

UK Forage News

Keeping Forage-Livestock Producers in Kentucky Informed
Dr. Ray Smith and Krista Lea, editors

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This issue of Forage News is sponsored by Growmark/FS Forage Seeds, now available at Southern States.



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Dates for UK Spring Fencing School

Spring fencing schools will be offered on May 11th in Hopkinsville and May 13th in Owensboro. Both events include topics such as Fencing types and costs, Fence construction basics, Electric fencing basics, Innovations in fencing technologies and hands-on fence building. Cost is \$30 to attend and includes supplies, educational materials and lunch. All Covid rules will apply. Register by visiting [http://forages.ca.uky.edu/ events](http://forages.ca.uky.edu/events).

Making an Old Fence Work!

Good fences let you sleep at night! One of the biggest challenges when renting pastureland is marginal perimeter fencing. It is very hard to justify the investment in new fencing if you are on a short-term lease. One option is to install an electrified offset on the interior of the perimeter fence (Figure 1). This works especially well with old woven wire fences. The electrified offset 1) helps to contain livestock, 2) extends the life of the existing fence by keeping animal pressure off of it, and 3) provides a source of electricity for further subdividing pastures with temporary fencing. Lastly, offsets can be easily removed and taken with you if the lease doesn't work out.

Since electric fencing is a psychological barrier (nothing likes to get shocked) it needs to deliver a knee bending, eye watering jolt preferably to the moist nose of the animal. It is imperative that the animal's first experience with electric fencing be a really painful one. For this to occur, offsets need to be installed correctly. If you take your time and install electric fencing correctly, it can be an extremely effective tool to control livestock. If you cut corners and use cheap materials or materials not designed for electric fencing, it can be an extremely frustrating experience. The objective of this article is to provide you with some practical tips for installing offsets that can effectively control livestock and extend the life of an old fence.

Use good quality offsets. Make sure that plastic components in the offsets that you use are UV stabilized. Saving a few pennies now can result in a real headache as plastic components start to breakdown in the sunlight.

Use 170,000 PSI high tensile wire with a Class III galvanization. This wire is corrosion resistant, able to be hand tied, and economical. A good quality high tensile wire will cost about 2.5 cents/ft. One installed, fence should be tensioned just tight enough to take the slack out.

Mount offsets at nose height of the livestock that you are trying to control. The height of the offset is important since your goal is to shock the animal in the face. For cattle this will be around 30 inches off the ground.

Use twist on offsets for woven and barbed wire fences. The offsets consist of two galvanized legs that are twisted onto the existing fence holding the electrified offset approximately 10 inches from the existing fencing. One advantage of these offsets is that they move with the existing fencing reducing the chances of the electrified wire coming in contact with the old fence (Figure 2). They are also easy to install and take off.

Use wood post offsets at beginning and end of runs and on problem posts. I like to use a more rigid wood post offset at the beginning and end of runs. This helps to get the offset wire away from the existing fencing (Figure 3). I also like to use these offsets on problem posts with in the run, like old railroad ties that have the existing fencing wrapped around them (Figure 4).



Figure 1. Electrified offsets can breathe new life into an old fence. They control livestock, extend the life of an existing fence, and allow for further subdivisions using temporary fencing.

Forage Timely Tips: May

- ✓ Start hay harvests for quality forage. Consider making baleage to facilitate timely cutting.
- ✓ Seed warm season grasses for supplemental forage once soil temperature is at 60 F.
- ✓ Clip, graze, or make hay to prevent seedheads.
- ✓ Rotate pastures based on height rather than time.
- ✓ Consider temporary electric fencing to subdivide larger pastures and save areas for hay.
- ✓ Scout pastures for summer annual weeds and control when the weeds are small.

Start and end runs with an end strain or bullnose insulator designed for high tensile fencing. These insulators are designed for the tension exerted by high tensile fencing (Figure 5). They are constructed of either reinforced UV stabilized plastic or porcelain. If the electrified offset is close to the existing fence at the start and end of runs, install the bull nose insulator 4 to 6 ft from the end post.

Use a good quality double insulated cable designed for electric fencing for lead-out, jumping wires or going underneath gates. Never use residential wire for electric fencing. This wire is designed to carry 120 volts NOT 10,000.

Always place underground wires in protective tubing. Whenever a cable carrying current is run under the ground, always place it in some type pipe or conduit that will protect it from future damage. Wires going under gates should be buried to a depth of approximately 6 to 12 inches. If not protected, breaks will occur in these wires and these shorts can be difficult to find and repair. I like to use pvc electrical conduit and secure it to post with a clamp (Figure 6). The larger the conduit, the easier it is to push the double insulated cable through it. I prefer to use ¾ or 1-inch piping in most situations. I also like to drill a hole in an end cap just large enough to slip the wire through and simply push the end cap onto the conduit with NO glue.

Make all connections with clamps. Loose connections result loss of voltage. Connections should NOT be wrapped, but rather clamped together with a high-quality clamp that is designed for high tensile fencing (Figure 7). Never use clamps that are constructed of dissimilar metals. Although economy clamps constructed of cast metal are sometimes available, they often fail upon tightening. Saving a few cents on clamps often leads to exponential headaches in the future.

Use a doughnut or bull nose insulator secured to a wood post to make gentle turns. Gentle turns where the offset wire pulls to the inside of the pasture can be made using a doughnut type or bull nose insulator secured to a stable post (Figure 8). NEVER use wrap around insulators. They almost always fail prematurely resulting in hard to find shorts.

Use heavy duty wood post insulators to make gentle turns. Gentle turns that pull toward to the outside of the pasture can be made by securing one or more heavy duty wood post insulators to a stable post. In cases where the offset wire is too close to the old fencing, a treated 2 x 4" can be secured to the post with deck screws and the insulators can then be screwed to the board (Figure 9).

Use a high-quality energizer. Energizers are the heart of electric fencing systems and are NOT a component that you should try to "save" money on. If electrical service is available, plug in energizers are considerably more powerful and offer the best value in terms of cost to power ratio. For remote areas, solar or battery powered energizers are viable alternatives for smaller acreages. Power comparisons of energizers should be done using "stored energy" which is measured in joules. One accessory that I cannot do without is an energizer that has a remote control that allows you to shut the fence off from anywhere. Once you

have one, you will wonder how you ever got along without it!

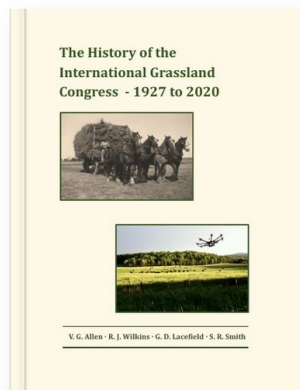
Proper grounding is essential. For an electric fencing to work properly, current from the fence must travel through the animal into the ground and back to the energizer. The grounding system on the energizer works as an "antenna" to collect this current and complete the circuit. Most of the problems associated with low voltage on an electric fence are caused by a poorly constructed grounding system. Grounding systems should have a minimum of 3 galvanized grounding rods, 10 ft apart, 6 ft in the ground, all connected with a single galvanized wire running from the energizer. For very large energizers or very dry conditions more grounding rods may be needed.

The above tips will help you install offsets capable of controlling all classes of livestock. However, for these offsets to work properly they should be kept "hot" at all times and vegetation below them must be controlled. This means that someone, preferably not you, will be manning a string trimmer this summer! ~ Dr. Chris Teutsch. Based on article in Cow Country News. See photos of all offset options online at www.KYForageNews.com.

International Grassland Congress History Book is Now Available to Order or to Download Electronically

In 1927, recognizing the importance of grasslands in food security, a group of 16 scientists, from seven European countries, met in Leipzig, Germany to seek ways to improve grassland agriculture and communication among grassland scientists. Close to 100 years later, their efforts have evolved into the International Grassland Congress, an event attended by about 1000 delegates representing more than 80 countries.

Using first-hand accounts of those who lived through its history, this book traces the origin and development of the International Grassland Congress. It also gives insight on how historical events, organizational changes, and technical advances are affecting the event and grassland science as a whole. However, despite shifting priorities and technology, many basic principles, methods, and objectives emerging from the early research in grassland agriculture remain relevant today.



Written by Vivien Allen, Roger Wilkins, Garry Lacefield, and Ray Smith. Download or purchase at: <https://www.internationalgrasslands.org/publications>.

Upcoming Events (see Forage website for details and to register, click on EVENTS)

May 11 - Fencing school, Hopkinsville, KY
May 13 - Fencing school, Owensboro, KY

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see blue.

Pub of the Month: Baling Forage Crops for Silage

Forage may be stored for winter feeding when pasture production is limited, for use in confinement feeding systems, or for cash hay. Dry hay is the most popular storage method since it stores well for long periods and is better suited to cash sale and shipping than high moisture forages. However, silage may be more suitable in situations where hay curing is difficult. It is possible to make high quality silage or haylage using long (unchopped) forage crops baled with large round balers, although balers may need modification to handle wet material. Download from the UK Forage Extension website under "Publications".

Line up Warm Season Annual Grass Varieties Now

Warm season annual grasses should not be planted until after there is no risk of frost, but seed supplies have been tight in recent years. Therefore, make sure to contact your seed dealer and order your seed now for May plantings. We also began testing warm season annuals for forage quality through Chris Teutsch's lab in Princeton. Special thanks to Chris and his crew for grinding and running these samples through the NIRS. See the tables below for Forage Quality of the warm season annual varieties that we tested last year of Sudangrass, Sorghum-Sudangrass, Pearl Millet, and Teff.

Go to the "Variety Trial" Tab on the Forage Website to download the complete 2020 Annual Grass Report: Warm Season and Cool Season (Cereals). This report contains 3 years of yield information for all these species and for forage sorghum. At the back of this report is a summary table showing how numerous varieties have performed in KY over the last 15 years.

Quality values of sorghum-sudangrass varieties sown May 27, 2020 at Lexington, Kentucky, samples taken at first harvest on July 8, 2020.					
Variety	CP	ADF	aNDF	IVTDMD30	TDN
Xtragraze BMR	12.5	33.0	57.6	74.8	63.4*
NutraKing BMR	12.1	33.4	57.2	75.8	62.9*
Surpass BMR	14.2	33.5	59.4	73.3	62.9*
AS6402 BMR	13.8	33.8	58.7	75.2	62.5*
SP4105 BMR	14.4	33.9	57.7	72.9	62.4*
DannyBoy II BMR	13.3	33.9	59.2	73.4	62.4*
FullGraze II BMR	12.7	34.0	59.5	73.3	62.3*
AS6401 BMR	12.5	34.0	57.8	75.2	62.3*
FullGraze II	11.8	34.5	60.0	71.2	61.8*
DynaGraze II	11.0	34.8	59.5	71.6	61.4
FirstGraze	12.2	34.9	58.8	71.8	61.4
SP7106 BMR	12.6	35.0	59.2	71.8	61.2
SugarGraze II	11.3	35.2	59.4	71.9	60.9
HyGain	11.6	35.3	59.8	71.2	60.9
F75FS13	11.0	35.5	60.8	70.5	60.6
Sordan Headless	11.6	35.5	60.2	70.2	60.6
SuperSweet 10	9.7	35.5	60.5	70.9	60.6
Sordan 79	9.1	36.3	60.9	71.5	59.8
Mean	12.1	34.6	59.2	72.6	61.7
CV,%	11.7	3.5	2.9	3.0	2.2
LSD,0.05	2.0	1.7	2.5	3.1	1.9

Quality values of sudangrass varieties sown May 27, 2020 at Lexington, Kentucky and sampled at first harvest on July 8, 2020.					
Variety	CP	ADF	aNDF	IVTDMD30	TDN
SS130 BMR	11.5	34.6	60.3	67.4	61.6*
AS9302 BMR (brachytic dwarf)	11.4	34.8	60.9	68.3	61.4*
Piper	9.3	36.7	62.7	66.0	59.3*
ProMax BMR	9.3	36.9	61.9	66.8	59.1
Trudan Headless	9.5	38.5	64.3	62.6	57.2
Mean	10.2	36.3	62.0	66.2	59.7
CV,%	13.1	3.8	3.3	2.7	2.6
LSD,0.05	2.1	2.1	3.2	2.8	2.4

Quality values of teff varieties sown May 27, 2020 at Lexington, Kentucky, samples taken at the first harvest on July 17, 2020.

Variety	CP	ADF	aNDF	IVTDMD30	TDN
Commercial Varieties-Available for Farm Use					
Corvallis	12.6	34.7	64.0	65.7	61.5*
VAT1Brown	11.9	35.1	64.2	66.5	61.1*
Tiffany	11.7	35.2	64.9	65.0	61.0*
Velvet	11.7	35.2	64.5	65.4	60.9*
Dessie	11.7	35.3	63.5	65.8	60.9*
SummerDelight	10.6	35.3	65.0	65.1	60.9*
HorseCandi	11.3	35.3	64.8	65.6	60.8*
CW0604	10.9	35.3	65.0	64.6	60.8*
Moxie	11.2	35.6	64.6	65.0	60.5*
Pharaoh	10.7	35.6	66.1	63.9	60.5*
Experimental Varieties					
BARETCT	11.5	35.5	65.0	64.0	60.6*
F11	11.6	35.6	65.1	64.9	60.6*
Mean	11.4	35.3	64.7	65.1	60.8
CV,%	14.4	3.7	2.6	2.4	2.4
LSD,0.05	2.4	1.9	2.4	2.3	2.1

Quality values of pearl millet varieties sown May 27, 2020 at Lexington, Kentucky, samples taken at first harvest on July 17, 2020.

Variety	CP	ADF	aNDF	IVTDMD30	TDN
Commercial Varieties-Available for Farm Use					
SS1562M	10.4	37.7	66.5	68.7	58.2*
Epic	9.9	38.2	67.9	67.5	57.6*
SS635	9.9	38.9	67.2	66.0	56.9*
Pennleaf	9.9	39.0	66.0	68.2	56.7*
Prime360	9.6	39.3	68.5	67.0	56.4*
TifleafIII	8.7	39.8	67.3	65.9	55.8
Wonderleaf	9.7	40.1	68.9	65.9	55.5
Exceed	9.4	40.1	69.5	64.5	55.4
PP102M	8.7	40.3	69.0	65.2	55.2
Leafy22	9.1	40.5	68.4	65.4	55.1
SweetSummer	9.0	40.6	69.7	64.5	54.9
PearlMil	9.6	40.7	68.6	65.2	54.8
MilleX32	7.8	43.2	72.0	59.7	52.1
Experimental Varieties					
LeafyTR7	10.1	39.1	68.2	66.2	56.6*
LeafyTR9	9.8	39.3	68.5	65.4	56.4*
18183	8.2	41.3	69.6	64.2	54.2
Mean	9.4	39.9	68.5	65.6	55.7
CV,%	15.0	3.8	3.0	4.3	3.0
LSD,0.05	2.0	2.1	2.9	4.0	2.4