

Project E:



Manitoba Crop Alliance CORN – STARTER PHOSPHORUS Replicated Strip Trial Protocol



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OBJECTIVE:

The purpose of this project is to quantify the impact of starter Phosphorus in Corn – 4 sites.

BRIEF SUMMARY:

- Corn fields with 30+ ppm of Phosphorus will be located and soil sampled.
- The grower will plant a corn hybrid with and without starter Phosphorus.
- The grower will plant the strips of corn with and without additional starter Phosphorus similar to the example on the right.
- 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 fertility the same on the strips and will manage their crop as per their normal best management practices.

Rep 1	With Phosphorus
	No Additional Phosphorus
Rep 2	No Additional Phosphorus
	With Phosphorus
Rep 3	No Additional Phosphorus
	With Phosphorus
Rep 4	With Phosphorus
	No Additional Phosphorus

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 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.

If you are interested in participating in a trial or have questions, please contact:

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Data to be Collected by Contractor or MCA (2024 Trials):

- ✓ Soil Test
- ✓ Plant Stand – plants/ft² – after emergence but prior to harvesting
- ✓ Early Season Plant Vigor – 1 poor vigor; 5 healthy plants
- ✓ Lodging – 1=no lodging; 5=flat – just prior to harvest or before swathing
- ✓ General health of the plant 1=no disease; 5=diseased plants (rated before maturity)
- ✓ Maturity – date
- ✓ Yield – bushels/acre
- ✓ Harvest Sample – 1 composite sample/seed treatment for quality analysis
- ✓ General Observations – e.g., General weed control; early season plant vigor

Note:

- A cool, dry spring – you may see more effects of seed placed P in the crop even if the field has sufficient P according to a soil test.