A One-Man Portable Livestock Exclosure

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NOW IN use in Nevada grazing studies of the Intermountain Forest and Range Experiment Station are several enclosures of a type specifically designed by the author for handling by one man. The chief advantage of these enclosures over the heavier, more rigid ones that have previously been used in various parts of the country is the ease and speed with which they may be put up and taken down. An enclosure of the type described here may be assembled in twenty-five to thirty minutes by one man. Easily capable of withstanding pressure by grazing animals. This quality is important toward the end of the season when the fresh feed within the small plot is attractive, and especially in those pastures where utilization is purposely heavy.

The one-man movable enclosure features an all-metal construction. A total of eight steel posts are used, four are for the corners, the other four for top braces. Ordinary thirty-inch woven stock wire and two strands of barbed wire serve as fencing materials (Fig. 1).

Fig. 1. A small enclosure suitable for use in grazing management research, as it appears after being erected and before utilization commences; Ruby Valley reseeding project, near Arthur, Nevada.

disassembled in ten minutes, the enclosure parts may be carried by the man to a new location, or loaded on a pickup truck for longer hauls.

Relatively few tools are required, yet the design assures the range technician of a simple but substantial enclosure,

A homemade corner sleeve is the key to the fitting together of corner posts and top braces. This is a foot long section of two-inch galvanized water pipe. About two inches from one end, a half-inch hole is drilled through the pipe, into which is inserted a short length of concrete re-
inforcing steel rod. Enough of the rod extends through the pipe to allow it to be bent upward, then crimped inside the pipe for an inch or two to make it rigid. The other end of the steel rod is also bent upward and cut off four or five inches above the pipe, forming the upright piece which fits into the top braces (Fig. 2). The portion of the steel rod that passes through the pipe also serves to keep the sleeve at the top of the corner post.

A half-inch hole is drilled one inch from each end of the four top braces, allowing them to fit over the upright steel rods of the corner sleeves. No other modification is necessary for the top braces, so that if in the future the need should arise, they retain their usefulness as steel posts. No modification of any kind is made on the corner posts.

Seven-foot steel posts are used for the top braces, enabling the research man to obtain quadrats up to a milacre in size within the exclosure. Corner posts need be only six and a half feet long, unless the soil is sandy or otherwise unstable and it is desirable to use longer ones.

Assembly of the exclosure can be accomplished step-by-step as follows. Corner posts are spaced, then forced into the soil with a steel post driver. Corner sleeves are installed and the top braces placed in position. A piece of woven wire long enough to encircle the plot is cut, allowing a foot or two for splicing. It is pulled moderately tight by hand, spliced, and fastened at each corner with soft iron wire. Two strands of barbed wire are spaced above the woven wire, also fastened at the corners. To provide more rigidity, a piece of soft iron wire can be tied to the center of each top brace, twisted around each of the barbed wires, then tied to the woven wire. The exclosure is now ready for use.

Disassembly is even simpler. The top braces and corner sleeves are lifted out of position, the barbed wire removed and rolled up, and the woven wire is unfastened from the posts but not unspliced. Extraction of the steel posts from the ground is next, and is made easier by removing a shovelful of soil from the side of the post footplate. After being vigorously shaken back and forth two or three times, the posts can be lifted out. The woven wire, if pulled diagonally until the sides are together and then folded lengthwise, handles easily.