# UNL Researchers Seek Two Farmer-Cooperators for an On-Farm Research Cover Crop Project

This 3-year on-farm research project will be evaluating the influence of a winter rye cover crop on water erosion and soil health in sloping and sandy soils.

## We are looking for two farmer cooperators:

-Farmer-cooperator 1: rainfed field with >5% slope under corn-soybean rotation in eastern Nebraska.
-Farmer-cooperator 2: irrigated field with sandy soil, low organic matter (about 1%), and under continuous corn or corn rotation (corn-soybean or corn-corn-soybean) in central or west-central Nebraska.

## Three treatments will be established:

1) control (no cover crop); 2) pre-harvest planted cover crop; 3) post-harvest planted cover crop The three treatments will be replicated six times for a total 18 plots (Figure 1). The size and general layout of the plots and the number of corn rows per plot can be modified depending on the field size and farmer equipment.

## The farmer-cooperators will:

Perform the typical farming practices in his/her field with two modifications:

- 1. Plant rye cover crop before crop harvest around mid-September with a Hagie planter for six plots (blue plots) and drill a rye cover crop on six plots after harvest (green plots).
- 2. Spray cover crops with a herbicide in spring before planting.

The cost of the rye seed, renting the Hagie planter, rental of a drill (if needed), and cover crop spraying with herbicide will be covered by UNL. The farmer will also be compensated for use of the field at a rate of \$1000 per year (\$3,000 for three years).

#### **Replication 1 Replication 2 Replication 3 Replication 4 Replication 5 Replication 6** <sup>2</sup>ost-Harvest Cover Crop Planting Post-Harvest Cover Crop Planting Post-Harvest Cover Crop Planting <sup>2</sup>ost-Harvest Cover Crop Planting **Crop Planting** Post-Harvest Cover Crop Planting Pre-Harvest Cover Crop Planting Cover Crop Control <sup>o</sup>ost-Harvest Cover <sup>o</sup>N 9 2 2 2 2 2 rows

#### The UNL research team will:

-Conduct simulated rainfall in spring (for information on water erosion and water quality) -Soil sample once a year to examine nitrate leaching and soil health properties

**Figure 1:** Plot layout of cover crops in sloping or sandy soil. Plot size, layout, and number of rows per plot can be modified based on field size or farmer equipment.

**If you are interested in being involved** in this project, please fill out <u>this form</u>. (If link does not work, type into your browser: <u>http://go.unl.edu/txi5</u>). If you have questions about this project, please contact Sabrina Ruis at <u>sruis2@unl.edu</u> or 608-515-9238 or Laura Thompson at <u>laura.thompson@unl.edu</u> or 402-472-8043.

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