Sulfur Deficiency - Is It Real?

This is Ag Outlook, I'm Chuck Otte, Geary County Extension Agent. Sulfur is a nutrient that is required for proper plant growth. The amounts needed for a crop are less than are needed with NPK but more than the micronutrients. Sulfur and chloride are likely in the 15 to 20 pounds needed per year. Sulfur deficiency is most likely to be seen in our grass crops like wheat and corn, but more and more sulfur deficient soybeans are being found. The problem in my mind is that most of the time, sulfur deficiency to most people is going to look exactly like nitrogen deficiency with yellow spots in fields. Since we've cleaned up our air we have far less sulfur falling in the rain so 60 years of sulfur deposits are now being mined out. Consider annual applications of sulfur on wheat and corn crops and include it in routine profile soil tests. Tissue testing is also a good way to test for deficiencies. I'm Chuck Otte and this has been Ag Outlook.

Fertilizer Selection - Price Isn't Everything

This is Ag Outlook, I'm Chuck Otte, Geary County Extension Agent. While price of fertilizer, in the cents per pound of needed nutrient is still a serious consideration, I think we also need to be considering the needs in each field and how to best deal with it. Anhydrous ammonia is often the cheapest and easiest N source for our corn crop, applying it in the late fall or early spring. But if wet weather has prevented your use of knifing equipment maybe it's time to consider liquid UAN or straight dry urea. If you are going onto soybean residue, in no till, it may not make a difference, but if you have heavy corn or sorghum residue, the fertilizer prills are going to have a better chance of rolling through the residue to the ground bypassing much nitrogen getting tied up on the old residue for short periods of time. So yes, absolutely look at the material cost, but also consider the crop needs and field conditions. I'm Chuck Otte and this has been Ag Outlook.

## Micronutrients - Are They Needed

This is Ag Outlook, I'm Chuck Otte, Geary County Extension Agent. I run into crop producers who are all over the board when it comes to philosophy on micronutrients. Okay, micronutrients are needed by all plants to grow but they are needed in very small quantities hence the name micronutrients. The amounts needed per acre are a few ounces to a few pounds. There are many of them: iron, zinc, manganese, magnesium, copper, boron, even calcium and chloride. Some producers spend a lot of money applying expensive micronutrient fertilizers every year and in all honesty most of them are not needed and routine use of them doesn't show up as improvements in yield or economic return. Short term foliage deficiency symptoms often don't mean there's a problem, just odd growing conditions. Before spending a lot of money on micros, let's do some soil or tissue testing just to find out where we are! I'm Chuck Otte and this has been Ag Outlook.

## Tissue Testing

This is Ag Outlook, I'm Chuck Otte, Geary County Extension Agent. Yesterday I was talking about micronutrients. One way that we can confirm the need for micronutrients is through tissue testing of leaves during the growing season. Two things to keep in mind. First of all, for accurate determination of micronutrient need you have to sample specific leaves of a plant at a specific stage of growth. If a tissue test shows a possible deficiency we will also do a soil test and likely a follow up tissue test. The second thing to be aware of is that tissue testing is a little more expensive than soil testing. If you want just nitrogen, phosphorus and potassium we're talking about ten bucks. If we toss in those micronutrients, and there's about 7 of them we normally will test for, you can add about another \$35 to the bill. Then soil tests too. But if you are curious, and really want to know, it's the way to go. I'm Chuck Otte and this has been Ag Outlook.

## Prepare for Crop Diseases in 2019

This is Ag Outlook, I'm Chuck Otte, Geary County Extension Agent. We all know that no two consecutive crop years are ever the same. But one thing that I can guarantee for 2019 is that we will see more diseases through the growing season. We had wheat leaf rust in the state this fall. With snowfall and wet conditions we are running a pretty good probability, so far anyway, of leaf rust surviving the winter. Just be on the lookout early! But while we didn't have a lot of corn, sorghum and soybean diseases that we treated for this past year, they did pop up in the late summer. Most of these diseases overwinter on residue so they are there and waiting as we begin the 2019 crop year. We saw a lot of root and stalk rots and late season foliar diseases in all crops. There's nothing we can do now. But it's a wakeup call that as we start in to the crop year we will need to be monitoring leaf health, likely early on. I'm Chuck Otte and this has been Ag Outlook.