TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE — SOIL CONSERVATION SERVICE

TN - Range - 33

Berkeley, California
May 1968

USES FOR PORTABLE EXCLOSURES AND A PLAN FOR CONSTRUCTING THEM

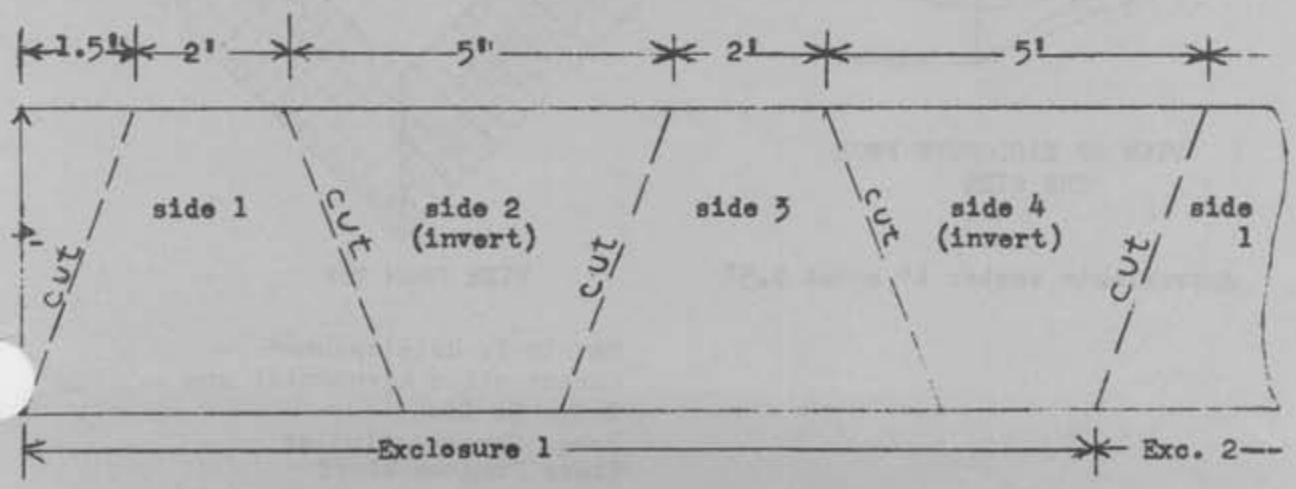
Small areas fenced to keep livestock and other animals out (exclosures) have been used for conducting ecological studies for many years. Exclosures are useful in any case where protection from livestock or other animals is needed for small plantings of garden, tree, ornamentals, etc. A most common use in soil conservation work has been to protect a small area of pasture or range from grazing while demonstrating the effects of various treatments on forage production, or to get a measurement of total seasonal production.

Exclosures are useful for setting up on farm demonstrations of grass and legume responses to various treatments: fertilizer, herbicides, seeding, deferred grazing, etc. They are quite effective in selling cooperators on various forage production techniques or practices they should be using.

Many Soil Conservation Districts have made very effective contributions to their pasture and range programs by constructing and using small portable exclosures of galvanized woven wire mesh. Individual cooperators may find them useful for protecting small trees, ornamentals, garden plantings, etc., from livestock or other animals.

Following are plans for constructing economical trapezoidal portable exclosures from 12 gauge, 2" x 4" welded steel wire of 4 foot height or width. The wire, cut to the dimensions shown, forms an exclosure with an approximate 5 foot square base, 2 foot top, and 4 foot height.

With careful cutting, a 100 foot roll of galvanized and welded wire will make 7 exclosures minus the tops. Tops can be formed by crossing or diagonaling the 2 foot diameter apex from corner to corner with smooth galvanized wire, tying into the corners. This adds rigidity to the exclosure.



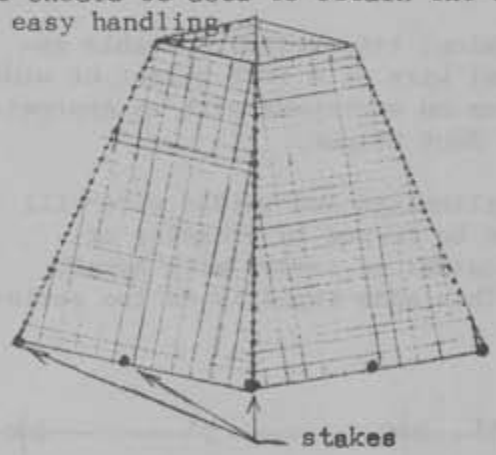
Construction is accomplished by cutting the wire and inverting even numbered sides as illustrated. The cut ends are twisted to tie the sides together. The ties are then turned down to give the structure smooth corners. (See plan for cutting on page 1, and drawings below.)

Experience has shown that the sloped sides have several advantages as compared to vertical construction. Livestock are discouraged from rubbing by the sloped sides. A'so, the sloped sides permit stacking several structures rather compactly for storage or handling. The slope adds rigidity and makes for easier hauling.

In use, the exclosures are pinned over the area to be exclosed using 8 railway spikes or similar steel or wooden pins. (See side view.)

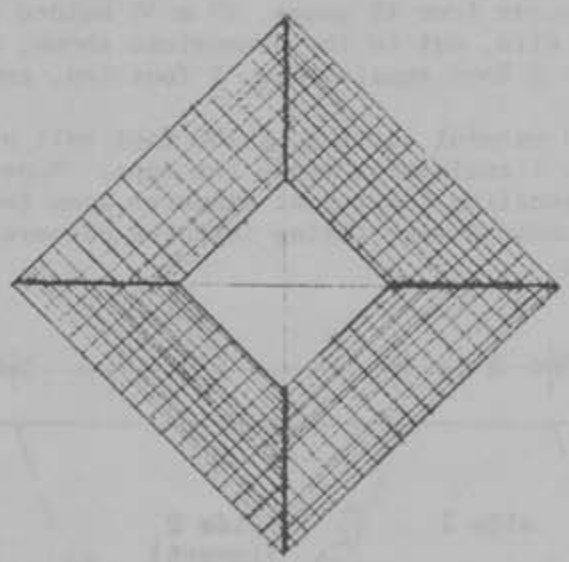
Material and tools for seven exclosures are as follows: (1) One 100 foot roll, 4 feet height, 12 gauge or heavier galvanized and welded 2" x 4" mesh wire. (1" x 2", 14 gauge mesh may be desirable to exclude rabbits.); (2) Forty feet smooth galvanized wire for tops; (3) Fencing pliers with wire cutter; (4) Tie down pins or stakes -- 56 each.

NOTE: If larger exclosures are desirable, a 100 foot roll of wire will make: (1) Six exclosures with 5.5 foot base and 2.5 foot top; (2) Five exclosures with 6.4 foot base and 3.4 foot top. On the larger exclosures, heavier wire should be used to obtain the desirable strength and rigidity for long life and easy handling.



VIEW OF EXCLOSURE FROM THE SIDE

Approximate scale: 1" equal 2.5'



VIEW FROM TOP

Marvin F. Hollingshead
Conservation Agronomist and
Roche D. Bush
Range Conservationist
State Program Staff