

August 17, 2018

LAST IRRIGATION CORN

It has been an interesting growing season. At the beginning we started out cold and dry but in this area we experienced excellent crop stands at emergence with our field corn. Then the weather changed opposite, followed by hot and below average precipitation. This week I checked the field corn at the Southeast Corn Growers plot on the Darrel Stehlik farm along Highway 33 and Road 1900, two miles west of Crete, and much of the corn is one-third starch line already. That means it will black layer or be fully mature around August 31st so our crop is coming along fast this year.

The last few irrigations of the season require some of the most important water management decisions of the year. An unneeded irrigation may mean wasting 1 to 3 inches of water and 2 to 5 gallons of diesel fuel per acre. Many irrigators apply more water than necessary toward the end of the irrigation season because the crop is using less water per day. The crop is getting more mature and the days are getting shorter and cooler and we have recently had cool evenings and the days not too hot. The average crop water use rate drops as evidence of ET gage readings. I recorded 1.4 inches on the ET gage the week ending August 13th and with corn in dent state crop water use was less than that. This past week, with the rain event (which was a real blessing for our crops), the ET gage will read even less, so that is good news to irrigators plus there is another rain in the forecast for Sunday afternoon, August 19.

Calculating the amount of water needed from rain and irrigation for the crop to reach maturity becomes important in August. The objective is to leave the field as dry as possible without lowering the yield. This is important for two reasons. First, it's important to provide room to store free offseason precipitation because we will refill that with off season precipitation. The second reason is to help prevent extended harvest delays because of rain. If the field is kept at field capacity, any rain can cause delays and lead to soil compaction from harvest equipment. Knowing approximately how much plant available water is remaining in the active root zone is critical for calculating the last few irrigations and will be referred to as the "remaining available water." The best method for determining the amount of remaining soil water is to use a soil water monitoring system such as watermark sensors. This is where this technology shines because it can save you money.

At the Corn Growers plot I installed sensors at depths of 1 foot, 2 feet, 3 feet and 4 feet deep. One station is averaging 69 cb and the other station is at 30 cb. You can get variation like this especially in a furrow irrigated field. What that means is irrigation over the next 16 days is not needed unless the average of the 4 sensors hit 120 cb. With no rainfall at all, over the next two weeks, it will be very close. The pipe has not been pulled yet. There is an app called CropWater developed by UNL Extension that is free and very useful predicting how much rain and irrigation is needed to finish a crop to black layer.



Predicting how much rain the field will receive is difficult, but if you do not plan for the possibility of rain, it is easy to apply too much irrigation water. Soybeans during pod fill is our most critical stage for adequate water. For more information on scheduling last irrigation for corn and soybeans, the following NebGuide is very useful at:

<http://extensionpublications.unl.edu/assets/pdf/g1871.pdf>

SOUTHEAST CORN GROWERS PLOT TOUR DETAILS

This year the annual tour is set for Wednesday, August 29 at 6:00 p.m. Please note the flyer had a mistake to gather at the dryland plot first. Actually the tour will start at the irrigated plot. From Highway 33 and Road 1900, 2 miles west of Crete, the plot is the first field on your left or west side of the blacktop road to Milford. We will gather at the farmstead or north side of the furrow irrigated field with the cooperator being Darrel Stehlik. Following the seed company updates, a meal is provided to all participants at the Dorchester Community Building. After the meal, Paul Jasa, UNL Ag Engineer, will be talking about no-till planting technology and cover crops research at the Rogers Farm. For more information, talk to John Hajek at 402-826-9409 or Mitch Fritz at 402-826-9600.

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