Drivers and deterrents of small grain adoption in the Upper Midwest

BENEFITS OF SMALL GRAINS IN ROTATIONS

Small grains, or cereal crops such as barley, oats, rye, and wheat are an opportune way to re-diversify corn and soybean rotations and are shown to have multiple economic and ecological benefits.

Economic benefits

Small grains can help reduce risk and build a more profitable farm business.

Agronomic benefits

Diversified rotations build soil health, reduce chemical use, and support greater system resilience.

Environmental benefits

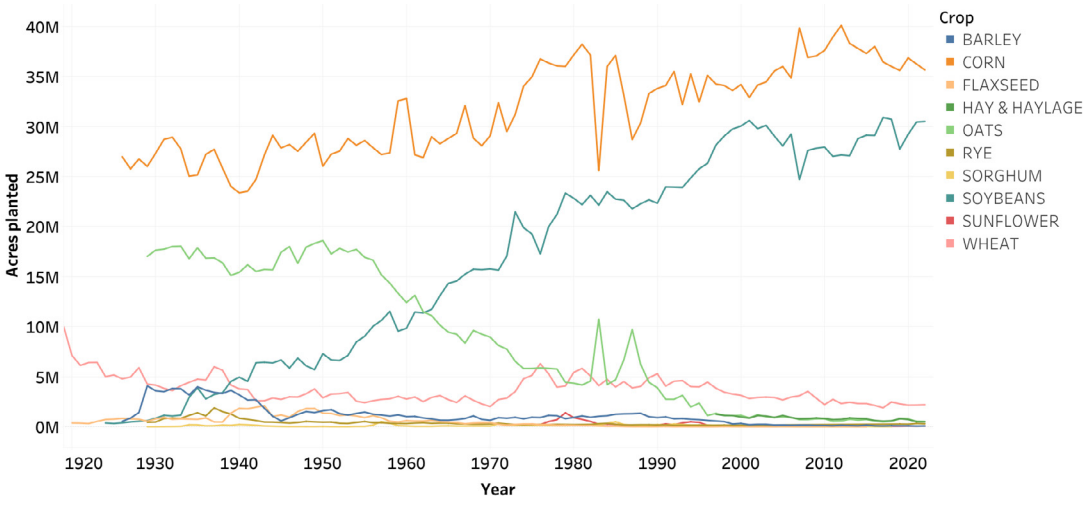
Including small grains in diversified rotations helps conserve soils and waters.

Societal benefits

Small grains are an integral part of regional food systems.

DECLINE IN SMALL GRAINS IN THE UPPER MIDWEST

Despite their benefits, most small grains have seen a decline in acres planted over the last century, while corn and soybean acreage has skyrocketed. Meanwhile, farmers struggle to earn a profit from their small grains and conventional farmers have little incentive to plant them.



WHY DON'T MORE FARMERS GROW SMALL GRAINS?

Whether for cover crops, human consumption, or livestock production, growing small grains benefits farmers and the land. Yet few farmers in the Upper Midwest plant them and small grains make up only 0.7% of total field crop acres planted in the region.

STUDY METHODS

This research sought to identify the barriers farmers face to growing small grains and the factors that have helped some to be successful in their small grain production. We did so through analyses through a widely disseminated survey, and we talked together in focus groups and interviews.

Survey

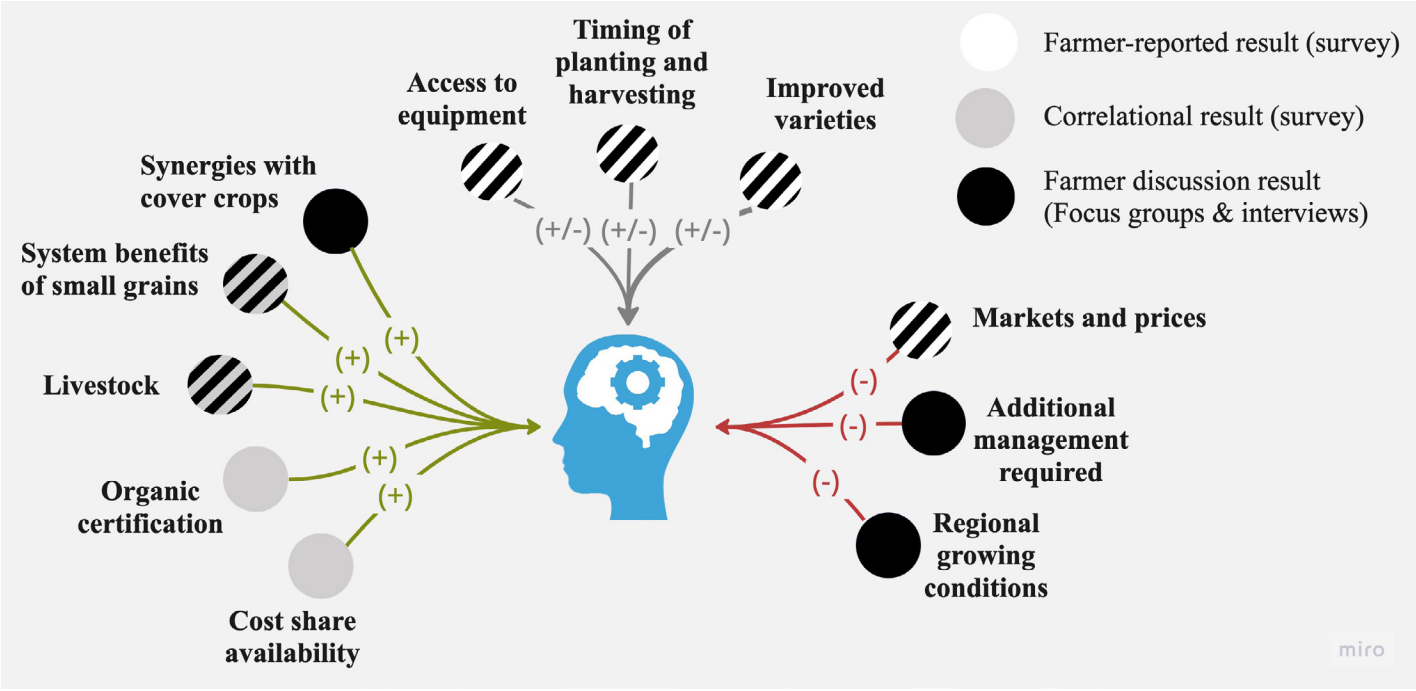
- ☑ Farmers growing corn, soybeans, and/or small grains
- ☑ Respondents = 406
- ☑ January-April 2022

Focus groups & interviews

- ☑ Farmers & stakeholders throughout the grain chain
- ☑ Participants = 38
- ☑ July-September 2022

FACTORS THAT INFLUENCE A FARMERS' DECISION WHETHER TO GROW SMALL GRAINS

Through multiple methods (quantitative surveys and qualitative focus groups and interviews) and through multiple ways of knowing (farmer-reported results and statistical analysis), we find a myriad of interconnected reasons why row crop farmers do or do not incorporate small grains in their operations. Markets and prices, regional growing conditions, and additional management are the strongest current barriers to small grains production. Access to equipment, improved small grain varieties, and timing of planting and harvesting can be both drivers and barriers to production depending on the farmer. Livestock, cost share programs, the system benefits of small grains, the synergies between small grains and cover crops, and organic certification are found to be drivers of production. Crop insurance and revenue supports (ARC, PLC, MAL) for small grains, access to a loan for small grain production, and technical assistance for small grains are not found to be important to a farmers' decision to grow small grains.



Note: shading of circles indicates the method used to determine the result or type of determinant. Striped shading shows multiple methods supporting the same result.

WAYS TO INCREASE SMALL GRAIN PRODUCTION IN THE UPPER MIDWEST

Small grains have the potential to create more diversified and resilient agricultural landscapes. However, more action is needed to support small grain production. To enable strong agricultural markets and support farmers to produce small grains, it will be important to 1) invest in market development, on- and off-farm infrastructure, and improved varieties; 2) level the playing field with corn and soybeans in terms of subsidies and supply mandates; and 3) leverage the drivers of existing small grain acreage—certified organic production, the integration of crops and livestock, systems thinking, and cover crop use.

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