

PROGRAM INFORMATION

EQIP: CONTRACTS CURRENTLY BEING WRITTEN ON PRE-APPROVED APPLICANTS. AS ADDITIONAL FUNDS BECOME AVAILABLE, ADDITIONAL PRE-APPROVALS MAY TAKE PLACE.

CSP: NEW 2020 PRE-APPROVED APPLICATIONS ARE CURRENTLY HAVING CONTRACTS SIGNED AND SUBMITTED FOR OFFICIAL CONTRACT OBLIGATION. – RENEWAL APPLICATIONS WILL BE ASSESSED AND RANKED AFTER OCTOBER 1ST.

NSWCP: NEW FUNDS HAVE ARRIVED. GET YOUR IRRIGATION APPLICATIONS IN BY AUGUST 31ST FOR FIRST CHANCE APPROVALS.

ENERGY EFFICIENCY GRANT: SIGN-UP DEADLINE FOR 2021 FUNDS IS OCTOBER 31, 2020. 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 27: VIRTUAL WC WATER AND CROPS FIELD DAY. FOR MORE INFO OR TO REGISTER, GO TO: [HTTPS://GO.UNL.EDU/T5QQ](https://go.unl.edu/t5qq)

SEPT 7: LABOR DAY – GOV'T OFFICES CLOSED

SEPT 8: CNPPID BOARD OF DIRECTORS MEETING

SEPT 8: TBNRD BOARD MEETING

SEPT 15-17: VIRTUAL HUSKER HARVEST DAYS. FOR MORE INFO, GO TO: [HTTPS://WWW.HUSKERHARVESTDAYS.COM/EN/HOME.HTML](https://www.huskerharvestdays.com/en/home.html)

When is My Last Irrigation?

The majority of the corn is approaching 1/4 milk line if not already there. If that is where your crop stage is at, then the chart on the right side of this page says you need 3.75 inches of water to finish your corn. Based on the example, you are on the edge of being done irrigating if you have an average of 80% moisture to a depth of 4 feet. If your corn has only rooted down to 3 feet, then 80% average moisture to 3 feet in your soil calculates to your needing another 1.05 inches. Aah, the benefits of deeper roots. You can use this same procedure for soybeans.

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.

A couple of thoughts are:

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 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. The last 2 years (2018 and 2019) had higher amounts.
3. 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.
4. 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.

CURTIS'S COLUMN

Predicting Last Irrigation:

Needed info: 1. Available Water Capacity (AWC) of soil, 2. current amount of plant available water to a four foot depth (unless roots are not that deep due to compaction, too much water early, etc.), 3. current crop stage, and 4. normal water use from current crop stage to maturity. This prediction assumes no rainfall to crop maturity. If rainfall occurs, the process must be reevaluated.

The following is a chart for normal water use requirements from various crop stages to maturity.

	Growth Stage	Approx. Days to Maturity	Water Use to Maturity
Corn	Dough (R4)	34	7.5"
	Beg. Dent (R4.7)	24	5.0"
	¼ 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 (R6.5)	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
 Moisture: 80% Water Use To Maturity: 3.75 in.
 Soil Type: Holdrege Silt Loam = an AWC of 2.25 in. per ft.
 (Soil information available at your local NRCS office)

1. AWC x root zone (4 ft. depth) = **9.0 in. Total AWC**
2. Maximum water depletion of 60% x 9.0 in. = **5.4 in. of maximum water depletion in 4 ft. root zone**
3. Current soil water already depleted (measured) = **1.80 in.**
 80% avg. soil moisture to 4 ft. (20% avg. depletion)
 0.20 x 2.25 in./ft. x 4 ft.
4. Remaining plant available water = **3.6 in.**
 (5.4 maximum water depletion minus 1.8 already depleted)
5. Irrigation requirement = **0.15 inches of irrigation water needed for plant to reach maturity.**
 (3.75 in. of water to reach maturity minus 3.6 in. of water available)

Note: This all assumes no rainfall. Should rainfall occur, the process needs to be repeated. It's also recommended to periodically check soil moisture & crop stages and repeat this process through crop maturity.

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.

Legislature passes bill to clear up accountability:

A bill that would remove obstacles to better constituent representation by members of Central’s board of directors was passed by the Nebraska Legislature on Aug. 3 and signed into law by the governor.

Specifically, LB1055 would allow members of a public power and irrigation district’s board to represent the interests of their constituents when it comes to discussing and providing input on matters related to standard form water service agreements and lot leases at District-owned property.

Sen. Matt Williams (Dist. 36, Gothenburg) introduced LB1136 which contained the necessary changes to the Accountability and Disclosure Act. The bill was amended into LB1055, which was introduced by Sen. Tom Brewer (Dist. 43, Gordon), that changes provisions regarding elections and the Nebraska Political Accountability and Disclosure Act.

Central’s board members are now allowed to have an interest in a contract with the district. They will still be required to disclose a potential conflict of interest to the Accountability and Disclosure Commission and abstain from voting on the agreements in question.

Board members will, however, be free to discuss and provide input to their fellow board members about said agreements, thus allowing them to more properly represent constituents who elected them to the board.

The bill also repeals another section of law to eliminate the prohibition against a member of certain boards from having an interest in a contract with the governmental entity. It eliminates the former possibility that board members with lease agreements or water service agreements could be removed from the board if they are party to certain contracts.

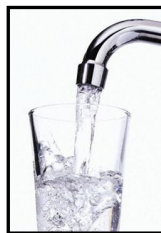
Central and its constituents would like to express thanks to Sens. Williams and Brewer for their efforts to secure passage of LB1055/LB1136.

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 sample will be tested for nitrates and coliform bacteria.



Test results are sent to the Tri-Basin NRD office, where they are recorded in a water quality database. The results are forwarded to the homeowner, along with information about protecting water quality.

Free Radon Test Kits:

Radon is a colorless, odorless gas that comes from the soil.

This gas can accumulate in your home and cause health problems. The only way to know if your home has radon is to test for it.

Tri-Basin NRD has a limited number of test kits available to residents who are concerned about the radon level in their home.



For more information on either of these programs, contact Tri-Basin NRD at (308) 995-6688.

Fall Alfalfa Drilling Season:

Now is the recommended time (Aug. 15 – Sep. 10) for fall drilling of new alfalfa stands. Ideally, this will allow at least six weeks of growth before our average first frost on Oct. 19.

Irrigation can be critical for germinating and establishing new tender alfalfa plants; otherwise, producers will need timely rains. The recommended fall seeding rate is 10 to 15 pounds per acre.

Alfalfa grows best at a soil pH of 6.5 to 7.5; and test both the surface and subsoil zones for pH levels. Inoculation of alfalfa seed is recommended with fields where alfalfa was grown previously. Use fresh inoculant and the proper species of *Rhizobium* for alfalfa.

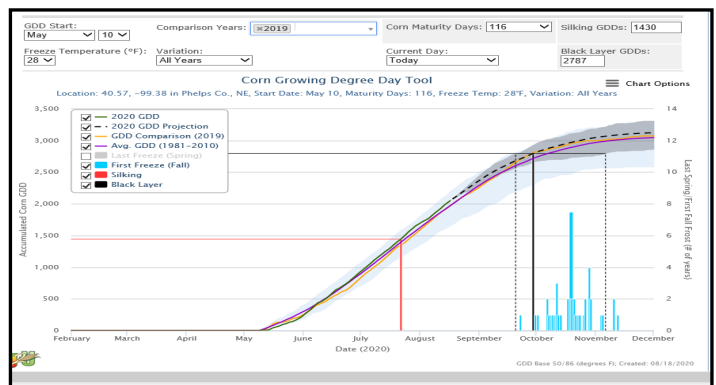
Weed control is also important for fall drilling. Our 2020 Nebraska Extension “Guide for Weed, Disease, and Insect Management in Nebraska,” EC130 has an in-depth review of labelled herbicides for alfalfa (pages 76-78).

2020 Corn Black Layer Prediction Model:

The Midwest Regional Climate Center provides several free online decision tools based on a 30-year historical data pool. Nebraska Extension is among the 11-states in the Midwest Region providing the Corn Growing Degree Day (GDD) decision tool. Average and year-to-year comparison decisions regarding: climate risk; activity planning and/or marketing can be used with this free Corn GDD tool:

<https://mrcc.illinois.edu/U2U/gdd/>. For specific data, click on your Nebraska county using the MRCC state map.

Below is an illustration using this tool for a Phelps county corn field **planted on May 10, 2020** with a 116 day full maturity hybrid. The **projected black layer full maturity** (2707 GDD’s) date is **Sep. 29th**. Please note that a medium maturity hybrid that was planted on the same day would reach black layer on Sep. 17; and an early hybrid planted on the same day is predicted to black layer on Sep. 2. Therefore, the predicted maturity date is about one week earlier than last year.



Grain Storage Management:

Due to potentially large fall crop inventories, many producers may be considering using on-farm grain bins and/or grain storage bags. Although the Nebraska Extension Grain Storage specialist position is still open, our <https://cropwatch.unl.edu> website links Extension grain storage resources with several educational partners including: Purdue; North Dakota State; Minnesota, Kansas State and Iowa State Universities. Featured topics include: Engineering Grain Storage; Storage Insects; Temporary /Emergency & Aeration Management.

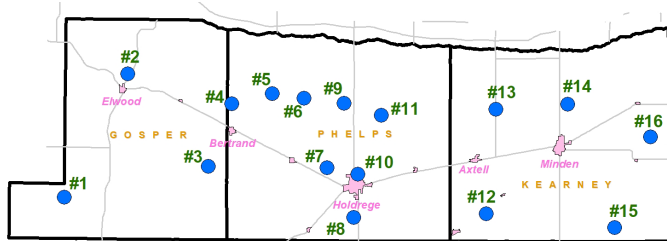
NAWMN CROP ET INFORMATION

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

Inches of Crop Water Use (ET) =

Evaporation x Kc

Site	Aug 3 – Aug 9		Aug 10 – Aug 16	
	Evaporation	Rain	Evaporation	Rain
1	1.60	0.00	1.60	0.23
2	1.50	0.93	1.50	0.00
3	1.50	0.66	1.50	0.05
4	1.50	0.30	1.50	0.00
5	NA	NA	NA	NA
6	1.40	0.18	1.40	0.05
7	1.40	0.09	1.30	0.04
8	1.40	0.10	1.30	0.06
9	1.35	0.13	1.40	0.00
10	NA	NA	NA	NA
11	1.40	0.10	1.50	0.19
12	1.10	0.13	1.30	0.00
13	1.40	0.13	1.60	0.08
14	1.30	0.12	1.60	0.12
15	1.30	0.04	1.50	0.00
16	1.30	0.11	1.70	0.00



2020 Map of NAWMN Sites across the Tri-Basin NRD.

Corn Stage		DESCRIPTION
R5	1/4 Milk Line	All or nearly all kernels are dented. Milk / 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).
R5.5	Full Dent / 1/2 Milk Line	The starch line is 1/2 way down the kernel. Top 1/2 is hard, bottom 1/2 is softer near the cob.
R5.8	3/4 Milk Line	The starch line is 3/4 the way down the kernel.

Soybean Stage		DESCRIPTION
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.
R7	Beginning Maturity	At least one (normal) pod that has attained its final mature color (tan or brown, depending on variety) is present on any main stem node. 0.0 inches needed for yield.

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): Stress at milk stage, although not as severe as at silking, can still have a profound effect on yield. However, one can start taking advantage of subsoil moisture in the 3rd and 4th foot.

Avg. daily water use from Aug 10 – Aug 16 was 0.19"-0.27".

Soybeans (R5-Beginning Seed to R6-Full Seed stage): Environmental stress from now til shortly after R6 (Full Seed) needs to be avoided. However, one can slowly start utilizing moisture from the 3rd and 4th foot.

Avg. daily water use from Aug 10 – Aug 16 was 0.20"-0.27".

Aug 10-Aug 16 (14 of 16 NAWMN sites reporting): Average weekly rainfall was 0.06 (range 0.00 to 0.23). Average weekly ET for corn was 1.59 and for soybeans was 1.57.

CROP ET INFORMATION

NAWMN Sites:

<https://www.cnppid.com/weatheret-data/nebraska-agricultural-water-management-network/>

<https://nawmn.unl.edu/ETdata/DataMap>
Email: NRCS: 308-995-6121, Ext. 3

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

CNPPID: <https://www.cnppid.com/weatheret-data/>

Texting: TBNRD: 308-995-6688 or UNL: 308-995-4222

Email: CNPPID: 308-995-3555

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 20, 2020, 8:00 AM	1 Year Ago
Capacity of Lake McConaughy	65.3%	NA
Inflows to Lake McConaughy	536 cfs	2760 cfs
Flows on the North Platte at North Platte	857 cfs	840 cfs
Flows on the South Platte at North Platte	118 cfs	369 cfs
Flows on the Platte at Overton	413 cfs	1770 cfs

Cherish what you have because not all people are blessed with the things that you are enjoying.

- Faith Starr

WEBSITES OF INTEREST

Soil Health:

www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/
 Climate agclimatenebraska.weebly.com
 NRCS Nebraska www.ne.nrcs.usda.gov
 Central Irrigation District www.cnppid.com/
 TBNRD Home Page www.tribasinrrd.org/
 Farm Service Agency www.fsa.usda.gov
 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

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 0.26 mi. S:	0.00	11.37
Bertrand 6.1 mi. SE:	0.19	11.23
Holdrege 0.99 mi. E:	0.00	9.18
Minden 7.2 mi. W:	0.00	9.08
Minden 5.8 mi. E:	0.00	11.06

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
 308-832-1895, 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

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

308-995-4222

308-785-2390

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident. Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English. To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at [How to File a Program Discrimination Complaint](http://www.fda.gov/programdiscrimination) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: mailto:program.intake@usda.gov. USDA is an equal opportunity provider, employer, and lender.