

# FERTILIZER USE 4 IN CANADA

4R NUTRIENT STEWARDSHIP  
GROWER ADOPTION

**2019 Results**



FERTILIZER CANADA



## ABOUT THE SURVEY

The Fertilizer Use survey assists in understanding the current state of fertilizer management in Canadian crop production and how growers use and make decisions about fertilizer applications. Conducted between the 2014 and 2019 growing seasons, the survey gathers data on fertilizer management practices and current knowledge of 4R Nutrient Stewardship (Right Source, Right Rate, Right Time, Right Place®) from growers across the country. The survey also captures baseline data about corn, soybean, and canola crops in Canada. This information is essential for developing sustainability metrics and sound 4R Nutrient Stewardship strategies.

## Improving Sustainability Practices Across Canada

Canada's fertilizer industry has been working diligently to maintain a resilient supply chain here and around the world by improving sustainability practices through 4R Nutrient Stewardship. Not only will implementing sustainability practices help Canada reach its climate goals but also help reduce the impact on our environment over time as demands in growers and their crops rise. In the years to come, as our population grows, we will require food production to double to meet the demands.

The goal of 4R Nutrient Stewardship is to support farmers as they replenish soils and push yields higher on the same amount of cropland, all while reducing environmental compromise. This will mean better use of our resources, increased supply and with limited environmental impacts in Canada. The 4R Nutrient Stewardship has become a critical part in the reliable and sustainable success of crops in Canada and around the world, that continue to yield supply that meets consumer demands.



### TOP BENEFITS OF HAVING A 4R PLAN IN PLACE

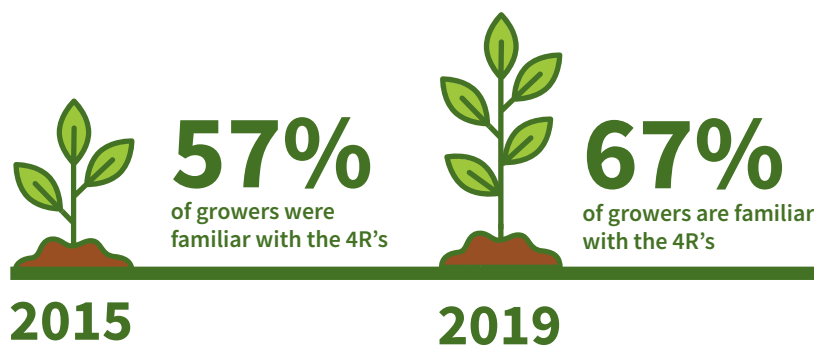
- Increase in economic return
- Recognition of using the best environmental stewardship practices
- Improved soil quality and nutrient availability

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

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

## SURVEY RESULTS

### 4R Familiarity Growth Over 5 Years



## THE RIGHT SOURCE

To help growers mitigate risks and unpredictability in their seasons, the Right Source recommends specific enhanced efficiency fertilizer (EEF) for grower's crops that reduces loss and improves yield during adverse weather, equipment breakdown etc.



PERCENTAGE OF GROWERS CHOOSING TO USE AN EEF:

**24.9%**  
OF GROWERS IN CANADA

## THE RIGHT RATE

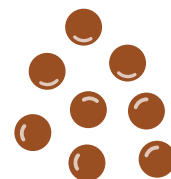
To ensure that a responsible rate of nitrogen and phosphorus is used, growers are using soil sampling to determine their rate. In this year's survey we found that growers in the high yield categories are soil sampling every three years to determine their fertilizer rates.



LOW YIELD:  
**54.8%**



MODERATE YIELD:  
**55.6%**



HIGH YIELD:  
**65.8%**

## THE RIGHT TIME

Timing is everything. 4R guidance helps ensures growers are avoiding high risk times in the year, where they are at risk of losing fertilizer to Green House Gas (GHG) emissions or run off.



The majority of Canadian growers implementing the 4R's apply fertilizer at spring planting or as an in-season application to avoid the risk of loss in the fall.

## THE RIGHT PLACE

By implementing the Right Place, growers are able to place fertilizer where it is less likely to leave the soil and provide the best nutrient available to the plant through banding and seed placement recommendations. This is great news for protecting Canada's water ways and reducing environmental impacts.



**76.7%**

of Canadian growers are applying phosphorus by banding or seed-placed, a practice shown to **reduce Phosphorous runoff by up to 60%**

# Soil-Sampling is Helping Canadian Growers

By soil sampling every 3 years, growers and crop advisors are able to leverage lab results on their soil to determine what their crops need to create site-specific plans that help increase yield and protect the ecosystem.

In this year's survey we found that growers in the high yield categories are more often soil sampling the recommended every 3 years to determine their fertilizer rate.





# Growers are Implementing Programing Across Canada

The 4R Nutrient Stewardship is currently used in Alberta, Manitoba, Ontario, New Brunswick, and Prince Edward Island. To fertilize properly and achieve the benefits of an abundant and healthy crop, it is a site-specific program based on science to protect soil, air and water.

**51.2% of Canadian corn & canola growers are following the basic 4R BMPs**



**10.9M of 20.9M** acres of canola in Western Canada are following 4R BMPs



**1M of 2.2M** acres of corn in Ontario follow the 4R BMPs

## Alberta

**16.7 %**

of growers have opted to use an Enhanced Efficiency Fertilizer (EEF) in the fall, a practice shown to reduce N<sub>2</sub>O emissions between **25-50%**.

## Ontario

**47.4%**

of growers in the Lake Erie Basin are working with a 4R Certified Retailer. This is great news because our growers are working to show a commitment to the 4R's and incorporating the best BMPs on their farms.

## Saskatchewan

**92.8%**

of canola growers are applying their phosphorus in a band or seed placed, a 4R BMP shown to reduce phosphorus run-off by up to **75%**.

## Manitoba

**71.8%**

of growers are soil sampling every 1-3 years to determine their phosphorus rate, improving crop productivity and fertilizer efficiency.



To read the full report, visit:

[fertilizercanada.ca/our-focus/stewardship/fertilizer-use-survey](http://fertilizercanada.ca/our-focus/stewardship/fertilizer-use-survey)

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