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Tri State Seed Co Newsletter March 2017

Editorial Comments

Just about the time I think Mother Nature may be hinting at some degree of normalcy, we have more weather events that remind us we are not in charge. The recent event of two weeks past dumped .94" of rain on still partially frozen ground, the result is the worst erosion in the central basin I have seen in all my 66 years. That was the setup; here is the message…. Almost all of it was preventable!

The only places spared from the sheeting effect of all that water were the fields that were planted into existing residue, yes, direct seeded. All my life the conventional wisdom has been to summerfallow your ground and seed fall wheat early to optimize your inputs. Conventional wisdom is just that, a generally accepted belief, opinion or prediction about a particular matter. When something like this happens …….**We should be skeptics!** Conventional wisdom is many times not true. It was conventional wisdom that smoking cigarettes does not harm your health. If that is the case then why did most of the people who listened to conventional wisdom die at an early age from lung disease? It was conventional wisdom that Hilary Clinton was a shoe in for the presidency—right! Well, someone forgot to tell all of us deplorables! My point here is simple; we should be flexible enough in our thinking to adjust our farming practices to the changes in the environment. No! I did not say I was a climate change advocate, what I said is when the circumstances change, so should our thinking. You are all familiar with the definition of insanity, correct? Doing the same thing over and over and expecting a different result. The weather has changed, technology has changed, wheat varieties have changed, fertilizers have changed, crop protection has changed and most importantly the political environment surrounding our industry has changed. I am just going to come right out and say it—summerfallow farming as we know it is not sustainable.

When we began this adventure called dryland farming, most of the population was rural. Our representation in the legislature was more balanced. Just the opposite is true now. When we started farming we had three wheat varieties, one source of nitrogen, small equipment and 2-4D. Diesel was $.12 per gallon, fertilizer was $.15, you could hire a good hand for $400/month and the house was free. Wheat was $4.00 per bushel. Life was good. Literally everything in this picture has changed, except the price of wheat. Good bye conventional wisdom.

Today we have wheat varieties that are adapted to shorter season rotations, mature early, are tolerant to Clearfield technology and break dormancy so quickly that it's tough to get the sprayer in the field fast enough. We have stream bar fertilizing. One of our customers last fall actually fertilized 3500 acres of standing wheat in 5 days, including one major breakdown and a frozen sprayer. Really, he put on over 35,000 gallons of 25-0-0-3 in 5 days at 18 miles per hour.

We have drills that cut through residue and place fertilizer, liquid or dry, in exactly the right position to optimize plant nutrition. Cheat grass is no longer an issue. Cereal rye is virtually gone. Erosion is very much controllable. We don't have to fertilize half a year in advance. We can spray only the weeds the sprayer sees, and not all the ground in between. We have futures markets so we can realistically offset risk whether the market is rising or falling. Yes, you can make money when the market falls!!!

The most important change is demographic. People living in the cities have all but lost their connection to the country, and production agriculture. Consequently, we have a very large geopolitical dilemma staring us in the face. We are no longer the majority, haven't been for a while, and the new majority is much less tolerant of erosion, both wind and water. Politically, we can only push mud uphill so long. I want to make sure you understand the gravity of the situation. The election of one person in the state legislature turns the current majority against us and when that happens, it is game over. If we don't adopt at least the appearance of being better stewards of the soil, we are certainly vulnerable to be regulated into more soil friendly measures, legislated into compliance or outright litigated into compliance. The hand writing is on the wall. We are not far away from having to apply for a permit to rodweed. Europe already has to have state approval to fertilize. Please get involved in the discussion and the solution! I would much rather have some help making the transition to more acceptable farming practices in the form of EQUIP, or CSP or cost sharing than not. I would much rather be able to steer this inevitable transition in our favor than lose the battle standing on the sidelines with my hands in my pockets. This is entirely possible because we now have the tools to make it work, and the political wherewithal to win. And if you think you can avoid the future, you are clearly one of the early adopters of conventional wisdom ……. 82% of Oregon wheat acres are direct seeded, 60% of Washington's. Do you think any of them ever made the statement, "It won't work here!"

Some Solutions to Consider

Some of you are no doubt wondering why I spend so much time talking about fertilizer and all these strange forms of fertility. My comments are based on research and experience. NH^3 is very hard on your soil, it reduces soil micro flora, acidifies the soil more

rapidly than other forms, and creates hard pan quickly and efficiently. The research done at Oregon State University, Don Horneck, and Don Wysocky, spanning five years and seven sites in both Oregon and Washington showed that NH^3 applied in a summerfallow system flagged off, as in lost the material, at a rate of 22% on average. They use laser technology and documented the results in a research paper available on line. I don't care if it wasn't bad for the soil; I just want 100% of the benefit of what I buy. How would you like to purchase 100% of your groceries and only take home 78% of them? Both researchers spoke at our annual meeting in Kahlotus a few years ago. When you evaluate the degrading effect it has on your soil over time, maybe it is not so "cheap." I am sure NH^3 has its place, just not on our farm. I hope this clarifies why we are trying our best to steer you in another direction. Right now your wheat needs Nitrate nitrogen, not Urea. We will have a meeting on this soon.

Stream Jetting Fertilizing

We have several tools today to address fertilizer shortfalls. The most viable in our minds is stream jetting. All this involves is changing the nozzles on your sprayer and figuring out your rate. The Stream Jett or Stream Bar nozzles are great because they shoot a stream of fertilizer and you can spray fast and in a 20 MPH wind with minimal concern for product loss or drift. Now is a perfect time to do this as we are expecting more rain soon and the amount of product loss will be minimized. Volatilization of product should be your primary concern and that too can be minimized with additives that stabilize the nitrogen. 25-0-0-3 is one of our favorites as you have ammonium nitrate and get sulfate sulfur in the blend. Both are immediately available to the plant. So, at 2.5 lbs. of N per gallon and .30 lbs. of S per gallon, at a rate of 10 gallon per acre you can put down an honest 25#s of N and 3#s of Sulfur very efficiently. Call us for delivery and pricing. We have already sold dozens of truck loads.

30-6-0-0 S. A. N. (Homogeneous granulated fertilizer)

No, this is not a military code. This product is much underestimated in its utility. 30-6-0-0 is **stabilized ammonium nitrate** with phosphate in a homogenous granule. If you can't stream jet your fertilizer this fall or early spring, then consider broadcasting this new product. The advantage here is the immediate availability of the Nitrate nitrogen, especially in cooler soils. It has less reduction of soil pH than traditional Ammonia or Urea sources of nitrogen. And last—less volatility. Since 30-6-0-0 **contains no Urea**, losses due to ammonia volatility are of minimal concern. This is very cool stuff, and it works like a champ when we need to ramp up our Nitrogen game on nutrient deficient wheat. Think about this soon. Probably needs to be done by air, and quickly.

Sulfur Coated Urea 39-0-0-12

This is controlled release nitrogen and sulfur. SCU increases Nitrogen use efficiency by reducing losses to the environment through leaching, volatility, and denitrification. It is manufactured by coating Urea granules with a thin layer of molten elemental sulfur and a protective wax sealant. SCU provides a slow predictable release of Nitrogen that is released into the soil through the following in the presence of moisture: bio oxidation of the sulfur coating, and diffusion through the somewhat porous coating. A recent Soil Incubation Study* found, a substantial reduction is ammonia volatilization rates compared to both straight Urea and NBPT treated Urea, in all soil temperatures. Average release time on N from SCU: Soil temp 40^{o} F = 60 plus days, Soil temp 60 ^{o}F = 45-60 days, Soil temp 80^{o}F = 30-45 days.

Study conducted July 1st, 2014 at the Hermiston Ag Research Center by Sarah Del Moro and Don Horneck*.**

Rust, Rust, Rust

We saw huge infestations of leaf and stripe rust last fall. The weather was so conducive to this fungus that even my lawn turned yellow with rust. The infection rate is huge. It won't go away by itself. Please consider using the right fungicide with your herbicide early this spring. We have a great stand and the crop will canopy quickly. Use a fungicide with two modes of action, something with a strobularin and a triazole. Headline, Quilt, Twinline, etc., are excellent choices. Remember the Tilt product and other generic propiconazols are curative but don't last as long as the others. Use the longest residual one first and then follow up with the Propiconazole**.** Hopefully HTAP high temperature adult plant resistance will kick in and we won't need a second fungicide. We can make our own fungicide with two modes of action with Azoxystrobin and Tilt much less expensive than the branded products. Same deal, just generic. Really, you can save two or three bucks an acre.

Most of you spray your weeds way too late in the spring for optimum control. I know what you are going to say…. If I wait I will get a few more late emerging thistles. The truth is, the crop is big enough and the weeds are small enough that you may be able to use less herbicide and actually save yourself money and do a better job than you would by waiting. The wheat will canopy and crowd out most of the late comers anyway. If you decide not to top dress with fertilizer, then consider using up to 50% of your total tank mix volume as liquid fertilizer. If you are spraying 10 gallons per acre, then 5 gallons of 25-0-0-3 will give you an additional 12.5#s of N and 1.5#s Sulfur. This will not burn the crop and will certainly help the activity of your herbicide package as well.

Herbicide Resistance is Here, Again!

Sometimes we are our own worst enemies. Many of us had our first experience with herbicide resistance with Glean Herbicide. Continued use of chemicals with the same modes of action is causing resistant weeds sooner than we thought. I won't go into all of the details here… but just remember to change up the chemistry every second year or so. And make sure you kill all of the weeds, not just most of them. That is exactly how resistance occurs. Almost killing a weed is worse than not trying, because it takes a more active ingredient the next time and soon you are not killing any of them. Ian Burke, weed scientist at WSU, said at a recent meeting this can happen in a two year period. Watch for glyphosate resistant Russian Thistles and Jointed Goat grass and Beyond resistant cheat and JGG. Remember, try not to cut your rate…. Just smoke 'em and you will be much better off long-term.

Fusarium Head Blight – Scab

If you are planting wheat after corn, remember to watch for Fusarium Head Blight. The fungus is harbored in the residue of the previous corn crop and manifests itself in the following wheat crop. The causal organism is fusarium graminearum and causes blank heads at harvest time. Consider burying the corn residue deep or just use a preventive spray of Prothioconozol. There are two products that I know of containing this chemistry. Prosaro and Carumba are both labeled for this and work really well. Remember to use this proactively because if you wait to see the disease manifest itself, it is too late and the damage is already done. I typically get two or three calls a year to diagnose this in a field. It usually starts in the middle of the pivot first, where it almost never gets dried out. In severe cases it will cause the wheat to become unusable because of the high levels of mycotoxins. This is very similar to vomitoxin and aflatoxin in corn. The dangerous thing is FHB has now had a race change, and is now able to reproduce as airborne spores, fusarium culmorum. This means the disease can now travel through the air from field to field and is not relegated to infecting only the origin field. This is not good.

Can I Cut My Herbicide Rate?

Many of you already know Tri State Seed Co handles both fertilizer and chemistry products. Primarily these are for our existing customers to help them remain competitive. This marketing effort on our part is pointed directly at the self-serve market, those of you that have made the commitment to roll your own fertilizer and do your own spray work. The most common question we receive is "Can I Cut My Herbicide Rate?"

The short answer is, "Maybe." In some cases you may very well need a higher rate. We think you should consider these factors before making any decisions.

- **Susceptibility.** If you herbicide is great on a particular weed, then your ability to cut the rate is much improved. On the other hand, if you're dealing with a difficult to control weed, you probably need to bump your rate up to the higher end of the label.
- **Weather.** All herbicides perform best when they are actively growing. If you have had temperatures in the 70 and 80 degree range during the last few days, that's great. If you have good soil moisture and good humidity that's even better. Most herbicides perform poorly when the weather is too cold or too hot or when the weather is too wet or too dry.
- **Weed Size.** Most weeds are easiest to kill when they are very small. By that I mean less than one inch tall. The bigger weeds get the higher dose it usually takes to control them.
- **Spray Coverage.** If you are using drift reduction nozzles you are creating bigger droplets. That's great for keeping your product from moving off target, but the downside is reduced spray coverage compared to flat fan nozzles. Many herbicides move well in plants, but if you don't get as much herbicides into the plant as you need to, you will not have a lethal dose to control that weed.
- **More Concentrated Droplets.** This is **not true** for all herbicides**.** But with products like Roundup I actually prefer less water in many cases. When you have the same amount of herbicide in two different tanks, but one has far less water that means that each droplet you spray will now be more concentrated. If you have waxy-leaved plants or very small plants where you can only get a little bit on them before your sprain runs off, the net result of using less water means those concentrated droplets deliver more herbicide into the plant.
- **Spray Adjuvants.** Some spray adjuvants can improve herbicide performance dramatically, but they may burn your crop. For example, MSO (Methylated Seed Oil) helps weed control with many herbicides because it allows the herbicide to better penetrate through waxy leaf cuticles. If you want less leaf burn you may go with NIS (Non Ionic Surfactant) in some situations, but the weed control usually suffers slightly.
- **Tank mix Partners.** Some herbicides have antagonism when mixed together. This is common when combining grass and broadleaf products. For best results using lower rates, spraying separately is generally the way to go.

As you can well surmise, there are a lot of factors that go into this decision. If you are trying to save $1.00 per acre by cutting a rate below the recommended label it is probably not worth the effort. If you are trying to save $10.00 per acre I encourage you to visit

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with a qualified agronomist so you can thoroughly understand why you may want a lower rate. We can get by with lower rates in many cases, but everything is usually perfect, i.e. weather, temperature, coverage, weed size, etc., when we make the decision to go that direction. Saving $5.00 on the herbicide and losing $20.00 on yield doesn't go too far, but if you can save $5.00 an acre and not give up any yield, that's a home run. (2)

Headline Fungicide (BASF) - Alfalfa

The alfalfa market is poised for resurgence. As you know very well, the premium alfalfa almost always sells first. Last year we noticed a lot of first cutting hay was just full of black stem and after the fields were cut, they looked almost brown instead of green. You need to consider fixing that ASAP. BASF has a label for alfalfa at a rate of 6 to 9 oz/ac and it looks good. The target pathogens here are leaf spots and stem blights. The increased plant health benefits and subsequent increased yield and feed values make this a no brainer especially on first cutting which tend to be heavy anyway. Headline is especially effective on spring black stem. I first noticed this in Southern Idaho. This application is clearly correlated to the Columbia Basin because we have even heavier first cutting hay than they do most years. BASF did the testing and the measured yield difference was 15.9% on first cutting. On this field that meant .34 tons/ac. If you assume $220/ton hay, that amounts to $68.00 return for an investment of about $25/ac including application. But wait—the returns just keep coming. Second cutting was 9.4% better than the untreated control and third was 2.4% better than the control and fourth was 4.7% better. The cumulative return on investment was .62 tons/acre in Rupert Idaho over four cuttings. That means an additional $106.26/ac. This application was applied to 4-6 inch alfalfa before first cutting only. Call us and we will send you the pictures.

Thanks for your continued support of our business. Stop in a see us when you are close. You can reach us anytime at the numbers below.

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