



Spring 2024

Volume 38, Issue 2

# Tri-Basin Topics

*A quarterly publication of Tri-Basin Natural Resources District*

## Prescribed Fire at Lake Seldom

Tri-Basin Natural Resources District (TBNRD) along with Pheasants Forever, Central Nebraska Public Power and Irrigation District, City of Holdrege and other volunteers conducted a prescribed burn on Wednesday, April 10<sup>th</sup>. The affected area is approximately 125 acres of native grasslands at Lake Seldom.



TBNRD tries to burn the grassland every five to seven years. Weather conditions determine when to burn. District staff plan and prepare equipment for the burn far in advance.

Past experience shows prescribed burning can kill up to 90 percent of invasive species, allowing the native plants to reestablish. Low-intensity fire is a natural disturbance process that rejuvenates grasslands and promotes forbs that support pollinators.

Prescribed fires are administered with constant attention, after securing permits from local fire departments, and public safety is a priority.



The prescribed burn's intention is to aid in the control of invasive reed canary grass, clear away dead plant material, and restore the natural ecosystem of native upland and wetland plant species. It is important to do the burn in the early spring as to not disturb nesting.



*"Dedicated to Conservation of our Natural Resources"*

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# Impact of Pivot Bio PROVEN® 40 at Three Nitrogen Rates on Corn

**Study ID:** 0064099202301

**County:** Kearney

**Soil Type:** Holdrege 3-6% slopes; Hobbs

**Planting Date:** 5/8/23

**Harvest Date:** 10/17/2023

**Seeding Rate:** 32,000

**Row Spacing (in):** 30

**Hybrid:** Channel® 214-22STXRIB

**Reps:** 4

**Previous Crop:** Corn

**Tillage:** Strip-till

**Herbicides:** **Pre:** 2 qt/ac Fulltime® and 2/3 pt/ac 2,4-D 6 LVE on 4/17/23 **Post:** 2.5 qt/ac Acuron®, 32 oz/ac Round-up® Ultra MAX and 5 oz/ac Status® on 5/30/23

**Foliar Insecticides:** None

**Foliar Fungicides:** Fungicide applied by plane on 7/20/23

**Fertilizer:** 100 lb/ac 11-52-0 broadcast March 2023; 4 gal/ac 10-34-0 applied in-furrow at planting; 32% UAN sidedressed on 6/9/23; 25 lb N/ac applied through fertigation on 7/3/23 and 7/21/23

**Irrigation:** Pivot, Total: 10"

**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. Both the Pivot Bio PROVEN® 40 treatment and check were evaluated at three sidedress nitrogen rates, 90 lb/ac, 130 lb/ac, and 170 lb/ac applied as 32% UAN on June 9. All treatments also received 65 lb N/ac from 11-52-0 in March, 10-34-0 starter at planting, and two fertigation applications of 25 lb N/ac as 32% UAN.

## Results:

	Stand Count (plants/ac)	Yield (bu/ac)†	Marginal Net Return‡ (\$/ac)
155 lb N/ac – No Pivot Bio	32,375 A*	249 A	1,354 A
155 lb N/ac – Pivot Bio	32,000 A	259 A	1,382 A
195 lb N/ac – No Pivot Bio	31,875 A	256 A	1,373 A
195 lb N/ac – Pivot Bio	31,875 A	249 A	1,319 A
235 lb N/ac – No Pivot Bio	31,625 A	259 A	1,367 A
235 lb N/ac – Pivot Bio	30,875 A	260 A	1,362 A
P-Value	0.727	0.628	0.890

\*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 \$5.91/bu corn, \$0.67/lb N, and \$26/ac for Pivot Bio PROVEN®.

**Summary:** There were no differences in stand count, yield, or net return between the with and without Pivot Bio PROVEN® 40 treatment or the N rates evaluated. The lowest N rate of 155 lb N/ac yielded as well as the highest N rate of 235 lb N/ac.

## Crop ET Data Texting Service

Signup for Crop ET Data texting. Five days a week you will receive a text message with the daily and future three days water use for both corn and soybeans. The plant date will be sent at the beginning of the season so you can adjust as needed for your crop. This year we plan to add a weekly text with precipitation and growing degree days. After June 1st you may sign up by texting START to 308-216-8188 or contact Sasha at the Tri-Basin NRD anytime for more information.

# Before Irrigating Do A Flow Meter Check List

In preparation for irrigation season, make sure your irrigation system flow meter is in proper working condition for accurate reporting of annual water use. Irrigation water meters are especially susceptible to damage due to the harsh environments they operate in. Additionally, protection and maintenance of the flow meter can help avoid costly repairs in the future.

## Tips & Checklist:

- Record the beginning meter reading before watering your crops.
- Check the meter frequently when in use and read and record the meter reading after each irrigated round. If the meter quits working, regular previous readings can be used to determine when the meter broke and how much water was pumped.
- Keep the flow meter register covered and make sure the register canopy lid is closed and not damaged. For added protection, insulated register canopy covers can be purchased for some meters, such as McCrometer meters.
- Check the meter register for water damage. Water inside the register canopy, including water droplets or fogging on the inside of the lens is a sure sign of a problem and should be repaired immediately to prevent further damage.
- Never try to service or repair your water meter yourself. Cutting or removing the register seal by an unauthorized person is a violation of metering regulations. Only qualified persons or businesses can service and repair water meters.
- Service meters regularly. Many water meters need to be serviced every year or two. Additionally, many water meters have electronic registers and the batteries should be checked and replaced when needed by a qualified technician.



## Chemigation: Apply Fertilizer When It Is Needed

Chemigation renewal forms and payments are due in the Tri-Basin NRD office by June 1, 2024. Renewal forms were mailed out in March. Anyone who plans to apply fertilizer or ag chemicals through an irrigation system must apply for a chemigation permit for the 2024 season. Contact Tri-Basin NRD at 308-995-6688 regarding chemigation permits. All New permits must have the chemigation systems inspected before use. A person who is certified as a chemigation applicator must supervise injection of fertilizer and ag chemicals in irrigation water.

NRD staff do routine inspections on chemigation systems from June until August. Inspections are required every three years. If your system is due for inspection, we will contact you to schedule it. Routine inspections must be completed for permits to be eligible for renewal the following year. Renewal permits are \$15 and new permits are \$50.

## Arbor Day Tree Give-Away

Tri-Basin NRD and the Holdrege Tree Board will host an open house to celebrate Arbor Day on Friday, April 26th. Holdrege area residents are invited to stop by the Tri-Basin NRD office during the open house for refreshments and to receive a free tree seedling.

Tri-Basin NRD will also provide free tree seedlings in other communities throughout the district on Arbor Day. Times and Locations:

**9:00 a.m.**  
Axtell Comm. Building

**9:30 a.m.**  
Tri-Basin NRD, Holdrege

**10:00 a.m.**  
First State Bank, Bertrand  
Loomis Village Office  
Elwood NRCS

**3:00 p.m.**  
Chautauqua Park, Minden



## Welcome New Elwood Field Office Secretary

My name is Carolyn Schaaf, the new Field Office Secretary in Elwood Nebraska. I grew up around Broken Bow, Nebraska, and was active in 4-H, working with cattle and horses all through high school. I was a Technology Assistant at the Broken Bow Public School for 13 years. After moving to Johnson Lake, I was employed at Canyon Lakes Brewery and Medos Resort.

My husband, Tim, and I live at Johnson Lake with our son, Brady, who attends college at Wayne State University. Our other son, Jake, and daughter-in-law, Kelsey, have two sets of twins. I love spending time with my family, and also enjoy spending time boating, fishing, and traveling. I am excited to represent the Tri Basin NRD at the Elwood NRCS Office.



**Tri-Basin Natural Resources District**  
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**RETURN SERVICE REQUESTED**

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# Calendar

April 9	NRD Board Meeting, 7:30 p.m.*
April 23-24	Water Jamboree
April 26	Arbor Day Tree Give-Away
May 14	NRD Board Meeting, 7:30 p.m.*
May 27	NRD Closed for Memorial Day
June 1	Chemigation Renewal Permits Due
June 11	NRD Board Meeting, 7:30 p.m.*
July 4	NRD Closed for Independence Day
July 9	NRD Board meeting, 1:30 p.m.*
August 13	NRD Board tour and meeting, 1:30 p.m.**
September 2	NRD Closed for Labor Day
September 10	NRD Board meeting, 7:30 p.m.*
September 19	Rainwater Basin Conservation Day

\* Times are tentative. All meetings are at TBNRD office in Holdrege unless otherwise noted. \*\*Location to be determined

**TRI-BASIN NRD BOARD OF DIRECTORS**

Todd Garrelts, Chairman	Holdrege
Joe Bilka, Vice Chairman	Holdrege
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Jeff Ryan, Treasurer	Heartwell
Brian Bergstrom	Axtell
Joel Grams	Minden
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**TRI-BASIN NRD STAFF**

Dana Christensen	Water Resources Technician
Todd David	Water Programs Specialist
Tammy Fahrenbruch	Water Programs Coordinator
Lori Hagan	Office Clerk
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Nolan Little	Water Resources Manager
Carie Lynch	Administrative Secretary
Nate Munter	Land Resources Coordinator
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Carolyn Schaaf	Elwood Office Secretary
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Esther Smith	Office Assistant
John Thorburn	General Manager
Jeff VanEperen	Water Resources Technician

A mailing list is maintained and requests to be placed on the list should be sent to the above address. Comments and suggestions may be addressed to the General Manager.

**Get Tri-Basin Topics in your inbox instead of your mailbox!**

To request an electronic version of this newsletter, send an email [shahn@tribasinprd.org](mailto:shahn@tribasinprd.org).