Jake Hendrickx runs a diversified crop and livestock farm in northern Minnesota where he uses diverse cover crop mixes and extended rotations. To build nutrients, soil biology, and provide forage for his cattle, Jake seeds up to 13 species in a cover crop mix following his small grains harvest. He also prioritizes winter-kill cover crops that allow him to reduce herbicide use and to save time ahead of planting corn, and uses soil tests to tailor a cover crop mix to the nutrient needs of a field. For example, using legumes to build nitrogen (N) or mustard to build sulfur.
**Luck with clover:** Jake uses crimson clover at 3-4 lbs per acre in his cover crop mixes, which winter-kill. Particularly ahead of corn, he wants to use this clover to build N in the soil. The clover must be in the ground early to ensure the fall growth is sufficient. “If we are seeding a mix after barley or peas, the long growing season allows us to use clover. But after soybeans or edible beans we might not have a large enough window to include clover in the mix,” says Jake. If the clover happens to survive the winter it can easily be terminated in the spring with a cultivator.

**Reducing Applied N:** Jake has cut his N-rates for corn in half over the past couple of years, from 220 lbs of N per acre to about 100 lbs per acre. “We totally switched our programming. We have NPK in the starter, but we are now more heavy on trace minerals and starter biology,” he notes. Jake plans to use a starter of 2.5 gallons per acre of CX-1, an organic biological concentrate, and 2 quarts per acre of high energy fish fertilizer made from whole fermented salmon, for nutrients.

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**PROGRAM UPDATES**

Get updates for future shared learning calls

**Shared learning calls return in June!**

Need a day-of reminder?

We’re transitioning our reminder emails to a new list - sign up to stay in the loop!

[Click here to receive a day-of reminder for each call.](#)

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**Southern Iowa market available for oats**

If you’re holding on to last year’s oats or figuring out where to sell your 2022 crop, consider delivering to Smithfield Grain in Davis City, Iowa.

**Bids are listed on their website,** oats below 38 lbs/bushel are accepted but subject to monetary discounts. (Example from late April at left. These bids are subject to daily changes in the CBOT futures market.)
Cash in on our cost-share

Don’t leave money on the table! There's still time to apply for both of PFI’s 2022 cost-share offerings. Each pays $15 per acre on up to 200 acres.

**Small grains cost-share:** Harvest a small grain and follow it with a frost-seeded or summer-planted cover crop that contains at least one legume.

**Fertilizer cost-share:** Reduce Nitrogen application by 40 units or apply no more than 100 units to corn harvested in 2022 that follows a 2021 small grain in rotation.

*Available for farmers in Iowa, Illinois, Wisconsin, Minnesota and Nebraska. Acres must be conventional or in transition to organic. Acres may not be able to overlap with EQIP or private carbon programs. Please inquire to learn more.*

Apply today!

### IN THE FIELD

**Clover as a corn companion crop**

This [2021 Cooperators’ Program research](#) explores allowing established clover to grow with corn as a companion crop or living mulch.

Farmers Jack Boyer and Dick Sloan hypothesized that suppressing (and then eventually terminating) the clover cover crop would not reduce
Estimating N-credits from legume cover crops

What kind of N credit can a legume cover crop provide?

In this blog, explore the nitrogen fixation potential of legume cover crops, decomposition of cover crops for N release and “try it yourself” basics for conducting experiments with different nitrogen rates.

Grow your own nitrogen

Learn how farmers have incorporated legumes to grow their own nitrogen to benefit soil health and their overall profitability.

This magazine article highlights the tactics different farmers are using to ensure they’re able to benefit from the nitrogen fixation of a legume in their rotations.

Nitrogen fertilizer for food-grade oats

This Cooperators’ Program research report walks through how A.J and Kellie Blair adjusted their nitrogen rates, attempting to achieve maximum oat yield on their farm.
The trials compared three N rates (25, 50, and 75 lbs per acre) for their food-grade oats.

The Blairs reported on their cost savings and what rate worked best for them.

Additional resources:

- Blog: “Green Manure Cover Crop Seeding and Termination Dates in a Corn-Wheat Rotation”
- Blog: “Small Grain Fertility”
- Blog: “Fertilizers, Herbicides and Fungicide for Small Grains”
- ATTRA Toolkit: “How to Reduce Synthetic Fertilizer Use”

UPCOMING EVENTS

All times listed are Central Daylight Time

**May 4:** Webinar - Make Your Best Alfalfa Ever In 2022
Hosted by: I-29 Moo University & Jeff Jackson
Noon-1 p.m. | Online

**May 5:** Workshop - Grain Culture: A Panel Discussion
Hosted by: Artisan Grain Collaborative & Elawa Farm
5-7 p.m. | Lake Forest, IL

**May 2-5:** Conference - Craft Brewers Conference & Brew Expo America
Hosted by: The Brewers Association
Minneapolis, MN

**May 11-12:** Conference - Distillers Grains Symposium
Hosted by: Distillers Grains Technology Council
Omaha, NE

More upcoming events

STRAW POLL

How much Nitrogen have you been able to cut from corn in extended rotations?

**10-20 lbs of N per acre**
20-50 lbs of N per acre

50-100 lbs of N per acre

Over 100 lbs of N per acre

Not sure yet, I haven’t made a cut before

N/A I don’t have corn in extended rotations

Previous poll results:

How do you think about your small grain seeding rate?

- Pounds per acre - 50%
- Bushels per acre - 30%
- Seeds per acre - 20%

Send us your straw poll ideas! We want to know what YOU want to know. Reply to this email with your ideas for the next poll.

STAY CONNECTED

Looking for more? Contact us today!

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