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file ETReduces in the late summer 2014 version 1

Source: Jerry Wright
Agricultural "Irrigation" Engineer
wrightsj@charter.net

WHEN CAN ONE STOP IRRIGATING!

CROP "ET" SLOWLY REDUCES AS MATURITY NEARS

Keeping track of daily crop water usage (ET) for the past 2 to 5 days can greatly assist an irrigation manager in deciding when to startup the next irrigation and when one can start to think about stopping for the season.

Daily water usage for most crops slowly starts reducing in mid August as they work themselves towards maturity. However, daily ET can still reach rates of .25 or higher at any time through mid September if air temperature spikes into the upper 80s to low 90s and the sky is cloud free.

Under normal temperature conditions however a corn crop generally will need only 2 to 2.5 inches of additional soil water after first dent to come to full maturity. For a soil holding at least 3.5 inches of available water at first dent there should be no additional irrigation needed if temperatures remain at or below normal. Lighter soils however may need one or two more irrigations while a heavier soil may tolerate even an earlier cutoff time.

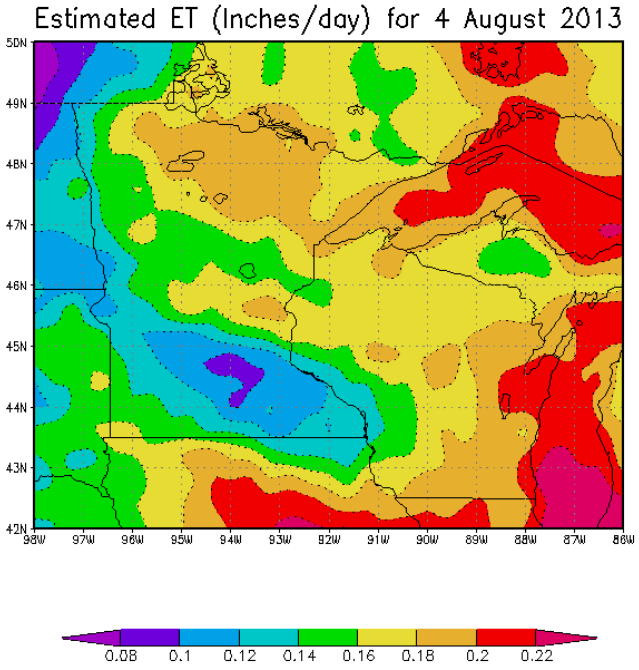
As irrigated corn and soybeans near maturity, the field's soil moisture level generally can be allowed to decrease to greater limits without causing stress to the crop. For corn starting to dent, research has shown that the soil moisture deficit can be allowed to start increasing to 50-65 percent by maturity time without reducing yields under normal late summer temperatures.

The table below lists estimated average crop ET requirements for corn and soybeans under normal September weather conditions within central Minnesota from different growth stages to maturity:

Stage of Crop Growth	Days to Maturity	Inches of ET to Maturity
CORN		
milk	38 - 42	4.8 - 5.3
dough	30 - 35	3.2 - 3.6
first dent	23 - 27	2.1 - 2.4
full dent	19 - 21	1.6 - 1.8
1/2 milk line	12 - 14	0.9 - 1.2
1/4 milk line	6 - 8	0.4 - 0.6
SOYBEANS		
full flower	48 - 54	6.8 - 7.6
full pod	35 - 39	4.0 - 4.8
begin seed fill	27 - 31	2.7 - 3.3
full seed fill	16 - 18	1.1 - 1.4
begin maturity	9 - 11	0.4 - 0.7

Regular in-field soil moisture checking with a soil probe and keeping track of a crop's daily ET use can go a long ways in helping an operator optimize a crop's growth as well as utilizing the irrigation water most efficiently.

Real time daily estimated crop ET potential for the past days at different locations across the state can be easily viewed on the Internet at:
http://agwx.soils.wisc.edu/uwex_agwx/sun_water/et_wimn
and once you found the colored state map just simply click on your site location to get ET values going back in time for the past 30 days.



Several local daily ET information services also exist for specific Minnesota counties and they are listed below:

Daily Crop "ET" for 2013 Available

Wisconsin & Minnesota Crop ET
http://www.soils.wisc.edu/uwex_agwx/

Benton SWCD
http://www.soilandwater.org/
320 968 5300 ext 3

East Ottertail SWCD
http://www.eotswcd.org/
218-346-4260 ext 3

Pope County SWCD
http://www.popeswcd.org/weatherstation/
320-634-5327

Sherburne SWCD
http://www.sherburneswcd.org/
763 241 1170 ext3

North Dakota Ag Weather & Crop ET
http://www.ndawn.ndsu.nadak.edu/