In recent years, extreme volatility in crop and beef cattle prices, influenced by highly variable weather patterns including drought, has made the business side of commodity farming and ranching difficult to manage. In North Dakota, researchers are suggesting that a sea of calm in this volatility might reside in the soil.

With a five-year SARE grant, North Dakota State University researchers sought to determine if an integrated crop and beef cattle production system, which uses grazing and crop rotation to build soil health, could provide more long-term stability than a conventional system.

Their primary objective was to compare yields and returns of continuous wheat production and wheat grown in a five-year rotation that included cover crops, forage crops and cattle grazing. At first the yield of continuous wheat was higher, but that gradually changed as the soil in the rotational system grew more productive. By the fifth year, the yield of wheat in rotation was 40 percent higher. “How that occurred is clearly a demonstration of the soil’s power to grow nutrients,” said Douglas Landblom, the project coordinator.

Over five years the net return per acre was $10 higher for wheat in rotation, and the production cost was lower. The profit margin per steer was $307 higher when cattle grazed this system and spent 76 fewer days in the feedlot than a control group.

For more information on this project, see www.sare.org/projects, and search for project number LNC11-335.
SARE Grants in North Dakota

SARE has awarded a total of 114 grants in North Dakota since 1988.

- 31 Research & Education Grants
- 49 Farmer/Rancher Grants
- 8 Graduate Student Grants
- 11 Professional Development Grants
- 6 Youth Grants
- 5 Youth Educator Grants
- 4 On-Farm Research Grants
- 6 Youth Grants

SARE’s Impact

- 53 percent of producers report using a new production technique after reading a SARE publication.
- 79 percent of producers said they improved soil quality through their SARE project.
- 64 percent of producers said their SARE project helped them achieve higher sales.

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SARE sustainable ag coordinators run state-level educational programs for Extension and other ag professionals, and many help grant applicants and recipients with planning and outreach. Visit www.northcentralsare.org/north-dakota to learn more.

For detailed information on SARE projects, go to www.SARE.org

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