
Small Grains News - Reducing nitrogen inputs with extended rotations + Blog on planting into cover

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Equipping farmers to build resilient farms and communities.



Improving soil biology and reducing inputs: A whole farm approach

Since taking over management of their family farm in southwest Minnesota in 2022, **Keith and Aalex Olsen** have increased ground cover on their farm, improved soil biology and consequently reduced purchased fertilizer inputs. Small grains play an integral role in the transition, serving as a nurse crop for their

perennial hay mix, which includes both cool and warm season grasses such as orchard grass, Timothy grass, smooth and meadow brome, fescues and alfalfa. The mix offers nutritious feed for the Olsens' cow-calf pairs and stocker calves.

Small grain versatility: Prior to 2022, spring wheat was a staple in the farm's rotation, but Keith and Aalex switched to rye and triticale, which are planted in the fall and keep the ground covered through the winter. Those small grains are used as a nurse crop for hay or are taken to harvest. The Olsens have gradually stepped away from harvesting the grains and focus more on grazing them before they head out, which helps to build biomass.

Reducing purchased inputs: Between implementing 100% no-till and incorporating more small grains and perennial hay mixes on their farm, Aalex and Keith have been able to reduce their synthetic nitrogen inputs to corn from 150 pounds per acre to about 50 pounds per acre. They apply 28% urea at 17 gallons per acre during the planting pass using a Yetter double fertilizer disc unit mounted to their John Deere eight-row planter. They also use manure from their cattle to produce compost that is normally broadcast on the hay ground. For upcoming seasons, they are preparing a compost extractor so they can put compost down in furrows during corn planting.

PROGRAM UPDATES

Only one more week to enroll in our N Rate Risk Protection Program



Nitrogen fertilizer is a major cost for farmers. But using less is risky. It could mean lower yields and less income.

But what if you could cut costs, not profits? PFI's N Rate Risk Protection Program offers a risk protection payment of \$35 per acre if your yield drops after reducing your typical nitrogen rate.

Enrolled farmers also receive field-specific consultation from a PFI agronomist on what reductions might be feasible.

Enroll by April 30.

See what we accomplished in PFI's 2024 annual report



As we reflect on our work and growth last year, we celebrate the accomplishments of our farmers, staff and supporters.

Our [**2024 annual report**](#), now available online, shows what we did together – and how these groups are the heart of our work equipping farmers to build resilient farms and communities.

[**View the report.**](#)

Share your ideas for the 2025 Midwest Mechanical Weed Control Field Day



PFI is excited to partner with The Land Connection and Glacial Drift Enterprises to bring the [**Midwest Mechanical Weed Control Field Day**](#) to Ames, Iowa, on Aug. 20, 2025. This regional event includes education and field demonstrations featuring mechanical weed control equipment for vegetable and field crop production.

Planning is underway, and we invite your input. What equipment, demos, speakers or topics would you like to see? [**Share your ideas.**](#)

IN THE FIELD

Research: “Can We Reduce N Rates to Corn and Improve ROI?”



Results are in from last year's research exploring nitrogen reduction to corn.

As part of the research, 19 farmers performed 22 replicated strip trials testing their typical nitrogen rate against a reduced rate. The participating farmers use a variety of practices including cover crops, extending rotations, little or no tillage, and livestock grazing.

Explore each individual trial's data and see overall results comparing return on investment across varying nitrogen rates.

[**View the report.**](#)

Blog: "Equipment for Planting Cover Crops and Frost Seeding"



Growing as many as ten different species for seed production, northern Minnesota farmer **Jade Estling** has gained a lot of seeding experience. With a four-tank planter he can seed both spring wheat and red clover and fertilize all in one pass.

Read this blog recapping Jade's shared learning call in February to find out how he has fine-tuned his equipment to improve efficiency and gauge plant health. You'll also learn how Jade pivoted to a planting green trial when his rye experienced water damage.

[**Read the blog.**](#)

Video: "Fertilizing Small Grains"



What's your fertility plan for small grains? In this video from 2018, PFI farmers and former ISU researcher **David Weisberger** weigh in on the best approaches to fertilizing spring and winter small grains.

You'll hear their insights on when to fertilize and how much to apply to improve yield but not cause other issues, such as lodging.

[Watch the video to help hone your fertility plan.](#)

ADDITIONAL RESOURCES

- 2022 Blog: **["Incorporating Small Grains in Livestock Rations to Achieve Regenerative Agriculture Goals"](#)**
- 2021 Research Report: **["Nitrogen Fertilizer for Food-Grade Oats"](#)**
- 2022 Blog: **["Oats Bearing Profits: Cutting Inputs by Extending Crop Rotations"](#)**
- 2020 Blog: **["Small Grain Fertility Requirements and Application Strategies"](#)**

UPCOMING EVENTS

Keep an eye out for PFI's field day guide



At PFI field days, you'll find a welcoming atmosphere, a spirit of curiosity, a culture of mutual respect and farmers openly sharing their knowledge and experience.

Our field days are led by our farmer members and will feature topics ranging from relay cropping to roller crimping to processing food-grade grains and beyond!

All PFI field days are free for anyone to attend.

Dates for 2025 field days will be announced in May.

Friends of PFI events

April 26: Farm Tour – 2025 Food and Farm Tour Hosted by: Savor the River Valley

10 a.m.-4 p.m. | Various farms in Southwest Minnesota

May 15: Webinar – Soil 2.0: Integrating Tests for a Smarter Farming Future

Hosted by: Soil Regen

11 a.m. - 3 p.m. | [Online](#)

May 14: Webinar – Buyer Perspectives on Organic Grain Sourcing

Hosted by: Rodale Institute

8:30-9:30 a.m. | [Online](#)

May 21: Webinar – Ask me Anything — Organic Markets for Grain Farmers

Hosted by: Rodale Institute

8:30 - 9:30 a.m. | [Online](#)

[View our events calendar](#)

Contact our team

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Chat with any of us by calling the PFI office at (515)232-5661.

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