

Driving Decisions Newsletter

Issue 16

June 2023

app.Cropintel.ca

Water Driven Yield Potential – Decisions

Crop Intelligence insights on Available Water and Water Driven Yield Potential are there to help support decisions all year round. In-season application of inputs, like fertilizers and pesticides, can be supported with data to improved efficiencies.

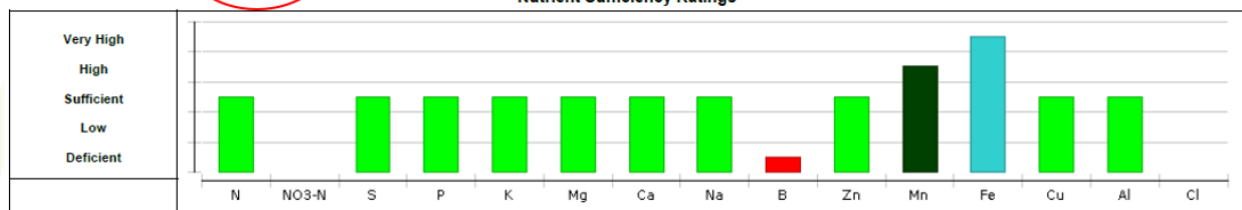
Here are some tips to help maximize learnings from the Crop Intelligence data this year!

Negative or Neutral Yield Potential

- Tissue Testing
 - Water is a key nutrient, but all macro- and micronutrients need to be in balance as well.
 - Take old leaf and new leaf samples, 3 times during the season (late vegetative, early flower, early seed set) to learn what nutrient(s) might be limiting yield.
 - Focus on optimizing the N:K and N:S ratios. Sulphur (S) and Potassium (K) are key nutrients that contribute to more efficient water and nitrogen utilization, thus supporting better stress resiliency.
 - Consider a foliar application of nutrients that come back deficient. Or create a plan with your agronomist to adjust shortages in the soil in preparation for years with positive potential.

Date Sampled	Lab Number	Nitrogen (%)	Nitrate Nitrogen (%)	Sulfur (%)	Phosphorus (%)	Potassium (%)	Magnesium (%)	Calcium (%)	Sodium (%)	Boron (ppm)	Zinc (ppm)	Manganese (ppm)	Iron (ppm)	Copper (ppm)	Aluminum (ppm)	Chloride (%)
2022-06-16	1680042	6.11		0.67	0.69	4.96	0.41	1.51	0.11	10.75	46	113	511	7.44	212	
Normal Range		5.19 7.00		0.64 0.90	0.41 0.69	3.49 5.10	0.24 0.60	0.69 2.00	0.11 0.20	29 60	32 49	39 100	99 350	4 25	300	
		N/S	N/K	P/S	P/Zn	K/Mg	K/Mn	Fe/Mn	Ca/B							
Actual Ratio		9.1	1.2	1.0	150	12.3	439	4.5	1405							
Expected Ratio		7.9	1.4	0.7	135	10.1	614	3.2	300							

Nutrient Sufficiency Ratings



- Stay the Course
 - Sometimes, the best thing to do is keep the money in your pocket or stick with original plans. Auto-generated in-season reports provide a great summary of GDD and heat that may be more limiting to yield than water. This year, GDD are ~100 days more than the 30 year normal for many Crop Intelligence fields.

Positive Yield Potential

- Top-dressing
 - Any top-dress decisions must be made with the context of growing conditions, crop stage and health, short and long-term weather forecasts, and financial considerations in addition to the soil moisture and Water Driven Yield Potential.
 - Canola Window of Opportunity = 3 leaf – bolting (as late as first flower).
 - Wheat Window of Opportunity = 4 leaf – tillering, N-applications can be made as late as flag leaf, but later applications are more variable for yield increases as the plant may portion more of the N to grain protein. Late season (post-flowering) nitrogen applications have also been shown to increase grain protein content, but these results are less predictable.
 - Applying Nitrogen prior to peak crop use is important to ensure the crop has time to utilize the applied nutrients.

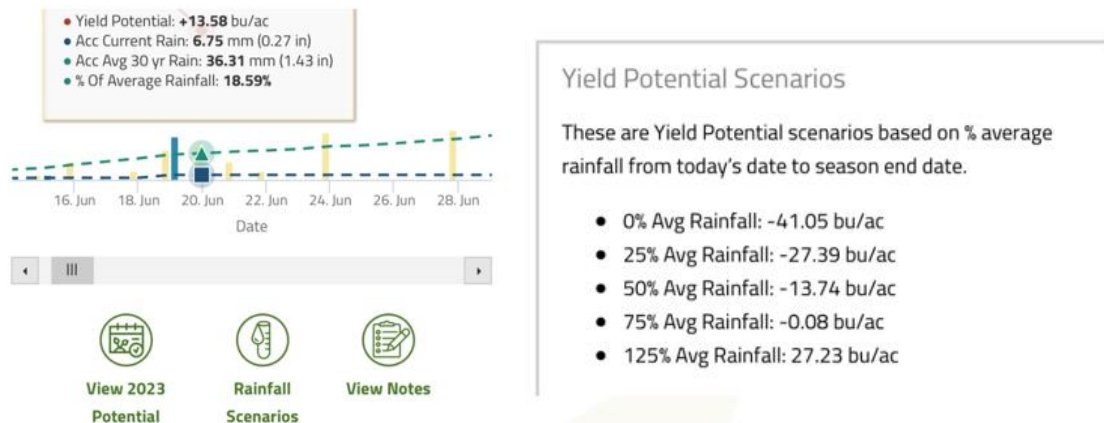
- Product Trials
 - There are a lot of products on the market to help crops grow through temporary stressful periods of the season (ie. nutrients, biostimulants)
 - Replicated trials are a great way to evaluate the success of a product and it's fit on your farm. Be prepared to source product and any special equipment needed (ie. nozzles). Document the application and harvest results. Use a single calibrated combine to harvest the plots.
 - Watch for heat stress below ground. When individual soil moisture sensors trend downward without the stair step pattern, your plant is stressed and pulling water all day to recover. This is not a good time to apply fertilizer, herbicide, fungicide, or PGR.

*"... four additional bushels of canola can mean an 80% increase in profits."
– Sean Taylor, 2019 Crop Intelligence Summit*

Crop Intelligence In-Season Features

We are always working on new tools to support better data driven decisions! Below are some of the features currently available for in-season decision making.

Rainfall Scenarios: Available on the app under the Yield Potential graph, Rainfall Scenarios show you what your yield potential will be if seasonal rainfall is not 100% of normal.



Reports: There are 3 types of reports that can be generated with Crop Intel data – Agronomy, In-Season, and Year End. Agronomy Reports are a great tool to assess what other yield factors may be limiting your crop. It is available on the app and website to create or view. In-Season Reports are auto generated weekly but can also be generated anytime on the website and are very useful for monthly summaries of rain, heat, and root activity.

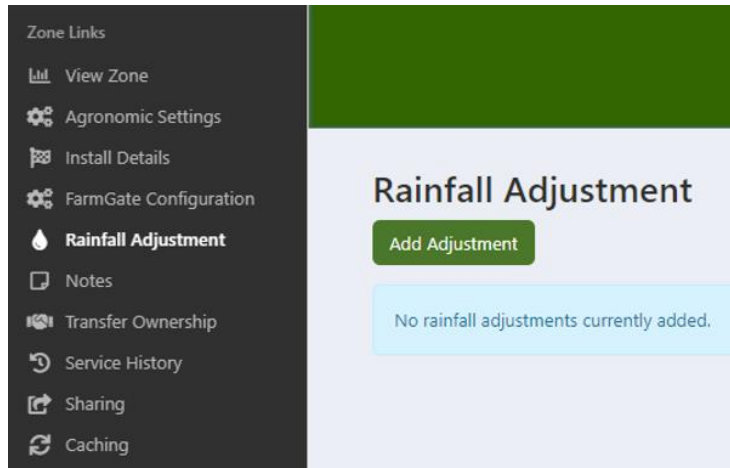
[Agronomy Reports](#) [Year End Reports](#) [In-Season Reports](#)

In-Season Reports

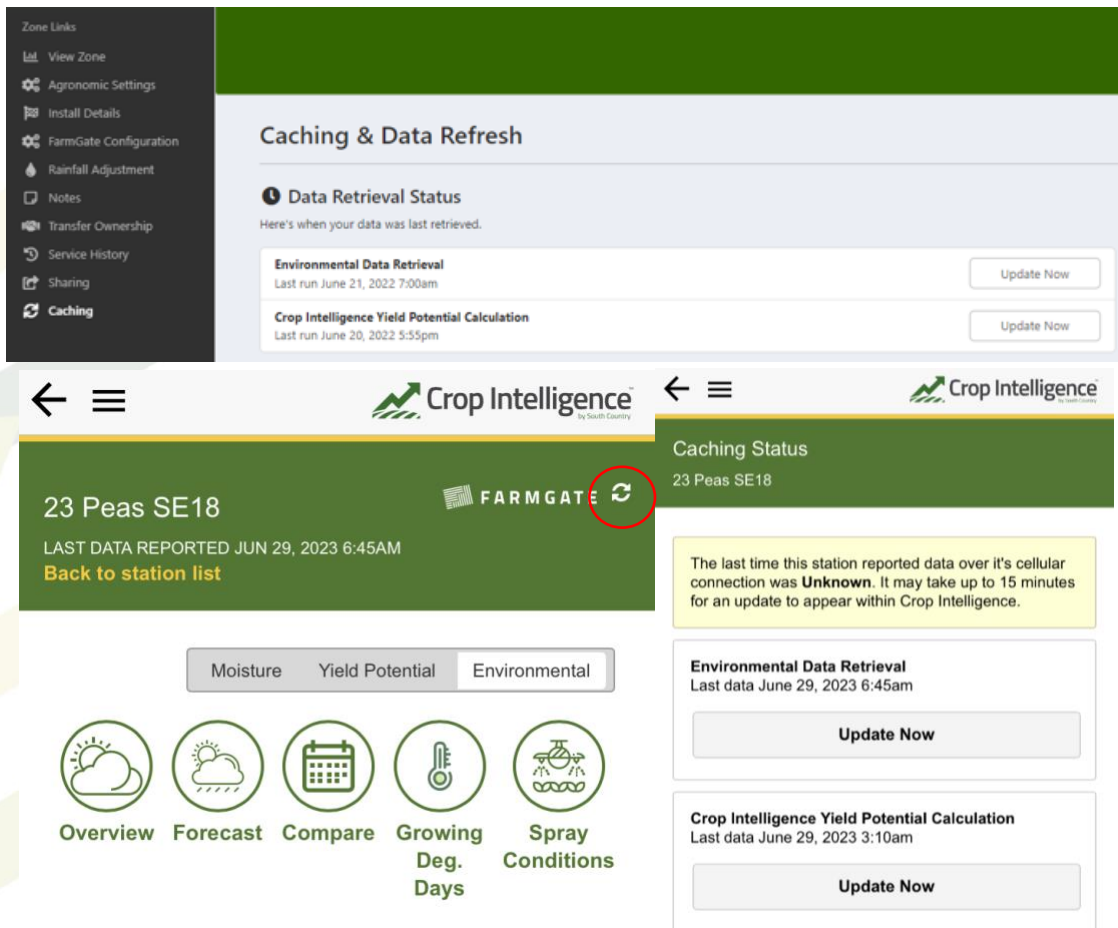
[Create Report](#) [Auto Generation Preferences](#)

Report Type	Zone	Generated	Generated By	
In-Season Report	22 Canola Creek	February 14, 2023	Ryan Hutchison	View Delete Email Report PDF
In-Season Report Auto	23 Peas SE18	May 30, 2023	Crop Intelligence	View Delete Email Report PDF
In-Season Report Auto	23 Peas SE18	June 6, 2023	Crop Intelligence	View Delete Email Report PDF

Rainfall Adjustments: Station issues can occur in season; however, you do not need to worry about missing rainfall data. Until your Crop Intelligence support team gets to the field, you can add missed rain events into your Yield Potential graph. This is done on the website by clicking on the Zone (field), then 'Rainfall Adjustment' under Zone Links. The next recache of data will update the rain event and WDYP.



Caching: There is a large amount of data flowing in from the stations, and sometimes the software can fall behind. Each individual station can be re-cached or updated on by clicking on the zone (field) and then 'Caching' in the Zone Links list on the website or on the app by clicking on the zone, then the circular arrows in the top right corner of the environmental data page. Environmental data is recorded every 15 minutes and should update in the app every 20-30 minutes. Probe data is collected every hour and should update in the app every 24 hours, along with WDYP.



Alerts: Alerts with push notifications are available in the app and online. There are two tabs for setting up alerts: *My Preferences* and *My Rules*.

My Preferences: Settings to determine what kind of alerts you want to receive and how you want to receive them (email or phone notification). The three types of alerts are: Agronomic and Environmental, Reports, and Features.

- Agronomic and Environmental: Alerts are sent to you based on your customized rules.
- Reports: An alert will be generated whenever a report, Agronomy, In-Season, or Year-End, is generated for your fields, including the autogenerated In-Season Reports this season.
- Features: You will get an alert when a new feature or insight comes from Crop Intelligence.

My Rules: Rules need to be created to identify the boundaries of the agronomic and environmental alerts. There are 8 steps to set and then save. These rules can be edited, deleted, or shared from vendors or consultants to customers or from customers to sub-users on their accounts via notify others.

Come Visit us at Ag In Motion – Booth #563!

We are very excited to be a part of the Ag in Motion show this year and have some great content lined up for our guests each day.

Click [here](#) to sign up for data consultations with one of our team members!

Presentation Schedule

Daily Crop Intelligence 101 Presentations

Mike Palmier (Max Ag) - Tuesday, July 18th

Yara International - Wednesday, July 19th

Crop Intelligence Producer Discussion – Thursday, July 20th

Have questions? Reach out to your Crop Intelligence partner for more information or email us at info@cropintel.ca.

