

Rec'd. 10,000-12-7-87

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# SUSPENSION FENCES



TEXAS A&M UNIVERSITY  
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# SUSPENSION FENCES

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It's possible to cut fencing costs in about half by using suspension fences. Fencing is long, laborious and expensive, but suspension fences tested at the Texas Agricultural Experiment Stations and on commercial beef cattle ranches have proved that total costs can be reduced greatly. A suspension fence is similar to other fences, except the distance between line posts is from 80 to 120 feet.

Suspension fences have these advantages over standard-type fences: they are useful for boundary, interior and cross-fencing; turn cattle equally as well or better than other fences; last as long; require less upkeep; and work well in all cattle country areas. A six-wire suspension fence should be satisfactory for a sheep fence.

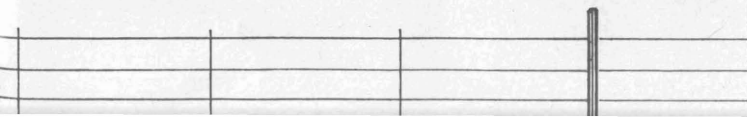
The suspension fence sways back and forth in the wind, particularly when animals run into it. This swaying motion actually beats animals away from the fence. There is little chance of cattle becoming mixed between pastures. Fences need less repair when herd bulls in adjoining pastures run over them during fights, since they spring back to normal position. The swinging motion discourages fighting through the fence.

## Construction

Anchor the suspension fence securely on each end with large posts, braces and a "deadman." Space line posts 80 to 120 feet apart. Place large support or stretch posts every  $\frac{1}{4}$  mile along the fence to make it more sturdy and when the fence

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direction changes up or downhill. In sandy soils, stretch posts may have to be spaced 1/5 mile apart.

Line posts can be cedar, pressure-treated pine or steel and set at least 2 feet deep. Wooden posts should be a minimum of 6½ feet tall with a 4-inch diameter top. A 6½-foot steel post with anchor plates and wire slips is sufficient. Use longer and larger posts in sandy soils and set the posts deeper.

The suspension fence usually consists of four to six strands of 12½-gauge barbed wire. Each strand is stretched taut so that not more than a 3-inch sag exists between posts. Extra strands of wire attached near the ground add little weight on the posts. The wire strands are separated with spiral wire stays placed 16 feet apart. Do not let the lower ends of the stays touch the ground, since this defeats the swaying feature of the fence. The wire stays are 36, 42 or 48 inches long, depending upon the height of the top wire.

Anchor corner posts with a "deadman" set at least 4 feet deep or any other type anchorage that will hold firmly under your soil conditions. Corner braces and support posts should be at least 8 feet long with an 8-inch diameter top.

The wire strands can be fastened to wooden posts with long U-shaped staples, L-shaped deformed shank staples or a piece of 18-20 gauge metal strip or gripper ½" x 1½", placed over the wires at a slight angle and held with a 6-penny nail on each end. The metal grippers have to be made at a metal shop. The L-shaped deformed shank staples have more holding power than the conventional staples on pine-treated posts. The staples or metal grippers are fastened so that the wire can move back and forth against the post. The wire strands are fastened to steel posts by the attached wire slips.

### **Construction Cost**

Building a mile of suspension fence at the Texas Experimental Ranch with wooden posts and stays placed 16 feet apart costs about \$350.


This is itemized as follows: 16 rolls wire—\$160; 53 line posts—\$21; corner and stretch posts—\$8; 330 spiral wire stays—\$20; metal strips, nails, brace-wire, etc.—\$6; and 108 hours labor—\$135. A standard fence with line posts at 20-foot spacing costs about \$600 per mile.

### **Semi-suspension Fence**

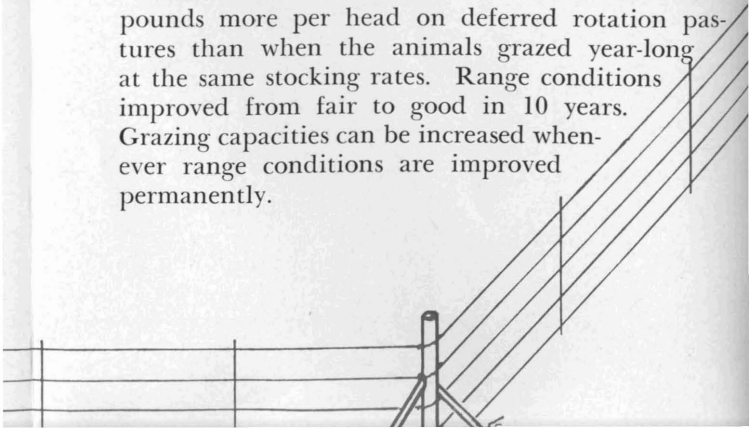
An adaptation of the suspension fence is the semi-suspension fence. This type of fence has line posts spaced 50 feet apart. It has proved successful for cross-fencing on several Texas ranches.

### **Where to Use Suspension Fences**

Use suspension fences for cross-fencing when subdividing large pastures for a systematic deferred rotation grazing program. Place cross fences according to range sites to insure proper forage plant utilization, proper distribution of livestock and ease in moving livestock at the end of deferment periods.

Suspension fences are excellent for keeping livestock in a temporary or improved pasture while native grasses are being deferred.

Eight miles of cross-fencing are required to subdivide a square four-section pasture for a systematic, deferred rotation grazing program. The cost per acre for fencing amortized over the life of the fence is about 10 cents per acre. Amount of individual animal gains based on results from the Texas Range Station and Texas Experimental Ranch indicate that the initial cost for 8 miles of fencing could be repaid in about 8 years. Gains on individual beef animals have been 25 to 100 pounds more per head on deferred rotation pastures than when the animals grazed year-long at the same stocking rates. Range conditions improved from fair to good in 10 years. Grazing capacities can be increased whenever range conditions are improved permanently.





Fencing large pastures is necessary to establish and carry out systematic, deferred rotation grazing programs for fast range improvement and sustained livestock production.

### **Points to Consider when Purchasing Fencing Material**

#### **Wire**

Foreign-made wire is about \$2 per roll cheaper than domestic wire. The workability, quality and uniformity of domestic wire is superior to foreign wire.

#### **Posts**

Cedar posts should contain at least two-thirds the diameter, dark-colored, in heartwood for a life

of 15 to 25 years. Cedar posts with a smaller amount of heartwood may not last more than 5 years.

Pine posts, properly pressure-treated with preservatives, should have a useful life of 30 years or more and are resistant to fire damage.

Steel posts are the most expensive, but they can be set faster and resist fire. Usually, they have a shorter useful life than pressure-treated pine posts or high-grade cedar posts, particularly in the higher rainfall areas of Texas.

The useful life of a fence generally is shorter in East Texas and along the Gulf Coast than in West Texas, because of the excessive humidity, which causes rust and corrosion.

### **Safety in Fencing**

Those who build and repair fences can sustain serious cuts and skin tears if they are not careful. These injuries are ragged, difficult to heal, and frequently result in infection. Most injuries can be prevented by using the following precautions:

1. Wear close-fitting, tough clothes that will not catch on the wire.
2. Wear extra heavy, gauntlet-type leather gloves which fit snugly.
3. Wear high-top boots for maximum protection to ankles and legs.
4. Keep chains and wire-stretching clamps in good condition and attach them properly.
5. Stand on the side of the post opposite the wire when stretching the wire.
6. Use a nail apron to carry staples.
7. Place shields on power shanks when using a power hole digger or post driver.
8. Wear a protective helmet when operating a power post driver.
9. Use the correct driving caps on the post as recommended by the driver manufacturer.
10. Keep children away from fencing operations.
11. Avoid letting hands or gloves touch the face, eyes, neck and other exposed skin when handling treated wooden posts. The preservatives can be irritating on hot, windy days.