## Proper wheat planting depth

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. One of the ongoing challenges in wheat production is getting plants started right which comes down to putting the seed into the ground at the right depth to insure quick germination and good root development. When it's dry we may dust wheat in and get it too deep. When it's wet you may never get the darn drill row to close back up. But generally, in most years, if we are planting into tilled ground we do a pretty good job of getting that wheat kernel 1 to 2 inches below the soil surface which is probably just about right. But with more and more wheat being planted in no-till settings we are starting to see increasing numbers of problems with poor seed placement. Here's the problem. Wheat, like most grass crops, develops the majority of its roots along the portion of the stem that is ABOVE the seed. The crown of the plant, which is that area where all the secondary roots, the really important ones, develop, forms on those underground nodes between the seed and the soil surface. The problem in no-till is that with inadequate down pressue, seed may only be placed into residue or barely into the soil leaving no area for the secondary roots to grow. These plants will be at a disadvantage and probably won't develop much, if any, grain as there are inadequate roots to provide moisture and nutrients to the plant. Many times I have gone to look at stand problems only to find that the seed never made it into the ground. So do some testing with your no-till drill before planting! This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.

## Last cutting of alfalfa

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. It's always a challenge, every fall, to try to figure out when to make that last cutting of alfalfa. It's the old conundrum that for the protection of the plant's long term productivity and health that we want to send it into winter with a full tank of gas if you please, or more correctly, the root system full of carbohydrates. Immediately after a cutting of alfalfa, assuming that there is adequate soil moisture, the alfalfa plant starts to regrow. To do this it has to use up root reserves until it can produce enough leaf area to produce food for growth as well as to replace root reserves. If there is adequate soil moisture for the two weeks after cutting and if the daily average temperature is above 50 degrees, alfalfa will start to regrow. How well it regrows depends on temperature or growing degree days. Once the plant starts to send up new growth, the carbohydrate reserves start to drop. They bottom out from about 125 to 175 accumulated growing degree days and then start to rebound. Generally the plant is back to a full tank of gas between 355 and 400 growing degree days. On an average day this time of year we're going to get 20 to 25 growing degree days. But by a month from now we'll be down to half that. A freezing temperature of 25 degrees pretty well puts alfalfa into dormancy. If you were to cut today and we have a frost on our average first fall frost date you'd probably be okay. If you cut today and we had an early frost in 10 days, it would probably hurt the stand. Bottom line in my opinion, is cut the alfalfa ASAP, or hold off and wait until about the 21<sup>st</sup> of October and cut regardless. This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.

## New herbicide resistant crops under development

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. It's always fun to check in with the researchers from time to time to see what new developments are coming down the pipeline. Today's pipeline topic is new herbicide resistant crops. Keep in mind that the earliest we might see any of these new developments is 2015 but more likely 2016 or beyond. And also keep in mind that development and access to any new herbicide resistant crops comes with it the responsibility to use the technology wisely to reduce how quickly the herbicide resistant weeds start to develop. The first one is going to be called Inzen Z grain sorghum. This technology was actually isolated at K-State when sorghum lines were discovered that had ALS herbicide resistance. Naturally ALS resistant weeds already exist, but ALS resistant sorghum will add another weapon for improved weed control especially grass control! Enlist corn and soybean will bring resistence to 2,4-D and the "fop" grass herbicides. Some new versions of 2,4-D will also be coming out with even less volatility than 2,4-D amine. There may be some additional stacking of traits going on in soybeans so don't be surprised by anything. Finally Xtend soybeans which will have resistance to dicamba. We are close to having 2,4-D and dicamba resistant soybeans, but don't forget which one you have because the traits are not the same. But it does bring some new opportunities to control those glyphosate resistant weeds such as marestail, waterhemp and palmer amaranth. But you still need to work on using preplant or pre-emerge products and treating weeds when they are small! This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.