

# Agriculture

## CENTRAL KANSAS EXTENSION DISTRICT NEWS

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**September 2019**

### Upcoming Events

#### October

- 8 Beef Production & The Working Cow Dog, Williamsburg
- 9 KSU Ag Lenders Conference, Manhattan  
Fall Forestry Field Day, Manhattan
- 31 Kansas Crop Insurance Workshop, Salina

### Examining Wheat Seed

In the KSU Agronomy e-Update from September 13, 2019, Dr. Romulo Lollato presented a map of Kansas recommending planting rates of wheat in seeds per acre. Planting “seeds per acre” is becoming a more common practice, though many producers still plant in “pounds per acre” based on traditional recommendations.

With a jar of wheat collected from this past harvest, I compared how planting by population translates into pounds per acre rates used in traditional recommendations. I gathered up a couple of scales and started counting seeds. It became quickly apparent that the kitchen scale would not measure low enough for me to get a seed weight estimate. The scale I found that worked is a small digital scale used for measuring grains of powder in reloading ammunition. You can buy them for thirty-five dollars at ACE hardware and they will measure fractions of an ounce accurately.

In this search for determining seed size, I learned a few things about my jar of wheat. The seed was quite large, averaging 12,648 seeds per pound uncleaned. There was some variability in the sample as well. Searching through the sample and intentionally pulling out the smaller seeds which measured 21,128 seeds per pound. Those smaller seeds likely would not have made it through a seed cleaner.

Fusarium infected kernels with a pinkish color could be found in the sample an indication of head scab. After seeing some scab in the field it was not surprising to find it in the sample, though the sample had more fusarium than I expected to find.

The planting population map has our district with a recommended population of 1,125,000 seeds per acre. This, divided by my measured 12,648 seeds per pound weight, results in an 89 pounds per acre rate. Had this seed been a more “normal” size, like 15000 seeds per pound, the same population rate would be 75 pounds per acre.

Using the planting by population recommendation, the number of pounds per acre rate can vary wildly depending upon seed size of your wheat. The use of a seed cleaner would have greatly improved the uniformity of seed and I would recommend using fungicide seed treatments, particularly this year with so much fusarium present.

Jay Wisbey, Crop Production Agent

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## Dealing with wet hay: Part 2

So, last month we discussed how much of the alfalfa, brome and even prairie hay harvests were negatively impacted by excessive rain this year. You may also remember that we said one inch of rain can leach 10% of the nutrients out of hay and that rain can also cause another 5-15% loss through leaf shatter.

Tonnage has not seemed to be an issue this year. It appears we have replenished our inventories and then some. What I'm more worried about this fall and winter is quality. Some forages got too mature on us, while others got laid down in some beautiful, soon-after-drenched windrows.

These things being the case, what is it, in terms of quality, that we need to be mindful of? Most cow guys are pretty much concerned with just crude protein (CP), Total Digestible Nutrients (TDN) and, perhaps, Relative Feed Value (which RFV can be discussed on its own). Our stocker and backgrounder operators usually take it a step further and also look at net energy values (Net Energy for Maintenance [NEm] and Net Energy for gain [NEg]) and the macro minerals (Calcium and Phosphorus). In truth, both classes of cattlemen need to be considering all of these every time as these are the basic components that nutritionists need to evaluate a feedstuff or develop a ration.

Our recommendations would be to also include acid detergent fiber (ADF) and neutral detergent fiber (NDF). The amount of NDF in forage reflects the amount of cell wall contents within the sample. The NDF fraction is often associated with the respective "bulkiness" of forage and is correlated with dry matter intake. Therefore, the amount of the ADF number represents the

amount of cellulose and lignin within the forage and is correlated with respective digestibility. In general, the higher the ADF value, the more mature the forage. Additionally, the ADF fraction is used to calculate the energy estimates TDN, NEm and NEg that appear on the report.

If the forage will be fed in combination with a byproduct such as wet distiller's grain, including an analysis for sulfur can be beneficial if the forage will be used in a growing or feedlot ration. Additionally, if the forage is a known nitrate accumulator (i.e. sudangrass) or may have been stressed due to drought, including a nitrate analysis should always be considered, especially if fed to pregnant cows.

Most laboratories have a number of different analysis packages which encompass the most common procedures or numbers that a nutritionist or producer needs to know about their feeds. I highly recommend going with a package versus just a single test such as CP or RFV.

The objective of testing forages is to improve our marketing and/or our ability to meet the animal's nutrient requirements and, ultimately, predict animal performance. Analytical testing in a laboratory is the most practical method we have to evaluate the quality of a feedstuff and, although not perfect, it is unequivocally better than the "this looks like really good stuff" method.

Oh yeah, speaking of looks, what about mold? We'll tackle that next month in the final: Part 3.

Cade Rensink, Livestock Production Agent



## **New / Revised Extension Publications**

SRP1151—2019 Kansas Performance Tests with Winter Wheat Varieties

[www.bookstore.ksre.ksu.edu/pubs/SRP1151.pdf](http://www.bookstore.ksre.ksu.edu/pubs/SRP1151.pdf)

MF991—Wheat Variety Disease and Insect Ratings 2019

[www.bookstore.ksre.ksu.edu/pubs/MF991.pdf](http://www.bookstore.ksre.ksu.edu/pubs/MF991.pdf)

### **Fall Musk thistle control**

Every so often we have “one of those years” when it comes to thistles. 2019 proved to be an exceptionally bad year for this noxious weed and I heard numerous reports of people (myself included) finding them in places they never had before. Needless to say, Musk thistle continues to be a common and widespread noxious weed in the Central Kansas District.

Musk thistle is primarily a biennial or winter annual species. Biennials take two growing seasons to complete their life cycle. Thistles that germinate in the spring will spend the entire summer as a rosette, live through the winter, and bolt the next year in May and June. Winter annual plants will germinate with moisture and warm temperatures in the fall, live through the winter, and bolt the following year.

Most people recognize musk thistle during the early summer when the plants are actively blooming. However, musk thistle is most easily controlled as a rosette.



Fall (October to early November) is an excellent time to spray musk thistle as all are in the rosette stage of growth. Another advantage for treatment in the fall is reduced risk of off-target drift. Waiting until most deciduous trees have lost their leaves and most crops are harvested will greatly reduce the likelihood of damage from herbicide drift. A wider window of opportunity for treating musk thistle also exists in the fall. The spraying window in the fall probably extends until the ground is frozen and the musk thistle plants have shut down activity until warmer temperatures in the spring. Freezing temperatures will start to damage musk thistle plants, with some yellowing and curling of leaves. However, the plants are susceptible to herbicides as long as green tissue exists.

While it's still warm-ish, a fall application of 2,4-D LVE is almost twice as effective than a similar rate of 2,4-D amine and even a tad better yet when a little less 2,4-D is used and shot of dicamba is added to the mix .

While these options don't provide much residual control, there are several others that can be applied this fall and last long enough to kill almost all of the rosettes that germinate next spring. Several newer ones like ForeFront, Milestone, and Chaparral work very well. Two other very effective herbicides are Tordon 22K and Grazon. Others that can also control thistles in pastures include Redeem, Cimarron, and Curtail. No matter which weed killer you use, though, be sure to read and follow label instructions and be sure to spray on time.. If you plan to treat musk thistle this fall, select a warm, sunny day, if possible, when spraying musk thistle in the next couple of months.

Give some thought now to thistle control during October and November. Your pastures can be cleaner next spring.

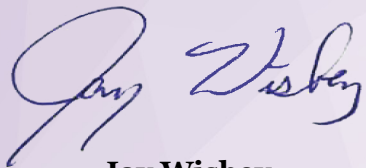
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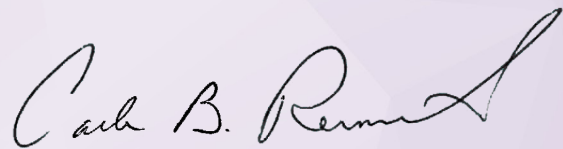
Address Service Requested

The enclosed material is for your information. If we can be of further assistance, feel free to call or drop by the Extension Office.

Sincerely,



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