

### Ammoniating Straw

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. Wheat harvest has been rolling right along and we've also got bromegrass being hayed with what there is of a 2<sup>nd</sup> alfalfa cutting right behind. So many things to talk about right there but let's focus on emergency forage and for today that means talking about ammoniating wheat straw. Thirty or so years ago we figured out that you could take crop residue, cover it with heavy plastic, inject anhydrous ammonia, let it react and often double or triple crude protein and increase digestibility around 20%. Basically bales of wheat straw are stacked up, usually 3 - 2 - 1 pyramid style and about 14 or 15 bales long, covered with 6 to 8 mil plastic that is covered with dirt at the base. You want to put a balloon over the stack and then inject 3% ammonia or 60 pounds per ton of forage. You do this by sticking a pipe attached to an ammonia hose in at the bottom near the center. You want to feed it in carefully using a good regulator. The ammonia will balloon the plastic. Once the ammonia is in, carefully withdraw the pipe or hose and quickly cover that area with dirt. The reaction will take place in a week or less in this kind of weather. Once treated you can leave the hay covered until ready to use. Make sure you open the stack up and let it air out for a few days before you start feeding. One word of caution, only do this with very low quality crop residue. While you can increase the quality of fine stemmed hays, you can wind up with byproducts that may make cattle go kind of crazy when they eat it! This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.

## Emergency Hay

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. When we hit droughts like this it can make livestock producers get creative. I know more than one producer that is NOT double cropping soybeans into their wheat stubble but going in with sudangrass or forage sorghum. All I can say is that if you don't have your seed already, you may be in out of luck! The theory behind this is sound - if we don't get rain, nothing's going to happen. If we do get rain you can get that sorghum up and growing and hopefully get enough rain to get a harvestable size forage plant. But that brings up the next question of what other kinds of emergency forages can we utilize. Well, if you can't find sorghum or sudangrass seed, consider pearl millet. Millet can be just as productive in dry conditions as sorghum, maybe more so. Production practices are similar as well. I have a few producers who are looking at haying some of their corn prior to silking. While this may sound odd, it isn't really. Whole plant corn with no grain can be just like any other grass plant and likely be in that 7 to 10% crude protein range. A lot of the protein value will be in leaves though so like everything else, you want to swath and crimp it before it does dead brown dry. Getting it dried down may be a challenge but fortunately, given the size of it right now, that stalk isn't overly large or hard. There may be nitrate issues, we'll talk about that tomorrow. And then there's also consideration of haying soybeans. But we are weeks away from that and I hope we don't get there! This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.

## Nitrates

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. Nitrogen is found in every green growing plant. It is a crucial nutrient that is used in so many different plant compounds. Under normal growth conditions we will find nitrogen in many forms in the plant. Unfortunately, under drought and heat stress we can find a buildup of free nitrates. These free nitrates will be quickly converted into something else when the growing conditions are better. But we can run into problems if we don't get better conditions and a plant is harvested for emergency forage. While certain plants seem to be notorious for accumulating nitrates it is important to remember that ANY plant can have dangerous levels of nitrates accumulate under stress. If you are thinking about cutting a normal crop for an emergency forage, it might be advisable to get a sample collected and tested prior to spending the time and money to swath and bale it. We can get samples over to the college and get tested for nitrates pretty quickly. While there have been some quick tests used before, I prefer to get a quantitative analysis done so we know exactly what we are working with. There are some basic considerations you need to keep in mind. Leaves are usually lower in nitrates than stalks and nitrates tend to be highest in the lower third of the stalk. Recent rainfall, cloudy weather, even hail, disease or herbicide stress can change nitrate levels. And finally, nitrate levels can be managed. Cattle can adapt to high nitrate levels if given time. But first, we have to know! This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.

## Blue-green algae

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. As the weather has heated up a lot of farm ponds have gone dry or getting lower by the day. One of the problems that can happen as these ponds get lower and hotter is that blue-green algae can build up to potentially toxic levels. Blue-green algae is present in all surface waters. It is actually a bacteria, a blue-green bacteria or a cyanobacteria, not an algae. It is only a problem when the population explodes because as the bacteria die they release a toxin into the water than can be harmful or fatal to just about any creature including people, cattle and dogs. You can often smell it before you see it. It actually looks more like paint sliming around on the water surface. I get a lot of calls about all sorts of things growing in farm ponds that the owner thinks may be blue-green algae. If it is green, long and stringy or in any way looks like a plant, it is not blue-green algae. Blue-green, because it's a bacterial growth will not look anything like moss. Again, it's going to look like some sort of paint or oily slime on the water surface and it may not be blue or green. It can be many different colors. It can be tested for but you want to be very careful when collecting a sample. Humans can become sick just from skin contact with the crazy stuff. You want to carefully collect about a one pint sample, seal it up and then get it into refrigeration. From there, if you get it to the Extension Office I will deliver it to the Vet College at K-State for analysis. For more information about blue-green algae, give me a call! This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.

## Testing Hay

This is Ag Outlook on 1420 KJCK, I'm Chuck Otte, Geary County, K-State Research and Extension Ag & Natural Resources Agent. Even if it starts raining soon, this is not going to be a normal year for hay and forages. I've seen a lot of bromegrass just getting swathed. Quite a bit of this was well past early bloom. It will not be normal quality brome hay. We have a lot of producers considering using forages other than what they traditionally have used. Sudangrass and forage sorghums may be usual fare for some of you, but if we start going with pearl millet because we can't find sudangrass seed, how does that rate. What if you put up corn that's 3 or 4 feet tall and stunted or we wind up haying soybeans. How do you figure feeding rates with these forages? This year, more than any other, we need to be testing all of our harvested forages. We need to test for protein and digestibility. It probably wouldn't be a bad idea to test for calcium and phosphorus as well especially if you may be feeding to cowherd later this year. And this year I would also include a nitrate test on everything except alfalfa. All of this together is going to cost you about thirty bucks - a good investment when you consider the value of one cow! Of course, to be of value you have to provide a good sample. Stop by and borrow one of our forage probes to make things easier. Then don't just sample one bale. Up to 12 bales I'd sample half of them. If you get over 20 bales, and that's of one forage field or harvest, I'd sample one out of 4 or 5 bales. You want an average so you get a good picture of what you're dealing with. This has been Ag Outlook on the Talk of JC, 1420 KJCK, I'm Chuck Otte.