

Fertilizer Use in Manitoba: Results From the 2021 Survey

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Background and Methods





- Fertilizer Canada performs Fertilizer Use Surveys to track trends in fertilizer use and assess farmer adoption of 4R Nutrient Stewardship practices.
- In 2021, Manitoba Crop Alliance funded the survey of 102 grain corn, 57 flax, 39 sunflower and 121 spring wheat farmers in Manitoba.
- The survey was conducted online. Respondents were required to grow a minimum of 300 acres of wheat or 50 acres of corn, flax or sunflowers.
- The survey provides important information on fertilizer practices and trends and can be a valuable resource to guide research and extension activities.
- It is important to consider the context of the 2021 growing season, in which much of Manitoba experienced significant drought conditions.

General Practices

- In 2021, 72% of Manitoba farmers report being somewhat or very familiar with the 4R concept, compared to 61% in 2016.
- 11% of Manitoba farmers have a 4R plan in place that was approved by a 4R Designated Agronomist.
- 79% of Manitoba farmers soil sample their fields for nitrogen every 1-3 years.
- Agri-retailers, Certified Crop Advisors and Professional/Technical Agrologists are the main sources of information on 4R Nutrient Stewardship.

Connect With Us

This survey contains additional valuable data. For more information, contact ashley@mbcropalliance.ca

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Nitrogen Source

- Anhydrous ammonia (46%) and urea (27%) made up most of the nitrogen (N) volume applied to wheat.
- In corn, urea and anhydrous ammonia each represented 37% of total N volume.
- Many Manitoba farmers are choosing to use enhanced efficiency fertilizers on their crops (Fig. 1).

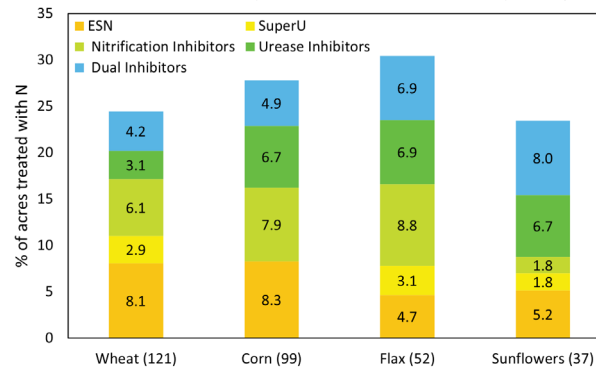


Figure 1. Use of enhanced efficiency fertilizers.

Nitrogen Rate

- For corn, average N rate was 121 lb/ac, a decrease of 20 lb/ac from 2017. For wheat, average N rate was 116 lb/ac, an increase of 19 lb/ac from 2016.
- Farmers report using many different approaches to determine their N rate (Fig. 2).

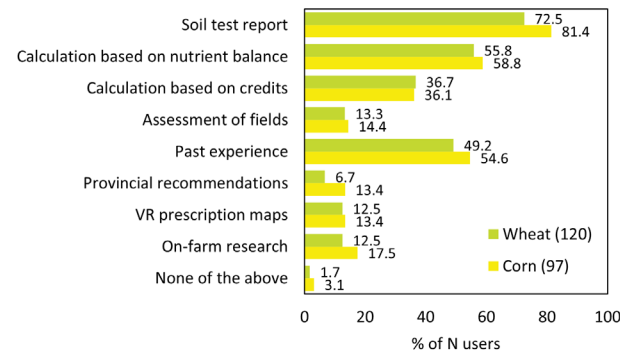


Figure 2. Approaches used to determine nitrogen rate.

Nitrogen Time

- More Manitoba wheat farmers apply fertilizer in the fall compared to farmers in other prairie provinces.
- The most common application timing for N fertilizer varies among crop types (Fig. 3).

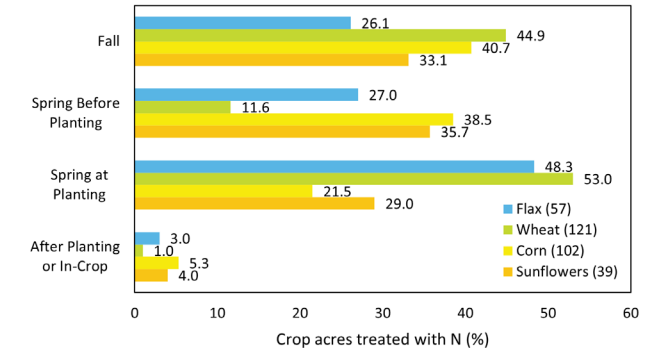


Figure 3. Application timing for nitrogen fertilizer.

Nitrogen Placement

- 68% of corn and 98% of wheat acres had all or some of the N applied in subsurface bands (Table 1).
- Only 10% of corn and 4% of wheat acres had all or some of the N applied by broadcasting with no incorporation.

Table 1. Nitrogen placement in wheat and corn, expressed in percent of acres.

		Corn	Wheat
Fall	Broadcast, no incorporation	0.0	0.2
	Broadcast with incorporation	6.4	5.2
	Banded	34.3	39.5
Spring Before Planting	Broadcast, no incorporation	3.8	2.7
	Broadcast with incorporation	20.5	2.9
Spring at Planting	Pre-plant Banded	14.2	6.0
	Broadcast, no incorporation	4.6	1.1
	Side banded	11.5	14.3
	Mid row banded	5.4	26.4
	Seed placed	0.0	11.3
After Planting /In-Crop	Broadcast, no incorporation (top-dress)	1.7	0.3
	Surface band below canopy (dribble)	0.3	0.7
	Sub-surface banding (side-dress)	2.9	0.0
	Fertigation	0.4	0.0