



Power fencing for Cattle

Designing the Power Fence

High power electric fencing is the tool farmers prefer for controlled grazing. It is much less expensive and more effective than conventional fencing. There are many different styles of fencing possible. However, over the years, they have evolved into three main types.

1. Permanent fence

A permanent fence is one designed to last 20 to 50 years with little or no maintenance. It can consist of either pressure treated wood posts using high strength permanent insulators or **#76000 Insultimber** self-insulating posts. The wire is 12 V ga. (2.5mm) Class 3 smooth galvanized high tensile **#90102 Power Wire**.

This wire is designed for electric fencing to allow easy knots and strain insulator ties.

Generally, for cattle control, 3 or 4 strands are sufficient for most locations; the fence being 36" to 42" high. The fence should be designed as a all hot fence with every wire powered. Once calves are trained, the bottom wire can be disconnected from the energizer to reduce the energy lost to the grass.

If the stock won't respect the fence in winter or during very dry conditions, alternate wires can be grounded. Do not use a hot-ground fence all the time unless you have a predator problem. Fault finding and fence maintenance are much more difficult and time consuming on a hot-ground fence. Refer to the manual for details.

Internal fences can be 3 or sometimes even 2 strands depending on stocking rates. Typical cost for a 4 strand **#76000 Insultimber** high tensile fence is less than \$0.42 per foot.

2. Portable fence

A portable fence is one that is moved at least once per year. When building a portable fence, it is important to consider the frequency that the fence will be moved so you can plan for future convenience. Steel posts and insulators are an economical solution if the fence is moved infrequently. However, shorts where the electrified wire touches a steel post are more common with this style of fence. **#63705 Multiwire treadins, #64253 Steel Treadin Posts or #64213 Pigtail**

Treadins with **#62354 Turbo Tape** are light and easy to use. **#62304 Polytape** and **#62004 Polywire** are popular in situations requiring stock training and control. For high performance, high conductivity

#62354 Turbo Tape and **#62054 Turbo Wire** are essential. They conduct electricity much better than conventional polywire. The Turbo Wire or Turbo Tape can be easily rolled up on a geared insulated reel for fast moving and compact storage of the fence.

3. Offset brackets on existing fence

Most farms already have conventional fencing. It is very easy and economical to reinforce the existing fencing with one or more strands of high tensile **#90102 Power Wire** attached to the fence with Offset Brackets. The offset brackets can be attached to the existing fence wire (**#65905 Offset Bracket**) or easily driven into the posts (**#66205 Drive In Offset Bracket**). They hold the hot wire 12 inches away from the conventional fence wire, greatly reducing the chance of shorting. For cattle control, usually one wire around the inside of the fence about 30 in. off the ground is sufficient.

A single strand of high tensile 12 V gauge **#90102 Power Wire** has sufficient conductivity to power up to 4700 feet from the energizer. Large distances need more conductivity to prevent the energizer from being 'isolated' from a problem short. The easiest way to improve the conductivity is to add a strand of **#93100 Aluminum XL Power Wire** to the existing offset wire. This allows distances up to 20,000 feet from the energizer.

Energizers

These fences will not work unless there is sufficient power on the fence. Cattle will push through 4 smooth strands if there is not enough shock to keep them back.

Gallagher has a range of energizers with different power output. In eastern Canada, an M400 or B260 can usually handle easily up to 75 acres or so, including cross fencing. For larger jobs, predator fencing or when calf control is important, a larger energizer is recommended. In dry western conditions, energizers usually can power more fence because of the reduced grass load.

The Gallagher price list has a table with recommended energizer selection. Your circumstances may be different that the average so it is worthwhile talking it over with your local Gallagher dealer or a knowledgeable neighbour.



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