



A field of winter wheat planted in the fall by Extension specialist Jochum Wiersma (middle) emerges in the spring, bringing opportunities to test varieties and practices in the real crop production environment on Ruth Hoefs and Rom Pomije's farm.

# SMALL GRAINS, BIG BENEFITS

Farmers participate in research with scientists and educators who know their world.

Ruth Hoefs and Ron Pomije's farmstead straddles the line between two townships in Le Sueur County. "Some of their crops and animals are in Lexington, and some are in Derrynane," says Diane DeWitte, a University of Minnesota Extension agriculture educator based in the area.

Their farm is also at the crossroads of Extension research and education. They are

in their sixth year of participating in trials meant to bring more wheat back to southern Minnesota after decades of farmers avoiding it due to low yields and disease problems. The study is one of over 100 Extension applied crop research projects taking place in Greater Minnesota.

"Not only can wheat come back stronger to some areas, but so can other small grains—oats, rye and barley," says Jochum Wiersma, the Extension small grains specialist conducting research on the Hoefs-Pomije farm as well as on farms in Benson and Kimball, with funding support from the Minnesota Wheat Research and Promotion Council.

## Why conduct research on Minnesota farms?

"The research we're doing on farms complements that conducted on University research plots by providing a real farm-business environment," says Wiersma. "It gives farmers a voice."

"We want a diverse landscape on our farm, but it has to be worth it economically to grow more than corn and soybeans. So we get into a lot of back and forth discussions to figure that out," says Pomije.

"Our farmers in southern Minnesota want to learn how we can improve small

grain crops outside of where they have more typically been grown in northwest Minnesota,” says DeWitte. “Many farmers in our region have not grown wheat and other small grains for over 20 years.”

The goal is to bring research to the farm and have it applied—or adopted—quickly for further study, whether that be new varieties or new production practices. “It makes things a lot less abstract,” says Wiersma.

Research on real working farms brings in the agricultural community to see it in authentic environments. “Seeing is believing,” says David Nicolai, Extension crops educator. “Other farmers, crop consultants and seed salespeople—they come to learn from Extension and the farmer about their experiences. Then those people turn around and share new information with others in the community.”

## Breeding improvements

Jim Anderson, a professor and wheat breeder in the University’s Department of Agronomy and Plant Genetics, consults closely with Wiersma on variety selection for the trials. “Our expanded work with Jochum Wiersma resulted in our ability to process data from twice as many plots as before,” says Anderson. “We’re learning more about yield, quality, diseases and more. And we can now shorten the time it takes to evaluate and develop new varieties.”

Agricultural groups complement the role that individual farmers play in the research trials. For example, data is available for analysis within hours of harvest because of technology onboard the farm equipment that the Minnesota Wheat Research and Promotion Council is providing for the trials.



Extension research takes place on farms and land across Minnesota, where community members can easily come to see results and consider their own options.

“We had our best wheat crop the last two years, and that was based on the varieties we selected and how we managed, all based on the data from the Extension project,” says Pomije. “And it feels good to us to know we are contributing to University research and education.”

## Giving new crops a chance

Pomije and Hoefs started out growing small grains to “mix it up” a bit. Alternating crops on a field from one year to the next (called “rotating”) has a lot of benefits. Growing small grains and forage crops on fields that at other times grow corn or soybeans can improve soil health, reduce erosion, and potentially even reduce the need to fertilize the corn and soybeans.

Wheat uses less water too, so it lets the soil recharge for a season, and that helps the corn grown there later.

The wheat Pomije and Hoefs grow is used for milling into flour, but more and more Minnesota producers are finding new local markets in the growing brewery industry. “I wouldn’t mind getting into that,” says Pomije, who may try to grow barley next.

“It feels good to know we are contributing to University research and education.”

“Wheat, barley, oats and rye are all cool-season grasses, but advances are making them competitive again in the southern part of the state,” says Wiersma. “It isn’t an economic and environmental fit for everybody to grow these crops, but for those who are serious about it, Extension provides the research foundation for success.”



Partnerships with commodity groups, such as the Minnesota Wheat Research and Promotion Council, help fund Extension crop research. Pictured: Ron Pomije, farmer and Diane DeWitte, Extension agriculture educator in Blue Earth County.

**SMALL GRAINS IN MINNESOTA**

- Winter wheat, spring wheat
- Oats
- Barley
- Fall rye
- Spring triticale