A Simple Sack-holding Frame

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Abstract

A lightweight frame was designed to hold sacks when sampling vegetation by species. Sacks are attached with clips to a pegboard in an organized arrangement with labels that are easily read. The frame is especially useful on windy days.

Harvesting rangeland vegetation by species is a common practice in range research. Weight by species is a valuable measurement in many plant communities. Once clipped, individual species or groups of species are placed in paper sacks, then dried and weighed. As the number of sacks per quadrat increase, their management in the field becomes more difficult. A lightweight sack frame was designed to hold sacks in an organized arrangement such that identifying labels could be easily read (Fig. 1). This minimizes time spent searching for the proper sack. The frame is especially useful on windy days and is easily transported.

The frame was constructed to handle different numbers of sacks within easy reach of the clipper. The illustrated frame can hold 21, No. 12 sacks. Sacks are attached by clips and arranged on 3 rows of pegboard. The pegboard allowed clips to be adjusted for different sack sizes. The frame can be adapted to meet criteria of individual projects.

To construct the frame, 3 cross-braces (120 cm length) were welded to the front legs (90 cm tall) and 2 cross-braces were welded to the back legs. Angle iron (0.64 cm) was used; however, aluminum material also would be suitable. Pegboard (10 by 118 cm) was bolted on the inside edge of the angle iron. A distance of 16 cm was allowed between the pegboard strips to permit sacks to fall behind the pegboard. Height above the ground to the bottom pegboard was determined by sack length (28 cm in this case). The front and back sides were joined by hinges welded at the top. A lightweight chain was fastened between the front and back legs. The cost was approximately $20.00.

Fig. 1. Sack-holding frame, made with angle iron and pegboard, holds and organizes sacks.