

PROGRAM INFORMATION

EQIP, CSP, WHIP, WRP, CREP, & CONT. CRP:

APPLICATIONS FOR FUNDING ASSISTANCE AND/OR ANNUAL PAYMENTS CAN BE TAKEN ANYTIME AT YOUR LOCAL USDA SERVICE CENTER. **CSP APPLICANTS, YOUR QUESTIONNAIRES NEED TO BE COMPLETED AND INTO YOUR LOCAL NRCS OFFICE SO THEY CAN BE ENTERED INTO THE COMPUTER SYSTEM BY JULY 16TH.**

NSWCP: APPLICATIONS FOR COST-SHARE MUST BE SIGNED BY THE LANDOWNER AND CAN BE TAKEN ANYTIME AT YOUR LOCAL NRCS OFFICE. FLOW METER AND NON-IRRIGATION APPLICATIONS ARE REVIEWED FOR APPROVALS MONTHLY. IRRIGATION APPLICATIONS WILL BE REVIEWED FOR APPROVAL IN SEPTEMBER.

ENERGY EFFICIENCY GRANT: THE APPLICATION CUTOFF DATE IS OVER FOR 2010. APPLICATIONS FOR 2011 CAN BE TAKEN AT ANYTIME. CONTACT KELLEY MESSENGER WITH RURAL DEVELOPMENT AT 308-237-3118, EXT. 4.

CALENDAR OF EVENTS

NO-TILL EXPOS AND BUS TOURS: GOTO [HTTP://WWW.NOTILL.ORG](http://www.notill.org)
JULY 27-29: POINTS SOUTH BUS TOUR IN OKLAHOMA AND KANSAS. **REGISTER BY JULY 21ST.**

JULY 4: INDEPENDENCE DAY HOLIDAY

JULY 5: INDEPENDENCE DAY HOLIDAY – GOV'T OFFICES CLOSED

JULY 6: CNPPID BOARD OF DIRECTORS MEETING 9 AM

JULY 13: TBNRD BOARD MEETING 7:30 PM

JULY 17-22: KEARNEY COUNTY FAIR

JULY 25-29: PHELPS COUNTY FAIR

JULY 28-31: GOSPER COUNTY FAIR

When to Irrigate with Full Soil Moisture?

To determine how much moisture is in a full soil profile, you must first know the soil type for your field. You can then determine how much moisture your soil profile can hold. For example, a Holdrege Silt Loam will hold 2.3 inches per foot. That equates to 6.9 inches in a 3 foot profile. If you plan to irrigate at 35% depletion, you have 2.4 inches of moisture that can be utilized prior to irrigating (6.9 inches * 0.35 = 2.4 inches). Keep track of daily crop water use (ET). Once they add up to 2.4 inches, it's time to irrigate provided no rain has been added to the soil. Effective rain amounts would need to be subtracted.

Another way to do this is to irrigate at 65% moisture (6.9 inches * 65% = 4.5 inches). Here you would subtract daily ET from the starting point of 6.9 inches until you reached 4.5 inches. This is when you would irrigate. Calculating it this way, effective rain amounts would need to be added.

This method of scheduling irrigations is called the checkbook method. You need to know your starting point before you can add and subtract inputs and outputs. Also, scheduling irrigations to a 3 foot depth allows you to utilize more soil moisture that is available to the crop (less irrigating, more money). Soil moisture sensors can provide you with both, your starting point and moisture levels to 3 feet. In using this method, it is always recommended to check the soil moisture levels throughout the year and to make adjustments as necessary. Kinda like your monthly bank statement.

ACROSS THE TRI-BASIN NRD

Soil Moisture Levels across the TBNRD!!!

We've started the year with a full soil moisture profile and it has been that way up until a week or so ago. Do you currently know where your soil moisture levels are? Soil Moisture Sensors provide you with that information. Once you know where you are, you can then use the checkbook method of adding effective rainfall and irrigations to your soil while subtracting crop water use or ET. You can use the sensors to balance your checkbook over the course of the year.

So where are we at? In observing some soil moisture sensors before any irrigation, on Tuesday the 29th, the lowest percentage I observed at the 1 foot depth was 75% moisture on 10 leaf corn with the highest still at the 95%+ category. The bulk of the sensors range from 80-85% moisture levels. These sensors are reading in the 9-12 inch zone. The 2 foot depths were all at 95%+ with the 3rd foot wetter than that. With that, there is moisture in the soil yet to be had.

According to the atmometers across the NRD and the consistent weather this week, corn used around 0.28 inches per day. The beans that are further along used about the same. The windier conditions this weekend will increase the usage.

Stage of Growth:

Corn (V10-10 leaf to V16-16 leaf stage): V15 is the beginning of the most crucial period of plant development in terms of seed yield. This crucial period continues until blister stage. Roots should be drawing moisture from 2 feet.

Average daily water use from June 21-June 27 was 0.13"-0.25".

Soybeans (V6-6th Node stage to R2-Full Bloom stage):

There is enough moisture in the soil to get to R3, Beginning Pod. At R3, stress from moisture, light, nutrients, etc. through R6, Full Seed, will reduce yields more than any other time.

Average daily water use from June 21-June 27 was 0.13"-0.21".

Irrigation:

Someone shut the water off, but not before lightening, hail and blown over pivots. In an eery kinda way, it's like a firework grand finale. Lots of regular rains this spring ending with mother nature's fury. Crop water use is now more than rainfall is supplying. There is still moisture in the soil. Soil moisture sensors are an excellent tool in knowing where your moisture levels are in order to determine that first irrigation. **From June 21-June 27 (13 of 13 NAWMDN sites reporting), the average weekly rainfall was 0.58" and average weekly ET for corn was 1.42" and for soybeans was 1.44".**

Lake McConaughy is at 86.3% capacity versus 54.4% a year ago. Inflows to Lake McConaughy are at 5113 cfs versus 1128 cfs a year ago. Flows on the South Platte River @ North Platte are at 2400 cfs versus 2029 cfs a year ago.

Rainfall:

Rainfall amounts come from NeRAIN which can be found at website <http://dnrdata.dnr.ne.gov/NeRAIN/index.asp?&>.

Location:	June 17 – June 30	May 1 – June 30
Arapahoe 6.9 mi. NW:	3.73"	10.21"
Bertrand 6.1 mi. SE:	2.27"	11.32"
Funk 12.5 mi. N:	2.16"	9.40"
Wilcox 0.3 mi. SW:	2.05"	13.90"
Minden 0.855 mi. W:	1.93"	15.11"

NAWMDN CROP ET INFORMATION

Additional Atmometer sites and Weather Station Data can be found at websites listed under "ET Information Sites" below.

7 Days = June 14-June 20 7 days = June 21-June 27

Inches of Crop Water Use (ET) = Evaporation x Kc

- Atmometer Station: Arapahoe 7 Northwest (#6)
Evaporation: Week #1 = 1.20 inches Week #2 = 1.70 inches
- Atmometer Station: Elwood 1 East (#7)
Evaporation: Week #1 = 1.50 inches Week #2 = 1.70 inches
- Atmometer Station: Bertrand 4 Southwest (#8)
Evaporation: Week #1 = 1.40 inches Week #2 = 1.70 inches
- Atmometer Station: Bertrand 6 Northeast (#12)
Evaporation: Week #1 = 1.40 inches Week #2 = 1.60 inches
- Atmometer Station: Holdrege 5 Southeast (#9)
Evaporation: Week #1 = 1.50 inches Week #2 = 1.80 inches
- Atmometer Station: Axtell 5 Northeast (#5)
Evaporation: Week #1 = 1.59 inches Week #2 = 1.80 inches
- Atmometer Station: Minden 11 Southeast (#2)
Evaporation: Week #1 = 1.50 inches Week #2 = 1.50 inches
- Atmometer Station: Heartwell 4 Southeast (#4)
Evaporation: Week #1 = 1.20 inches Week #2 = 1.60 inches

		<u>Crop Coefficients (Kc)</u>	
		<u>Corn</u>	<u>Soybeans</u>
<u>Stage</u>	Kc	<u>Stage</u>	Kc
2 leaf	0.10	Cotyledon (VC)	0.10
4 leaf	0.18	1st Node (V1)	0.20
6 leaf	0.35	2nd Node (V2)	0.40
8 leaf	0.51	3rd Node (V3)	0.60
10 leaf	0.69	Beg. Bloom (R1)	0.90
12 leaf	0.88	Full Bloom (R2)	1.00
14 leaf	1.01	Beg. Pod (R3)	1.10
16 leaf	1.10	Full Pod (R4)	1.10
Silk, Bl., Dough	1.10	Beg. Seed (R5)	1.10
Beg. Dent	1.10	Full Seed (R6)	1.10
Full Dent	0.98	Beg. Mat. (R7)	0.90
Black Layer	0.60	Full Mat. (R8)	0.20
Full Maturity	0.10	Mature	0.10

ET Information Sites

- NAWMDN Sites:
www.cnppid.com/ET_Map_location_page2010.htm
elkhorn.unl.edu/ETGage/index.jsp
 Water Use Hotline: 1-800-993-2507
 Central Irrigation District: www.cnppid.com/ETdata2009.htm
 Cropwatch: www.ianr.unl.edu/cropwatch/weather/gdd-et.html

Websites of Interest

- NRCS Nebraska www.ne.nrcs.usda.gov
- Central Irrigation District www.cnppid.com
- TBNRD Home Page tribasinrdrd.org
- Farm Service Agency www.fsa.usda.gov
- UNL Cropwatch cropwatch.unl.edu
- UNL Extension www.extension.unl.edu/home
- UNL Water extension-water.unl.edu
- K-State SDI Website www.oznet.ksu.edu/sdi
- No-till On The Plains www.notill.org
- No-till Notes www.npnrd.org/notill.htm



CNPPID's first water to start a producer's irrigation run in 2010. This producer, as well as many, did not take CNPPID water during the first two weeks of the season due to all the rains.

May 1934, the drought is the worst in U.S. History. April 14, 1935 "Black Sunday" – worst black blizzard of the dust bowl. Hugh Hammond Bennett knew a nationwide effort would be needed to impact the soil erosion problem.

*** If you wish to receive this newsletter via e-mail, or have any questions, comments or ideas, feel free to contact Curtis Scheele at the NRCS office in Holdrege or you can email him at curtis.scheele@ne.usda.gov. ***

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