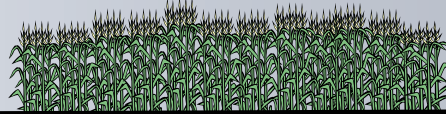




# Nemaha County

## Ag Line



January 2024  
Volume 19 Issue 1



By: Ritika Lamichhane, Nemaha County Extension Educator

We are soon transitioning to an electric newsletter. If you enjoy reading the newsletter and would like to continue receiving it, please let us know. You can provide us with your email address by calling (402) 274-4755 or emailing [nemaha-county@unl.edu](mailto:nemaha-county@unl.edu).

### HELLO NEBRASKANS!

I would like to start this newsletter with my introduction. I am Ritika Lamichhane, the Water & Cropping Systems Educator for Nemaha, Johnson, Pawnee, and Richardson Counties, based out of Nemaha. I joined UNL in August 2023, succeeding Gary Lesoing. I grew up on my grandparents' paddy farm in the flat terrains of Nepal, a Southeast Asian country. I earned my B.S. in Agriculture in 2018 from Agriculture and Forestry University in Nepal. After graduation, I worked on a project by Ministry of Agriculture and Livestock Development, where I traveled extensively across Nepal to conduct needs assessments for several cooperatives and assist them in writing grant proposals. The real field experience opened my eyes to farmers' challenges and the need for scientifically driven, relevant solutions. In 2021, I joined the University of Idaho to pursue my master's degree in plant science. I worked as a research assistant at the university's research station, focusing on nutrient management and precision agriculture for crops such as wheat, barley, corn, sugar beets, dried beans, and hops. Additionally, I participated in conducting field days and grower meetings during my time at Uofl, which I really enjoyed. My MS thesis project was on improving efficiency of nitrogen fertilizer use in wheat and barley production by utilizing sensor-based technologies and rigorous in-season plant and soil testing. Now, as a fresh graduate, I am thrilled to apply my insights as a UNL Extension Educator, eager to both share and learn from local growers. You can reach out to me at 402-274-4755 or [rlamichhane3@unl.edu](mailto:rlamichhane3@unl.edu).



### CALENDAR OF EVENTS

#### IN-PERSON EVENTS

- January 18 Tri-State Beef Conference  
Otoe County Fairgrounds  
Syracuse, NE  
Registration begins at 5:30 pm
- January 20 Lambing & Kidding School  
Gage County  
FuBerry Farms  
Registration begins at 9:45 am
- January 25 Corn & Soybean Expo  
ENREEC  
1071 County Rd G, Ithaca, NE  
8:30 am—3:00 pm
- February 6 & 7 Soils School  
Nebraska Innovation Campus  
2021 Transformation Dr, Lincoln, NE  
9:30 am—4:45 pm
- February 8 Private Pesticide Applicator Training  
4-H Building, 816 I St, Auburn  
Nemaha County Fair Grounds  
9:00 am—12:00 pm
- February 16 Private Pesticide Applicator training  
Fairview Gold Course Clubhouse  
Pawnee City  
1:00-4:00 pm
- February 20 On-Farm Research Results Update  
ENREEC  
1071 County Rd G, Ithaca, NE  
Registration: 8:30 am  
Program: 9:00 am—3:00 pm
- February 21 On-Farm Research Results Update  
Holiday Inn, Beatrice  
Registration 8:30 am  
Program: 9:00 am—3:00 pm
- February 22 & 23 Women in Agriculture Conference  
Holiday Inn Convention Center  
Kearney, NE

- February 29 Eastern NE Soil Health Conference  
West Point Nielsen Community Center  
200 Anna Stalp Ave, West Point, NE  
Registration: 8:00 am  
Program: 8:30 am—3:30 pm
- March 7 Private Pesticide Applicator Training  
Nemaha NRD Meeting Room  
Tecumseh, NE  
9:00 am-12:00 pm
- March 18 Private Pesticide Applicator Training  
SCC Learning Center  
Fall City, NE  
1:00-4:00 pm

### ONLINE EVENTS

- January 15, 18, 22, & 25 Webinar Series: Fundamentals of Feeding the Cow  
[go.unl.edu/feedingthecow](http://go.unl.edu/feedingthecow)
- Every Thursday Center for Ag Profitability Webinars  
12:00 pm  
Livestream & Recordings at:  
[cap.unl.edu/webinars](http://cap.unl.edu/webinars)

**NEBRASKA EXTENSION:  
GET TO KNOW US!**

*Nebraska Extension has evolved over the last 100+ years to meet the current and future needs of Nebraska. Currently, we employ approximately 360 Extension experts on campus and in the counties who annually connect with 1.9 million Nebraskans. Nebraska Extension operates under the leadership of the Dean and Director. The Extension's Dean collaborates directly with the Associate Deans, Engagement Zone Coordinators, and Program Leaders to oversee county-based Educators, Assistants, and Support Staff. Extension Boards play an integral role in Nebraska Extension, collaborating with county offices and the County Board of Commissioners/Supervisors. Engagement Zone Coordinators supervise educators and engage with various stakeholders regionally.*

Previously, we had Extension Agents, but since the structural change in 2015, we now have Extension Educators. Educators provide expertise in eight major program areas. These

educators, even though located in one county office, are responsible for serving multiple counties in what is known as an accountability region. Here is a list of Engagement Zone Coordinator and Extension Educators serving Nemaha, Pawnee, Johnson, and Richardson counties:

### Engagement Zone Coordinator - Karly Black

#### 8 Program Areas & Extension Educators:

- Water & Cropping Systems - Ritika Lamichhane
- Food, Nutrition & Health - Tara Dunker
- Rural Prosperity - Ben Jewell
- 4-H Youth Development - Mary Moser (Johnson and Pawnee) & Kaytlyn Kennedy (Nemaha and Richardson)
- Early Childhood - Ingrid Lindal
- Agricultural Profitability - Anastasia Meyer
- Livestock Systems - Wayde Pickinpaugh
- Horticulture Landscape & Environmental Systems - Nicole Stoner

For more information about Nebraska Extension expertise and personnel, the online Nebraska Extension Expertise and Personnel Directory is a valuable resource. Visit <https://epd.unl.edu/> to explore further.

**PRIVATE PESTICIDE &  
CHEMIGATION  
APPLICATOR TRAINING**

**Option 1:** Traditional in-person training. The training cost is \$60/person. Be sure to bring the following three items with you to the in-person trainings listed:

- Driver's license or photo ID
- Bar-coded recertification form in the mail in December from the Nebraska Department of Agriculture. A replacement form is available at the training. Not required, but please bring your dark orange & green private pesticide application card if possible.
- \$60 cash (exact change is appreciated) or check made out to University of Nebraska-Lincoln.

| Private Pesticide Training |          |                    |  |              |
|----------------------------|----------|--------------------|--|--------------|
| County                     | Date     | Time               | Venue  | Phone        |
| Nemaha                     | Feb 8    | 9:00 am - 12:00 pm | 4H Building, 816 I Street, Auburn                          | 402-274-4755 |
| Pawnee                     | Feb 16   | 1:00 – 4:00 pm     | Fairview Golf Course Clubhouse, 1800 D Street, Pawnee City | 402-852-2970 |
| Johnson                    | March 7  | 9:00 am - 12:00 pm | Nemaha NRD Meeting Room, 62161 Hwy 136, Tecumseh           | 402-335-3669 |
| Richardson                 | March 18 | 1:00 – 4:00 pm     | SCC Learning Center, 3200 Bill Schock Blvd, Falls city     | 402-245-4324 |
| Chemigation Training       |          |                    |  |              |
| Johnson                    | March 7  | 1:00 – 4:00 pm     | Nemaha NRD Meeting Room, 62161 Hwy 136, Tecumseh           | 402-335-3669 |

You must pre-register online at <https://go.unl.edu/2024privatepest> for private pesticide training and at <https://go.unl.edu/chemigation2024> for chemigation training or call your local Extension office to register over the phone.

Pre-registration is required due to room capacity limitations and to notify you in case of cancellation due to inclement weather at the in-person trainings shown above:

**Option 2:** Online private self-study can be taken at [pested.unl.edu/certification-and-training](https://pested.unl.edu/certification-and-training). The online option takes 3 to 4 hours and allows for a test-out option at the beginning, and if passed (70% or better score), the rest of the online training is not required. This option is flexible to your schedule (*you can start and stop as needed during the online training*) and can be taken from home. The online training cost is \$60/person. Not available until January 1, 2024.

**Option 3:** In-person Crop Production Clinics are offered statewide during the month of January with our local clinic in Beatrice on January 11. Visit the clinic website at [agronomy.unl.edu/cpc](https://agronomy.unl.edu/cpc) to register. The training cost is \$95.00/person.

**Option 4:** Walk-in testing sessions in Lincoln, that is taking a written, closed-book exam given by the Nebraska Department of Agriculture. Please visit [https://nda.nebraska.gov/pesticide/applicator\\_testing.html](https://nda.nebraska.gov/pesticide/applicator_testing.html) for a list of available test-only dates, times, and locations. There is no cost to the walk-in testing.

**Option 5:** Hard copy home self-study and exam is only offered in extraordinary circumstances.

Applicators who were unable to attend in-person training, are unable to access the online training, or have a disability accommodation are allowed to take the home self-study and exam. Please contact the UNL Pesticide Safety Education Program at 402-472-1632 to be granted this option. The cost is \$75/person.

After completing one of the training options above, the Nebraska Department of Agriculture will mail you a postcard so you can pay the \$25 license fee.

## NEBRASKA ON-FARM RESEARCH NETWORK RESULTS UPDATE MEETING

The Nebraska On-Farm Research Network is a statewide, on-farm research program that addresses critical farmer production, profitability and natural resources questions. Farm operators and agronomists from across the state will obtain valuable crop production-related information from on-farm research projects conducted on Nebraska farms by Nebraska farmers in partnership with University of Nebraska faculty. These research projects cover

products, practices, and new technologies that impact farm productivity and profitability.

The February program will provide an opportunity to hear growers who conducted on-farm research share their results from the 2023 growing season. Field length replicated treatment comparisons were completed in growers' fields, using their equipment. The meetings will be offered in-person in 2024. There is no cost to attend, but pre-registration will be required for everyone attending. Meeting starts at 9 am local time, check-in and refreshments begin 30 minutes prior. To register go to: <https://on-farm-research.unl.edu/nebraska-farm-research-network-results-update-meetings-2024>. On February 20 and 21<sup>st</sup>, in person meeting will be held near Mead and in Beatrice respectively.

For more information and general inquiries about Nebraska On-Farm Research Network, contact Laura Thompson, Nebraska On-Farm Research Network & Ag Technology Extension Educator at [onfarm@unl.edu](mailto:onfarm@unl.edu) or 402-245-2224.

## **RITIKA & JOHN ON-FARM RESEARCH REQUEST**

In the past year, Nebraska Extension has hired seven Water & Cropping Systems Extension Educators across the state. One of the most impactful roles for a Water & Cropping Systems Educator is to work with growers in their areas to conduct on-farm research. As a result of these new hires, there are great opportunities for farmers to engage with new Educators and grow the on-farm research base in many areas across the state where Educator positions have been vacant for several years.

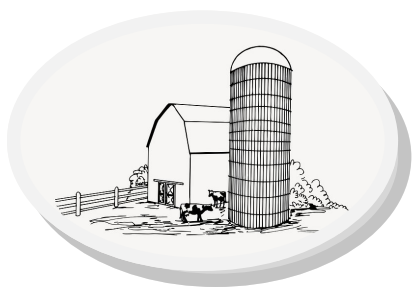
The Nebraska On-Farm Research Network (NOFRN) is an incredible resource for farmers to conduct randomized, replicated research on their own land to address their production and profitability questions. There are about 80-100 on farm studies completed each

year addressing topics like crop production, water and nutrient management, and cover crops. UNL Extension Educators and Specialists along with NOFRN team will help you design trials in your field, collect data, and statistically analyze the data at the end of the season. It also gives producers a greater level of confidence in the research, knowing that the data is coming from a location that they are familiar with, and likely have a deep understanding of the variability across the landscape and how it has historically affected production.

For many years, John and his family worked with their county Extension agent to conduct wheat variety trials on their farm in eastern Colorado. They found the information gleaned from these trials to be vital in how variety decisions were made every year. It also gave them increased confidence in the results from replicated variety trials conducted by Colorado State University, offering the ability to compare replicated small plot results to those collected on farm in real production conditions. This is the power of on-farm research, to capture results in a practical setting, and compare those to similar studies conducted in controlled research environments. Often times, if the conclusions are similar, the producer can move forward with implementing these practices with much greater confidence.

As new Water & Cropping Systems Educators covering Nemaha, Johnson, Pawnee, and Richardson counties (Ritika), and Lancaster, Cass, and Otoe counties (John), we are very interested in growing the on-farm research network in southeast Nebraska. We both have backgrounds in cropping systems research and have conducted research in partnership with local farmers during our careers. One of our focuses for southeast Nebraska is to revisit nitrogen rate and timing studies to understand how we can better manage our fertilizer inputs in the face of water quality issues across the region. We have several example nutrient protocols including grower N rate compared to +/- 50 lb/ac. However, we encourage any grower with questions, practices, or products they would like to test on their farm. We understand that on-farm research introduces some complexities and in-

conveniences during busy times of growing season, but we truly believe it will help farmers across the region improve production, stewardship, and profitability of their farms.



## SOYBEAN GALL MIDGE IN NEBRASKA

In 2023, the soybean gall midge was reported in eight new counties—two in Kansas and six in Iowa, bringing the total documented counties in the United States to 164. This "field edge pest" was initially observed in Nebraska in 2011, and it was formally identified as a new soybean pest in 2019.

### Symptoms and life cycle:

Soybean plants with the presence of gall midge larvae shows signs of stunted growth, wilting, and eventual death along the field borders adjacent to a field planted with soybeans the previous year. The adult gall midge overwinters in the previous year's soybean field and subsequently flies to the adjacent field to lay eggs on young soybean plants. That is why it is crucial to scout field borders for early detection of soybean gall midge. Once the egg hatches, young larvae commence feeding on soybean plants. This results in dark brown or black discoloration at the base of the plant below the cotyledonary nodes and plant becomes prone to breaking off at the base. As the larval population increases, discoloration spreads around the stem. Peeling back the outer layer of the stem reveals orange or white larvae. Larvae can be observed as early as the V2 stage (2nd leaf stage) of soybeans.

### Field Survey and Distribution Analysis:

Drs. Ana Velez, Thomas Hunt, and Justin

McMechan at the University of Nebraska-Lincoln received funding from the Nebraska Soybean Board to track soybean gall midge distribution and severity in the state through a field survey. The survey, conducted from late July to mid-August this year, revealed that among the southeast Nebraska counties, Nemaha, Johnson, and Otoe observed 6-12% wilting or dead plants along the field edge. Nemaha County recorded an average of 5-10 larvae per plant, followed by Johnson County with 15-20 larvae per plant, and Otoe County with more than 20 larvae per plant.

### Pest Management Strategies:

The Entomology team at University of Nebraska Lincoln are continuously working to identify effective management strategies for soybean gall midge. In 2020, Dr. Justin McMechan and his team did a study in eastern Nebraska. They found that using Thimet 20G (phorate) significantly lowered the number of larvae, reduced plant damage, and increased yield compared to plots without treatment. However, using Thimet requires special equipment. In 2021, another study was conducted in Lancaster, Cass, and Otoe Counties to see if non-chemical control is effective or not. Results from this study showed that hilling (covering the stem base with soil) significantly reduced the number of infested plants, larvae per plant, and plant damage compared to not hilling. Despite promising findings, further studies are needed to fully understand the management strategies for soybean gall midge.

For more information on soybean gall midge and to receive alert notifications of soybean gall midge adult emergence visit [soybeangallmidge.org](http://soybeangallmidge.org)



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