

## Conservation Practice Fact Sheet



One of the challenges in raising sheep or goats is the expense of the fencing that will contain them. Electric fencing is less expensive than either barbed or woven wire and new product development has improved its effectiveness and flexibility.

The flocking instinct to stay in a group is very strong in small ruminants, especially in sheep as compared to goats. This behavior increases the ease in movement of animals from one pasture (paddock) to another, but if one animal get through a fence,

the others may follow, usually darting through the opening very quickly.

Train livestock by holding them in a secure pen with three strands of electric wire at nose height across one corner. Make sure that the charger is providing at least 5000 volts. The higher the charge, the longer the lesson will be remembered. Watch the animals closely to ensure that all individuals experience the shock but that none become entangled since that stress could be fatal. Wool sheep are easier to train after shearing reduces their insulated coat. Once the sheep or goats are trained to the electric fence, they'll respect it as long as it is kept charged and they are satisfied to stay where they are. Bored animals short on forage may find a way into the next field. Cull individuals that repeatedly violate the rules since they can lead the others astray.

Small ruminants are not as well grounded as larger animals and so are not as sensitive to electricity. However, a fence with only hot wires works in Arkansas if the charger is very well grounded in moist soil. Watering the ground rods during droughts is advisable. Use a digital voltmeter to routinely check the electric fence and ensure that it is carrying the 5000 volts and does not have shorts anywhere in the system.

Goats are especially intelligent and will check fence daily to see if it is on or if there is a spot to go through. They will also quickly learn the locations of gates, even if they are not in corners as normally recommended for the best flow. Temporary or permanent lanes can be used but are not required. A feed bucket makes the first few moves easier, but when the flock realizes that every move means better foraging, then all that is needed is a call through an open gate to get them going. Once a few start moving, the rest will follow quickly. Any laggards need to be checked for health issues. With patience, flocks or herds can even be moved on through a good pasture to the next one without a lane.

Permanent electric fence should be built with 12.5 gauge high tensile fence with 170,000/180,000 psi. Three wires will contain sheep, but goats may need four wires. Seven wires are usually recommended for perimeter fences.

Temporary cross-fencing of 2-3 strands of polywire, with 9 conductive wires in each one, may be used with trained animals. Electrified netting should only be used with animals without horns since the stress of entanglement could be fatal. Portable fencing can be used to concentrate livestock to control a particular weed infestation. Goats generally have a strong preference for browse and severely damage some brush, like cedar and sumac, by stripping the bark at certain times of the year. Favorites, such as any multiflora rose and blackberries they can reach standing on their hind legs, may be constantly nibbled leading to their eventual demise. Sheep can also select the leaves from shorter thorny vines but prefer forbs like buttercup, chickweed, and dock, and are more satisfied with grass than goats. Neither sheep nor goats should be forced to eat short grass since they will be more likely to ingest the worm larvae that can crawl up to two inches on the blades. Never keep livestock in areas devoid of vegetation except for poisonous plants, like perilla mint or jimsonweed that they would normally reject.

Gap-type gates can be made of electrified netting or at least 4 smooth high tensile wires, cables, polytape, polywire, polybraid or polyrope with several plastic pipes or fiberglass posts as vertical stays to separate the wires. A larger composite or fiberglass post is needed at the end of the gate that is pulled to close the gap, securing it with rope at the top and the bottom. Then the gate can be electrified with an insulated wire with stripped ends. Double-insulated wire also needs to be buried under the gate inside plastic conduit to carry the full charge to the other side of the fence.

Fences need to accommodate guard animals. If donkeys or llamas are used, the top wire should be at least 36 inches high, although ideally the guards will bond with the flock and not jump into the next field. Low wires will prevent guard dogs from roaming, which may or may not be desirable. Consider one dog to stay with the flock and another to roam a larger territory to intimidate predators.

A low wire at 6-8 inches does discourage both predators and small ruminants from crawling under the fence. The livestock will not be able to graze under it either, though, so weeds and brush could grow up. If the charger is powerful enough and grounded well enough it will desiccate this vegetation and maintain a satisfactory charge. A less powerful charger will not be able to push the voltage through the load, especially on wet days. Then the weeds will need to be controlled with careful weed-eating or herbicide use. Noxious, hard to eradicate, weeds may then take advantage of the bare ground.

Muddy areas around ponds can aggravate foot rot problems. So 3-4 electric wires can be installed to exclude small ruminants that actually prefer fresh, clean water. Goats and sheep can drink 1-3 gallons per day. Since they extract much of the moisture they need from green plants during the growing season, hauling water could be a feasible option with small herds or flocks during most of the year. Water requirements would decrease during the winter. If donkeys are utilized as guard animals, their higher water needs also need to be considered.

When building electric fence, be sure to purchase quality materials. This is especially important when selecting fence chargers. The charger should be a low-impedance energizer that is capable of producing a minimum of 5000 volts. There are several reputable companies that have quality products. Some of the farm supply stores carry high quality products but also carry cheaper supplies that may not be as effective. If in doubt about materials to purchase, visit with persons that have experience with electric fencing or consult an NRCS grazing specialist in your area. Your local cooperative extension person, county NRCS or conservation district personnel can assist you in developing a grazing program using electric fence.

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