



Tendances de l'utilisation des fertilisants au Canada

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Conférences &
Cabane à sucre

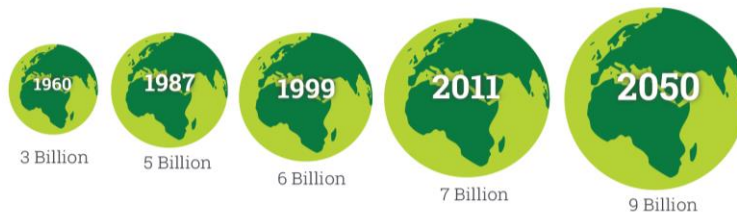


Réseau végétal
Québec
70 ans au service de l'industrie

4R Nutrient Stewardship

Meeting the challenge of sustainable food production is a global concern

The world's population is expanding & food production **must** rise



By 2050 we will need to **increase** food production by 70%

The global population is expected to increase by more than 2 billion people in the next 40 years

4R nutrient stewardship

4R Nutrient Stewardship can
help grow crops sustainably

----- The 4Rs work to increase production/profitability for
farmers while ensuring the future of the agricultural industry -----

RIGHT

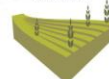
SOURCE

RIGHT

RATE

RIGHT

TIME

RIGHT

PLACE

Sustainable agriculture is supported by environmental, economic and social pillars:

ENVIRONMENTAL

- Sustain or improve soil quality
- Maintain nutrient levels within natural ecosystems
- Preserve wildlife habitat

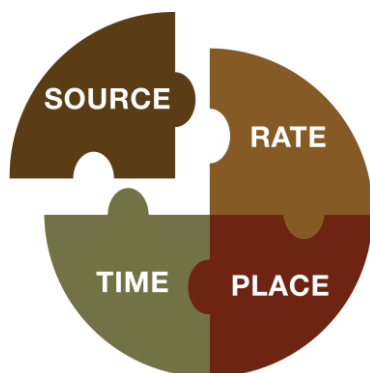
ECONOMIC

- Produce revenue to sustain farm operations
- Preserve quality of life
- Make the most of dollars spent on fertilizer

SOCIAL

- Produce nutritious, abundant and affordable food
- Help meet global food needs
- Provide ongoing employment opportunities in agriculture

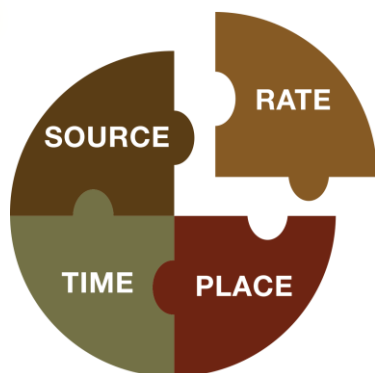




- Ensure Balanced Supply
- Suit Soil Properties



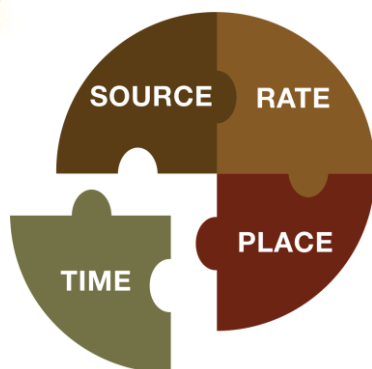
Right Source



- Assesses All Resources
- Assesses Plant Demand



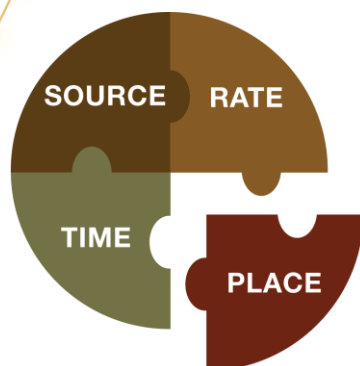
Right Rate



- Assesses Dynamics of Crop Uptake and Soil Supply
- Determine Time of Loss Risk



Right Time



- Recognize Crop Rooting Patterns
- Manage Spatial Variability

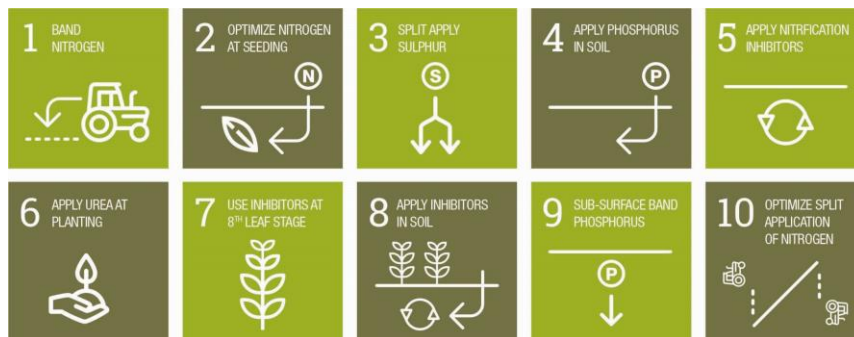


Right Place

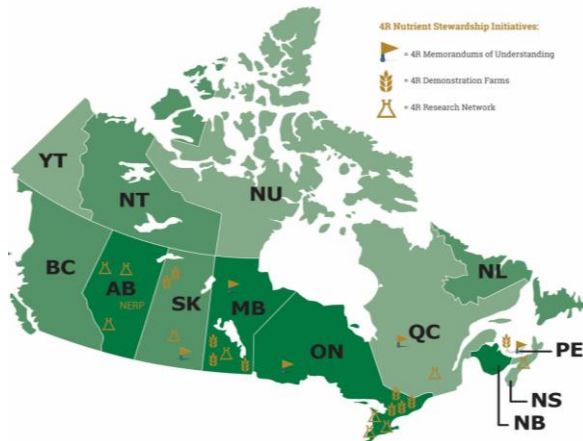


Evolution of 4Rs in Canada

4R Research Network



FERTILIZER CANADA: 4R NUTRIENT STEWARDSHIP ACROSS CANADA



4R Nutrient Stewardship across Canada

- Provincial agreements in Saskatchewan, Manitoba, Ontario, Quebec, and PEI
- 4R Demonstration Farms across the country in these provinces
- 4R Research Network of 10-15 leading Canadian soil scientists
- Grower Fertilizer Use Survey
- 4R Agri Retailer Programming

4R Designation – National program



- Grower and Agri-retailer develop voluntary 4R plan
- Consistent with regional BMP guidance tables
- Sign off by trained professional: CCA, 4R training provincial qualifications as required (P.Ag, Nutrient Management Planner)
- Acres, Crop and Eco-district data filed confidentially to registry
- Grower and Agri-Retailer receive 4R Designation and recognition
- Registry reports acres under 4R management by crop and Province

•2024 4R Reported Acres

• Alberta	2,152,586
• Saskatchewan	2,952,644
• Manitoba	1,096,690
• B.C.	13,435
• Quebec	684,882
• Ontario	610,756
• Province not specified	687,664
• Total	8,198,657 acres

Fertilizer Use Survey

Long-standing initiative since 2014

Surveys growers annually to determine fertilizer application practices of growers across Canada and 4R awareness

Data collected through online survey from an unbiased database of farmers

Expanding in 2025 to include more crops

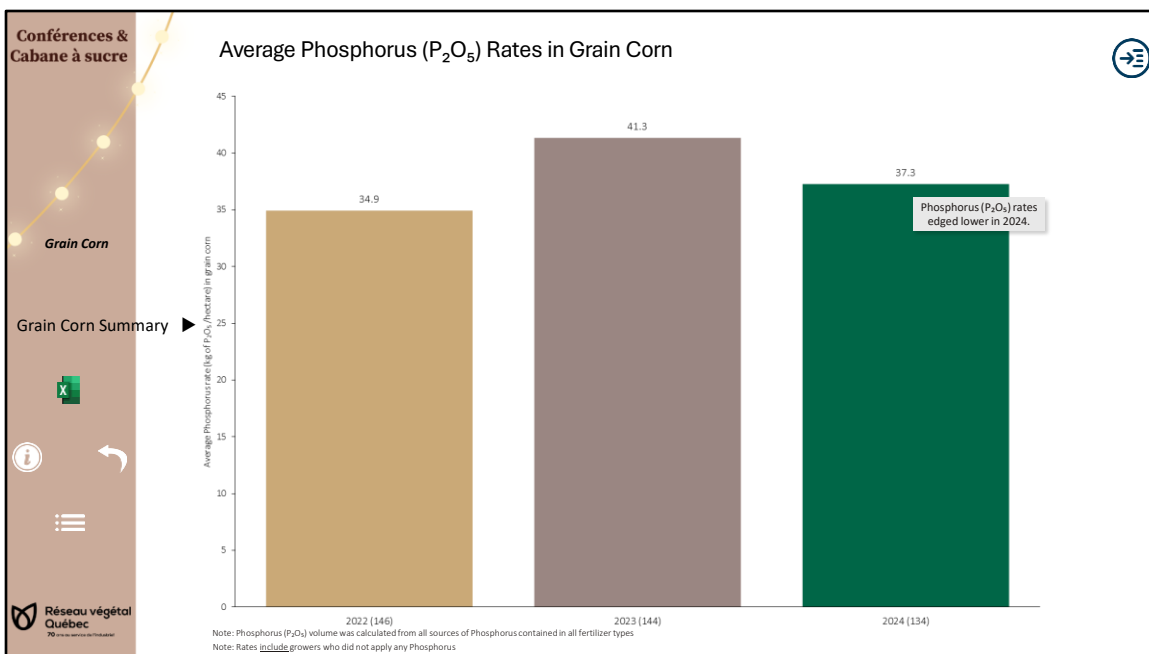


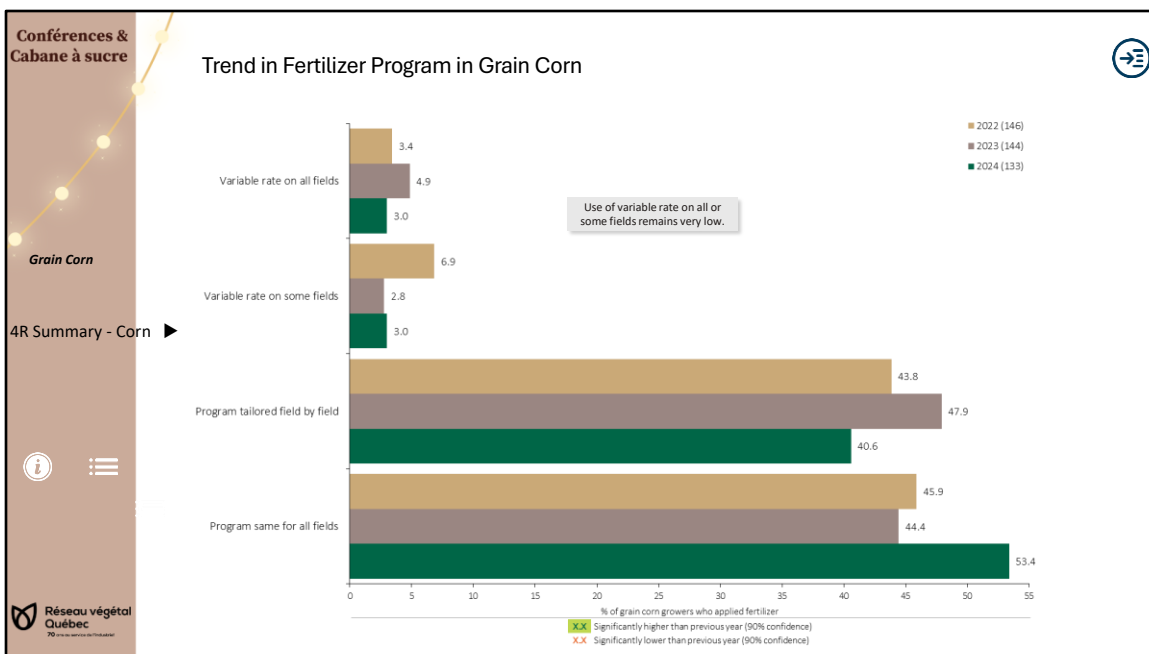
4R Nutrient Stewardship - Summary

4R Summary ►

More farmers are working with a 4R Designated Agronomist and more have a formal 4R Plan.

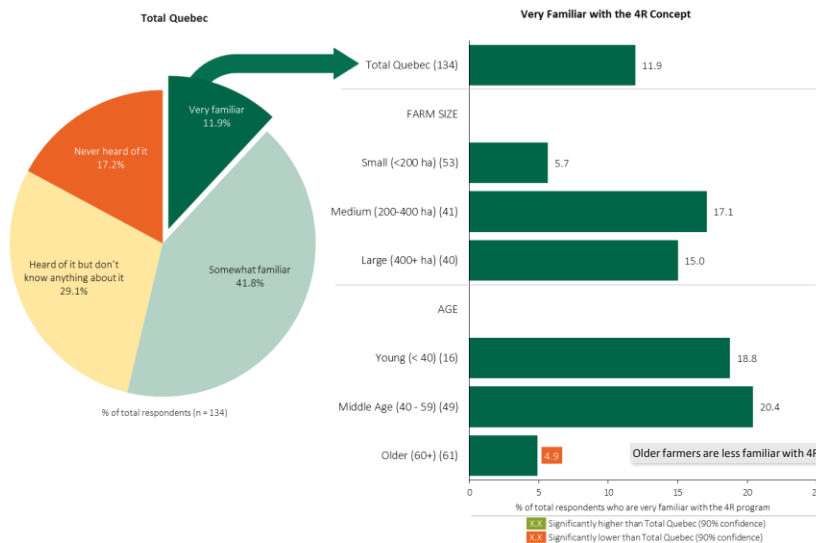
- Small farms and older farmers are less familiar with 4R. ►
- The number of farmers who work with a Designated Agronomist continues to trend higher. ►
- Slightly more large farms work with a 4R Designated Agronomist. ►
- Growers with a formal 4R plan continues to trend higher. ►
- More farmers who are very familiar with 4R have a formal 4R Plan in place. ►
- Those with a 4R Plan say there are multiple benefits led by improved soil quality and nutrient availability. ►
- Independent CCA's and CCA's who work for an ag retailer are the main sources of information about 4R. ►

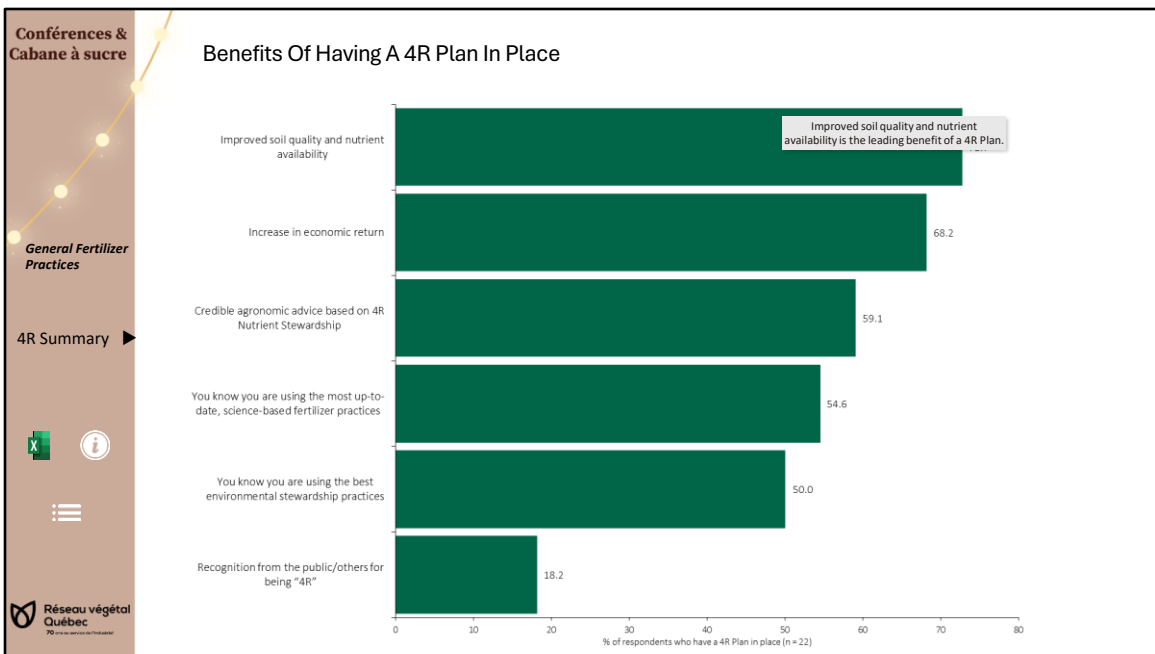






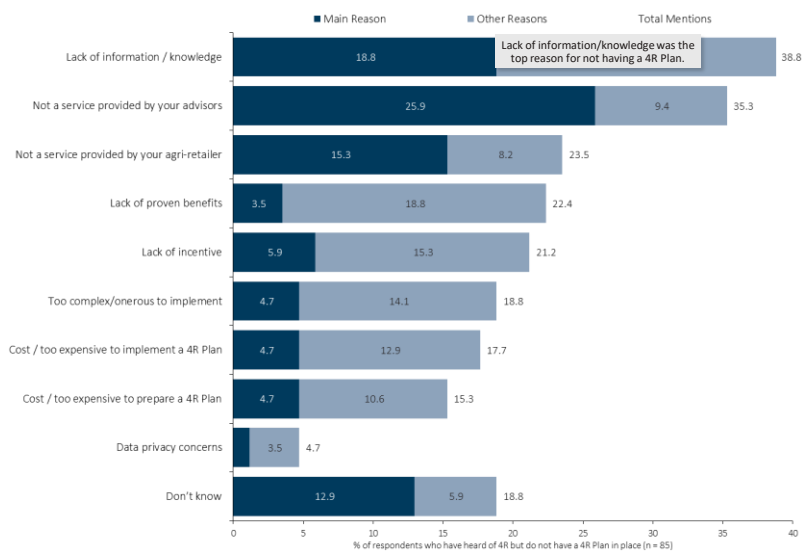
Familiarity With 4R Concept







Reasons For Not Putting A 4R Plan In Place



Growers following the Basic 4Rs

- 57% of growers surveyed believe their fertilizer practices follow the 4Rs to at least a basic level, but only 26% of growers surveyed report they have worked with a 4R Designated or certified agronomist and only 6 % have a 4R Plan in place.
- There is clearly an opportunity to increase the adoption and sophistication of 4R implantation on Canadian Farms.

What growers are telling us!



TOP BENEFITS OF HAVING A 4R PLAN IN PLACE

- Increase in economic return
- Recognition of using the best environmental stewardship practices
- Improved soil quality and nutrient availability

TOP REASONS FOR NOT PUTTING IN A 4R PLAN IN PLACE

- Cost / too expensive
- Lack of proven benefits
- Lack of incentive

Thank-you
Any questions?



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