



## Farm Fencing

**Farm fencing is a big expense, both in terms of time and money, but it's one of the most important investments a farmer will make.**

By Carol Ekarius

In this article...Fence Laws and Regulations

Guidelines for Fence Posts

Dealing with Your Existing Fence

A Fact About Electric Fences

Fences Made of Wood

Fences Made of Barbed Wire

Fences Made of Woven Wire

High-Tensile Wire Fencing

Synthetic Fencing

Electric Fencing

Mapping Your Farm Fencing Project

More Fencing ArticlesRepairing a Gate or Fence

Farm fencing is a big expense, both in terms of time and money, but it's one of the most important investments a farmer will make, and it's best made early in the process of setting up your farm.

After all, you've achieved your goal of moving to the country.

But without the right type of fencing for your farm, you could look out the window and see your flock of sheep and their guardian llama heading down the road, your goats enjoying the newly planted fruit trees or your pigs digging in the neighbor's garden. Oops!

In the distant past, natural materials were the only available supplies for farm fencing; then in the late 1800s barbed wire was invented, offering the intrepid farm fence builder an effective means of creating long-standing barriers.

But today, fencing technology has grown more humane and includes a much wider range of materials, from the old standbys like wood, to new, high-tech materials like high-tensile polymer rail and electro-plastic twine.

Stan Potratz, owner of Premier Fence Systems has been instrumental in introducing many of the new farm fencing products to the North American continent.

Fence Laws and Regulations

Every state has laws that regulate ownership and control of livestock.



In some areas where “free-range” laws are still in force, a landowner must fence out the neighbor’s animals, but in most places, it is the livestock owner’s responsibility to control his or her animals with adequate fencing.

Fence laws typically define who is responsible for constructing and maintaining a fence, who has liability when animals get out and cause damage (including when they get on the road and cause an accident), and a description of what constitutes a “legal fence.”

Some local governments also have fence laws, which often prohibit the use of certain types of fence—for example, barbed wire or electric fence are often illegal in towns and subdivisions.

Your County Extension Agent or local animal control officer should be able to provide information on the fence law in your area.

Top

“While attending college in England in the late 1960s, I found a used copy of Andre Voisin’s book, *Grass Productivity*, which outlined the principals of rotational, or intensive, grazing,” he explains.

“The college had an operating farm, and because of my background, I got recruited to work on it, and I began experimenting with the ideas. New materials were showing up in Britain at the time, like low-impedance energizers, step-in posts, electro-plastic wire and high-tensile wire.”

When Stan returned to the family farm in the late 1970s, he wanted to run sheep. He went to the local farm supply stores, but couldn’t find any of the materials he’d been using in England, so he began importing them for his own use.

“My neighbors looked kind of askance. At the time in Iowa, you raised corn and beans, maybe some hogs. But the economy of the late 1970s was good for sheep, and I was running 700 ewes, using these products I’d imported. Other sheep producers became really interested in what I was doing—as did staff from some of the agricultural colleges.”

Stan didn’t intend to start a fencing supply business, but by the early 1980s, he had a viable sideline business.

#### Guidelines for Fence Posts

While the type of post you choose depends on the type of fencing you ultimately select, there are some general guidelines: Posts should be stout with about one third buried.

8 to 12 feet between posts is the usual spacing recommendation.

PVC posts generally require more concrete.

Standard metal “T” posts fit with PVC sleeves reduce impalement risks.

Wood posts should be treated with a preservative before being put in the ground. Peeling the bark is also recommended as it can harbor boring insects and trap moisture, which hastens decay.

TopToday, his accidental business has grown, because, as he explains, “There has been a real increase in the availability and quality of these newer fence products in the last couple of decades, both with the imported products and the domestic ones.”

Top

#### Dealing with Your Existing Fence

If you’ve inherited an old fence, you’re faced with the dilemma of fixing it up or replacing it. Some old fences still have lots of life left in them, and with just a minor amount of repairs can provide years of service. But many are more trouble than they’re worth.

To decide which category your fence falls into, take a stroll. Walk the entire fence slowly and look at its condition.

Are posts rotting and falling over? Push them with all your strength; do they move easily? Are wires rusted to the point that it takes little pressure to break them?

#### A Fact About Electric Fences

Electric fence is effective largely because it offers the same type of reaction that livestock are accustomed to in a herd



environment.

Those who challenge the herd leader receive an immediate, aggressive response. Those who challenge electric boundaries get an instant bite as well, thereby establishing the rules.

Top

If you answer yes to these questions, scrap the existing fence. On the other hand, if the posts are still stout and firm and wires aren't severely rusted, or if there are just one or two spots that are failing, you may be able to just tighten up an existing fence.

Top

#### Fences Made of Wood

Traditionally, wood was the best choice for fencing, often cut and milled right off the farm. But for early fence builders, the heartwood of aged, hardwood trees was readily available, and this heartwood had longevity—often lasting 100 years with little attention.

Today this type of wood is generally unavailable.

The wood at lumberyards is typically softer wood that requires diligent upkeep. In humid climates, a wooden fence has a life expectancy of about 20 years with a regular maintenance schedule including painting or staining every few years. Without dedicated maintenance, a wooden fence will suffer. Pressure-treated lumber will last for about seven years without painting or staining, but carries a higher cost than untreated lumber.

Vinyl-coated wood can dramatically increase a wooden fence's life span. "Solar radiation is what does wood in," says Bill Mullin, owner of Stockton Lumber and Fence. "By cladding pressure-treated wood with vinyl, you get a water-resistant product that is not exposed to solar radiation. You get a great, no-maintenance product."

Although wood is rarely used today for perimeter fencing of large pastures, its strength makes it a good choice for small pastures, handling facilities and paddocks designed to separate bulls or stallions from cows or mares. It also makes affordable riding arenas.

Top

#### Fences Made of Barbed Wire

Barbed wire, developed in 1853 by Texan William H. Meriwether, enabled those settling in the arid West (where wood was scarce) to operate farms and ranches. However, barbed wire is difficult to work with—inevitably tearing up pants, gloves and skin if it has half the chance. It's also dangerous to animals that get caught in it, often resulting in such severe injuries that the animal must be euthanized; this is particularly true for horses.

Barbed wire is, unfortunately, the only "legal fence" in some states (see "Fence Law"), yet it's often illegal under local government codes if you live in a town or a subdivision. If you live in one of the states that limit a legal fence to four-strand barbed wire, and your animals escape from another type of fencing, you lose certain protections that are afforded under the state's fence law.

Top

#### Fences Made of Woven Wire

Sheep, goats, pigs and poultry are difficult to contain. They climb, dig or fly through many fences, so for years woven wire has been the choice for these critters. It's also favored by many horse owners—as horses are less likely to get tangled in woven wire than in barbed wire—and, because of its sturdy character, it's often used for corrals and night-holding pens in areas with predator problems.

A well-made, woven wire fence can last for 20 years with moderate maintenance—unless you live in a high-snow region where the weight of the winter's snow tends to pull it down. Initial construction of a woven wire fence requires heavy-duty wooden posts to support the weight.

Top



### High-Tensile Wire Fencing

High-tensile wire fencing is effective in both smooth and woven wire designs. Unlike traditional galvanized wire, high-tensile wire is extremely strong and has a life expectancy up to 50 years, with minimal maintenance. Initial construction costs can be high, and it requires specialized equipment and skills that the neophyte fence builder might not have, but it is perhaps the most economical and trouble-free fence if amortized out over the life of the fence. It is like the Humvee of fences: durable and heavy-duty.

Top

### Synthetic Fencing

When synthetic fencing hit the market in the 1970s, it had a reputation for failing or looking shabby after a few years in the sun. But the class of synthetic fencing that's been around for the last decade has improved tremendously and now often comes with a lifetime guarantee against discoloration, rusting, peeling, rotting or splintering.

"Synthetic fencing is highly visible, and good-looking," says Debbie Disbrow, owner and president of RAMM Fence Systems Inc. "As animal owner's ourselves, we are always concerned with safety, and products like reinforced and bonded flexible rail are very safe, because the product gives on impact."

There are many types of synthetic fencing. PVC fencing is hollow rails sunk into heavy-duty posts. RAMM Fence suggests using electric in combination with rigid PVC in high-traffic areas, or with aggressive animals. High-tensile polymer rail fences are flexible systems where rails slide through post-mounted brackets. Rail sizes can vary, but are designed to flex upon impact to reduce livestock injury.

Like high-tensile fences, PVC requires a substantial up-front expenditure, specialized tools and skills to install, but with their longevity, their long-term cost is very reasonable. Because of their cost, they are most often used for horses and exotic animals, like llamas, alpacas or emus, in suburban areas, but are rarely seen in remote rural areas.

Top

### Electric Fencing

Electric fencing provides great flexibility and exists with fairly low maintenance if constructed properly. It is also a fairly inexpensive option, regardless of what you need to fence in (or out).

Modern electric fencing relies on an "energizer" (sometimes called the fence charger, or fence controller). The energizer sends short pulses of energy out through the wires. Like a reservoir, an internal capacitor stores electrons until it is full; then, when an animal challenges the fence, the capacitor spills out what it has stored up as a pulse of energy. A short, intense pulse is more effective at getting an animal's attention without injuring it, than a long, less intense pulse.

The energizer is one of the most important components of an electrical fencing system, so plan on spending as much as you can afford to purchase a good "low-impedance" unit. Avoid low-end energizers, as they run a continuous charge, or a long charge, either of which can harm animals or start fires. Always mark your fences with warning signs.

Electric fencing is available for both temporary and permanent use. Temporary is effective for subdividing paddocks so you can improve grazing management, and uses electro-plastic twine, rope or tape, and step-in fence posts made from vinyl, fiberglass or polymers. There's also a woven-mesh version of electro-plastic fencing that works well for poultry, sheep, goats, pigs and for protecting gardens. Temporary electric fencing is also convenient if your existing fence is questionable, but you can't afford to replace it entirely. Consider running a temporary electric fence about two feet inside the existing fence. This will keep animals from pushing on a dubious fence, and it is relatively inexpensive to construct. However, don't attach it to the existing fence, or you'll spend a great deal of time troubleshooting shorts.

Permanent electric fencing uses metal wire and a combination of wooden and metal T-posts with plastic insulators. Some permanent electric fences, such as electric-braided fencing, reduce injury because if an animal runs into it, the fence acts like a "boxing ring"—bouncing the animal back. Permanent electric can provide an adequate perimeter, though if you live in an area where your perimeter needs to be extra secure (adjacent to a highway) you'll do better with a combination of electric with one of the other types of fencing (wood, woven wire, synthetic or high-tensile), because electric fencing can fail at times. Combination fencing also works best in high-stress areas, like runways, stallion paddocks or holding pens.

Even if the energizer never fails, electric fences will fail to give the shock that animals respect if a wire is shorted against a piece of metal, or if the fence is inadequately grounded. Proper construction minimizes both shorts and grounding problems.



Top

#### Mapping Your Farm Fencing Project

Before you start purchasing materials, it helps to map out your fencing project. Draw your farm on grid paper showing roads, buildings, paddocks and significant natural features (like heavy woods, ponds, rock outcroppings, et cetera).

Think about paddock design (a pasture subdivision). Having multiple paddocks to rotate livestock through improves grass management, feed quality and herd health. The more paddocks the better, but ultimately, aim for at least eight. Paddocks can be easily subdivided using temporary electric to start out, though developing permanent paddocks reduces the workload. When designing paddocks, keep in mind that a square requires less fencing material per square foot than an oblong or triangular layout, though at times these shapes may be best to meet other needs, like access to water.

Next think about how many gates you'll need, and where to place them. Gates are best constructed at the onset, and extra gates provide greater flexibility, but they also cost extra money. Plan gate layout for ease of movement, both for animals and equipment that might need to pass through. Man gates should be four-feet wide; equipment gates 12- to 16-feet wide. Show property lines, paddock lines and gates on your map. Take measurements for the lines, and mark them accordingly.

Now with your design mapped out, begin pricing materials and comparing products or contractors.

"If it sounds too good to be true, it probably is," says Debbie Disbrow. "Do your homework: Look for reputable dealers and contractors, and check out warranties. A high-quality, well-made fence costs more to build, but is really the best buy over the long haul."

About the Author: Carol Ekarius and her husband, Ken Woodard, are hobby ranchers in the mountains of Colorado.

Top

This article first appeared in the Summer 2002 issue of Hobby Farms magazine. Pick up a copy at your local newsstand or tack and feed store. [Click Here](#) to subscribe to HF.