

Tri-Basin Irrigator

Volume 22, Issue 8

August 20, 2026

PROGRAM INFORMATION

EQIP: SIGN-UP NOW FOR 2027 FUNDS TO ENSURE NOT MISSING THE CUTOFF DATE.

CSP: SIGN-UP NOW FOR 2027 FUNDS TO ENSURE NOT MISSING THE CUTOFF DATE.

NSWCP: APPLICATIONS CAN BE TAKEN ANY TIME.

APPLICATIONS MUST BE SIGNED BY THE OWNER. INSTALLATION WORK CANNOT BE STARTED UNTIL APPROVED.

ENERGY EFFICIENCY GRANT: FOR PROGRAM INFORMATION, CONTACT JOLENE JONES AT RURAL DEVELOPMENT AT THE KEARNEY USDA SERVICE CENTER AT 308-455-9840 OR AT JOLENE.JONES@USDA.GOV.

CALENDAR OF EVENTS

AUG 28 – SEPT 7: NEBRASKA STATE FAIR

GOTO [HTTPS://WWW.STATEFAIR.ORG](https://www.statefair.org)

SEPT 7: LABOR DAY – GOV'T OFFICES CLOSED

SEPT 8: CNPPID BOARD OF DIRECTORS MEETING

SEPT 15 - 17: HUSKER HARVEST DAYS

GOTO [HTTPS://WWW.HUSKERHARVESTDAYS.COM/EN/HOME.HTML](https://www.huskerharvestdays.com/en/home.html)

SEPT 16: TBNRD BOARD MEETING

When is My Last Irrigation?

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. 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.

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

1. 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 2025 (last 15 years) across TBNRD:
Avg rain 1/4 milk to 1-week prior to black layer was 1.41"
Low 0" to high of 3.33" - 12 of 15 years > 0.68 inches
Avg rain 1/2 milk to 1-week prior to black layer was 0.77"
Low 0" to high of 3.15" - 7 of 15 years > 0.59 inches
Avg. rain between 1/4 and 1/2 milk line was 0.64"
Low 0" to high of 2.42" - 9 of 15 years > 0.30 inches
3. 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. To learn if that last irrigation was worth it or not, put that last 0.5 inch or so on part of the pivot to get a comparison.
5. Be patient. As mentioned in #2 above, odds are, there will be rain after 1/4 milk line. Don't be so quick to irrigate and fill your profile in order to end the season early. If you irrigate and catch that rain, not only have you wasted money on that last irrigation, you have also reduced the amount of room to store off-season moisture. That can lead to leaching valuable nitrogen into our already nitrogen high groundwater. Again, wasted money on lost nitrogen that can be used for 2027 corn. You can always irrigate later if needed. Keep monitoring your sensors and making adjustments to the end.

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"
	1/2 Milk Line (Full Dent)	13	2.25"
	3/4 Milk Line	7	1.0"
	Maturity (R6)	0	0.0"
Soy Beans	Full Pod (R4)	37	9.0"
	Beg. Seed (R5)	29	6.5"
	Full Seed (R6)	18	3.5"
	Leaves Beg. To Yellow (R6.5)	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/g1871.pdf>.

Predicting Last Irrigation Example

Crop: Corn Growth Stage: 1/4 Milk Line

Current Moisture: 85% 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)

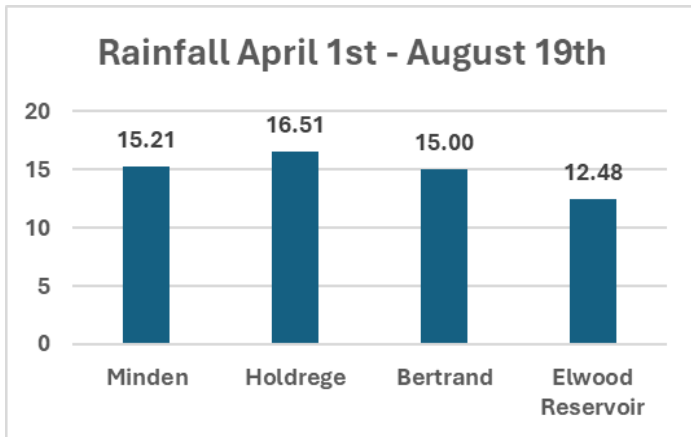
1. AWC (2.25 in./ft.) x root zone (4 ft.) = **9.0 in. Total AWC**
2. Crop maturity moisture goal of 65% x 9.0 in. Total AWC = **Minimum Water Balance (MWB) of 5.85 inches in 4 ft.**
3. Current moisture level of 85% x 9.0 in. Total AWC = **7.65 in. current available water**
4. 7.65 in. current available water – 5.85 in. of MWB = **1.80 in. of available water to the crop**
5. 1.80 in. of available water – 3.75 in. needed to maturity = **- 1.95 in. of water**
(Negative: water is needed. Positive: done irrigating.)
6. **1.95 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.

Irrigation Season Ending

Monday, August 17th, 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 4th, 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 for delivery. The following graph shows Central's recorded rainfall from April 1st to August 19th located at Minden, Holdrege, Bertrand, and Elwood Reservoir.



Find us at www.cnppid.com or @CNPPID on Facebook, Instagram, X and LinkedIn.

Visit Colors of Water Tool <https://cnppid-cow.vercel.app>

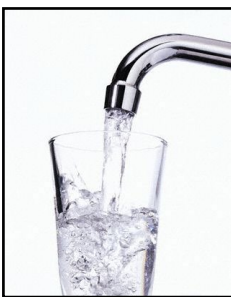
TRI-BASIN NRD NEWS



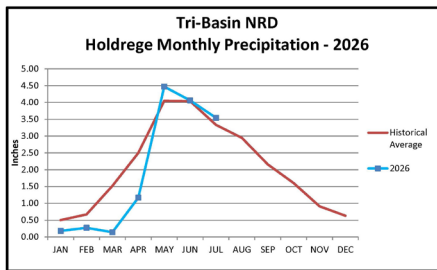
Free Domestic Water Testing

Tri-Basin NRD helps rural residents protect their drinking water. District residents who use a rural household well may request one free well-water test each year. Tri-Basin staff will collect the sample, and a lab will test it for nitrates and bacteria.

After testing, the lab sends the results to the Tri-Basin NRD office. Staff add the results to the water quality database, then send them to the homeowner along with information on how to help protect water quality.



Monthly Temperature and Precipitation



Want to see how this month's weather compares with average conditions in Holdrege? Tri-Basin staff track daily temperature and precipitation and use the data to create monthly graphs. The graphs

compare each month's totals with Holdrege's monthly averages. Updated charts are posted each month at <https://www.tribasinprd.org/information-outreach/weather-data> under **Holdrege Monthly Weather Data**.

Managing Drought-Affected Corn Crops

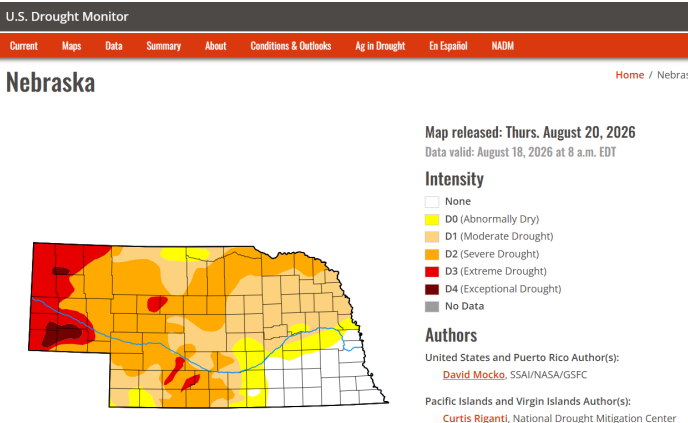
Drought has been an issue for all farmers in Nebraska this year. If you have any dryland acres that you put into production, you may have a corn crop that is not going to yield well and you may have questions on what needs to be done. Should you cut the loss and graze it? Should you claim it on crop insurance? What can I do to make the best of a bad situation? The first step to these questions is to contact your crop insurance agent and talk with them and see what practices they would recommend following. Not contacting your crop insurance agent could affect any claims or APH. Another thing to consider before any of these decisions are your pesticide applications. Before making any of these decisions, make sure you are outside of any and all pre-harvest intervals.

Grazing presents the lower risk of nitrate toxicity than harvesting the crop as hay. This is due to the cattle grazing the corn as forage much slower and can selectively graze the leaves and upper portions of the plant where nitrate concentrations are lower. Corn as a forage is high quality and high moisture which helps slow the nitrate release in rumen. If ears are present, nitrate concentrations in the plant begin to reduce. However, starch intake increases which can carry its own risks with too much grain on the plants if the cattle are not properly adjusted. This can lead to ruminal acidosis.

Silage production is another option to avoid the most nitrate rich parts of the plant by cutting the corn 8 to 12 inches above the ground. Fermentation will reduce concentrations by about 30%-60%. The feed value of fermented corn without ears is about 70%-80% and with ears is about 80%-90%. If the plant is about 65% moisture, you should be able to bunker the silage successfully. Above this, it can be too wet for proper fermentation.

Haying the corn residue is generally the least desirable course of action because the plant may be too wet to properly dry down for safe baling and there are no ways to reduce the nitrate concentrations in the plant. If you hay the corn plants, be sure to take representative samples with a hay probe and have it analyzed for nitrate concentrations. Use these results to develop a feeding plan for the hay.

For more information on all of this go to <https://cropwatch.unl.edu/2023/forage-options-drought-stressed-non-irrigated-vegetative-corn-and-nitrate-concerns/>.

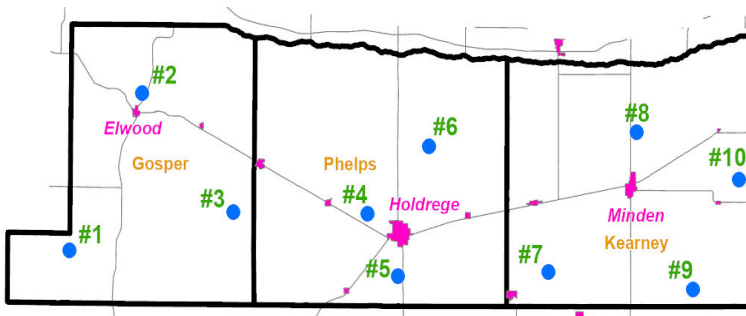


NAWMN CROP ET INFORMATION

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

$$\text{Inches of Crop Water Use (ET)} = \text{Reference ET} \times K_c$$

	Aug 3 – Aug 9		Aug 10 – Aug 16	
Site	Reference ET	Rain	Reference ET	Rain
1	1.40	0.65	1.80	0.98
2	1.20	0.22	1.50	1.05
3	1.20	0.22	1.50	2.10
4	1.10	0.37	1.50	1.80
5	1.20	0.45	1.50	1.50
6	1.10	0.20	1.30	1.14
7	1.10	0.37	1.40	2.73
8	1.10	0.07	1.30	2.81
9	1.00	0.38	1.50	3.12
10	1.10	0.90	1.50	3.10



2026 Map of TBAWMN 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 (R3-Milk 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 10 – Aug 16 was 0.20"-0.27".

Soybeans (R4-Full Pod to R6-Full 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 Aug 10 – Aug 16 was 0.20"-0.28".

Aug 10-August 16 (10 of 10 TBAWMN sites reporting): Avg. weekly rainfall was 2.03 (range 0.98 to 3.12). Avg. weekly ET for corn was 1.60 and for soybeans was 1.65.

CROP ET INFORMATION

TBAWMN Sites: <https://www.tribasinrrd.org/tbawmn>

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

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

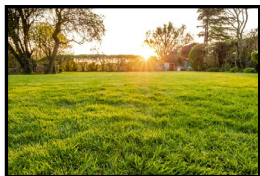
CORN STAGE		DESCRIPTION
R4	Dough	Most kernels contain semi-solid, pasty material.
R4.7	Beg Dent	Kernels at the base of the ear are beginning to dent.
R5	1/4 Milk Line	All or nearly all kernels are dented. Milk line or starch line appears shortly after denting as a line across the kernel when it is viewed from opposite the embryo side and will advance toward the base of the kernel (toward the cob).
SOYBEAN STAGE		DESCRIPTION
R5	Beg Seed	At least one pod containing small seeds is present at one of the four uppermost main stem nodes with 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 rapidly, 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/wp-content/uploads/2016/06/lakeRiverData.html>.

	August 20, 2026, 8:00 AM	1 Year Ago
El. & Cap. – Lake McConaughy	3203.6 ft - 30.8%	3223.7 ft - NA%
Inflows to Lake McConaughy	466 cfs	455 cfs
Flows on the North Platte at North Platte	708 cfs	326 cfs
Flows on the South Platte at North Platte	466 cfs	455 cfs
Flows on the Platte at Kearney	154 cfs	42 cfs

*Leaves of green, yet fall draws near.
August lingers, hold it dear,
Moments of warmth, fleeting and bright,
A gentle sun, a soft twilight.
- Unknown*



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/
 UNL Cropwatch cropwatch.unl.edu
 UNL Extension extensionpubs.unl.edu/
 Drought Monitor <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/

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:	Aug 6 – Aug 19	May 1 – Aug 19
Elwood 1.81 mi. NW:	1.03	12.42
Loomis 0.2 mi. SW:	2.65	13.85
Holdrege 0.49 mi. WNW:	2.38	12.46
Minden 7.2 mi. W:	3.01	12.32
Minden 8.8 mi. ESE:	2.62	15.30

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

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
 308-995-6688



Nebraska Extension



1308 2nd Street
 Holdrege, NE 68949
 308-995-4222

PO Box 146
 Elwood, NE 68937
 308-785-2390

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

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