

TYPES OF FENCING FOR GOATS

Steve Hart

*E (Kika) de la Garza Institute for Goat Research
Langston University
Langston, Oklahoma 73050*

Introduction

Anyone that has goats knows that fencing them in is one of the greatest challenges of having goats. A Texas adage says that if you can see through it or blow smoke through it, it won't hold a goat. However, it is possible to keep goats in your pasture without spending a mint on your fencing. This article describes several different types of fencing that have been used to keep goats in successfully and the cost for materials. This article also covers several methods of converting 5-strand barbed wire fence to a goat fence and several types of electric fence that have been used with goats. One area of difficulty is fencing water crossings. Considerable attention must be given to this because goats unlike cattle are very good at finding gaps in the fence to escape. Most of the fence types that hold goats will also hold the debris in water and therefore will have to be a tear-away type of structure for one end to give away when debris accumulates on them, but they will have to be repaired before the water goes down enough to allow the goats to escape. Generally goats will not walk through water or get their feet wet.

One last thing to mention is that in a few cases names of particular brands of fencing materials may be mentioned. This does not imply an endorsement by the Institute of this product or that other brands might not be equally suitable.

1. Goat Net Wire Fence

Goat net wire is a net wire fence (Sheep and Goat Wire designated 10-47-10-121/2) that is topped with a strand of barbed wire. It can be put on steel or wood posts. It has been fastened to existing 5-strand barbed wire with hog rings, but if the barbed wire is rusty, it will hasten the rusting process of the net wire. The barbed wire on top is necessary to keep cows and horses from putting their heads over the fence and stretching the net wire down low enough for goats to escape. People crossing the fence will also stretch the net wire. The shorter version of sheep and goat net wire can be used (8-35-12 sheep and goat wire) can also be used in this way, but requires being topped by several strands of barbed wire. Do not use conventional field fence(8-35-6) because goats will become caught by the horns and starve or be eaten by predators. If you have this type of fence already, the only solutions are to replace it, cut every other vertical wire, or to put one strand of electric fence in front of it.

This type of fence is a very secure fence for goats, although very young small kids can escape through the holes, but they will remain close to their mothers.. It is somewhat expensive. Post spacing can range from 10-25' depending on terrain and animal pressure. The cost for 1/4 mile of this fence with one set of corners and two line braces and the list of materials needed is as follows:

4 rolls of 10-47-12 sheep and goat wire	@ \$68 each	\$272.
1 roll of 4 pt barbed wire	@ 35	35
105 T-posts, 7 ft long (12-ft spacing)	@ 2.83 each	297
2 line braces (wood posts and brace)	@ 28 each	56
1 corner brace	@ 43	43

Total cost of materials 703

2. Barbed Wire - 10-12 strand

This fence is a very secure fence that keeps goats in and is difficult for humans to cross. This tends to be one of the more predator-resistant types of fence. It is composed of a number of strands of barbed wire that are closely spaced with wire stays every 4-5 ft to hold the wires in alignment. The wires are spaced 3-3.5 inches apart at the bottom and increased to 4, 5, and 6 inches between the wires towards the top of the fence. Post spacing can be 10-15 ft. Since there are so many strands of barbed wire under tension, careful attention must be given to having a stout set of braces to hold the tension of wire. The cost for 1/4 mile of this fence with one set of corners and two line braces and the list of materials needed is as follows:

12 rolls of barbed wire	@ \$24.00 each	\$288
105 T-posts, 6 ft long (12-ft spacing)	@ 2.83 each	297
2 line braces posts and horizontal	@ 28 each	56
1 corner brace	@ 43	43

Total cost of materials 684

3. Converting 5-Strand Barbed Wire Fence with Addition of 4 Strands of Barbed Wire

This is a fairly economical way to convert 5-strand barbed wire to be goat proof, but also requires considerable labor. Two strands are added to the gap between the lowest strand and the ground and 1 additional strand of barbed wire between the lowest and second strand of barbed wire and 1 additional strand of barbed wire between the second and third strand of the existing fence. Wire stays must be added every 3-5 ft. The cost for modifying 1/4 mile of this fence and the list of materials needed is as follows:

4 rolls of barbed wire, 'Gaucho'	@ \$24 each	\$96
7 lb of staples	@ 1.50 each	8
200 wire stays	@ 0.35 each	70

Total cost of materials 174

4. **Converting 5-Strand Barbed Wire fence by Addition of 8-35 Net Wire Fence**

In this fence conversion, the lowest strand of barbed wire is moved to ground level, the next two strands are moved to between the top wires, and net wire is used to fill the gap in between. Considerable labor is also involved in this conversion of fence, but it is a relatively secure type of fence. The cost for modifying 1/4 mile of this fence is as follows:

4 rolls of 8-35-12 sheep and goat wire	@\$56 each	\$224
10 lb of staples	@ 1.50 each	15
<i>Total cost of materials</i>		227

5. **Converting 5-Strand Barbed Wire Fence with Addition of 1 or 2 Strands of Electric Fence**

This is the cheapest and fastest method for conversion of 5-strand barbed wire fence enabling goats to be used in areas that would be prohibitively expensive to fence and use for goats otherwise. Although it is the least secure type of fence it gives acceptable levels of animal control. Young kids can escape under it, but will stay close to the doe. Electric fence does not work well for everyone's management style and can be another management problem if you do not have several years of successful use of electric fence behind you. There are three rules for successful electric fence use with goats: 1) construct it properly with quality materials; 2) train animals to electric fence before turning them out; and 3) keep the fence hot (minimum 4,500 volts) by checking it daily. Find someone who has used electric fence successfully for a long time and learn their techniques and the materials they use. Half the problems with electric fence are due to poor quality components and(or) poor construction techniques. When an animal gets his head through the electric fence before getting shocked, most likely, he will go forward and out. Therefore, it is profitable to spend a couple of days training animals in a trap or pen lined with a similar type of electric fence to what you are using. Aluminum soft drink cans can be crushed and put on the wire to attract animals to the wire. Bales of hay or feed in a trough can be used to attract animals into the fence. It only takes a couple of days to train goats. To keep fence hot, you need to put a voltmeter on the fence every day. There are some new sophisticated electric fence voltmeters which not only tell the voltage, but will tell whether the short is to the left or right of the voltmeter. When the voltage is low, get it fixed before the goats find out. Falling limbs can also short an electric fence. Vegetation can also be a problem on the fence and can be sprayed with herbicide or clipped with a weedeater. Roundup can be sprayed from a 4-wheeler to cover a lot of area fast. Also, it does not take long to discover that a high quality fence charger is worthwhile investment. Expect to pay \$100-600 for a quality fence charger. Never underestimate the importance of a good ground. Follow the manufacturers directions on grounding to avoid grounding problems. Generally plug-in type fence chargers are cheaper for the amount of power and are more reliable than solar powered chargers. However, in remote areas, solar powered chargers are a necessity.

One strand of electric fence can be added to a barbed wire fence in many ways. It should be 14-16" high and have posts and insulators every 30-35 ft. It must stand out from the existing fence at least 5-6 inches or more to keep the electric fence wire from becoming entangled in the barbed wire. Many

of the stand-off insulators fitting on T posts are 5 inches long. If two strands of electric wire are to be used, they should be 8" and 18" high. This will help with predator control and is more secure than one strand of electric fence. Although, a common recommendation is to place the lowest line of electric fence wire between the ground and the first strand of barbed wire, and the second line between the first and second barbed wire strands. Quality stand-off insulators which fit on existing posts can be used. Stand-off insulators allow the fence to be weed-eated under easier. Some stand-off insulators are poor quality and subject to breakage. Good quality standoff insulators are often more expensive than using short posts. Other materials than can be used for posts include temporary step-in posts, homemade posts from 1" PVC electric conduit (stabilized against the sun), fiberglass sucker rod, or 2" × 6.5 ft posts cut in half (3 ft) and fitted with an insulator. The cost for converting 1/4 mile of fence is as follows:

1/3 roll of 12 gauge high tensile wire	\$55/roll	\$19
PVC posts 45 posts	0.80 each	36
Wire clips, pk of 50	3.40	3.40
1/4 of a shocker and ground rod	300	75
<i>Total cost of materials for 1-strand electric fence</i>		<i>133</i>
<i>Total cost of materials for 2-strand electric fence</i>		<i>153</i>

Don't forget a quality electric fence charger, ground rod, lightning arrester, voltmeter, gate handles, and underground wire.

6. Temporary Electric Fence

Four-strand temporary electric fence on step-in posts with three strands of Maxishock (small galvanized cable from Premier) topped with Intelli-Rope, a rope that has wire conductors, gives visibility to deer to keeps them from tearing the electric fence down. This type of fence works well on keeping goats in and provides some protection from predators. Four wires spaced 8 inches apart has worked well for us. Corners and ends can be landscape timbers. The cost for 1/4 mile of this fence with one set of corners is as follows:

45 step in posts	@ \$2.05 each	\$92
Three strands Maxishock	@ 70 each	210
One strand Intelli-Rope	@ 62	62
One landscape timber	@ 2.60 each	3
Corner insulators (4)	@ 0.60 each	2
<i>Total cost of materials</i>		<i>369</i>

7. Permanent Electric Fence

Permanent electric fence is easy to put up and not under as much tension as a barbed wire fence.

It provides a significant degree of predator control. Five strands, placed 6,13, 21, 31, and 43 inches from the ground, work well for goats. Sucker rod posts (\$5.15) and fiberglass T posts are expensive (\$5.60); steel T posts with pinlock insulators (\$3.50) and wood posts (2") with quality insulators (\$2.60) are less expensive. A problem in the use of steel posts with insulators for electric fence is that when the wire gets knocked off of the insulator, the wire may contact the steel T post, causing a direct short to ground.

The cost for 1/4 mile of this fence (5-strand electric fence with sucker rod posts every 30') is as follows:

Sucker rod posts 45	@\$5.15 each	\$232
Wire 1 2/3 roll	55 each	91
Wire ties, 5 pk of 52	3.40 each	17
Landscape timber posts for corners, 3	2.60 each	8
1/4 of electric fence charger and grounding	300	75

Total cost of materials for 1/4 mile 423

8. Gallagher Electric Fence

This fence uses Insultimber posts made from Acacia wood (very hard wood) at 90' spacings with 2 wooden battens in between the posts and 5 strands of high tensile wire.

Posts, 13	@ \$4.00 each	\$52
Wire, 1 2/3 roll	55	91
Battens, 26	2.80 each	73
Wire clips, 5 pk of 50	3.40 each	17

Total cost of materials for 1/4 mile 233

9. Least-Cost Electric Fence - 4 Strands, 2"-Post Every 90', with 2 Fiberglass Battens Between

Wood posts, 13	@ \$2.60 each	\$34
Fiberglass battens, 26	1.20 each	31
High tensile wire, 1.25 rolls	55	70
Landscape timbers, 1.5	2.60	4
Fence clips, 2 pk of 50	3.40	7
Shocker used on 4 miles of fence	400	25

Total cost of materials for 1/4 mile 171

Summary

There are many fencing options and such a diversity of materials. Cost and what is available at the local store are not important factors in determining what components to use in a fence. The labor required to find and replace one poor quality insulator in a fence will cost more than the whole package of high quality insulators. The loss of one quality animal due to poor quality fencing will pay for the difference in cost of quality materials. The fencing garden at Langston is designed to expose you to these options so that you can determine what type of fencing and components are most appropriate for your farm.

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