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Forage News

Keeping Forage-Livestock producers in Kentucky informed

Dr. S. Ray Smith and Krista Lea, MS.~ Editors

December 2017

Don't Trip on Triple-19

There are wrong ways to do right things. Repeated use of products like triple-10 (10-10-10) or triple-19 (19-19-19) on hay fields can ultimately make that field unresponsive to the fertilizer that is applied. Don't get me wrong, fertilizing is a 'right' thing. People that fertilize their pasture and hay fields have a special place in my heart. But here is why triple-19 can trip you up.

The nutrients in a hay crop are 100% removed from the field, unless that hay is fed back in the same field. It takes 18 pounds of P₂O₅ and 50 pounds of K₂O fertilizer to replace the nutrients in one ton of grass hay (Table 1). Using triple-10 or triple-19 alone to replace these nutrients is guaranteed to over-fertilize with P or under supply K.

Soils have very different abilities to supply P and K from the mineral parent material. This fact alone is one of the best reasons for a current soil test from hay fields. Repeated use of 200 or even 300 pounds of triple-19 on

Crop	Approximate lb nutrients per ton of hay		
	N	P ₂ O ₅	K ₂ O
Alfalfa	50	14	55
Red clover-orchardgrass	35	12	53
Tall fescue, orchardgrass, timothy	35	18	50

Source: UK AGR-1. Lime and Nutrient Recommendations.

hay fields will drain the soil of potassium, such that the other fertilizer nutrients are ineffective.

To understand why low K fertility limits other fertilizer benefits, you have to understand what is called the Law of the Minimum, which states that growth only occurs at the rate allowed by the most limiting factor. Think of your field as a barrel and your yield as water. The height of each stave is the level of individual soil nutrients. If your 'K' stave is excessively short, your barrel will not hold much water. Low K means low yield in spite of how tall the P stave is.

Fertilizing with adequate K affects more than yield. Potassium is directly involved in stomatal function. Stomates are the openings in leaves where water exits the plant; low K forages cannot effectively regulate water status in drought. Potassium directly affects

winterhardiness, especially in legumes like alfalfa. Finally, plants with low K status are more prone to disease when stressed.

Don't let triple-19 trip you up. Get a current soil test, especially from hay fields, and apply the needed nutrients. Make a visit to your preferred vendor for fertilizer and tell them what you need. Getting a blended fertilizer that fits your needs may take some extra work on their part, but they can do it. If they can't, maybe it's time to find another vendor. Really. Happy foraging.

~ Dr. Jimmy Henning, modified from Forage Doctor column, The Farmers Pride - Nov.16, 2017

Kentucky Hosting 2018 American Forage and Grassland Council's Annual Conference

In case you haven't heard yet, the 2018 American Forage and Grassland Council (AFGC) Annual Conference will be held in Louisville, January 14-17. The focus of this year's meeting is *Opportunities for the Next Generation*. Keynote presenter is Greg Peterson, Peterson Brothers Farms. Workshops include Clover Management in the 21st Century, Taking the Guesswork out of Horse Pasture Management, Fescue Toxicosis in Grazing Livestock: Impacts and Solutions, Opportunities for Grassland Agriculture: Thinking Outside the Box, Producing Quality Hay in a Humid Environment and new Technology in Grassland Agriculture. Contests include the National Forage Spokesperson, Emerging Scientist, Photo, Hay Judging and the National Forage Bowl. Producer day will be Monday, January 15th with one day registration just \$75. Visit www.afgc.org for more info or to register.

Feature Publication: Appropriate All Weather Surfaces for Livestock—AEN-115

Many livestock producers would say that mud is a natural part of livestock production. But the creation of mud costs producers money and makes them less competitive. Livestock that walk through mud require more feed for energy but actually eat less because walking in mud requires more effort to get to feed and water. Therefore, mud decreases average daily gains.

The benefits of hardened surfaces for livestock operations are that they have the potential to increase production and profitability by decreasing mud. In many cases, the costs of installing all weather surfaces are outweighed by the benefits in production. In addition, these best management practices can add improve



aesthetics and water quality, creating a more successful farming enterprise. This publication gives a step by step guide to building an inexpensive all-weather feed pad or dry lot. Download on the UK Forage website

publication list under grazing.

Alfalfa Training Workshop Feb. 22—Mark Your Calendar

The annual KY Alfalfa and Stored Forage Conference (sponsored by KFGC and UK) will be held Feb. 22, 2018 at the Cave City Convention Center. This year, the conference will be a workshop covering all aspects of Alfalfa Production from Establishment to Exports. Topics include: 1) Fine tuning variety selection, 2) Alfalfa Establishment, 3) Fertilizing for high producing stands, 4) Integrated weed and pest control systems, 5) Keys to harvest high quality alfalfa, 6) Mechanization to optimize efficiency, 7) Economics of new varieties, 8) Emerging export markets, 9) Understanding GMO traits and their impact. Registration will be available at the UK Forage Website soon.

Hay Testing - A Wise Investment

The Kentucky Department of Agriculture has an excellent hay and haylage testing program. The program has been improved and expanded. A toll free call to the Kentucky Department of Agriculture Forage Testing Program will get quick results. A trained individual will come to your farm, take samples of your hay/haylage and get the test results back in a short period of time. The results can be used to accurately, efficiently and economically determine your feeding and supplementation program. The cost is \$10.00 per "lot". A "lot" of hay/haylage is hay/haylage taken from the same harvest, the same field, same type of harvest conditions, and with the same method of storage and same weather conditions during harvest.

The testing program can also aid in marketing hay. When your hay is tested, you can list that hay for sale on the Department of Agriculture's computer hay listing service. There is no additional charge for the listing. If you want to buy hay, call the toll free number (1-800-248-4628) for a list of tested hay for sale in Kentucky.

Determine Land Area/Distance with a Smartphone

How big is that pasture? How long is this fence line? How far is it to the nearest water point? All of these questions and more can be answered using the GeoMeasure app, a free download for both Apple and Android smartphones.

Knowing the area of a pasture or field is very useful information, especially when calculating application rates of a sprayer or determining stocking rate. GeoMeasure allows you to assess area in a multitude of units including square feet and acres. Users

have two options to retrieve the area of a determined space: manual measurement, which entails dropping markers on your device's screen, or measurement by GPS, which simply means the device tracks your movement as you walk the perimeter of the given area. I have found the second option to be more precise because I cannot achieve the same level of accuracy dropping markers with my finger on the phone's screen. Much like Google Maps or the built-in map function on your phone, users can also choose from four map layouts: normal, satellite, hybrid or terrain. ~ Austin Miles, Noble Research Institute



Quote of the Month: "Silage and Hay Take Nutrients Away"

A key to profitable forage-livestock production is to provide adequate nutrients for good forage growth. Fertility requirements for a hay or silage crop are vastly different than for grazed forages, even if the pasture and hay crops are the same species. When forage is harvested mechanically, it is usually taken to the barn, silo, or other storage facility or to a feeding site at another location. Thus, virtually all of the nutrients in the top growth of the forage plants are moved to another location, possibly even away from the farm. In pastures, most of the nutrients in top growth are recycled via dung and urine which, with good management, will mostly be placed back on the pastures to stimulate more forages growth. Purchase Forage-Livestock Quotes and Concepts books for \$5 each by contacting ukforageextension@uky.edu.

Annual Horse Pasture Meeting - Jan. 22nd

University of Kentucky (UK) Ag Equine Programs will host its 11th Annual Pastures Please! pasture management workshop from 5:30 to 8 p.m. on Monday, Jan. 22, 2018, at the Scott County Extension Office. The event is free, and snacks will be provided prior to the event by McCauley's Feeds.

Horse owners, farm owners, and farm managers will have the opportunity to listen to several informative talks from forage extension specialists about reestablishing pastures, weed management, and general pasture maintenance. For more information or to RSVP for the event, contact your local county extension agent.

Upcoming Events

- List of upcoming events at www.uky.edu/Ag/Forage
- JAN 12 – Forages at KCA Lexington, KY
- JAN 15-16 - AFGC Annual Meeting Louisville, KY
- JAN 22 - Equine Pasture Program Georgetown, KY
- FEB 10 – Small Ruminant Grazing Conf. Madisonville, KY
- FEB 22 - Alfalfa and Stored Forage Conf. Cave City, KY
- FEB 26-27 - Heart of America Grazing Conf. Springfield, MO
- MAR 8 - Novel Tall Fescue Workshop, Lexington, KY

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