Cheaper Fencing—Here at Last!

Thomas E. Bedell

Good fences are absolutely necessary to control livestock grazing. Because of high costs, great reluctance exists to building new fences. Fencing innovations hold large promise that costs can be substantially reduced without any reduction in the quality of the fence. How is this possible?

Only by revamping one's traditional attitudes do changes take place. This is what happens regarding range fencing. Several basic considerations are:

(1) Close line post spacing is *not* necessary.
(2) Brace posts or fence strainers are critically important.
(3) Barbed wire is *not* necessary for any type of animal.
(4) Controlled tension on wires is mandatory.

Recent studies and observations in the U.S. and Canada show labor costs reduced by from 25% to 60% and, depending on the number of wires and terrain, material costs may be reduced by 30%. The characteristics of such a fence are:

(1) High tensile smooth wire is recommended in place of normal two-ply barbed wire. Many more feet of smooth wire exist per pound than barbed wire and wire costs are on a weight basis primarily. The number of smooth wires needs to be greater. Research in British Columbia showed 6 wires kept weaned calves successfully separated from the mothers. Also, barbed wire must be prestretched to maintain its tension properties. That is not common knowledge.

(2) High-tensile 12 1/2 gauge triple galvanized wire of 150 to 200,000 pounds per square inch is expected to last 35 to 50 years. This strength is twice that of barbed wire.

(3) Line posts are up to 60 feet apart. A line post primarily serves to space wires and keep the fence from falling over. Research shows much less fence breakage when posts are widely spaced than when the conventional 16 to 20 feet apart. Consider when an animal encounters the highly stretched wire (250–300 pounds) which is not stapled firmly to line posts. The wire stretches and will return to its same position. If between closely spaced posts and especially if stapled tightly, wire may break because it will not have opportunity to stretch and absorb the stress.

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(4) Stays or spacers of wood or metal (called droppers in Australia, New Zealand, and Canada) are placed at 10- foot intervals with the base resting on the ground surface. Placing the base on the ground helps both maintain wire at the desired distance above the surface and keeps the bottom wires from being pushed out by livestock.

(5) Brace or strainer assemblies can be about 1/4 mile apart but are often closer because of terrain. There are no differences in brace needs for this fence as compared to conventional barbed wire fences.

Much has been written about electrifying fences. This can be easily done and possibly reduce the number of wires used. Obviously, insulators or insulative posts are needed. But, a six strand smooth wire fence, not electrified, was 100 percent effective in separating weaned calves from their mothers in a B.C. trial. Unless the fence were to repel coyotes or other predators, electrification would not be necessary.

A number of innovative fencing tools and aids greatly influence the amount of labor needed as well as the strength of the fence. For example, using sleeves to join two ends of wire not only saves time but keeps the fence strong. Knots in wire reduce its strength up to 40%. A single three-crimp sleeve will stand between 600 and 900 pounds tension.

Several wire stretcher designs including in-line strainers have greatly speeded the wire stretching procedure. Coupled with a tension meter (several kinds exist) the proper amount of tension can be simply, rapidly, and accurately arrived at. Using pre-fabricated metal droppers (spacers) after wire is attached to line posts will save valuable time, and ultimately money. Although wooden droppers may be cheaper, they require more labor to tie wire to the dropper. Also, it is possible with age that wire ties may move against the dropper and not retain the desired wire spacing.

Obtaining materials should not be a problem, since a number of companies sell fencing material and tools. Research and demonstration thus far show that smooth wire fences have great promise. Not having to handle barbed wire and using one-third or less lines posts just could revolutionize the fencing job.

Editor's Note: This article is not long but says enough to get the reader thinking and that is what the author wants.

The senior author of the article on page 162, August issue, who was out of the country when the proofs of the article came, has asked us to correct three errors that mar the sense of the article. They are as follows: p. 162, col. 1 para. 2, line—separate plants *or* groups of plants p. 163, col. 2, para. 1, line 17—gave regression coefficients (r^2) p. 163, col. 2, para. 5, line 10—*2,000* for 15.8