

# TECHNICAL NOTES

## PORTABLE FEEDERS FOR RANGE GRAZING STUDIES

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Portable self feeders for range supplements and salt boxes are essential facilities in many grazing trials. They must be durable and easy to handle. Low cost and economy of feed and salt are other desirable features.

New range management research at the San Joaquin Experimental Range required such a feeder in each of 33 range units. Variations in number of animals per lot and seasons of use between units indicated a need for two types of feeders: (1) small ones to provide salt in spring and summer and feed in winter for small groups of cattle, and (2) larger ones to provide feed in winter for larger groups of cattle.

The first need was met by the purchase of Whirlwind commercial feeders (Figure 1). This 100-pound capacity feeder, equipped with a revolving hood, keeps the contents dry and clean under all weather conditions and accommodates three animals simultaneously.

For a portable feeder capable



FIGURE 1. A Whirlwind self feeder.

of serving up to 25 or 30 animals and holding 500 pounds of feed, we drew on an idea suggested by K. A. Wagnon some years ago and the ingenuity of J. L. Burns and C. A. Graham, foreman and superintendent, respectively, at the San Joaquin Experimental Range. Using the following listed materials and 5 man-hours of labor, a completely satisfactory feeder (Figure 2) was constructed.

- 2 55-gallon oil drums
- Rough lumber (cull incense cedar)
  - 8 ft.—4x6" (4 24" legs)
  - 20 ft.—2x8" (base and roof section plug)
  - 8 ft.—2x4" (base braces)
  - 14 ft.—1x6" (roof frame)
  - 12 ft.—1x4" (roof frame)
- Salvage sheet iron roofing
- 1 strap hinge (8- or 10-inch)
- Scrap iron for bracing
- Bolts and nails (miscellaneous)

One drum was cut down one side and across the middle of each end, then bent outward along the uncut side to make two connected troughs. For a hopper, the ends of the other drum were removed, and one rim was notched to fit tightly over the center portion or ridge, of the split horizontal drum. The drums were bolted together with iron supports. The roof frame was

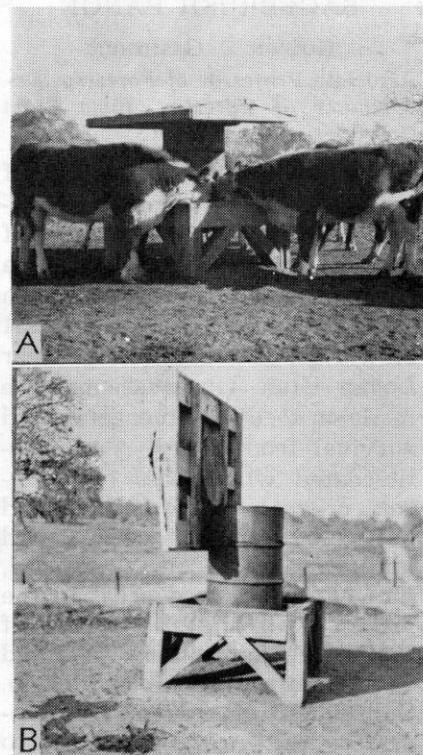


FIGURE 2. The homemade 500-pound capacity drum feeder.

covered with metal roofing. A wooden plug 2 inches thick was fitted underneath the roof section to fill the open upper end of the upright hopper. This greatly increased roof stability. A heavy strap iron hinge connected the roof and the hopper.

The hinged roof (Figure 2B) makes filling the feeders fast and easy, often from the back of a pickup truck. One man can move the feeders, but it is easier for two. Wind-blown rain can damage feed in this device. A larger roof section would prevent this. At first some feed was wasted, but this was easily remedied by nailing a 2x6 lip along the top of the feeder opening so that a 2 inch rim extended over the inside edge of the two troughs.

After 2 years of use and a number of moves between and within units to improve grazing distribution, the Whirlwind and homemade drum feeders have done a good job.