



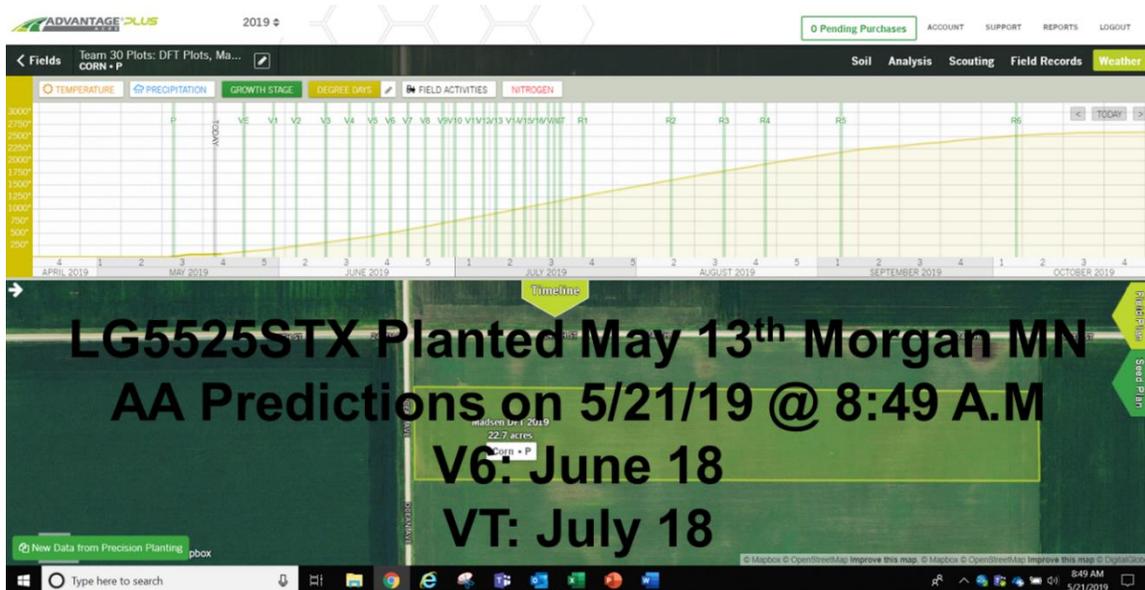
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## Utilizing Advantage Acre to Predict Black Layer Dates and Harvest Windows

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Delayed plantings and slow accumulation of GDU's has led many growers to ask when corn harvest will begin in their areas and what kind of moisture will we expect to see. Advantage Acre® and the timeline feature provide us with some insights into when we can expect black layer and harvest windows to begin.

First, I want to start with the timeline feature, tracking crop development this year with Advantage Acre I have found it to be accurate. I screenshotted Advantage Acre's prediction for the growing season in 8 different locations in SW Minnesota. I then tracked V6, VT, and black layer predictions.



I've included pictures that detail my findings on a plot planted in Morgan, MN. Advantage Acre was able to predict V6 and VT dates of LG5525STX within a day of when they occurred; just 8 days after planting!



Using the above timeline and the forecasted black layer date from Advantage Acre of the first week in October and research data from Iowa State University we can start to forecast our harvest window.

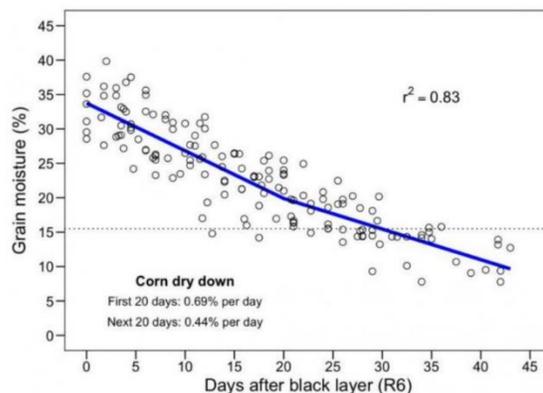


Figure 1. Average grain moisture dry down (blue line) across four hybrid maturities, four dates of planting and three years near Ames, IA. Horizontal dashed line represents 15.5% kernel moisture, open circles are actual data.

The chart above from Iowa State shows average grain moisture dry down for hybrid maturities in Iowa. Pairing that together with Advantage Acre’s weather predictions for October and November having average temperatures and a later than normal black layer, we can be conservative in saying that it will take about 25 days for LG5525STX to reach 24% moisture (35% black layer moisture - (25\*0.44% per day)) and 35 days for it to reach <20% moisture. This puts the beginning of our harvest window at October 25<sup>th</sup> for this LG5525STX planted on May 13<sup>th</sup> in SW Minnesota.

Oct 2019	Forecast	Average	Last Year
Days Below 30F	0	0	10
Days Below 50F	31	31	31
Days Above 80F	0	0	1
Days Above 90F	0	0	0
GDU	83	47	16
Average Temp	50°F	49.4°F	43.6°F
Precipitation	2.7"	2"	1.6"
Nov 2019	Forecast	Average	Last Year
Days Below 30F	16	26	25
Days Below 50F	30	30	30
Days Above 80F	0	0	0
Days Above 90F	0	0	0
GDU	0	0	0
Average Temp	36.3°F	33.9°F	25.9°F
Precipitation	1.8"	1.1"	1.1"

Advantage Acre and its timeline can be extremely useful in identifying harvest windows and helping to predict corn moisture ahead of time. That information can be crucial in identifying drying needs and costs and harvest priorities in advance.

For any questions, or if you want to take a more in depth look at Advantage Acre and harvest plans, contact your local Technical Team Agronomist (TTA) or Sales Account Manager (SAM).

#### References and Additional Information:

<https://crops.extension.iastate.edu/cropnews/2017/09/corn-grain-dry-down-field-maturity-harvest>

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