

Precision Ag – Soil

The definition of Precision Ag will change for every grower and farm operation. Precision Ag includes tools that help observe and measure field variability. Although the definition will change for every grower, the goals are the same. The data collected from observing field variability can be used to support decisions for field and farm management thus optimizing returns on inputs and focusing on environmental sustainability. Field variability starts with the soil; how do we manage field variability? The easiest way is to complete zone and/or grid samples based on yield data and farmer knowledge. These maps can be used to find spatial variability of factors such as organic matter, pH, C.E.C., Mg, Ca, K, etc. These factors can be combined with multi layers such as multi year yield data, satellite imagery, and maps of topography and soil moisture levels. At the end of the day most of the field variability will relate back to topography, soil type and organic matter content, which overall relates to the soil water holding capacity. If a blanket fertilizer application is applied across an entire field, areas that tend to yield below the farm average do not utilize the nutrients efficiently. Over time, as more nutrients are applied to these areas then is used, the soil levels will continue to increase. The opposite can be true for high yielding areas, where the crop is removing more nutrients than are being applied. Precision Ag can help us make variable rate nutrient applications, soil amendments such as lime, or even help with tile drainage plans or variable rate planting to ensure that the right variety and right population is planted in the correct area of a field.

Spring Cereal Options

Spring cereals in most cases tend to be a final option behind corn, soybeans and winter wheat. However, there is still a benefit to growing them as a crop. They help keep good rotation in the event winter wheat is unable to be planted or has above threshold winter kill and needs to be ripped up. Spring cereals still give the ability to grow cover crops after the crop is taken off to promote soil health moving forward. One of the large obstacles farmers can face with growing spring cereals as a cash crop is finding a market for the commodity. This is one of the challenges that should be mitigated with a marketing plan in place prior to the growing season and making the decision to move forward with planting a spring cereal. The decision on what spring cereal to grow is largely based around the best market for each cereal. Another factor to consider is the purpose that the spring cereal is being grown for. If it is being fed to livestock as a forage or grain and under seeded to alfalfa or being grown as a cash crop. In both scenarios there is a different list of criteria that has to be filled.

Some of the options for spring cereals are:

- Barley:
 - 2 row: best suited for forages purposes
 - 6 row: better suited for cash crop purposes
- Oats
- Spring Wheat
- Mixed Grains: for both grain and forage purposes (in various percentages)
 - Peas, oats, barley
 - Peas, oats

Boron Use in Plants

Boron is an essential nutrient required by all plants, but only in very small amounts; example 150 bu/ac corn removes only .06 lbs. But soils in central Ontario rarely have more than 1 ppm on a soil test with most well below that. Excess moisture will leach boron and drought conditions make it unavailable as boron is found in soil solution. Boron is essential for germination of pollen grains and pollen tubes, the formation of seed and cell walls and it assists in metabolic regulation, carbohydrate production and transportation. Organic matter is a primary source of boron in soil, as it decomposes boron is released into the soil solution.

Boron must be used carefully as larger amounts can be toxic to plant growth, even distribution of a boron source is very important. Spraying low rates of foliar boron or solubor as a soil application are effective ways to uniformly apply boron to crops. The most effective way to apply boron with granular fertilizer is to impregnate (coat) dry fertilizer with ProcoteB or use Aspire (0-0-58+.5B) as your potassium source. Both Boron options are available and have their advantages over the standard practice of blending 10% boron with fertilizer. Talk to your Holmes Agro certified crop advisor for more information about the importance of boron in your operation.

Did You Know?

All of the Ontario crop trials are now out. You can go to each of the OMAFRA crop websites for the updated trial information. We now have all of the links and trial data available on our website as well! On our website, click the agronomy tab and you will see a page called 'Agronomy links'. Click that page to see the results for yourself! <https://www.holmesagro.com/links2>

Starter on Soybeans

If you've been told there is no point in using starter fertilizer on soybeans think again! An application of MAP (11-52-0) or MAP combined with some sulphur can give a dramatic response where phosphorus availability is limited. A very low phosphorus soil test level is the initial factor but there are many other soil test values that reduce phosphorus availability. Extremely high calcium or aluminum levels (usually associated with very high or low pH) tie up phosphorus making it unavailable to plants. Very cool soil temperatures also reduce availability. Make sure your crop advisor reviews your soil sample results with you and lets you know if you have the potential for a response to starter fertilizer in soybeans.



Reduction in Plastic with Rapid Aid

The total production of plastic worldwide is approximating 359 millions metric tonnes, and only one fifth of this is recycled annually. At Holmes Agro, we take pride in doing our part and finding environmentally sound solutions to add to our operations. We recently collaborated with Rapid Aid Corp. to reduce significant amounts of plastic waste. In the beginning of 2019, they purchased product in plastic 25 kg packaging bags as part of their operation and over the course of the year took a total of 3207 bags. Currently, they no longer use these bags and we now package their product in re-usable bulk containers. In 2020, Rapid Aid's change will save 12,000 bags, equivalent to 2,000kg, of plastic from being disposed of each year and approximately 600 wooden pallets as well. While this is only a small portion compared to the worldwide number, it is a step in the right direction and we'll continue to work towards creating more stories like this one.

Changes to Bravo Zn for 2020

As a result of the completed re-evaluation of chlorothalonil by the Pest Management Regulatory Agency (PMRA), Canadian growers are allowed to continue using chlorothalonil products (Bravo Zn) in their crop protection program, but with some restrictions and new requirements. These new requirements include amended mixing instructions, personal protection equipment, re-treatment intervals among other changes. An additional difference moving forward is that cased 10 L jugs cannot be used on potato acres, and will be relabelled as Bravo ZNC. Tote product may still be used on potatoes and all other crops registered for this product, and will still be called Bravo Zn. All products will be relabelled for the 2020 season with the new information. Details about these changes can be found on the following website <https://response.syngenta.ca/chlorothalonil-support>

Please read labels before applying and reach out to your Holmes agronomist for more information or call the Syngenta Customer Interaction Center at 1-87-SYNGENTA.

Grower Pesticide Renewal

We have dates set for the new year for Grower Pesticide courses. These are required for any chemicals other than Class 4 – these include some common herbicides as well as most insecticides and fungicides. Please have a look at your existing cards and make plans for renewal.

Bookings can be made online at www.opec.ca or by calling 1-800-652-8573. Payments must be made ahead of time as course instructors are no longer accepting payments at the courses. Books are available at our offices for pick up anytime.

We will not be able to sell chemical other than Class 4 to those who do not have a current Grower Pesticide License, so please make sure you have this in place before the upcoming year.

- Stayner – Sunnidale Corners - Tuesday February 25th
- Orangeville- Holmes Agro – Thursday March 26th and Saturday April 4th

Upcoming Events

January 9th – Orangeville Grower Meeting

January 17th – Cereal Smart, Waterloo

January 18th – Farm Smart, Guelph

January 21st – Canola Growers Annual Meeting, Nottawasaga Inn

January 29-30 – Precision Agriculture Conference, London

February 12th – Dufferin Feed & Seed Show, Amaranth Municipal Office

February 27th – Stayner Grower Meeting

Jeff Shane Nicole Will Greg Taylor Scott John Lydia Dennis Travis