

MN Wheat On-Farm Research Protocol

Cover Crop Establishment

Objective

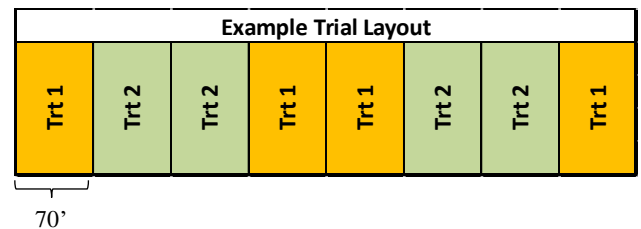
Determine if planting soybean into a rye cover crop established in the previous fall can reduce the effects of IDC in soybean and observe any differences the cover crop makes.

Field Selection

- This trial will take place over at least two years, through one complete cycle of a wheat-soybean rotation
- Preferably placed on a field that has moderate-severe IDC issues
- Preferably use a soybean variety susceptible to IDC within the trial

Treatment Application

- The cover crop and control treatments will be replicated at least four times, for a total of eight harvested strips. Strips should be wide enough to allow for one combine pass that excludes sprayer tracks (70-100 ft) and will run the full length of the field.
- Treatment 1- Rye established following wheat harvest
- Treatment 2 – No cover crop



Year 1 – Wheat

- Cereal rye established in late August or early September following wheat harvest
 - Tillage may be done prior to planting rye if desired

Year 2 – Soybean

- Plant soybean into living rye
- Terminate rye near 4 weeks after planting – date may vary depending on available soil moisture
 - If crop insurance is an issue, rye can be terminated the day of soybean planting

Special considerations for field management will include fall tillage, herbicide options, and cover crop termination, and will be considered on an individual basis.

Harvest

- Soybean yield will be measured using a grain cart equipped with a scale or a weigh wagon
 - MN Wheat Staff will be available with a weigh wagon to assist with harvest
- Combine passes should avoid sprayer tracks and down-outs if possible
- MN Wheat would like to collect the as-applied map and yield map following harvest if available

Data MN Wheat Will Collect

- Rye stand and biomass in fall and spring
- Fall residual nitrate at first hard-frost
- Spring soil moisture and temperature
- Soybean stand, height, yield
- Soybean IDC score
- Weed stand and biomass

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Data Reporting

MN Wheat will email participants the preliminary results of all on-farm research trials after harvest. Data will also be included anonymously in the annual On-Farm Research Report booklet, be discussed at the annual On-Farm Research Summit in December and posted on-line on MN Wheat's On-Farm Research Network homepage at the link below.

Participants will be compensated according to the payment structure outlined in the Producer Agreement upon the successful implementation and harvest of each trial for any extra time and costs incurred while participating in this research. This trial is eligible to receive \$1,000-\$1,500 in compensation. The Producer Agreement can be found at www.mnwheat.org/farm-research-network/

Call us anytime with questions - Thank you! Lauren, 218-556-3174; Melissa, 952-738-2000