Manitoba Crop Alliance

Spring Wheat Seeding Speed

Replicated Strip Trial Protocol

OBJECTIVE: The purpose of this project is to quantify the agronomic and economic impact of different seeding speeds on spring wheat.

Rep 1	7 mph
	4.5 mph
	6 mph
Rep 2	4.5 mph
	6 mph
	7 mph
Rep 3	7 mph
	6 mph
	4.5 mph
Rep 4	6 mph
	4.5 mph
	7 mph

BRIEF SUMMARY:

- The grower will plant a spring wheat variety at three different planting speeds, e.g., 4.5 mph 6 mph and 7 mph. An example is shown on the right.
    - Planting speeds may differ depending on equipment used. If the highest speed treatment is not achievable given the equipment, two treatments will be used.
- Strips should be full length of the field (minimum 1000 ft.) and width to allow for a full "pure" pass with combine header.
- The grower will manage their crop as per their normal best management practices.

GROWER REQUIREMENTS:

- Accurately record soil test results, variety, seeding date and rate, previous cropping history (rotation, fertilizer rates), tillage practices, fertilizer rates and application timing.
- Accurately record where all treatments are within the field.
- Note any significant weather events throughout the growing season, such as high winds, hail, or extreme precipitation events.
- Areas containing waterways and headlands should be avoided. All other factors in the trial area must be treated the same.
- Alert trial coordinator of expected harvest date and ensure all treatments are harvested the same day into a weigh wagon/calibrated grain cart, and that grain samples can be secured for seed moisture and seed quality analysis.
- Allow MCA to use data for research, educational and information purposes.
- ***Must be a member in good standing with the MCA.***

MCA AND PARTNERS AGREE TO:

- Be available during seeding and harvesting.
- Take various measurements, including stand establishment, height, lodging and crop maturity.
- Provide a report analyzing the statistical and economical treatment differences.
- Keep data in a confidential manner that cannot be linked back to the individual grower by other parties.

RESEARCH ON THE FARM COACHES:

- Project coordinator will work with local Research On The Farm coaches to collect field observations and harvest.
- Research On The Farm coaches may be local Manitoba Agriculture staff, retail or independent agronomists.

BENEFITS TO GROWERS:

- Access to the latest research that can be applied to their farm.
- Determine profitability of the practices.
- Learn accepted on-farm testing procedures.

RESEARCH ON THE FARM

Manitoba Crop Alliance

SPRING WHEAT SEEDING SPEED

Replicated Strip Trial Protocol

MANITOBA CROP ALLIANCE

Data to be collected by Contractor

- Agronomic info (equipment size, field size, variety used, pervious crop, seeding date and soil temperature at seeding, harvest date, seeding rate, row spacing, tillage practices over the past year, fertilizer applied and application method, fungicides/pesticides/herbicides/other chemicals applied (timing and rate) including pre seeding herbicides.)
- Soil sample- Taken prior to spring fertilizer application.
- Germination sample- to be sent for analysis using seed used at planting.
- Maturity Date.
- Fuel use, measured in gallons per hour taken for each seeding speed.

The following will be taken per strip:

- Plant stand (plants/ft^2)- taken approximately 21 days after seeding (1-2 leaf).
    - 5 spots per strip of a length determined by the row width (see table below)

Row width (inches)	Row Length (inches)
6	24
7	20.6
7.5	19.2
8	18
10	14.4
Calculation: 144/row width= Row length	

- Canopeo* - readings taken with phone arm fully extended facing straight down. Readings should be taken between 10 AM-2 PM. Avoid mixed overcast / sunny conditions. 5 readings taken per strip. Taken at time of plant stand measurements (1-2 leaf)
- Canopy Height- taken just prior to harvest. 10 measurements per strip.
- Lodging score- Both Incidence and severity- taken just prior to harvest or before swathing.
    - Incidence = % of strip effected
    - Severity =1-5
- Yield- Bushels/ac
- Harvest sample- 1 sample per strip taken at time of harvest to be sent for quality analysis
    - SGS Elite analysis.
- General observations during the trial (significant disease pressure, insect issues, etc)

*Optional and subject to change.

Lodging Severity Rating Guide

