



CORN RESIDUE MANAGEMENT Replicated Strip Trial Protocol

Objective:

The purpose of this project is to quantify the agronomic impacts of spring corn residue management practices on a subsequent soybean crop in **replicated** strips across the field.

Brief Summary:

- Growers will apply four randomized replications comparing four different spring corn residue management practices: i) Current tillage (disc), ii) Vertical till (high residue), iii) Vertical till (low residue), and iv) Strip till. An example is shown on the right.
- The **width** of a strip must be at least as wide as the planter and combine pass. **Length** should be not less than 200m, with a target of 400m.
- Planting and spraying will occur in same direction as tillage treatments. Example is shown on the right.
- Harvesting must ensure at least one “pure” combine pass from each treatment (not mixing yields from two different treatments).

Rep 1	1	Vertical till - high residue
	2	Disc
	3	Strip Till
	4	Vertical till - low residue
Rep 2	5	Strip Till
	6	Vertical till - low residue
	7	Disc
	8	Vertical till - high residue
Rep 3	9	Vertical till - low residue
	10	Strip Till
	11	Vertical till - high residue
	12	Disc
Rep 4	13	Strip Till
	14	Vertical till - high residue
	15	Disc
	16	Vertical till - low residue

▶ Planting/Spraying

Grower Requirements:

- Plant soybeans on 30-inch rows in same direction as tillage treatments, and in furrow of strip till treatment.
- Areas containing waterways and headlands should be avoided. All other factors in the trial area must be managed the same (planting date, variety, crop protection, etc.).
- **If possible**, accurately record where all treatments were applied using GPS mapping equipment.
- All treatments must be harvested on the same day in the same direction as tillage treatments (with rows).
- If available, harvest with a calibrated yield monitor equipped with GPS.
- Allow Manitoba Corn Growers Association and University of Manitoba to use submitted and collected data for research, educational and informational purposes.

University of Manitoba agrees to:

- Be available when applying spring tillage treatments, planting and harvesting.
- Provide tillage equipment that farmer does not have access to.
- Take various soil and crop phenology measurements starting in the spring and continuing until harvest.
- Provide a report analyzing the treatment differences and an income statement.
- Keep data in a confidential manner that can't be linked back to the individual producer by other parties.
- Make this **minimum work for farmers**.

Benefits to the Farmer:

- Access to latest research which can be adapted to their farm.
- Learn what works and what doesn't, what is profitable and what isn't.

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