

## Ag Radio Programs for November 27 - December 3, 2017

### Resistance in Weeds Doesn't Go Away

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. Based on some things I've been reading in the popular ag press there are apparently some folks who feel that if they started changing around their herbicides and started using dicamba for pigweed control, and other non glyphosate herbicides, that we would move back to being able to get good control of pigweeds with glyphosate again. Sorry folks, that's not the way genetics work. The glyphosate resistant genes are now so widespread that we aren't going to get them out. Now don't get me wrong, there are still a lot of pigweeds out there that will be controlled with glyphosate, but they seem to be coming less and less of the population. You could eliminate all glyphosate use for 20 years, then bring it back, and you wouldn't be able to control the pigweeds with it. Genes don't have switches that allow them to turn certain genes on and off at will. A plant has a set of genes and if it has genes that give it resistance to glyphosate, and that is the only herbicide you use, for 5 straight years, guess what's going to be around at the end of those five years. Pretty much the offspring of that plant. The herbicide did not cause a mutation of the genes in that plant and not using that herbicide isn't going to cause it to change. We've got glyphosate resistance and we'll continue to have it. It doesn't matter what herbicide technology we bring in. If you focus on only one mode of action you will eventually kill out everything that's susceptible and the only thing left will be those that are resistant. This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.

## More on the Dicamba Dilemma

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. Dicamba is the hot button topic in crop production right now. In the soybean growing states 3.3 millions acres of soybeans were reported as being damaged by dicamba in 2017. Many of us feel that the actual number is 2 to 3 times that. Arkansas is already moving towards limiting when dicamba can be sprayed. And a counter lawsuit has been filed by a herbicide manufacturer. Missouri is seriously considering limiting when applications can be made and it wouldn't surprise me if Kansas and other states are considering it also. Part of the problem, I feel, last year was that the federal dicamba labels didn't really change that much. All the big changes and restrictions were in the supplemental labels that some applicators may not have seen. Part of the problem comes from how sensitive soybeans are to dicamba. Let me put it in perspective. Corn is very sensitive to glyphosate. Corn will start to show visible damage at 1/100 of a normal use rate. Cotton is very sensitive to 2,4-D and will start showing damage at 1/5,000 of a normal use rate. With dicamba and soybeans, visible damage is seen at 1/20,000 of a normal use rate. What we don't know is how much some of these visual symptoms relate to yield loss. Early dicamba exposure is far less damaging than drift exposure at blooming. There are going to be a lot of changes coming in 2018 for using dicamba on row crops. We have a soybean production meeting in mid March that will address many of these new changes. This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.

## Temperature Inversions - You Need to Learn About them

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. I'll bet you've all heard about temperature inversions. If we haven't heard about them, we've witnessed them. That's when the smoke from chimneys gets up to a certain altitude and flattens out. It's when smoke gets pushed to the ground and just hangs low and moves without any real guidance. It's those mornings that the fog is lying low in the valley and doesn't lift up. Those are all caused by temperature inversions. Temperature inversions occur when the air at the surface is cooler than the air at say 30 feet above the soil surface. What really complicates things is when the wind speed drops to 3 mph or less. Slow air speeds cause everything to drop to the ground because the air is cooling. Herbicides that have any volatility, like dicamba, can release vapors and these vapors will meander around and can cause all kinds of damage in unpredictable ways. Some of the changes in the dicamba label state that wind speeds have to be above 3 but not more than 10 mph and this likely will include gusts, not average wind speed. Applications can only be made from sunup to sunset. And you can't spray during a temperature inversion. Buffer distances are also being increased. Folks, there's a lot of things we still have to learn about dicamba and how it acts after it's applied. There's a lot of things being studied right now and the original federal approval only runs through 2018. If we have a repeat of the problems we saw in 2018, this technology is likely dead. Pay close attention to label changes! This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.

## Managing for high yielding wheat

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. I saw a lot more wheat go into the ground this fall and in my opinion that's a good thing. But what are the things that you can do to push your wheat acres to optimal yield levels? Is it seeding rate, fertility, fungicide, insecticide or just what. What research, both research farm and on-farm research has done is to look at different combinations of factors with different types of wheat, older vs newer, and across multiple environments. Researchers looked at 70 pounds of nitrogen put on at or near planting vs adding an additional 40 pounds of topdress in late winter. They looked at no fungicide, 1 fungicide and 2 fungicides where one application went on at early green up and the other at flag leaf emergence. They also looked at what were fertilization rates needed to maximize yield and protein. What they found was that newer varieties were going to benefit from higher nitrogen rates and high yielding varieties with good straw strength but poor disease resistance were going to benefit most from fungicide applications. Well, that's pretty profound. BUT, are you already planning to apply fungicides to your wheat? Are you applying the fertilizer that you need to for the genetics that today's varieties have? Or are you afraid that we might have a drought so you're going to fertilize for mediocrity and become a self fulfilling prophecy? Oh, nitrogen rates for maximized yield occurred before optimal rates for maximized protein. 150 pounds vs 170 pounds. Are you anywhere near that? This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.

## Soybean Seeding Rates

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. I finally feel justified! Well, that probably requires a little explanation! Soybean seeding rates have, over the years, been all over the board. I can remember 35 years ago researchers and producers talking about 200 to 225,000 seeds per acre planting rates. Yet at the same time they were showing that more than 3 plants per foot of row didn't really increase yields all that much. That's a planting rate of about 53,000 plants per acre. In recent years we've had a couple of Extension Specialists that have been working with farm cooperators with on-farm research. This is not small plot research but large field real world research. At the farmer's request they were looking at 15 vs 30 inch rows and seeding rates from 60,000 to 180,000 seeds dropped per acre. On average, the narrow rows garnered an extra 4 bushels per acre. In some settings the yield increases were greater, in some less. But narrow rows didn't cost anyone yield. Narrow rows also help with closing canopy sooner and provide a noticeable edge for weed control. In low to medium yielding scenarios, seeding rates of 70 to 100,000 seeds per acre maximized yields. More seeds per acre did not significantly make a difference. Under high-yielding environments, and this includes irrigation, optimal yields were reached at 120,000 seeds per acre. When we used to plant bin run seed it didn't impact cost very much if we dropped 180,000 seeds. This is a different world today, so save money and adjust your seeding rates! This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.