Cutting Fertilizer Costs??

With current low commodity prices, many farmers are trying to figure out where they can cut inputs and not lose yield. They know that they need to produce high yields to achieve the best economic return, even when crop prices are low. When nutrient inputs are considered, of course you need to start with a soil test.

Nitrogen (N): Basing your N fertilizer rate on a soil test is the first step. If you are in an area which uses the 0-24" soil nitrate test, you are way ahead of the curve. You may want to fine tune your fertilizer guideline by using a tool like the "North Dakota Corn N calculator "for wheat and for corn." If you are in an area that does not use the nitrate test, you may want to use a tool like "N Rate Calculator" which covers corn production in the Midwest.

You may also want to consider split application for crops like corn and wheat. Research has shown that all of the N upfront in wet years will not give you top yields. If you have the ability hold back some N and apply it as a side dress or top dress application early in the growing season, you may be able to reduce losses to denitrification and leaching and achieve higher yields reducing cost per bushel.

Phosphorus: Having the ability to apply P fertilizer in a band close to the seed gives you some flexibility in P fertilizer rates in the short term. If you have medium or high soil test levels of P, you can reduce the broadcast rate and apply most or all of the P fertilizer in a band near the seed for corn and wheat. This is a great option for the short term because the rate you apply in the band will be much less and you can save dollars this year. In the long run you will have to account for the P removed in all crops in the rotation to maintain high yield potential.

Potassium (K): For soil testing medium or high in K you can also reduce the amount of broadcast K fertilizer. Care must be taken to ensure seed safety as high rates of KCl fertilizer banded near the seed can damage the seed and reduce stand.

Sulfur: (S): Sulfur has been the wild card for nutrient management the last several years. If you now have split fields into management zones for soil testing, you have the best information to work with. Zone samples will show you the differences in the soil test levels for sulfur and organic matter and give you an indication of soil texture. Areas of the field with a low S soil test, coarse soil texture and low %OM will need higher rates of S applied. Rates of > 10 lb/a will likely have to be broadcast to ensure seed safety. Sulfur deficiencies have become very common the past few years across the entire region on many soil types. Soil and tissue tests have confirmed the yellowing early in the season has been sulfur in many instances. On fields where you have confirmed an S deficiency, adding a safe rate of sulfate sulfur in your starter is one approach. Another approach for corn production is adding some sulfur to your side dressed liquid nitrogen. For corn production side dressing S has worked very well and is becoming a very common practice in areas that have confirmed sulfur deficiencies from the past few years.