

# On-Farm Research Protocol

## Variable Rate Nitrogen on Wheat

### Objective

Determine if a variable rate application of N is more profitable than a flat-rate application.

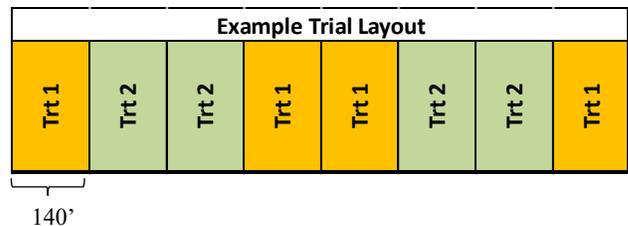
### Field Selection

- Fields with variability with variable topography, soil type, etc.
- Plots typically run the full length of the field and must be wide enough to allow for at least one full combine pass through the plot that avoids sprayer tracks (usually 100-140 ft).

### Variable Rate Application

- The two treatments will be replicated at least four times, for a total of eight harvested strips. Strips should be twice the width of the equipment used to fertilize (ex. 2 passes of a 70 ft floater = 140 ft. per strip) and will run the full length of the field.

- Treatment 1- Variable rate N
- Treatment 2- Flat rate N



- MN Wheat will work with the producer or their consultant to produce the application map
- Applications can be fall or spring applied
- The flat-rate should be the 100% optimum N rate. There should be a total of 5 rates in the variable rate treatment – 2 above the optimum N rate and 2 below the optimum N rate.

### Harvest

- Yield will be measured using one of MN Wheat's weigh wagon to record yield and obtain a protein sample
  - MN Wheat Staff will be available with the weigh wagon to assist with harvest
- Combine passes should avoid sprayer tracks and drown-outs if possible
- MN Wheat will also need to collect the as-applied map and yield map following harvest

### 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 \$1,500 in compensation. The Producer Agreement can be found at*

[www.mnwheat.org/farm-research-network/](http://www.mnwheat.org/farm-research-network/)

Call us anytime to discuss further: Thank you - Lauren, 218-556-3174; Melissa, 952-738-2000