Tri-Basin Irrigator

Volume 21, Issue 5 **July 10, 2025**

Program Information

EQIP: **Sign-up now for 2026 funds.**

CSP: **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: **It was announced on June 30th that USDA-Rural Development will not accept Rural Energy for America Program (REAP) applications from June 1, 2025 through September 30, 2025 due to the popularity of the program and the current backlog of applications. They currently anticipate accepting both REAP Inflation Reduction Act (IRA) and Farm Bill applications starting on October 1, 2025, the beginning of Fiscal Year 2026 funding. Financial assistance is for converting gravity systems to pivots or SDI, and natural gas/propane/diesel engines to electric motors, well rebowls, etc. For more `information contact Jolene at Rural Development at the Kearney USDA Service Center at 308-455-9840 or at *jolene.jones@usda.gov*.**

Calendar of Events

July 16: TBNRD Board Meeting
July 18-20: Kearney County Fair
July 19-24: Phelps County Fair
July 24-27: Kearney County Fair
Aug 4: CNPPID Board of Directors Meeting

Leaf Tissue Samples Prior to Tassel (CSP)

For CSP contract holders who are getting 2025 payments for corn leaf tissue samples and/or nutrient management.

A. Leaf Tissue Samples

The following are guidelines:
- 1 leaf sample per 40 acres or less per management system.
- ** Samples must be taken prior to tassel. **
- 15-20 plant leaves per sample.
- Sample leaves are ear shoot leaves. If samples prior to ear shoot leaf, samples will be the youngest mature leaf (top leaf with a collar).
- Dirty/dusty samples should be lightly rinsed. Over-rinsing can leach out soluble nutrients.
- Samples should be air dried or placed in a paper bag for shipping.
- Contact your lab for additional information on sampling and analysis.

B. Nutrient Management

- Total fertilizer applied for 2025 crop must be applied according to UNL recommendations.
- Fertilizer applied last fall counts towards total fertilizer applied for 2025 crop.

Curtis's Column

Marketing vs Input/Output Profits

As I was putting together the summary of nitrogen/yield comparisons mentioned on page 2, see attached, I had a thought/question (mentioned later in this article). I'm looking at this thought/question as two-parts, dollars and environment.

Part 1 - Dollars: Corn prices don't seem to go up much, but everything else seems to. I have heard that pivot insurance has really spiked up in the last year or so. Other insurance has spiked up as well. I am sure you have seen it as well as I on houses, buildings, etc. etc. Where does it end? I am hoping for no major natural disasters this year to see what insurance prices do next year. It seems like there are other areas besides insurance where prices have simply exploded.

Part 2 - Environment: As you know, areas of the Tri-Basin NRD have high nitrates in the groundwater. We need to work on getting these high nitrate levels to safer levels. Do we ignore the situation and pass it on to our kids and grandkids to clean up and pay for? Or should we try to clean it up ourselves and make their future better, just like we want to make their future better by acquiring more land, etc., etc.?

Part 1 and Part 2 combined: Being a part of the TAPS competition over the last few years, it seems like farm income is made more so via marketing than raw inputs such as nitrogen and raw outputs such as yield. Or at least it helps a lot, especially if grain is bought and sold at the right time.

So, my thought/question is, if marketing plays a large roll in farm income, does it blind our vision of income and losses from the raw inputs and outputs. In other words, are we happy with the money we make, including from marketing, that we don't see the profits from nitrogen inputs and yield outputs?

From TAPS competitions over the last number of years and from looking at the results of the nitrogen/yield summaries in the UNL On-Farm Research Results, it seems like there is a place to make money with less nitrogen. As finances get tighter and money needs stretched, this looks like an area that can be stretched. Look at where the most profits are? More nitrogen doesn't equal more yield, let alone profit. The results of these research projects show less nitrogen and little if any yield loss from what producers apply. I don't see much difference as a general rule in the Tri-Basin NRD.

If we can simply dig in and see what makes the most financial sense from the raw nitrogen inputs and yield outputs; one, we can make extra money and two, we can start making an effort in cleaning up our groundwater for our kids and grandkids to enjoy the life that we get to live.

If we can save $20.00 per acre by applying less nitrogen, then a 130-acre standard quarter section pivot would save $2600.00. For a 10-pivot farmer, that equates to $26,000.00 per year. That is one helluva start towards a new pickup.

For those of you in CSP and those of you wanting to be in CSP, that $26,000.00 is above the average annual payment in the CSP program here in the Tri-Basin NRD. So, one, you can earn as much as you would in CSP without having your operation tied into a contract for 5 years. Or two, you can double your money if in a CSP contract.

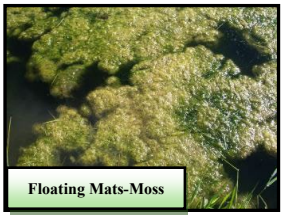
In closing, we need to dig in, quiz our agronomists and fertilizer dealers, and try things on our own research fields (every field is research). Finally, spend your own money, don't let others do it for you.

CNPPID Notes

Aquatic Weeds

Aquatic weeds, such as filamentous algae, moss, and sago pondweed can make delivering surface water through a canal system difficult without mechanically removing or making treatments throughout the irrigation season to control the aquatic weed growth.

Filamentous algae and moss start as hairlike strands that grow toward the water's surface, eventually forming floating mats. Sago pondweed is a bottom rooted aquatic weed that grows up towards the water's surface and grows very thick, which can eventually slow or stop the movement of water. Excess nutrients from fertilizers, stormwater runoff from fields, and wastewater along with abundant sunlight, and warmer temperatures are key factors in providing the essential needs to fuel and feed these aquatic weeds causing them to grow and eventually break off which can plug the screening and the flow of water to the irrigation system. Central's irrigation division is constantly on the lookout to control these aquatic weeds before they grow and hinder the delivery of surface water for irrigation.



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

Tri-Basin NRD News

Assistance to Treat Infestation

Phragmites australis, commonly known as **common reed**, is an invasive perennial plant that thrives in wet environments such as rivers, ponds, creeks, CRP acres, sub-irrigated ravines, and road ditches. This plant spreads rapidly through both seeds and rhizomes, allowing it to expand its presence significantly within a single season. Unfortunately, it offers no forage value for livestock or wildlife, making it a problematic species.

Landowners must control phragmites on their property as it is on Nebraska's Noxious Weed list. The Twin Valley Weed Management Area (TVWMA) and Platte Valley Weed Management Area (PVWMA) have worked diligently over the past several years to combat phragmites along river channels. The TVWMA and PVWMA, with grant funding from the Nebraska Environmental Trust, can aid landowners in treating phragmites.

If you have phragmites on your property, contact your County Weed Superintendent to see if you are eligible to have it sprayed free of charge.

Gosper:
Marty Craig-
308-324-3771,
Phelps:
Bobby Hamilton-
308-991-0139,
Kearney:
Joe Anderson-
308-832-2854

Nebraska Extension Extras

2024 UNL On-Farm Research Results

Attached to this newsletter is a summary of nitrogen/yield comparisons from the 2024 UNL On-Farm Research Results publication. The comparisons on my summary attachment are the pivot comparisons on silt loam or similar soils. There are other nitrogen/yield comparisons in the UNL publication for gravity irrigation and dryland. There are some on sandier soils. There are comparisons for sensor and image based technologies that compare nitrogen rates and yields. And there are comparisons when using biologicals, etc. in combination with nitrogen. As a general rule, in summarizing these projects, farmers are spending more money than they need to be. Yes, there are exceptions but looking at this stuff year in and year out, not only here, but in the UNL-TAPS program, it's the same story.

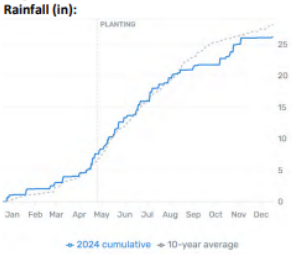
In addition, to the nitrogen/yield results, you might also be interested in some of the other research items going on in the 2024 results publication such as tillage, populations, cover crops, fungicides, non-traditional products, equipment, etc.

To view this publication, prior year publications or search for specific projects, you can goto: *https://on-farm-research.unl.edu/research-results/*. See a sample results page below.

Optimizing N Rate with and Without Pivot Bio PROVEN® 40

Study ID: 0064099202401
County: Kearney
Soil Type: Coly-Kenesaw silt loam; Hersh fine sandy loam
Planting Date: 5/9/24
Harvest Date: 9/24/24
Population: 32,000
Hybrid: Beck's® 5864 AM
Reps: 3
Previous Crop: Soybean
Tillage: Strip-till
Herbicides: ***Pre:*** 2 qt/ac Fulltime® + 44 oz/ac glyphosate ***Post:*** 2.5 qt/ac Acuron® + 24 oz/ac glyphosate + 5 oz/ac Status®
Seed Treatment: Pivot Bio PROVEN® 40 in half of planter
Foliar Insecticides: 7.3 oz/ac bifenthrin on 7/19/24
Foliar Fungicides: 7.1 oz/ac Veltyma® on 7/19/24. 7.1 oz/ac Veltyma® on 8/8/24.
Fertilizer: 15 lb N/ac + 51 lb P/ac fall of 2023; 64 lb N/ac + 9 lb K/ac + 6 lb S/ac from three fertigations

Note: Rye cover crop planted in fall of 2023, grazed with sheep until 4/1/24. Rye was chemically terminated 4/13/24. 20% green snap on July 7.
Irrigation: Pivot, Total: 8.6"
Rainfall (in):



Introduction: Nitrogen fertilizer is a significant input in corn systems. Additionally, N loss through leaching, volatilization, and denitrification pose environmental concerns and reduce profit. Pivot Bio PROVEN® 40 is an N-fixing bacterial inoculant that is expected to fix 40 lb N/ac over the growing season. Biological N fixation for cereal crops has potential to increase N efficiency and decrease N loss. The objective of this study was to evaluate Pivot Bio PROVEN® 40 on corn yield and net return. Pivot Bio PROVEN® 40 was applied as a seed treatment and compared to a check. The entire field received 80 lbs of N between a fall fertilizer application and 3 fertigation applications. Both the Pivot Bio PROVEN® 40 treatment and check were evaluated at four sidedress nitrogen rates, 0 lb N/ac, 40 lb N/ac, 80 lb N/ac, and 120 lb N/ac applied as 32% UAN. Early season stand counts were taken on June 18, 2024. These counts where taken shortly after a hail event.

Results:

	Stand Count (plants/ac)	Yield (bu/ac)†	Marginal Net Return‡ ($/ac)
80 lb N/ac	32,167 A	230 D	915 B
80 lb N/ac + Pivot Bio PROVEN® 40	31,500 A	230 D	892 B
120 lb N/ac	32,000 A	260 BC	1024 A
120 lb N/ac + Pivot Bio PROVEN® 40	31,500 A	260 C	997 A
160 lb N/ac	31,167 A	269 ABC	1040 A
160 lb N/ac + Pivot Bio PROVEN® 40	31,333 A	270 AB	1020 A
200 lb N/ac	30,833 A	271 A	1026 A
200 lb N/ac + Pivot Bio PROVEN® 40	31,000 A	270 AB	999 A
P-Value:	0.600	<0.0001	<0.0001

*Values with the same letter are not significantly different at a 90% confidence level.
†Yield values are from cleaned yield monitor data. Bushels per acre corrected to 15.5% moisture.
‡Marginal net return based on $4.35/bu corn, $0.60 N lb/ac and $26/ac for Pivot Bio PROVEN®

In the past, I have heard people talk about needing more research. There is a lot of research that has been done over the years. These annual publications have a lot of good research information.

If you would like to participate in an On-Farm Research Project in 2026, contact your local County Extension Educator.

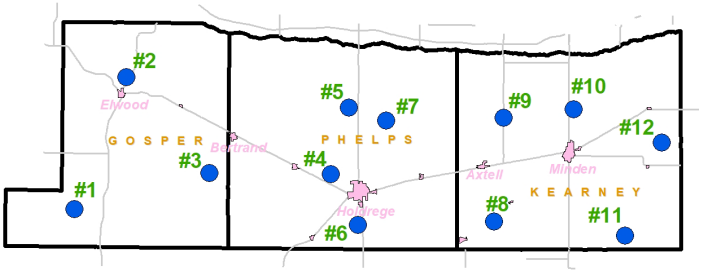
By Curtis Scheele: Water Mgt Specialist, NRCS, Holdrege

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

	June 23 – June 29		June 30 – July 6	
Site	Reference ET	Rain	Reference ET	Rain
1	1.70	2.20	1.70	1.49
2	1.40	1.25	1.70	2.51
3	1.30	5.15	1.80	0.84
4	1.80	5.01	1.10	0.36
5	1.20	5.12	1.40	0.62
6	1.30	2.65	1.70	0.16
7	1.20	5.11	1.50	0.28
8	1.40	2.37	1.60	0.16
9	1.50	5.45	1.60	0.28
10	1.50	3.70	1.40	0.22
11	1.20	4.90	1.70	0.06
12	1.40	5.74	1.60	1.83



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

Crop Coefficients (Kc)

Corn Stage	Kc	Soybeans 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
¼ Milk Line	1.04	Full Seed (R6)	1.10
Full Dent (½ Milk)	0.98	Yellow Leaf (R6.5)	1.00
¾ 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 (V8-8 Leaf to R1-Silking stage): The peak water use stage of corn is at R1-Silking. Nitrogen and Phosphorous uptake is rapid. Environmental stress at this time can greatly reduce yield.

Avg. daily water use from June 30 – July 6 was 0.08"-0.28".

Soybeans (V8-8th Node to R2-Full Bloom stage): Environmental stress from R3-Beginning Pod through Full Seed will reduce yields more than any other time. Full Pod is the most crucial period.

Avg. daily water use from June 30 – July 6 was 0.12"-0.0.26".

June 30-July 6 (12 of 12 TBAWMN sites reporting): Avg. weekly rainfall was 0.73 (range 0.06 to 2.51). Avg. weekly ET for corn was 1.43 and for soybeans was 1.29.

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
V16	16 Leaves	Leaf stage is defined by number of leaves with collars. The collar is a discolored line where the leaf meets the stalk. This line circles the stalk. After V6-6 Leaf, lower leaves will be lost.
R1	Silking	Begins when any silks are visible outside the husks.
R2	Blister	The kernels are white on the outsidce and resemble a blister. The cob should be at or near full size by R2. The silks are beginning to dry out and darken in color.

SOYBEAN STAGE		DESCRIPTION
R1	Beg Bloom	At least one open flower is present at any main stem node.
R2	Full Bloom	At least one open flower is present at any one of the two uppermost main stem nodes that have fully developed leaves.
R3	Beg Pod	At least one pod of 3/16" length is present at any one of the four uppermost main stem nodes that have fully developed leaves. It is not uncommon to see pods of greater length at the lower nodes.

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*.

	July 10, 2025, 8:00 AM	*1 Year Ago*
El. & Cap. – Lake McConaughy	**3230.1 ft - 50.4%**	**3236.7 ft - NA%**
Inflows to Lake McConaughy	**391 cfs**	**751 cfs**
Flows on the North Platte at North Platte	**332 cfs**	**353 cfs**
Flows on the South Platte at North Platte	**199 cfs**	**171 cfs**
Flows on the Platte at Kearney	**283 cfs**	**1600 cfs**

Enjoy the

Websites of Interest

NRCS Nebraska	*www.ne.nrcs.usda.gov*
Farm Service Agency	*www.fsa.usda.gov*
TBNRD Home Page	*www.tribasinnrd.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:	June 26 – July 9	May 1 – July 9
Elwood 1.81 mi. NW:	2.90	8.91
Loomis 0.2 mi. SW:	6.34	11.93
Holdrege 1.7 mi. W:	2.23	7.02
Minden 7.2 mi. W:	3.33	7.80
Minden 5.8 mi. E:	5.76	12.09

Average Rain for May-July in Holdrege = 11.32 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
308-995-6688

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

2024 UNL On-Farm Research Results

Nitrogen Rates in Corn

Study Number	Total Nitrogen Applied (lbs/ac)	Yield (bu/ac)	lbs of N per bu	Profit per Acre $0.50 per Lb N $4.00 corn	Irrigation	Previous Crop	County	Notes	2024 UNL On-Farm Research Results - EC3079 - (Page #'s)
1537021202402	190	254	0.75	$ 921.00	Pivot	Soybean	Burt	Is 190 still too much nitrogen? Another plot with 160 lbs of N and even a 130 lb N plot would have been nice.	34
	220	248	0.89	$ 882.00					
1528011202402	200	269	0.74	$ 976.00	Pivot	Soybean	Boone	Side-dress research. 200 lbs N up front on both plots. 50 lbs side-dress on the 250 plot. The profit per acre does not include the cost of side-dressing.	35
	250	272	0.92	$ 963.00					
1532159202401	149	252	0.59	$ 933.50	Pivot	Soybean	Kearney		36-37
	177	248	0.71	$ 903.50					
	204	254	0.80	$ 914.00					
	231	256	0.90	$ 908.50					

2024 UNL On-Farm Research Results

Nitrogen Rates in Corn

Study Number	Total Nitrogen Applied (lbs/ac)	Yield (bu/ac)	lbs of N per bu	Profit per Acre $0.50 per Lb N $4.00 corn	Irrigation	Previous Crop	County	Notes	2024 UNL On-Farm Research Results - EC3079 - (Page #'s)
1524155202401	161	247	0.65	$ 907.50	Pivot	Corn	Saunders	Image and Sensor Based Project. Grower applied 220 lbs of N and the Sensor Based applied 161 lbs of N.	40-41
	220	248	0.89	$ 882.00					
0064099202401	80	230	0.35	$ 880.00	Pivot	Soybean	Kearney	This is the same project I wrote about in the last issue of the Tri-Basin Irrigator dated June 26, 2025.	141-142
	120	260	0.46	$ 980.00					
	160	269	0.59	$ 996.00					
	200	271	0.74	$ 984.00					

For more information, see article on Page 2 of the Tri-Basin Irrigator dated 7-10-25.

For more on these results or to view other results goto: *https://on-farm-research.unl.edu/research-results/*
You can search for projects or view publications from prior years as well.