



Fence (Electric)

382

Conservation Practice Job Sheet

Name _____ County _____ Acres _____

Field ID(s) _____ Feet of Planned Fence _____

Use new materials (with the exception of steel pipe and utility poles in excellent condition). Trees, stumps, in-service utility poles or landscape timbers are not allowed. Wooden posts will be Osage Orange, red cedar, black locust or treated posts labeled as specified in AWPA standard UC4A.

Single corner, end, gate or pull posts (at direction changes over 20 degrees, terrain changes over 8 percent, or every 2640 feet) of 5 inch diameter wood or composite or capped 2 7/8 inch steel pipe are allowed for one and two wire fences. Fences over two wires must use H-braces, welded angle braces, or prefabricated corners. The brace must be 3 inch wood or 2 inch pipe 8-10 feet long, with a twitch wire and stick for wooden assemblies. Posts shall be set or driven 36 inches deep or buried in at least 24 inches of concrete 6 inches around the post.

High tensile wire (12 1/2 gauge) with a minimum of 170,000 psi will be used. **Do not** electrify barbed wire. Electric fence warning signs should be posted where the public has access to the fence.

Fence chargers must be high voltage/low impedance, short pulse units which can produce a minimum of 5000 volts output. Monitor fence voltage with a digital volt meter. Install a surge protector at 110 volt connections to provide protection from lightning.

A minimum of 3 ground rods 1/2 inch in diameter must be installed 10 feet apart near the energizer. The rods will be connected with one continuous wire back to the charger terminal and do not mix dissimilar materials. The rods should be 6 feet long and located in moist, deep soil. Keep ground rods 25 feet from other grounding systems.

All underground wire installations must be double insulated, molded, high tensile strength 12 1/2 gauge wire. Placing the wire in nonmetal conduit or PVC pipe buried deep enough to protect the wire is recommended. Gates can be made of smooth high tensile wire, springs, cable, polytape, polywire, polybraid or polyrope. Cutoff switches are recommended at each secondary fence feeding off the main line to assist in tracing shorts. Insulators must be high density plastic with UV protection or porcelain with a 10-yr warranty.

Line posts can be 3 inch diameter wood, eucalyptus, steel T-posts (1 1/4 lbs/ft of length) or steel rods, composite posts or 3/8 inch diameter fiber glass or rigid plastic posts. Posts shall be located every 60 feet or less for fences with over two strands, dependent on the terrain. One or two wire fences may have posts 100 feet apart on level ground.

Height of a one-wire fence for cattle and horses should be around 36 inches or at the height of an animal's outstretched nose. Two-wire fences probably work best at 40-44 and 28-32 inches. For more control, three wires at 40-44 inches, 32-36 inches, and 24-28 inches are effective. For small ruminants, three wires at 6-10, 16-20, and 26-30 inches should be effective. Goats may require four wires.

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