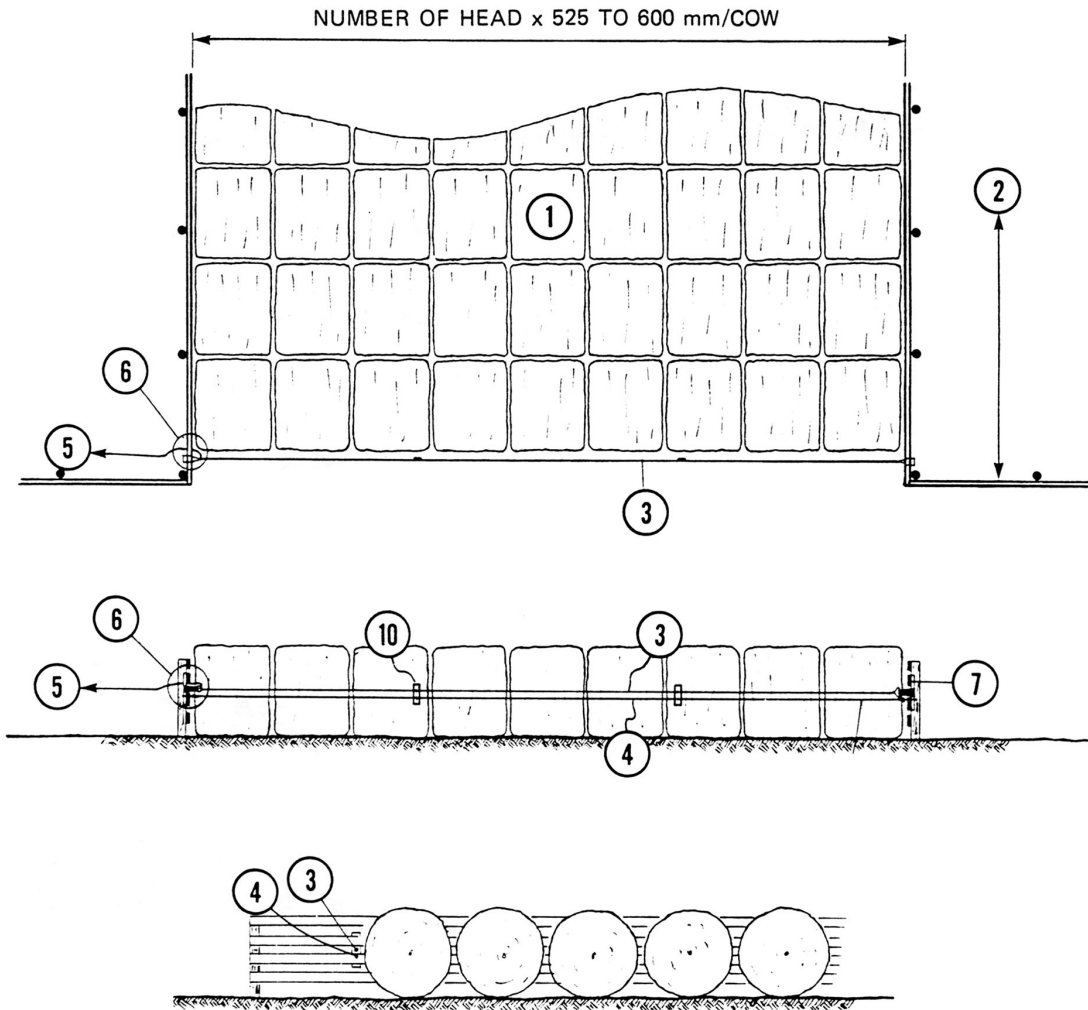
This system works equally well for loose stacks placed side-by-side, except the wires must be kept at a height of about 750 mm above ground level.

Electric wire fence feeding is not recommended where the feeding location is quite remote from the person doing the feeding. A power failure could allow the cattle to trample and ruin the wires and also have free access to the bales, thus causing a great deal of feed wastage. In the event of a power failure, remove the wire so cattle will not trample and ruin it.

One fence charger can provide sufficient shock for several fence line feeding wires. The electric fence charger should be 110v, solid state, and CSA-approved. In cold weather, place the fence charger in an insulated box with a 60 watt light bulb. By switching the light bulb on in very cold weather the charger is kept warm, thereby providing a stronger shock.

In humid winter climates such as Eastern Canada or coastal British Columbia, it is preferable to shelter the bales and the paved feeding area under a roof. The roof should slope to drain rain and snowmelt outside the feeding area.

Follow the manufacturer's instructions regarding connections and grounding of the fence charger.



- 1 large round bales
- 2 to accommodate desired feed supply
- 3 non-insulated electric wire
- 4 ground wire
- 5 to solid state fence charger
- 6 wire adjustment detail
- 7 38 x 89 mm electric wire supporting block, to support wires @ 900 mm height
- 8 wire tension device cut from rubber inner tube
- 9 adjustment holes in fence plank – approximately 100 mm apart
- 10 plywood insulated spacer

CAUTION: DO NOT PLACE LARGE ROUND BALES CLOSE TOGETHER UNTIL AFTER RAINY WEATEHR HAS PASSED.