



# Temporary Fencing for Horse Pasture Efficiency and Environmental Protection

## Equine Water Quality Education Series

Rotational grazing has long been used by livestock producers as a way to use pastureland more efficiently. By dividing large pastures into smaller paddocks, animals make better use of available forage. Additionally, pastures that are not allowed to be grazed down to such an extent that soil erosion can occur protect the environment by preventing sediment loss into adjacent waterways.

Improved pasture use means greater carrying capacity, or stocking rate, for the horse owner. This is important for limited acreage pastures as well as for boarding operations where stocking rates may exceed more than one horse per acre. Rotational grazing also stretches the length of the grazing season, resulting in decreased winter feeding costs.

Temporary electric fencing is often used to divide pastures for rotational grazing. Temporary fencing is also helpful in keeping horses off overgrazed or recently renovated areas until new forages are established. Another advantage of temporary fencing is that it is easy to install and move as needed.

This publication examines the use and safety of temporary fencing, as well as the costs and potential savings of rotational grazing using temporary fencing.

### Safety

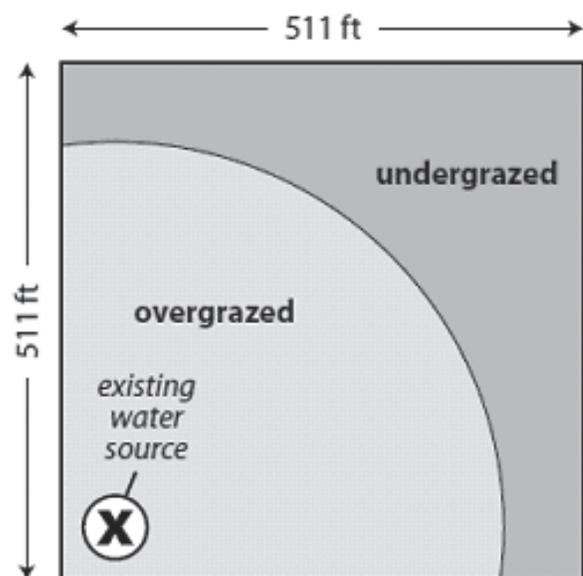
Existing perimeter fence should be strong enough to contain horses sufficiently. Horses should be trained to electric fencing by first putting them in a small fenced area. Using smaller areas decreases the risk of horses running through the fence. The area, however, should not be so small that horses cannot get away from the fence if shocked. *Keep in mind that electric fencing works as a psychological barrier, not a physical one.* Fences must remain charged at all times for the psychology to work.

White polytape is the most visible fencing and therefore the best choice for horses. Choose a polytape that is at least three-fourths inch wide that contains at least five steel strands. Heavyweight plastic step-in posts are sturdy and usually the easiest to use. Metal fence posts are not recommended.

### Paddock Layout

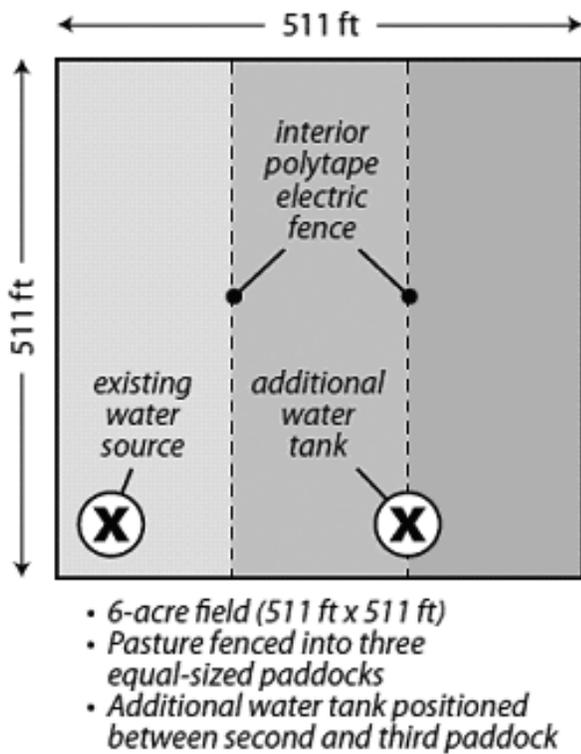
Figure 1 illustrates a sample pasture for this exercise. This pasture is six acres, roughly square, and three horses are permitted to continuously graze here. A water hydrant and tank are located in one corner of the pasture as shown in Figure 1. In this situation, horses are permitted to make their own grazing decisions and will tend to overgraze some areas and undergraze others.

Figure 1. Continuous grazing pasture layout.



- 6-acre field (511 ft x 511 ft)
- No internal fencing
- Horses make grazing decisions

Figure 2. Rotational grazing pasture layout.



To convert this continuously grazed pasture to intensively grazed paddocks, the horse owner would need to determine how to lay out paddocks and invest in internal fencing and a portable watering system. There are many ways to lay out new paddocks. Figure 2 illustrates a possible grazing system using three paddocks. Location of the water source usually dictates the most logical design. For a newly designed system where no water yet exists, a simple solution would be to lay out all three paddocks to intersect somewhere near the center of the field. This would allow use of just one water source.

In situations where existing water systems are present, they are typically located along a perimeter fence, as in the sample layout in Figure 1. If this water source cannot be accessed from other paddocks, water sources must be added. This is most easily done by purchasing a portable watering tank and some heavy-duty water hose. The tank should be positioned so that it can be shared between the other two paddocks.

Dotted lines drawn in Figure 2 show the placement of temporary electric fence. Two to three strands of tape would likely be sufficient. Use of three strands would require roughly 3,066 feet of tape. If a step-in post is placed every 15 feet, the horse owner will also need to purchase about 69 step-in posts. Finally, a portable salt/mineral feeder that can be moved from paddock to paddock with the horses may also be needed.

### Managing Paddocks

The growth rate of forages and stocking rate per paddock will determine when horses should be moved to the next paddock. A good rule of thumb is to make sure that horses do not graze the forage below 3 inches. Paddocks should be monitored closely so that overgrazing does not occur.

During periods of fast forage growth, it may be necessary to mow one or more paddocks. If horses are not grazing forage, it should be mowed before the grass is allowed to produce seed heads. This helps keep forages actively growing and results in better quality.

Temporary fencing also can be used to keep horses off newly seeded paddocks. Allow new seedlings to get about 3 inches tall before letting horses on this pasture. Horses can graze very closely, so care must be taken that they do not overgraze or pull up new seedlings. It may be necessary to move horses after only a short time to prevent new seedling damage.

### Initial Costs

Estimating the cost of this system depends on individual needs and the cost of supplies in different areas. Table 1 outlines cost estimates for this 6-acre pasture example at the time of publication. Total cost of converting this pasture to a three-paddock rotation is estimated to be \$1,067.30. If these costs are spread out over five years, the annual cost for this improvement is \$213.46 (see Table 1).

### Savings and Return on Investment

Horse owners would recoup these costs within a few years by feeding less hay during the winter. Assuming winter hay cost an average of \$4 per bale, this expense could be saved by using a rotational grazing practice that would insure some paddocks are viable all year long and would increase the amount of grazing time available to the horses and reduce hay requirements.

Table 1. Estimated additional cost of setting up a rotational grazing system.

Item purchased	Quantity purchased	Cost per unit	Total expenses
Electric fence charger (low impedance charger)	1 charger	\$150	\$150
Ground rods for charger	3 rods	\$12	\$36
Lightning arrestor	1 arrestor	\$10	\$10
Ground rods for arrestor	3 rods	\$12	\$36
Interior electric polytape (3/4 in minimum, white)	3,066	\$0.05 per foot	\$153.30
Step-in posts (heavyweight plastic)	69 posts	\$3.00 per post	\$207
60-gallon portable watering tank	1 tank	\$150 each	\$150
Heavy-duty water hose	350 feet	\$0.50 per foot	\$175
Portable mineral feeder	1 feeder	\$150	\$150
Total cost			\$1,067.30
Annualized cost over 5 years			\$213.46

Another way to recover investment costs is through boarding capabilities. Pasture leasing and boarding costs vary throughout the state. If one additional horse was boarded on pasture at \$20 per month, this would easily offset the annualized investment of \$213.46.

Needs of individual horse owners will vary, but the concept of rotational grazing will always be the same. By dividing large pastures into smaller paddocks and moving horses from paddock to paddock throughout the grazing season, better pasture use is possible.

Utilizing a larger percentage of available forage means greater carrying capacity and less potential for overgrazing. Greater carrying capacity means that more horses can be grazed per acre, or, as in the preceding scenario, the grazing season can be extended to decrease winter hay needs.

#### Reference

University of Kentucky. ID- 165. *Temporary Fencing for Horse Pastures*. Kenny Burdine, Bob Coleman and Traci Missun.

## **Authors**

**Ron E. Sheffield, Ph.D.**

Assistant Professor, Department of Biological and Agricultural Engineering, LSU AgCenter

**Brian D. LeBlanc, Ph.D.**

Associate Professor, W.A. Callegari Environmental Center, LSU AgCenter and Louisiana Sea Grant

**Vinicius R. Moreira, Ph.D.**

Assistant Professor, Southeast Research Station, LSU AgCenter

**Lacey Urick**

Assistant Extension Agent, Washington Parish, LSU AgCenter

**Carol Franze**

Associate Area Agent, Southeast Region, LSU AgCenter and Louisiana Sea Grant



**[www.lsuagcenter.com](http://www.lsuagcenter.com)**

**Louisiana State University Agricultural Center**

William B. Richardson, Chancellor

**Louisiana Agricultural Experiment Station**

David Boethel, Vice Chancellor and Director

**Louisiana Cooperative Extension Service**

Paul D. Coreil, Vice Chancellor and Director

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