Agronomy Update

BATTLE RIVER IMPLEMENTS LTD.

JULY 2020

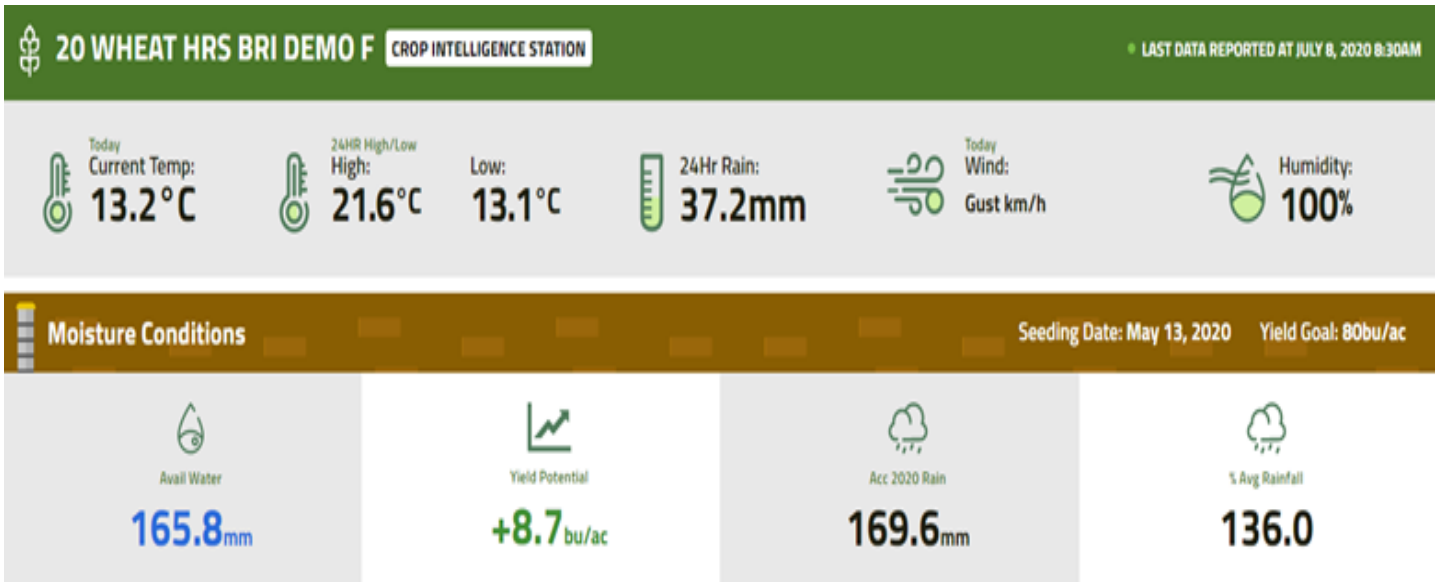
Why Available Crop Soil Moisture is Important

Pessl iMetos 3.3

At Battle River Implements, we have been working with Crop Intelligence technology for 3 years now. For those of you not familiar with it, Crop Intelligence uses traditional weather station data combined with a soil moisture probe to monitor soil water and calculate how much of it is available to the crop in the field. It then generates an estimate of yield potential based on that crop available water.

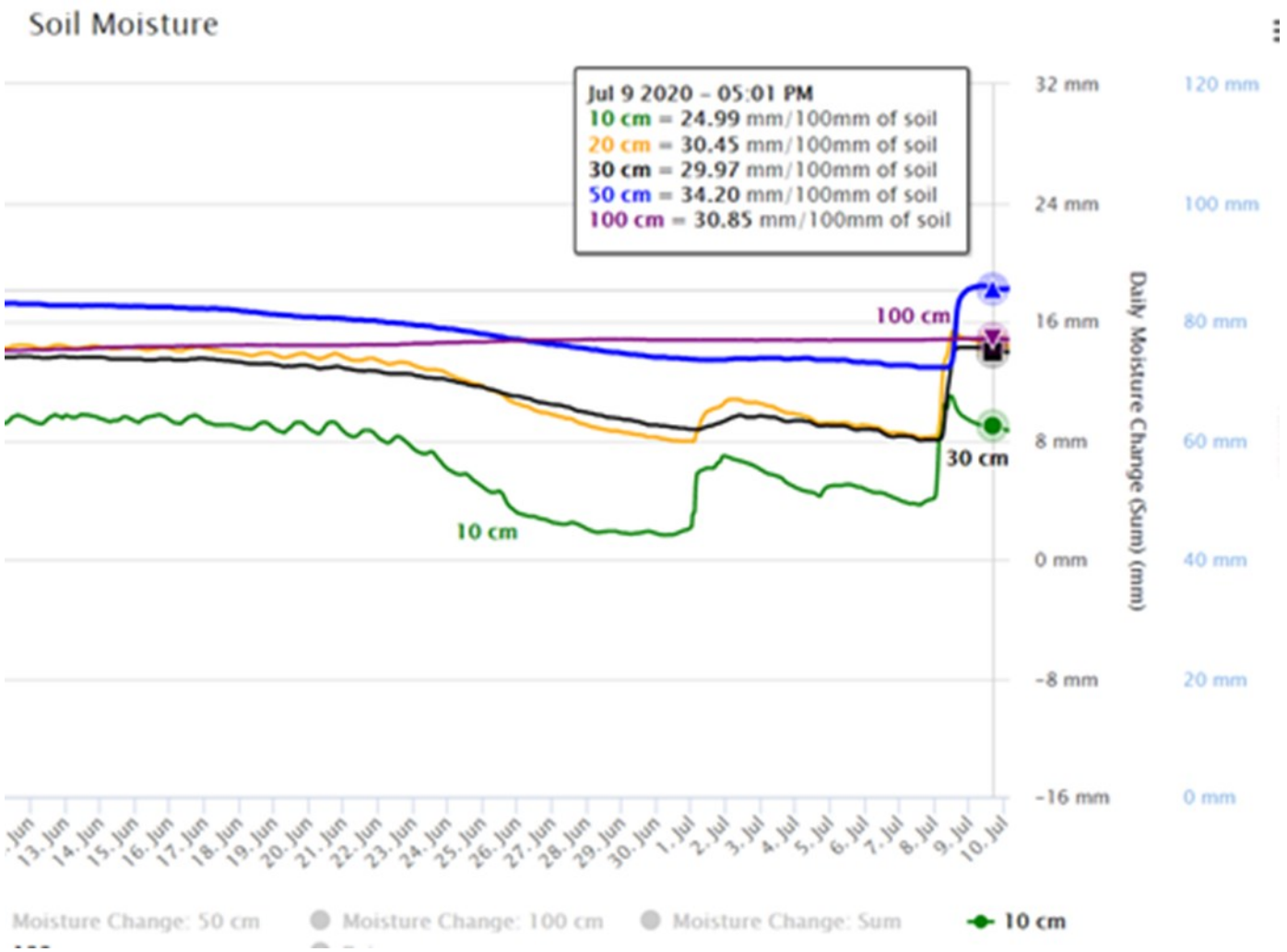
POTENTIAL YIELD NUMBER, NOW ASK MORE QUESTIONS

Because the Crop Intelligence App generates a yield potential number, the automatic assumption is that it is a yield predictor, but that is not exactly true. It does give you an estimate of how many bushels of wheat, barley, canola, etc can be grown with the amount of measured water. Your actual final yield is always going to be influenced by your agronomic decisions along the way or environmental factors. For example if you look at this screenshot of the Battle River Training Field, you see that we have enough soil crop available water that if we receive normal rainfall between now and the end of the growing season, we have a yield potential of around 87 bushels/acre.



However, this yield remains as only potential unless we use this information to make agronomic decisions as we go through the growing season. Measuring how much moisture we have available for the crop gives us information on a variable that we have never even tried to track in the past. Understanding how much moisture we currently have available to the crop and how much more we can reasonable expect for the remainder of the growing season allows us to start asking the right management questions for this crop. If there is enough water to grow 87 bushels of wheat, is there enough nitrogen? How are the field's phosphate levels? What micronutrients could be a limiting factor when we start to approach these yield levels? What does this yield potential tell me about the potential payback of a fungicide in terms of yield and quality protection?

SOIL MOISTURE PROBE SENSOR READINGS



Knowing what is going on down where the crop's roots are gives us new insight into managing crops throughout the growing season and making more informed decisions that can help us maximize the returns on the investments we make in the field throughout the season.

Demo Field July 6, 2020

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