...FROM THE DESK OF SCOTT SCHAFFERT P.AG. CCA 4R

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CropMaxx Inc Innovative Ag Solutions

DYNAMIC CROP & SOIL SERVICES

BETWEEN THE ROWS

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How to Deal with Variable Maturity

This growing season has been a text book example of variable maturity in crops. Lack of early moisture, coupled with late abundant rains have resulted in 2 (and sometimes 3) different growth stages present as we try to harvest.

To deal with multiple growth stages we require help. Help can come from mother nature in terms of a frost, mechanical means such as swathing, or application of herbicides.

The end goal is to achieve the highest yield possible, with the lowest level of moisture and immature crop in the bin.

A frost can be beneficial as immature plants not likely to mature are killed off and begin to dry naturally. However frost can come too late and not be followed by warmer, drying weather to dry out the crop. A frost occurring too early on immature crops can also devastate yields and quality. Grain will be shriveled and canola seed will either pepper out the back or lock in green.

Swathing accomplishes the same task, by cutting the crop and placing it into a swath to dry. Swathing has its own risks, Continuous fall rains can prolong the time period it takes for the swath to dry down and be able to go through the combine. Moisture can also promote sprouting and reduce grade especially in cereals. Light rains followed by good drying weather can however enhance the clean out of green seed in canola. The enzyme required to remove the chlorophyll from the seed does require some moisture to activate.

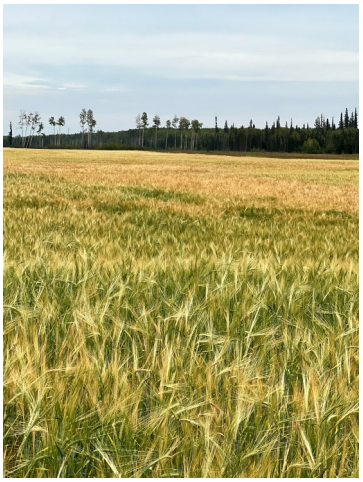
Herbicide application will also accomplish these ends, however different active ingredients achieve it differently but can also have some added benefits.

The only true desiccant registered on the market is diquat, (Reglone Ion and Desica). Diquat quickly penetrates plant leaf and stem surfaces, blows up the photosynthesis process, resulting in fast death and drying of all plants in the field. It will not usually kill perennial weeds that have growing points not contacted by diquat. Harvest can follow as quickly as 3 days.

Glyphosate is NOT a desiccant. Glyphosate will only kill susceptible plants, that then have to dry down naturally. Glyphosate is effective in fall since usually preharvest application is coupled with dry harvest weather. This hastens the process. The other benefit glyphosate gives you is a chance to control perennial weeds for next year. Perennial plants are triggered by the shorter days to begin storing reserves into the roots, and thereby pull the glyphosate there as well. Glyphosate alone will not speed up the actual drying process, it simply kills the plants beginning the natural drying process. In dry harvest conditions, I've seen glyphosate-treated fields ready to combine in a week. In wet, cool conditions it can take several.

The other product we commonly use is saflufenacil (Heat). Heat should always be tank-mixed with glyphosate and they work well in combination by killing annual weeds faster, allowing for quicker dry down, yet not interfering with glyphosate's effectiveness on perennial weeds. Heat can thereby "speed up" the process since it is rapidly absorbed into the plants from the roots and foliage, quickly causing cell membrane damage, allowing moisture to "leak" out the cells causing drying. In dry harvest conditions the crop could be ready in 5 days, but as with glyphosate, it will take longer in cool wet conditions.

The bottom-line is that remember the goal: highest yield, lowest level of moisture and best grade possible.



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Harvest 2023 Update

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Hurry up and wait.

That seems to be the theme to Harvest 2023. As I discussed earlier in how to deal with uneven maturity in crops at harvest time, this variability has delayed harvest this year.

Now first off we were generally spoiled by Harvest 2022. With absolutely no moisture from mid-August until October, our harvest conditions were beyond excellent. This in and of itself has created some problems for this year, but I will discuss that later. Crop matured, dried and were combined almost in the exact order of seeding and everything progressed like clockwork in 2022.

2023 is a whole different beast. The dry fall last year, coupled with the below average snowfall, resulted in very little frost in the ground, so when seeding came plants able to access the sub-soil moisture were able to germinate quickly. However, this is where some fields diverged. On knolls and compacted areas less sub soil moisture was accessible, delaying germination in those areas. Then as the season progressed with spotty and light precipitation, (and smoky conditions) germinated plants progressed slowly with knolls and compacted areas bare.

Then on July 25 we got upwards of 4" of rain, followed by a few more significant rains in August and September. So what happened? Plants struggling through the dry conditions, now (if they were able, most peas were not) took off. Indeterminate plants such as canola actually sent up new flowering branches on a plant that was already maturing.

But where the biggest issue developed was those knolls and compacted areas that did not germinate in June. They suddenly had enough moisture to germinate in August. Now August germination is good if your growing fall rye or winter wheat, but NOT if your growing canola or spring cereals.

In the first 2 weeks of August, I went to Nebraska to visit relatives. When I got back, fields were yellow and green, however it was the canola that was yellow and the barley that was green, not the other way around. Imaging my surprise when bare knolls just 3 weeks prior has nice even rows of 3-leaf canola.

So now we are left to deal with the conditions we are given. We will get through this harvest (I mentioned some strategies in an earlier article) and nobody is complaining about the moisture that came late. It should help next year.

Weed of the Week: Lamb's Quarters

Lamb's quarters

Lamb's Quarters (*Chenopodium album*) is an annual weed often called pigweed. It is common in all continents except Antarctica. Native to Europe and first identified by Linnaeus in 1753, its spread has been linked to widespread cultivation of crops.

Lamb's quarters (Left side of photo below) can grow up to 10 feet, and dare I say I've seen some this fall that would make fine Christmas trees. Mostly however it is usually around 1-2 feet tall. Lamb's quarters can be distinguished from true redroot pigweed (*Amaranthus retroflexus*) (Right side of photo) by the reddish tinge of redroot pigweed seedlings and the presence of small fine hairs. Redroot pigweed also has a dense flower head with short spike-like hairs. Lamb's quarters heads are dense almost ball-like with no hairs.

Lamb's quarters is usually easy to control by use of pre and post emergence herbicides, however in dry conditions, as we saw this spring, the plants tend to get a thick waxy layer that inhibits herbicide uptake. They can also germinate later in the season with later rainfall, again as we saw this year, and can become a problem when the post-emergence crop stage window has passed.

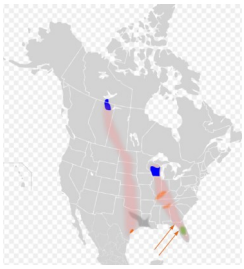
Lamb's quarters is edible, its young leaves eaten raw or cooked and its seeds mixed with conventional grains. It is actually quite high in protein and many vitamins.

Sandhills Crane

One sure sign of fall up here is the sudden presence of migratory birds. Seeing these birds is a highlight of fall field scouting. I'm not an avid bird watcher, but Sandhills Cranes always catch my attention.

I grew up in the Sandhills of Nebraska, from whence the Cranes got their name. The sandhills near the Platte River in Nebraska is an important stop-over on their migrations. I've also had the opportunity once to see the rare Whooping Crane (only an estimated 677 birds in 2020).

So as your doing your combining or fall field work this year, I suggest you take a moment to observe these magnificent birds.



"take a moment to observe these magnificent birds.

Post Harvest Weed Control Options

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You've probably heard the expression "next year starts now", in fact I've probably repeated itself a few times. But there are several times when it is actually true. Post harvest weed control offers producers a rare chance to control both winter annuals and perennial weeds at the same time. Controlling these weeds can provide you a nice head start going into next year's crop.

So why post harvest weed control? There are several advantages to fall application of herbicides. It gives you an ideal time to control perennials such as Canada thistle, quackgrass, and sow thistle. It also gives you the best timing for winter annuals such as narrow leaved hawk's beard. Often winter annuals are very hard to kill before seeding and in-crop timing. You may also get some extremely hard to control weeds such as foxtail barley, if they haven't fully matured yet.

There are several options for post harvest weed control, anywhere from just straight glyphosate to tank mixes with glyphosate to some stand alone products. Many of the options available are products that we can also use in the spring pre-planting.

So how late can you go with post harvest applications? If we we've had a touch of frost can I still spray? Often times the answer is yes. In fact a touch of frost (-1^{0}C to –3^{0}C) actually enhances the capability of systemic herbicides to control perennial weeds. As the plant prepares for winter it is shunting all the reserves down into the roots or other growth structures to enable growth next year. So this activity by the plant actually pulls the active ingredients into the these growth areas where they can do their thing.

For a full list of products and strategies available for post harvest applications or to have your field scouted to see if post harvest is right for you, please call me at (780) 628-5142.