

Energizers for Electric Nettings

Photos by Author

—Ulf Kintzel

A recurring question I receive on my Facebook farm page is the one about the energizer or fence charger I use. In many cases, the questions are triggered by people who think their energizer is not powerful enough. Powering electric nettings with their multiple wires around each of the horizontal strands can potentially be challenging. In this article I will address what kind of energizer I used in the past and now use in the present and will also offer helpful hints on how to make your energizer more efficient.

Let's talk first about ways energizers can be powered. There are three ways: 1. Plug-in units that are powered by electricity from an outlet. 2. Battery-powered units are either powered by a wet cell battery, like a marine or deep cycle battery (as opposed to a car battery), or in some cases by a dry gel battery. 3. Solar-powered units.

Often, any of the above can be converted from one source of energy to another or can be a combination of two. In addition, battery-powered units and those with a solar panel are portable, while plug-in units are stationary. When it comes to cost, plug-in units are the cheapest to

run and solar units the most expensive because the initial cost of solar panels remains very high.

Your starting point when choosing an energizer should be what fencing system you will have and where it will be located. If you have all your grazing around the house or barn, a plug-in unit is the cheapest and easiest option. If your grazing takes place away from home or away from any outlet, you will need a battery-powered unit or one with a solar panel or both.

The next question is what size to buy. Size is defined by how many joules a unit has. The higher the joules, the higher the pain when touching the fence. The higher the joules, the more resistance can be overcome, be it because of a lot of fence or because of weeds and grass touching hot wires. Without a load (meaning the energizer is running but not connected to any fencing), any energizer unit I know will have a somewhat similar number of volts when compared to the next. The question is how many volts can be delivered when you connect a dozen or so nettings to it and how strong is the punching power when the fence is touched by an animal. That is where joules are the best indicator. As a rule of



My battery-powered energizer, which I use when I graze my sheep off the farm. Note how the ground rods are angled and connected.



My remote control/voltmeter/fault finder.

thumb, when exploring energizers, I recommend that you start with two joules energizer units. A smaller size of one joule will very quickly not have enough power to inflict some pain when a sheep touches the fence, let alone an energizer with less than one joule. Without punch, the animals will keep testing the fencing and will eventually push through it. More than two joules means more power will be used, which drains batteries quicker or requires larger solar panels. I found the difference in usage of power between a battery-powered unit with two joules versus a unit with five joules was significant when I had both many years ago.

When I am off the farm and graze at neighboring farms in the fall, I am using a battery-powered unit with two joules. It sufficiently electrifies 16 to 18 rolls of electric nettings, each 50-some yards long, without or with very little weed load. I am a stickler when it comes to weed load. I avoid it at all cost, usually by making a well-defined track with my truck before putting up my nettings so no hot wire touches any green plants. It has the added benefit that the lowest strand is not lifted off the ground and thus reduces the risk of animals trying to get out under the fence or predators trying to come in. Since I do rotational grazing throughout the fall as well, my grazing cell is usually not larger than eight to ten nettings for a flock of 200 or slightly more sheep at that time. I often have the next grazing cell set up right next to it and connect it to the existing cell. That amounts to up to 20 nettings. My two joules unit is doing the job. You could go with a three joules unit as well for a setup similar to mine. However, I don't see a need for a five joules unit, which is usually the next size, which will likely be significantly larger in actual size and will likely drain your battery faster.

My plug-in unit I use at the home farm is a six-joule unit with a remote control/voltmeter/fault finder. This



My plug-in unit, operating at half power.

unit powers up to fifty erected electric nettings without any problems. In addition to the electric nettings that I use during grazing season, I have an electrified strand on top of the perimeter woven wire fence, which fences in the entire farm. This hot wire is directly connected to the energizer and allows me to electrify my electric nettings by using a Powerlink, a piece of insulated wire with an alligator clip on each end.

If you decide to buy a unit that is remote control compatible, I strongly recommend buying it with the remote control, which also functions as a voltmeter and a fault finder. My remote control can turn the fence charger off and back on anywhere on the farm. That is incredibly convenient, especially when you are hundreds of yards away from the energizer. At the same time, I can check how many volts are at any given spot on the fence. However, the fault finder has been the biggest advantage of the remote. I recall faults draining away electricity that were so hard to find that I doubt I would have found them without the fault finder. At the very least, I would have spent a lot more time finding the faults. I remember a very thin wire being pulled over my hot strand, probably by a deer that had jumped across the fence, and then touching the woven wire fence, shortening the fence out entirely beyond the spot where it was touching. Only because of my fault finder did I know the proximity of the fault. The wire itself was almost invisible and a light spark at the onset of the night gave away its existence.

When deciding on the size of the unit to buy, you want to consider both ends: too small and too big. If you buy a unit that is just right for the moment, you leave no room for future growth while using this unit. For instance, some people told me their one-joule unit is doing a fine job with their four or five nettings. While that is certainly true, the same unit will not be enough for 12 or 15 nettings, but a two-joule unit will. There

often isn't an actual size difference between the two and the price between a one and a two-joule unit of the same brand is often entirely neglectable. So, consider the potential growth when buying a unit.

What about a unit that is perhaps too big? In my 30-some years of using energizers I got shocked by many different energizers. I can assure you that getting shocked by a six-joule unit is extremely painful and not at all comparable to the far less painful shock of a two-joule unit. A lamb getting stuck in fencing powered by a unit of six joules or more runs the risk of dying in a relatively short time. There is far less of a risk with a fence charger with two joules. Units with 12, 24, or even more joules are even more dangerous. In my view, the only use for units this large is when you run a grazing system of extreme size. This many joules can kill animals and humans. I certainly would be concerned if any fencing powered by a such large unit is exposed to the public.

Let's discuss brands of energizers. Gallagher is a very well-established brand that I used in the past extensively, but it is also a very expensive brand. However, I am confident that you can never go wrong with a Gallagher unit. Speedrite is also a well-known company, producing quality products. Stafix is identical to Speedrite, just that the former units are red while the latter are green. My plug-in unit with remote control is a six-joule Speedrite energizer. Patriot, Kencove, Parmak, and Kube are additional well-established brands. Some nationwide farm stores may have their own brands. However, I don't have any firsthand knowledge of any of these brands.

There is a German manufacturer of energizers called Horizont (which means horizon in English), which produces a line of energizers for Premier One Supplies called IntelliShock and HotShock. I have a battery-powered two-joule IntelliShock unit for when I graze off the farm. It is a small and light unit with very competitive pricing. The design is very basic. For instance, it has no on and off switch. The wiring harness or the battery needs to be disconnected to turn it off, which is easily done. I believe this basic design allows the company to sell it for such a competitive price, and that is why I chose this one over other brands. I am very pleased with the

energizer and still amazed how powerful the two-joule unit is, putting enough "juice" on the fence even when I have close to twenty nettings connected to it.

Where can you get a good energizer? If you are practicing rotational grazing and especially if you are using electric nettings, I recommend buying your energizer either from a reputable company that tests energizers such as Kencove and Premier One Supplies or from a dealer. You may think that buying the unit from a dealer is a more expensive version. I did at first. However, my Speedrite plug-in unit was purchased from a dealer, who offered it for the most competitive price. The additional benefit is that a knowledgeable dealer will be able to advise you what unit is suitable for you and will likely offer repair services.

I'd like to end my suggestions for selecting an energizer with a few words about a different element of the electric fence, the ground rod(s). When an energizer falls short in providing

the anticipated or projected power, the reason for it is often, perhaps even most times, a lack of proper grounding. First, a common mistake is to have too short of a ground rod. Most battery-powered energizers of one to three joules require several feet of ground rods. However, pounding a ground rod four or five feet into the ground and then removing it a day or several days later when the fence is moved is not feasible. I make this suggestion: Use two or three ground rods, pound them spaced out into the ground but only about two feet deep. Do so in an angle rather than vertically to the ground for easy removal, and then connect them with power links. Those ground rods are far more easily removed again. The sum of three ground rods each two feet in the ground and connected to each other equals one ground rod six feet in the ground. Aside from a lack of length of ground rods, dry soils around them can also put a limit on the effectiveness of your energizer. If the charger you use is a stationary plug-in unit, think about your ground rods before you install the unit. I have my plug-in energizer installed at the gate of the barn so that the soil around my three six-foot ground rods always get sample water from the runoff from the roof. If you move your



Connecting my electric netting with a Powerlink to my hot strand of wire, powered by my plug-in unit.

ground rods a lot for your portable fence and cannot pick and choose spots with moist soils, use this little trick I learned almost 30 years ago from a sheep farmer in the Black Forest. Take a jug or a bucket, drill a tiny hole in it at the bottom, fill it with water, and then set it right next to your ground rod. The water will drain slowly rather than running off and, in the process, moisten the soil around the ground rod. Try all that first before you dismiss your energizer, wanting to buy a new and more powerful one.

Last but not least, practice safety and avoid lawsuits by putting up electric fencing warning signs where the public could possibly touch the fence. Don't rely on common sense when it comes to people knowing that the fence is hot. One thing can be said for sure about common sense: it isn't all that common. 🐄

Ulf owns and operates White Clover Sheep Farm and breeds and raises grass-fed White Dorper sheep and Kiko goats without any grain feeding and offers breeding stock suitable for grazing. He is a native of Germany and lives in the U.S. since 1995. He farms in the Finger Lakes area in upstate New York. His website address is www.whitecloversheepfarm.com. He can be reached by e-mail at ulf@whitecloversheepfarm.com or by phone during "calling hour" specified on his answering machine at 585-554-3313.

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