Manitoba Crop Alliance

CORN PLANTING DEPTH

Replicated Strip Trial Protocol

OBJECTIVE: The purpose of this project is to examine the agronomic and economic benefits of different planting depths for corn in terms of establishment, standability, and yield.

BRIEF SUMMARY:

- Corn planting depth recommendations can range from 1.5-3 inches depending on several factors like soil type, environmental conditions and field history. There is evidence that corn planting too shallow will cause season-long issues in far more cases than the risk of planting too deep.
- The grower will plant the strips of corn at varying depths depending on their standard planting depth.
- Strips should be full length of the field (minimum 1000 ft.) and width to allow for a full "pure" pass with the combine header.
- The grower will keep the rest of the agronomic practices the same on the strips and will manage their crop as per their normal best management practices.

Rep 1	Depth A
	Depth B
Rep 2	Depth B
	Depth A
Rep 3	Depth B
	Depth A
Rep 4	Depth A
	Depth B

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

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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.

The following will be taken per strip:

- Plant stand (plants/acre) taken at approximately V1 stage (First leaf collar)
    - Counts should be done according to table below and repeated 5 times per strip.

Table 1. Row length equivalent to 1/1000th acre at various row widths.

Row width	Length for 1/1000th acre
inches	feet inches
7	74' 10"
15	34' 10"
20	26' 1"
22	23' 10"
30	17' 5"
36	14' 6"
38	13' 10"
40	13' 1"

- Yield- Bushels/ac
- Moisture %
- General observations during the trial (significant disease pressure, insect issues, etc)

Corn staging guide

