

High Tensile Fencing

Patricia F. Lee—Lee Buffalo Farm

One of our on going controversies among bison producers is the fencing system best for bison. As I am an advocate of high tensile fencing, I was appointed to write this section.

I will start by saying I have used woven wire cattle fence with two bars on top. That fence did not hold even a two-year old bull. I stood at the window one morning and watched my two-year old bull (that had been raised with cattle) jump the standard cattle fence from a standstill and go over into the cattle pasture!!! I then fortified the cattle fence with the "old type of electric wire". That helped but the electric fence kept shorting out. My herd was still young at the time and thank goodness I didn't have my six and seven year old bulls!

Finally, on the new farm, I switched to the electrified high tensile type fencing with the new types of electric fence "energizers" (charger). This article is not a building guide, so I will only briefly mention that high tensile wire fences have smooth, 11 to 14 1/2 gauge wire with a tensile strength of up to 200,000 psi and a breaking strength of up to 1,800 pounds. Quoting from the "Midwest Plan Service: Structures and Environment Handbook, Eleventh Edition 1983" (a composite book by engineers

of many midwest universities), "A ten-strand, high-tensile fence lasts longer and costs about two-thirds as much as an equivalent woven wire fence. The wire is also easier to handle, reduces damage to livestock and hides, has less sag, and requires little maintenance." For further technical information contact the Extension Agricultural Engineer at any of the following universities: Illinois at Urbana, IL; Purdue at West Lafayette, IN; Iowa State at Ames, IA; Kansas State at Manhattan, KS; Michigan State at East Lansing, MI; Minnesota at St. Paul, MN; Missouri at Columbia, MO; Nebraska at Lincoln, NE; North Dakota State at Fargo, ND; Ohio State at Columbus, OH; South Dakota State at Brookings, SD; Wisconsin at Madison, WI; or USDA.

The new type of "energizers" are what are termed "high amperage, high voltage" and must meet the requirements of Underwriters Laboratories, Inc. (UL) 69 permit!!!! This new energizer greatly increases the amperage and voltage on the fence line for very brief periods. This allows control of stubborn animals yet provides an adequate margin of safety during the "off" period to allow humans and animals to free themselves from the electrified wire. I repeat again *buy only a UL (underwriters lab) approved energizer!!!!* In my experience, the "old types" of electric fence chargers will not work on bison. The charge is not enough and the release periods are not long enough. I have had a buffalo, not yet conditioned to electric fencing get her head caught in the fence and go down convulsing because there was not enough time between pulses to back up. If you are going to use this type of system, buy an energizer (get rid of your old chargers) and buy a backup energizer. My mistake was having an old charger for a backup.

Building a high tensile fence is not the scope of this article. There are many publications dealing specifically with all angles of this and can usually be purchased at the same place you buy fencing materials. The above mentioned handbook has a chapter

on this type of fence. I am only going to relate to you the situations where high tensile fence works for bison as well as the types of situations that are not consistent with this type of fence.

GOOD POINTS OF USING ELECTRIFIED HIGH TENSILE FENCING FOR BISON

- 1. Lower cost, low maintenance, and quick to repair have all be mentioned. They are very important points.
- 2. The electrified high tensile will hold bison even when off under most circumstances. Even large bulls will not go through or fight down this fence under ordinary circumstances. This is especially meaningful in small pastures where the bison come into contact with fence lines all the time. As the bison are "conditioned" by the electricity, they will respect the fence line under most conditions even when off for extended periods of time. If the electricity goes off in a storm, it does not mean that you will find your buffalo have headed south. I always turn off the electricity to my fence all the time I am out at the farm. Then I can walk the fence lines and slip through them when I need to. My bison can thus be viewed up very close and they will not charge the fence even turned off. If I were just standing out in the open without a fence line in between, the dominate ones would tend to push me around but will not try through the fence line.
- 3. Curious visitors and hunters don't climb your fences and get in. However, be sure to mark the fences as electric! They have plastic signs that can be hung on one wire at frequent intervals. Nail signs up at your farm entrance.
- 4. Weeds, snow and other items are of little problem with the new energizers. There is a tester that you can get to check the voltage on the line and it will tell you by a drop if something is wrong with

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the line but it almost never goes down by more than half.

- 5. Mending the fence is simply a matter of a small splice, (you need a special splicing tool and special splices) and then crank on the tension. If for some reason your bison were out and you failed to have a gate in the proper place, you could just cut the wires, let them in and splice it back together. This is very handy for emergencies. If a tree or large limb goes down on the fence the process may not even require a splice. Just cut the log off and crank up the tension or splice it first, as needed. Check the nearest fence posts or spacers, some of those may be damaged if a tree goes down.
- 6. Buying buffalo raised inside of high tensile electric fencing will save you having to condition them. Wild buffalo and buffalo not born and raised with electric fencing will need an experience or two before they know about the fence. You should plan on being around for a while when you introduce

them to the fence. You might miss all sorts of fun experiences. You probably should plan on introducing only a few to the fence at one time so you do not get a whole herd running toward a fence they think they can get through.

- 7. Buffalo don't rub on high tensile electric fence.

LIMITATIONS OF HIGH TENSILE ELECTRIC FENCING FOR BISON

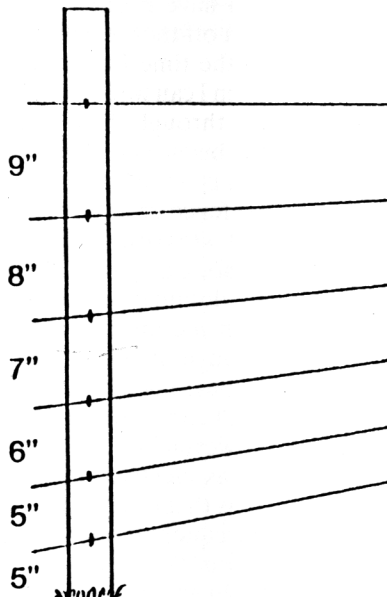
- 1. High tensile fencing even with electricity is not to be used as a crowding fence! It does not take the place of a corral. Bison can and will go through the fence if conditions force them to take the consequences. You can get them so panic stricken that they will go through, over or under the fence. Don't put yourself and them in that situation. This fencing is a pasture fence. Have a corral for working them and for bringing in new livestock.
- 2. Almost any fence you put up is only as good as their feed. You try to starve buffalo and unlike beef

animals, they will find something to eat. Unless they are already too weak, they will go through almost any type of fence to get food or water. Again don't put your bison in that situation and they will be happy to stay put. Food, water, and enough room for the number of animals you have is essential. Buffalo do not need to migrate but they do need enough room to get away from more dominate bison and they should have some room to scuffle and breed in without hitting a fence. This should be common sense.

- 3. Calves and electric fencing can be a problem. First, if you leave the bottom two wires without electricity as I do so they can graze up to and sort of under the fence, then the wilder calves that get separated from the cows may find going through the bottom of the fence is easier than learning to walk down to a gate. Once they get to going through the fence, it takes less thought to doing it in stress

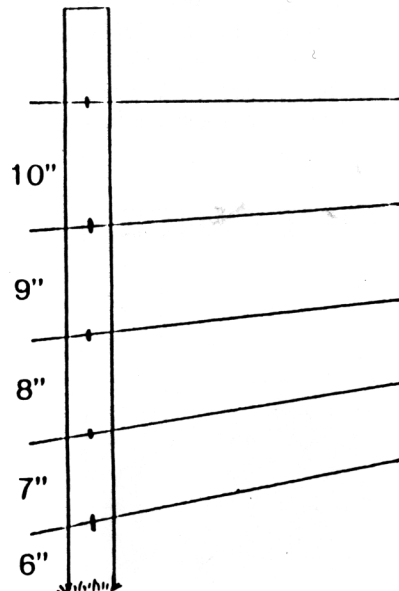
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ELECTRIC



6 Wire

The six wire electric fence can be used to confine both cows with calves and sheep with lambs, especially if dogs or other predators are a problem. Also consider this design for goats. Hot wires from ground up are 1, 2, 4 & 6. Requires a single brace assembly.



5 Wire

The five wire electric fence is ideal for the containment of sheep with lambs. Height to top wire is 40". Hot wires from ground up are wires 1, 3 & 5. This design requires a single brace assembly.

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situations when they get older, even though it is electrified. I have so few that have ever done this, I don't worry about it. As they get older, the ones that have bad habits go to slaughter first.

- 4. Newborn calves have some trouble in small pastures with electric fencing. When they are just born and wobbly, they may fall against the fence and not be able to stand to get away. However, the charge knocks them down and with the bottom two wires off, they will be unharmed. They don't see real well the first few hours and may not see a fence line. If the herd gets excited over a new addition as it often does, they may run the little calf against the fence. Also as a calf tends to curl up along a fence line and stretch out, sometimes it wakes up outside the fence. I have experienced all of these things and so have the cows in the herd. They learn just as quickly as I do. They now have their calves out in the middle of an area away from the fence and I give them larger pastures to calve in. I also turn off my fence from about daylight to dark during the heavier part of calving season just to prevent these problems. I have had no calves out since the first season. If they get out they must get back in so I have had no problems. Cows do like to get away from the herd to have calves and if you have large pastures and woods then you will not be likely to have these problems. It is when you bring them in close and keep them confined to watch on the birthing or have too many in a small lot that the electric fence becomes a problem for newborns.
- 5. I stated before the bulls *usually* don't fight across an electric high tensile fence. There are some limitations to this. A new, older bull that is closely matched to your other herd bulls probably should not be put in an adjacent pasture. They will be highly motivated to see who is dominant and it would be better to let them fight it out then put them side by side. This is especially true if one of the bulls is not conditioned to electric fences. The best solution of all is to buy very young bulls and let them grow

up with the herd. You will have much less serious fighting. Bulls growing up together will scuffle but will not fight like strangers will. Electric fences alone are probably not the best feedlot fences where you are always bringing in new and strange animals together, some of which may be very wild.

FENCE BUILDING TIPS

While I said the scope of this article was not fence building, I have found some types of fence building techniques are better than others for bison. Here are some tips.

- 1. The high tensile fence *perimeter* should have 12 foot corner and brace posts in the ground 50% or 6 feet.
- 2. Perimeter fence lines should have the extra sturdiness of having wooden line posts in the ground at least 4 feet and not use just spacers on the outer most fence lines. I didn't do this and wish I had. The wooden posts should be drilled and put the fence wire through each post. This makes a very sturdy fence even if a tree comes down. The rest is still secure rather than a long stretch coming down. Inner fences can have spacers or dropers if you want.

- 3. If you are going to try to keep different herds with different bulls in separate pastures then those fence lines should also have line posts driven in the ground and not just use droppers or spacers.
- 4. Fences along a road should not have the posts drilled and wires running through them. Instead run the wires toward the inside (pasture side) and staple them. That way if a car comes through the fence, it doesn't take out your posts, it only breaks your wire away. You may even want to have an open space and then another fence line if you are along a highway just to keep the bison in if a car goes off the road.
- 5. Pay close attention to grounding your fence.
- 6. Water ways, gullies, and other trouble spots need plugging up by some means. Don't just run the fence over a washed out area without putting boulders, or other fencing there. That is a good way to teach them to go under fences. They learn all the tricks.
- 7. How much fencing? Enough to do the job. I have less than 5 foot high fences with 7 strands. Three are electrified and three are grounds (every other one). I leave

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the bottom one also a ground. They can graze up to and sort of under the fence. It keeps weeds down. I also use roundup or other weed killer just under and outside the fence lines each spring.

- 8. Neighbors' attitudes and what livestock are around your buffalo herd helps determine how extreme you have to be with your fencing. Also whether you are going to buy domesticated offspring or wild buffalo. All these facts are important.
- 9. One last limitation to electric fencing. It is not easy to just climb over the fence if you need to get out. It is a hard choice to make to force yourself to go through the electricity, fly over the top, roll under the fence or face angry buffalo. That is why the first thing I do when I get to the farm is turn off the fence. I frequently call it my memory improving device. Since the bottom two strands are not electrified, I know I could crawl under if need be. However if someone gets in to your pasture (goes over a gate, etc.) they may be surprised when it comes time to get out. If you have children visitors this may be something to watch. Better to pull the fence plug than have problems. An invitation to visit makes you responsible for visitors. Trespassing, however, is against the law. Trespassers may get hurt no matter what type of fence they violate. Post your property against trespassing.

I relate to you that the *only time* I have arrived at the farm to find the whole herd outside of my perimeter fence was when my son forgot to close a gate by the water tank. They just walked out, were out most of the day, spent the time investigating the barn, tasting each hay bale, carrying straw out and dumping it on the road and eating grass that needed mowing. They stayed on my property and I only wish I hadn't missed all the fun they had.

Strangers might have scattered them but I simply opened a couple of gates and proceeded to bang, yell, etc. and they all came running to see what was going on and I closed the gate. Buffalo psychology! Pretend you don't want them around and they will

be underfoot. Even 73 head, they are still like children.

I *conclude* from all this that a reinforced concrete wall fence about 10 to 12 feet high might just be perfect!! What I am really saying is that short of being a billionaire and building a fortress, you probably can't find "*The Perfect Fence*". It is a dream. I know of no other livestock owner who has a perfect fence. I hope to have informed you enough about high tensile fencing and the limitations it has so that you can decide what is best for your situation. I would not change to any other type of pasture fencing but would drive line posts on perimeter fences.

Trading Post

Buffalo Skulls for sale: Bulls & cows, all sizes. Completely cleaned & ready for hanging. Custom painted Western & Indiana designs also available. Ray Shannon 414-871-9337*

For Sale: Entire herd in Washington State—2 large bulls; 3 cows (2 bred); 2 yearling bulls. Barbara McFarland, Chinook Valley Ranch, 84 High Co. Road, Hermiten, UT 801-254-7377*

For Sale: Cows, bulls & calves. For information call: Frank Howell, 4-J Ranch 503-468-2657*

For Sale: Buffalo Yearlings & 2-year olds. Hassler Buffalo Farm, Emerson, NE 402-695-2356*

For Sale: Yearling calves & 1990 calves. Also USDA Packaged or Bulk meat. Hides, skulls & painted skulls available on advance order. Brown's Buffalo Ranch, 720 Stephens Blvd., Nyssa, OR 97913 (503) 372-5588*

Wanted: Back issues of "*Buffalo!*" especially all of Volumes 4, 5, 6 & 7. Need some issues from volumes 1-12. R.M. Rowell, 4510 Gregg Rd., Madison, WI 53705*

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South Dakota Silver Bison Collection Receives National Attention

The official South Dakota Silver Bison Collection gained national attention recently when it was featured in the *Numismatic News*, a magazine for coin and commemorative collectors.

The set is a collection of three 10 oz. Silver Bison medallions minted in South Dakota from South Dakota Silver. "Only 300 of the sets were created," according to Trevor Guthmiller, marketing director at Hayzlett & Associates, the firm marketing the collection.

The set has medallions representing the years 1987, 1988, and 1989—South Dakota's Centennial year. Each medallion features different artwork of the North American Bison by South Dakota artists.

"Because of the national attention the set has received, we've received inquiries about it from all over the country," Guthmiller said. "We're really proud of the tribute these medallions pay to the buffalo."

"One of the reasons the set is so special is that there were very few of the medallions ever minted," Guthmiller said. "In fact, there were less than 1,000 medallions minted in 1989, and 300 are part of this set," Guthmiller added.

The medallions are mounted in blue suede, and framed in rich, dark walnut under glass in an attractive display that can be mounted on the wall or set on a desk or mantle.

Each set is a reflection of the strength and security of the bison it honors. Many sets are still available. The cost is only \$1,050.00, with the National Buffalo Association (NBA) receiving \$105.00 from each set sold through its advertisement efforts.

Individuals interested in this collector's item can call the NBA at (605) 223-2829 for more information.

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