

Tri-Basin Irrigator

Volume 21, Issue 7

August 5, 2021

PROGRAM INFORMATION

EQIP: SIGN UP ANYTIME FOR 2022 FUNDS.

CSP: SIGN UP ANYTIME FOR 2022 FUNDS.

NSWCP: FIRST CHANCE AT IRRIGATION PRACTICE APPROVAL, HAVE YOUR IRRIGATION APPLICATIONS IN BY AUG. 31ST. THEY MUST BE SIGNED BY THE OWNER.

ENERGY EFFICIENCY GRANT: SIGNUP ANYTIME FOR 2022 FUNDS. DEADLINE IS OCTOBER 31, 2021. FOR MORE INFORMATION CONTACT KELLEY AT RURAL DEVELOPMENT AT THE KEARNEY USDA SERVICE CENTER AT 308-455-9837 OR KELLEY.MESSENGER@USDA.GOV.

CALENDAR OF EVENTS

AUG 10: TBNRD ANNUAL TOUR AND BOARD MEETING

AUG 26: WEST CENTRAL FIELD DAY AT NORTH PLATTE – SEE LINK IN ARTICLE UNDER NEBRASKA EXTENSION EXTRAS.

SEPT 7: CNPPID BOARD MEETING

Farm / Irrigation Safety!!!

I was searching through past years newsletters looking for something to fill this spot in the short amount of time I have to get it sent. What struck me was in the past 17 years, I wrote two articles on irrigation safety due to two people killed. This is two too many people. I am sure there are plenty more across the nation over the years. So, if this article can be a reminder for you to slow down and get some rest then your family will appreciate it. We are in heavy irrigation season, so take it easy.

Here is a quick list of hazards, but hazards are not limited to this list:

- Electrical contacts such as overhead power lines, short circuits, energized equipment, lightning, etc. Irrigation / water and electricity is a powerful combo.
- Entanglements with moving parts such as PTO shafts, gear boxes, etc.
- Chemicals/Poisons when working with chemigations, fertigations, etc.
- Falls from center pivots, slick spots around operating power units, etc.
- Drownings, especially around canals, reuse pits, etc.
- 4-wheeler accidents. Slow down and pay attention. Get rest so you can be alert.
- Physical damage to your body from just the nature of the job such as smashed fingers, ear damage from loud well motors, etc.

We work around this stuff all the time and it becomes a routine. Bad things happen when we have other things on our mind, we are tired, or in a hurry. **We just need to remember to take it easy and err on the side of caution.**

CSP and EQIP REMINDERS!!!

1. For those needing to plant cover crops, contact your local NRCS office.
2. Make an appointment at your local NRCS office to turn in your fertilizer, pesticide, irrigation, etc. records.

CURTIS'S COLUMN



UNL Link is Back for ET Data from NAWMN Sites!

You will notice on page 3 in the "Crop ET Information" section under "NAWMN Sites" that the UNL website is back up and running. For years, Crop Water Use information gathered weekly from the NAWMN sites across the Tri-Basin NRD was recorded on this website. Producers could go onto this website, click on the nearest link to their fields and determine the weekly crop water use for their own fields. At the beginning of 2021, we were told that this site had been decommissioned. Well folks, it is back up for business. This gives producers another option in determining their own crop water needs.

The following are step by step instructions on how to maneuver through the site:

- Click the link next to UNL at the location mentioned above on page 3. Or type the link on your webpage.
- Click "View Weekly ET Data" in the red bar area.
- Click in the box below "Select County" and select your county.
- Click the "GO" button.
- Scroll down to the aerial photo.
 - Red balloons are the active NAWMN sites
 - Blue balloons are weather stations
- For NAWMN ET, click on the red balloon nearest your field.
- Click the corn or soybeans tab for your crop. Other crops are available.
- Here you will find your Crop Water Use for the past week. For average daily for the past week, divide by 7 days.
 - Weekly dates run across the top with the most current week on the left side.
 - Crop Stage is in the far left column.
 - Crop Water Use (ET) for the past week will be in the row that matches the proper crop stage under the proper week column. The weeks are from Monday to Monday.
 - As a side note, don't worry about the blue shaded boxes.
- Below is a screen shot of the weekly ET (red) location.

Reading for week	07/26/21 - 08/02/21	05/17/21 - 05/24/21	09/09/21
ETgage Weekly Change	1.30	1.10	
Rain measurement	0.00	0.00	

Weekly crop water use

Stage	ET Factor	07/26/21 - 08/02/21	05/17/21 - 05/24/21
V2	0.10	0.15	0.11
V4	0.18	0.27	0.20
V6	0.35	0.53	0.39
V8	0.51	0.77	0.56
V10	0.69	1.04	0.76
V12	0.88	1.32	0.97
V14	1.01	1.52	1.11
V16-Beginning Dent	1.10	1.65	1.21
Full Dent	0.96	1.44	1.06
Black layer	0.60	0.90	0.66
Full Maturity	0.10	0.15	0.11

Aquatic Weed Treatment:

Aquatic weeds, such as filamentous algae, moss, and sago pondweed, can make delivering surface water through a canal system difficult without using chemical treatments throughout the irrigation season.

Central's irrigation division is constantly on the lookout for these aquatic weeds to treat before they grow and hinder the delivery of surface water for irrigation. Filamentous algae and moss start as hair like strands that grow toward the water's surface, eventually forming floating mats on the water's surface.

Sago pondweed is a bottom rooted aquatic weed that grows up towards the water's surface and grows very thick, which can eventually stop the movement of water. These aquatic weeds can break off and plug the screening of the irrigation delivery point, stopping the flow of water to the irrigation system.

Treatment of these aquatic weeds is expensive; the cost of the chemicals can range from \$30 to \$80 per gallon. Chemicals are applied by gravity drippers, injection pumps, slug treatment, or surface sprayed. All of the chemicals Central uses to control aquatic weeds are labeled to be safe for the irrigation water and the crops.

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TRI-BASIN NRD NEWS



Irrigation Season Reminders

Chemigation: Our staff is busy with chemigation inspections. New permit inspections must be conducted prior to use and routine inspections due this year must be completed by the end of this irrigation season. If your system is due for a routine inspection, we have tried to contact you to schedule. Please call us to schedule your inspections.

Water Samples: If you have crop reports due each year, do not forget to take water samples from your irrigation wells for those reports. These samples are for your 2022 reports.

NRD staff are also taking samples from irrigation wells for our Water Quality testing program.

Irrigation Meters: Periodically check your irrigation flowmeters to make sure they are working correctly. If you do not think your meter is working correctly, our staff or Curtis Scheele at NRCS office can check flow rates using an ultrasonic flowmeter.

If you have a meter repaired during the irrigation season, please contact the NRD and note the meter reading before removing. Doing so will make it easier to reconcile any movement of the propeller while the meter was being repaired. If you have questions about reinstalling your flowmeter or about your meter readings, contact our office at 1-877-995-6688.



West Central Field Day – North Platte – Aug. 26

The UNL West Central Water and Crops Field Day is scheduled for **Thursday, Aug. 26** beginning at **8:00 a.m.** at the WC Research Center – 402 W. State Farm Rd., North Platte, NE. The “Using Technology to Improve Efficiency & Sustainability” theme will include In-field demonstrations relating irrigation, nitrogen, chemigation and pest management. Morning sessions feature: Precision Conservation; Soil Health; Water; Wildlife; Beneficial Insects and Pest Control. Sponsoring vendors will provide booth promotions and a free lunch. Dwane Roth, keynote speaker, will share “My Experience as a Farmer and the Kansas Water Technology Farms.” Afternoon updates will focus on Senator Mike Groene; Twin Platte Natural Resources District (TPNRD) and Nebraska Water Balance Alliance (NEWBA). This event will then close with UNL Testing Ag Performance Solutions (TAPS) technology updates. Topics will be: nitrogen management and sensor technologies to ‘Farms of the Future’ initiative. Register by Monday, Aug. 23 at <https://extension.unl.edu/statewide/westcentral/2021-water-and-crops-field-day/>.

Free 2021 Carbon Credit Webinar

The National Ag Law Center is hosting a free “Considering Carbon: Agribusiness & All Things Crypto” webinar on **Wed., Aug. 18 at 11:00 a.m.** Carol Goforth, University of Arkansas Extension Professor, will outline carbon credit programs using crypto-assets & blockchain technology linking online resources. Register: <https://nationalaglawcenter.org/webinars/cryptoassets/>

Corn Southern Rust Disease Update

‘Southern Rust’ pustules were confirmed on July 28 in Adams, Nuckolls, and Clay counties. Although disease incidence levels are still low with pustules waist-high in corn canopies, growers can follow nationwide rust movement at: <https://corn.ipmpipe.org/southerncomrust/>

UNL Soybean Scouting Calendar

A free UNL **SoyCal** soybean scouting calendar is available at: <http://cropwatch.unl.edu/soycal/>. SoyCal provides a seasonal calendar including photos and videos to help manage soybean insects, weeds and diseases. The user only needs to input field locations, planting dates and maturity groups; and the SoyCal will recommended timelines for pest management. For example, high humidity conditions during the past week have likely contributed to Sudden Death Syndrome (SDS) and/or brown stem rot patches within soybean fields. So, cobalt blue/gray fungal growth on rotted soybean taproots may be an indication of Sudden Death syndrome (SDS) disease. Foliar systems typically appear after flowering. A yellow, interveinal leaf chlorosis develops into necrotic lesions between leaf veins. Fields with Soybean Cyst Nematodes (SCN) will increase SDS severity.

Brown stem rot can be confused with the SDS disease, but unlike sudden death, the dead soybean leaflets remain attached to the plant. This foliar disease occurs at growth stages R4-R5.

Brown leaf spot (brown lesions) start in the lower canopy. Infected leaves eventually turn yellow & may drop prematurely. This disease is most severe with continuous soybeans. Fungicides applied at R3 to early R4 may slow development.



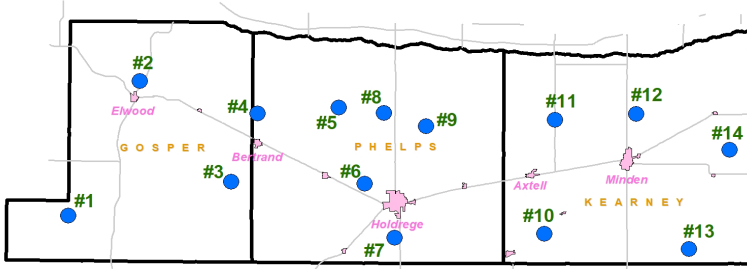
TBAWMN CROP ET INFORMATION

Additional Information and other ET resources can be found at websites listed under "Crop ET Information" below.

Inches of Crop Water Use (ET) =

Evaporation (ETr) x Kc

Site	July 19 – July 25		July 26 – Aug 1	
	Evaporation	Rain	Evaporation	Rain
1	1.70	1.13	1.90	0.00
2	1.60	0.22	1.50	0.00
3	1.40	2.62	1.40	0.00
4	1.60	0.09	1.50	0.00
5	1.50	0.95	1.45	0.00
6	1.60	0.56	1.60	0.00
7	1.40	1.00	1.50	0.00
8	1.50	1.03	1.50	0.00
9	1.60	3.05	1.50	0.00
10	1.15	1.22	1.85	0.00
11	1.40	0.24	1.60	0.00
12	1.40	0.39	1.70	0.00
13	1.50	0.33	1.70	0.00
14	1.40	0.25	1.40	0.00



2021 Map of NAWMN Sites across the Tri-Basin NRD.

Crop Coefficients (Kc)			
Corn		Soybeans	
Stage	Kc	Stage	Kc
2 leaf	0.10	Cotyledon	0.10
4 leaf	0.18	1st Node	0.20
6 leaf	0.35	2nd Node	0.40
8 leaf	0.51	3rd Node	0.60
10 leaf	0.69	Beg. Bloom	0.90
12 leaf	0.88	Full Bloom	1.00
14 leaf	1.01	Beg. Pod	1.10
16 leaf	1.10	Full Pod	1.10
Silk – Beg. Dent	1.10	Beg. Seed	1.10
¼ Milk Line	1.04	Full Seed	1.10
Full Dent (½ Milk)	0.98	Yellow Leaf	1.00
¾ Milk Line	0.79	Beg. Mat.	0.90
Black Layer	0.60	Full Mat.	0.20
Full Maturity	0.10	Mature	0.10

CROP STAGE INFORMATION

Corn (R1-Silking to R3-Milk stage): Not as severe as R1-Silking, stress now can still have a profound effect on yield. As the kernels mature, the potential yield loss becomes less.

Avg. daily water use from July 26 – Aug 1 was 0.22"-0.30".

Soybeans (R4-Full Pod to R5-Beginning Seed stage): Demand for water and nutrients is large throughout the rapid seed filling period. Environmental stress from now til shortly after R6 (Full Seed) needs to be avoided.

Avg. daily water use from July 26 – Aug 1 was 0.22"-0.30".

July 26-Aug 1 (14 of 14 NAWMN sites reporting): Average weekly rainfall was 0.00 (range 0.00 to 0.00). Average weekly ET for corn was 1.74 and for soybeans was 1.74.

CROP ET INFORMATION

NAWMN Sites:

- UNL: <https://nawmn.unl.edu/ETdata/DataMap>
- Tri-Basin NRD: <https://www.tribasinnrd.org/nawmn>
- Email: Contact Curtis at 308-995-6121, Ext. 3
- CropWatch: <https://cropwatch.unl.edu/gdd-etdata>
- CNPPID: <https://www.cnppid.com/weatheret-data/>
- Texting: Contact TBNRD at 308-995-6688
- Email: Contact CNPPID at 308-995-3555

CORN STAGE		DESCRIPTION
R2	Blister	The kernels are white on the outside and resemble a blister in shape. The cob should be close to, if not, at full size by R2. The silks are beginning to dry out and darken in color.
R3	Milk	The kernels display a yellow color on the outside. Inner fluid is milky white. Silks are brown and dry or becoming dry.
R4	Dough	Most kernels contain semi-solid, pasty material.
SOYBEAN STAGE		DESCRIPTION
R5	Beginning Seed	At least one pod containing small seeds is present at one of the four uppermost main stem nodes that have fully developed leaves. You can hold a pod up to the bright sky to see the small developing seeds in the pod cavities.
R6	Full Seed	At least one pod whose cavities are completely filled with green seeds is present at one of the four uppermost main stem nodes that have fully developed leaves.

LAKE AND RIVER LEVELS

CNPPID Reservoir Elevation and Platte River Flow data listed below and other locations can be found on CNPPID's website at <http://cnppid.com/wp-content/uploads/2016/06/lakeRiverData.html>.

	August 5, 2021, 8:00 AM	1 Year Ago
Capacity of Lake McConaughy	62.2%	NA
Inflows to Lake McConaughy	270 cfs	652 cfs
Flows on the North Platte at North Platte	1230 cfs	1290 cfs
Flows on the South Platte at North Platte	103 cfs	152 cfs
Flows on the Platte at Overton	280 cfs	1870 cfs



*** 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@usda.gov. ***

WEBSITES OF INTEREST

NRCS Nebraska www.ne.nrcs.usda.gov
 Farm Service Agency www.fsa.usda.gov/
 TBNRD Home Page www.tribasinrrd.org/
 Central Irrigation District www.cnppid.com/
 HPRCC hprcc.unl.edu/
 UNL Cropwatch cropwatch.unl.edu/
 UNL Extension extensionpubs.unl.edu/
 K-State SDI Website www.ksre.ksu.edu/sdi
 No-till On The Plains www.notill.org
 Soil Health: www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/
 NE State Irrig Assoc www.nebraskastateirrigationassociation.org/

RAINFALL

Rainfall amounts listed below and other locations come from NeRAIN which can be found at website <https://nednr.nebraska.gov/NeRain/Maps/maps>.

Location:	July 22 – Aug 4	May 1 – Aug 4
Elwood 0.26 mi. S:	0.53	8.24
Bertrand 6.1 mi. SE:	1.19	13.09
Holdrege 0.61 mi. N:	0.88	11.59
Minden 7.2 mi. W:	0.43	10.73
Minden 5.8 mi. E:	0.57	8.69

Average Rain for May-July in Holdrege = 11.32 Inches

USDA - Natural Resources Conservation Service

1609 Burlington Street
 PO Box 798
 Holdrege, NE 68949-0798
 308-995-6121, Ext. 3

309 Smith Street
 PO Box 41
 Elwood, NE 68937-0041
 308-785-3307, Ext. 3



1005 South Brown Street
 Minden, NE 68959-2601
 308-832-2280, Ext. 3

Central Nebraska Public Power & Irrigation District

415 Lincoln Street
 PO Box 740
 Holdrege, NE 68949
 308-995-8601



Tri-Basin Natural Resources District

1723 Burlington Street
 Holdrege, NE 68949
 308-955-6688



Nebraska Extension

1308 2nd Street
 Holdrege, NE 68949



PO Box 146
 Elwood, NE 68937

308-995-4222

308-785-2390

424 North Colorado
 PO Box 31
 Minden, NE 68959
 308-832-0645

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