Tri-Basin Irrigator

Volume 21, Issue 8 August 21, 2025

PROGRAM INFORMATION

EQIP: SIGN-UP NOW FOR 2026 FUNDS.

NSWCP: GET YOUR IRRIGATION APPLICATIONS IN BY AUGUST
31ST FOR FIRST CHANCE AT THE IRRIGATION FUNDS. FLOW METERS
AND NON-IRRIGATION APPLICATIONS ARE APPROVED MONTHLY.

ENERGY EFFICIENCY GRANT: APPLICATIONS FOR 2026 FUNDS WILL START BEING TAKEN ON OCTOBER 1, 2025. CONTACT JOLENE AT RURAL DEVELOPMENT AT THE KEARNEY USDA SERVICE CENTER AT 308-455-9840 OR AT JOLENE, JONES @USDA, GOV.

CALENDAR OF EVENTS

AUG 22-SEPT 1: NEBRASKA STATE FAIR

GOTO HTTPS://WWW.STATEFAIR.ORG/

SEPT 2: CNPPID BOARD OF DIRECTORS MEETING

SEPT 9-11: HUSKER HARVEST DAYS

GOTO HTTPS://WWW.HUSKERHARVESTDAYS.COM/EN/HOME.HTML

SEPT 17: TBNRD BOARD MEETING

When is My Last Irrigation?

Most corn is at Dough stage to 1/4 Milk Line stage. The chart on the right side of this page says you need 3.75 inches of water to finish your corn at 1/4 Milk Line and 7.5 inches at Dough. Using the example on the right side of this page, you can estimate how much more water needs applied to get the corn to maturity. The example ends the season at 65% moisture.

We need to start managing our moisture levels down so we can make room for the FREE off-season moisture. No need to pay for plenty of water at seasons end only to watch it leach on out of the rootzone taking valuable nutrients with it.

Here are a few thoughts as we start to close the year.

- Corn seems to shut down rather quickly. Moisture that we thought was going to be used was not. We've ended up with more moisture at maturity than predicted.
- 2. From 2011 through 2017, average rainfall from 1/2 milk line to black layer was 0.75 inches. 0.21 inches was the low and 1.56 was the high.
- Soil moisture sensors are a great tool to see how rains fill the profile, how much water the corn is actually using, at what depth water is being removed by the crop, etc.
- 4. In order to learn if that last irrigation you made was worth it or not, put that last 0.5 inch or so on part of the pivot to get a comparison.
- Be patient. Don't end the season too soon. You may catch a rain. You can always irrigate later if need be. Keep monitoring and making adjustments as the year progresses.

CURTIS'S COLUMN

Predicting Last Irrigation

Needed info: 1. Available Water Capacity (AWC) of soil, 2. goal for soil moisture level at crop maturity, 3. current soil moisture level to a four-foot depth (unless roots are not that deep due to compaction, too much water early, etc.), 4. current crop stage, and 5. water use from current crop stage to maturity (see chart below).

	Growth Stage	Approx. Days to Maturity	Water Use to Maturity
Corn	Dough (R4)	34	7.5"
	Beg. Dent (R4.7)	24	5.0"
	1/4 Milk Line (R5)	19	3.75"
	½ Milk Line (Full Dent)	13	2.25"
	¾ Milk Line	7	1.0"
	Maturity (R6)	0	0.0"
Soy	Full Pod (R4)	37	9.0"
Beans	Beg. Seed (R5)	29	6.5"
	Full Seed (R6)	18	3.5"
	Leaves Beg. To Yellow (R6	3.5) 10	1.9"
	Beg. Maturity (R7)	0	0.0"

You can get a copy of NebGuide G1871 "Predicting the Last Irrigation of the Season" online at

http://extensionpublications.unl.edu/assets/pdf/q1871.pdf.

Predicting Last Irrigation Example

Crop: Corn Growth Stage: 1/4 Milk Line

Current Moisture: 80% Year-End Moisture Goal: 65%

Water Use To Maturity: 3.75 in. (see chart above)

Soil Type: Holdrege Silt Loam = an AWC of 2.25 in. per ft. (Soil information available at your local NRCS office)

- 1. AWC (2.25 in./ft.) x root zone (4 ft.) = 9.0 in. Total AWC
- 2. Crop maturity moisture goal of 65% x 9.0 in. Total AWC = Minimum Water Balance (MWB) of 5.85 inches in 4 ft.
- 3. Current moisture level of 80% x 9.0 in. Total AWC = 7.2 in. current available water
- 7.2 in. current available water 5.85 in. of MWB =
 1.35 in. of available water to the crop
- 5. 1.35 in. of available water 3.75 in. needed to maturity = -2.40 in. of water
 (Negative: water is needed. Positive: done irrigating.)
- 2.40 in. of irrigation and rainfall is needed between now and crop maturity.

Note: It's recommended to periodically check soil moisture levels & crop stages, repeating this process through crop maturity. Different hybrids can utilize moisture differently, did all rainfall enter the soil profile, etc.

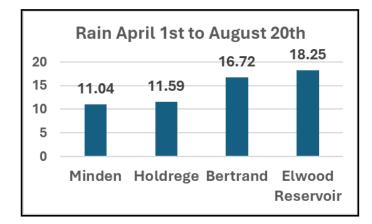
If you have any questions, you can contact Curtis Scheele at curtis.scheele@usda.gov or call him at 308-995-6121, Ext. 3.

CNPPID NOTES



Irrigation Season Ending

Monday August 18th began Central's 6th and final two-week scheduled irrigation run. The headgates to Central's irrigation canals are currently scheduled to close on Friday September 5th, with drain down water available for irrigation. During drain down, customers will need to coordinate with their Irrigation Service Specialist (ISS) for the availability of water to accommodate their desired deliveries. The following graph shows Central's recorded rainfall from April 1st to August 20th located at Minden, Holdrege, Bertrand, and Elwood Reservoir.



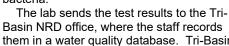
Visit www.cnppid.com or follow @CNPPID on Facebook, Instagram and Twitter for updates throughout the year.

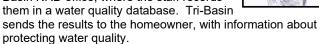
Tri-Basin NRD News



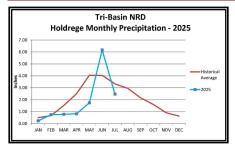
Free Domestic Water Testing

Tri-Basin NRD wants rural residents to have safe drinking water. Any district resident who uses a rural household water well can request NRD staff to sample their well once per year at no charge. The lab will test the sample for nitrates and coliform bacteria.





Monthly Temperature and Precipitation



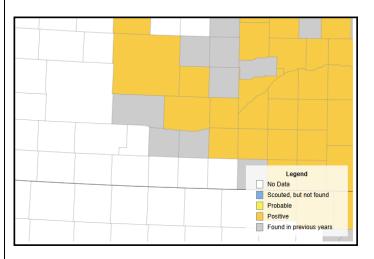
Are you interested in how monthly data compares to monthly averages? Our staff keeps track of daily temperatures and precipitation for Holdrege and compiles the data

into charts that compare monthly totals to the average for Holdrege. This information is updated on our website monthly and can be found at https://www.tribasinnrd.org/informationoutreach/weather-data under Holdrege Monthly Weather Data.

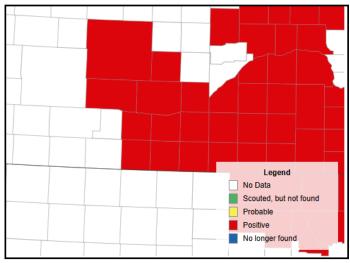
NEBRASKA EXTENSION EXTRAS RETENSION



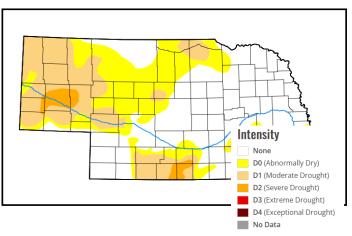
Tar Spot of Corn Map - 2025



Southern Rust of Corn Map - 2025



Drought Monitor Map - August 14, 2025



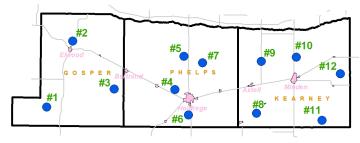
By Curtis Scheele: Water Mgt. Specialist, NRCS, Holdrege, NE

NAWMN 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) = Reference ET x Kc

	Aug 4 – Aug 10		Aug 11 – Aug 17	
Site	Reference ET	Rain	Reference ET	Rain
1	1.40	0.35	2.00	0.22
2	1.30	0.21	1.80	0.21
3	1.30	0.31	1.80	0.40
4	1.30	0.25	1.70	0.06
5	1.40	0.27	1.70	1.00
6	1.30	0.25	1.70	0.05
7	1.40	0.15	1.70	0.54
8	1.30	0.46	1.50	1.00
9	1.20	0.63	1.60	0.00
10	1.20	0.71	1.60	0.11
11	1.50	1.60	1.30	0.10
12	1.30	0.38	1.60	0.47



2025 Map of TBAWMN Sites across the Tri-Basin NRD.

Crop Coefficients (Kc)			
Corn		Soybeans	
Stage	Kc	Stage	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 - Beg. Dent	1.10	Beg. Seed (R5)	1.10
1/4 Milk Line	1.04	Full Seed (R6)	1.10
Full Dent (1/2 Milk)	0.98	Yellow Leaf (R6.5)	1.00
3/4 Milk Line	0.79	Beg. Mat. (R7)	0.90
Black Layer	0.60	Full Mat. (R8)	0.20
Full Maturity	0.10	Mature	0.10

CROP STAGE INFORMATION

Corn (R4 - Dough to R5-1/4 Milk Line stage): At R4.7, Beginning Dent, kernels are beginning to dent at the base of the ear. R5.5, Full Dent, is when the milk line is ½ way down the kernel. Knowing this will help in determining last irrigation.

Avg. daily water use from Aug 11 – Aug 17 was 0.19"-0.31".

Soybeans (R4-Full Pod to R6-Full Seed): 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 Aug 11 – Aug 17 was 0.20"-0.31".

Aug 11-Aug 17 (12 of 12 TBAWMN sites reporting): Avg. weekly rainfall was 0.35 (range 0.00 to 1.00). Avg. weekly ET for corn was 1.85 and for soybeans was 1.76.

CROP ET INFORMATION

TBAWMN Sites: https://www.tribasinnrd.org/tbawmn

CropWatch: https://cropwatch.unl.edu/gdd-etdata

Texting: Sasha Hahn at TBNRD: 308-995-6688

CORN STAGE		DESCRIPTION		
R4.7	Beg Dent	Kernels at the base of the ear are beginning to dent.		
R-5	1/4 Milk Line	All or nearly all kernels are dented. Milk line or starch line appears shortly after denting as a line across the kernel when it is viewed from opposite the embryo side and will advance toward the base of the kernel (toward the cob).		
R-5.5	Full Dent - 1/2 Milk Line	Starch line is 1/2 way down the kernel. Top 1/2 is hard and bottom 1/2 is softer near the cob.		

SOYBEAN STAGE		DESCRIPTION	
R5	Beg 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.	
R6.5	Full seed / yellow leaf	Leaves begin to yellow, beginning in the lower canopy and progressing upwards.	

LAKE AND RIVER LEVELS

CNPPID Reservoir Elevation and Capacity as well as Platte River Flow data listed below and other locations can be found on CNPPID's website at http://cnppid.com/wpcontent/uploads/2016/06/lakeRiverData.html.

	August 21, 2025, 8:00 AM	1 Year Ago
El. & Cap. – Lake McConaughy	3223.7 ft - 43.3%	3231.0 ft - NA%
Inflows to Lake McConaughy	490 cfs	1020 cfs
Flows on the North Platte at North Platte	325 cfs	484 cfs
Flows on the South Platte at North Platte	155 cfs	110 cfs
Flows on the Platte at Kearney	36 cfs	195 cfs

Have a Great Labor Day Weekend!!! Enjoy the youtube video link below.

Workin' Man Blues - by Merle Haggard https://www.voutube.com/watch?v=EVA35dI0MTk&I ist=RDEVA35dI0MTk&start radio=1

WEBSITES OF INTEREST

NRCS Nebraska Farm Service Agency TBNRD Home Page Central Irrigation District **UNL** Cropwatch **UNL** Extension **Drought Monitor**

www.ne.nrcs.usda.gov www.fsa.usda.gov www.tribasinnrd.org/ www.cnppid.com/ cropwatch.unl.edu extensionpubs.unl.edu/

https://droughtmonitor.unl.edu/nadm/Home.aspx

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/

RAINFALI

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

Location :	Aug 7 <u> – Aug 20</u>	May 1 - Aug 20
Elwood 1.81 mi. NW:	0.25	13.37
Loomis 0.2 mi. SW:	0.73	16.31
Holdrege 1.7 mi. W:	0.22	9.89
Minden 7.2 mi. W:	0.50	11.26
Minden 5.8 mi. E:	0.64	16.37

Average Rain for May-August in Holdrege = 14.21 Inches

*** 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.

USDA - Natural Resources Conservation Service

1609 Burlington Street PO Box 798 Holdrege, NE 68949-0798

308-995-6121, Ext. 3

Natural Resources Conservation Service 309 Smith Street

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

1005 South Brown Street Minden, NE 68959-2601

308-832-1895, Ext. 3

Central Nebraska Public Power & Irrigation District

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



1723 Burlington Street Holdrege, NE 68949 308-995-6688

Nebraska Extension

1308 2nd Street Holdrege, NE 68949

308-995-4222

EXTENSION

PO Box 146 Elwood, NE 68937

308-785-2390

CENTRAL

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

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