K-STATE Research and Extension
Meadowlark Extension District
CropConnections
www.meadowlark.ksu.edu

2017 Chemical Weed Control Guide

The new KSU Chemical Weed Control Guide will be available next week at your District Office.

It is available online at:

http://www.bookstore.ksre.ksu.edu/pubs/SRP1132.pdf

Dear Producer:

As someone who encourages research to help make decisions, a 'saying' isn't necessarily what I'd base a lot of decisions on! That said, if it's raining 90 days after this last week's fog (mid-April), I might just look back and pay a little closer attention next time around just to see how accurate that might prove to be!

Monday, January 23rd @ NOON is the last chance for signup for the KSU Soybean School @ Highland that will be held next Friday, January 27th. Details are below. Please RSVP online or by calling a District Office. Hope to see you there!

David G. Hallauer
Meadowlark Extension District Agent,
Crops & Soils/Horticulture

2017 K-State Soybean School

The K-State Soybean Production School will be Friday, January 27th at the Highland Community Building, 501 West Avenue in Highland. Program topics will include weed control strategies; production practices; nutrient management; and insect/disease pressures. Lunch is courtesy of Kansas Soybean Commission and there is no cost to attend. RSVP by January 23rd - by noon! - to a Meadowlark Extension District Office (or dhallaue@ksu.edu). Online registration is available at: K-State Soybean Schools http://bit.ly/KSBEANSchools .

Managing Costs – N Fertilizer

A recent Kansas State University analysis compared farms based on returns over total costs, separating farms in to the high one third, medium one third and low one third categories. What they found gives a picture of our focus if we are trying to manage costs when returns are reduced. One of those areas where differences were noted was in the fertilizer/lime budget line. Those producers in the top one third for returns have fertilizer/lime costs that were just two thirds that of the low one third of producers – an almost $40 difference! How can that be?! Two facets of a 'simple' nitrogen recommendation might help explain how some of those savings can be achieved.

Profile nitrogen samples – 0-24" deep, typically – are not easy to take. Their value, however, can be high! According to observations by KSU Professor Emeritus Dr. Dave Mengel, some profile N samples showed that as much as 60, and maybe even 90 lbs. of N could be supplied from the profile. Have you accounted for that? KSU soil test recommendations assume a 30 lb. profile N credit, but that may still be giving up N that could be used to meet the crop's nitrogen need. Is a 30 lb. per acre N savings worth the time, effort, and cost of a profile N sample? It might be something to consider! There are other factors of a soil test recommendation that a soil sample could provide information on that might save you money as well. Bottom line: a soil test is a great investment!

A second facet of a nitrogen recommendation has to do with Nitrogen Use Efficiency, or NUE. Worldwide, NUE is about 35%. In the U.S., it's about 45%. In Kansas, we assume 50% for recommendations, and routinely measure NUE ranges of 40-70% in corn. Assuming a 50% NUE on a 130 lb. per acre N recommendation, that's 65 lbs.of N uptake. Drop NUE to 40%, that same N recommendation increases to 163 lbs./acre to get the same 65 lbs. of uptake. Increase NUE to 60% and you drop the N recommendation to 108 lbs.for the same 65 lbs. of uptake. In other words, Nitrogen Use Efficiency is a big deal, and your management thereof can result in economic returns. NUE can be increased in a number of different ways. Essentially, it means applying the right source of nitrogen at the right rate in the right place at the right time (one example below). The key to this 4R concept is to identify your likely loss problem (if one exists) and apply the right tool to fix it.

Similar efficiencies are more difficult to attain for P or K or any of the secondary or micronutrients (do NOT overlook lime!). If nutrient management is a place you were considering making adjustments, now is a great time to research how to fine tune things. Always base changes on sound nutrient management principles. To request KSU research on those principles, drop me a line at dhallaue@ksu.edu or by contacting your District Office.

Treatment	Yield, bu/a
No N	120
February urea on surface	159
February ESN on surface	179
Urea V-2	191
Urea V-2+ Agrotain + DCD	201
Urea/ESN blend	201

Weber and Mengel, 2009

KANSAS STATE UNIVERSITY

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