A LAY-DOWN FENCE FOR SNOW COUNTRY

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Wire fences pose a problem in snow country. Wherever the snowpack reaches a depth of 4 feet or more, wires are loosened or broken and posts frequently need to be straightened or reset. Consequently, maintenance becomes a major chore and expense.

The type of fence described here (Figure 1) has reduced maintenance costs by two-thirds on Black Mesa in western Colorado. It was first observed on the Grand Mesa National Forest, but the originator is unknown. This fence is highly recommended for relatively uniform terrain where livestock need not be controlled during winter. Basically, it is a standard 4-wire fence that can be laid down as a unit. It remains under tension at all times. One man can let the fence down or put it up almost as fast as he can walk. Since the wires rest on or near the ground and thus escape the strain of the settling snowpack, they are seldom broken.

Construction of a lay-down fence is simple. Right-of-way should be relatively free of large stumps and rocks and wide enough to accommodate the fence when laid down. Posts and braces are used as in an ordinary fence and wires are stretched between braces. However, instead of being anchored directly to brace posts, the wires are fastened to a stub post set on the ground next to each brace (Figure 2). The top of the stub post is guyed to the bottom of the second brace post on the side from which the fence will fall. The bottom of the stub may be guyed to the bottom of the second brace post or bolted loosely to the first brace post so as to swivel near the ground. A half-inch bolt is recommended for this purpose. Both methods have proved satisfactory. A wire loop near the top holds the stub post upright.

Fenceline wires are stapled to 3-inch stays slightly offset from line posts. Stays are held upright by a wire loop stapled loosely to the opposite side of the post near the top. In addition, a bottom loop is recommended where livestock are on both sides of the fence. Offsetting the stays prevents binding in the lower loop when the fence is lowered. For best results stays should be the same height as the posts. One or two additional stays may be placed between posts if a tighter fence is desired.

¹Maintained in cooperation with Colorado State University, Fort Collins, Colorado.

Figure 1. A lay-down fence practically eliminates damage from snow. When let down, fence remains under tension (note guy wires fastened to stub post).

Figure 2. Detail of fence construction showing: (1) stay slightly offset from line post; (2) stub post; (3) first brace post; (4) guy wires; (5) second brace post.
EFFECT OF AERIAL 2,4,5-T SPRAYS ON FORAGE PRODUCTION IN WEST-CENTRAL ARKANSAS

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In May 1957, several hardwood tracts in the Ozark mountains near Paris, Arkansas, were aerially sprayed with 2,4,5-T in order to convert them to range. A fixed-wing aircraft applied to each acre 2 pounds of iso-octyl ester of 2,4,5-T mixed with one gallon of diesel oil and 3.5 gallons of water. The mixture was intended to rid the tracts of trees like post oak (Quercus stellata), blackjack oak (Q. marilandica), and hickories (Carya spp.).

Production of grass, forbs, and browse under five feet in height was measured in September 1957 and 1958 on adjacent sprayed and unsprayed areas. Major grasses were little bluestem (Andropogon scoparius), broomseed (A. virginicus), panicums (Panicum spp.), and poverty oatgrass (Danthonia spicata). The most important forbs were asters (Aster spp.), various legumes, horseweed (Erigeron canadensis), fireweed (Erechtites spp.), and pokeweed (Phytolacca americana). Various species of oak, hickory, blueberry (Vaccinium spp.), grape (Vitis spp.), and sumac (Rhus spp.) composed the bulk of woody growth.

At the end of the 1957 growing season, air-dry grass production per acre was 564 pounds on the sprayed area and 433 pounds on the unsprayed area. During 1958, grass yields increased to 873 pounds per acre on the sprayed area but declined to 321 pounds on the unsprayed.

The increase in grass yield reflected lessened competition by overstory trees for light and moisture. Because cattle are mainly grass eaters, the immediate outcome of spraying was favorable to this class of livestock. It is not yet known whether the potential grazing returns would justify the cost of treatment and maintenance.

The yield of forbs was sharply reduced the first year. It increased greatly the second year, but the new growth consisted largely of horseweed, fireweed, and other undesirable species. Therefore the increased yield of forbs did little to enhance grazing values for either cattle or deer, but probably had value in reducing runoff during this period of land conversion.

The large decrease in browse plants in 1957 was caused mainly by defoliation and killing of the oaks—species of low browsing value. In 1958, browse yields increased to 279 pounds per acre—an amount equal in weight to that on unsprayed areas. The sprayed areas, however, produced more browse plants of the species preferred by deer, such as blueberry and grape.

### Per-acre yields of air-dry forage on sprayed and unsprayed areas were:

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<th>Sprayed areas</th>
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<tr>
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