

# 4R Nutrient Stewardship Update

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[saskatchewan.ca](http://saskatchewan.ca)

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# Outline

- 4R Overview
  - What is 4R Nutrient Stewardship?
  - What are the 4R Principles?
  - What is a 4R Stewardship Plan?
- 4R Training for Agronomists
- 4R Programming for Producers

# 4R Overview

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What is 4R Nutrient Stewardship?

What are the 4R Principles?

What is a 4R Stewardship Plan?

# What is 4R Nutrient Stewardship?

- 4R Nutrient Stewardship is an internationally recognized approach that promotes environmental stewardship through best practices in science-based nutrient management
- Assists Producers and Agronomists in identifying opportunities for continued improvement in fertilization practices that enhance productivity, sustainability and profitability



**Was the crop  
given the proper  
source of a  
nutrient at the  
right time, rate  
and place?**

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# What are the 4R Principles?

Right



Source

Right



Time

Right



Rate

Right



Place

# Right Source

- Select the correct source of nutrient for your soil ensuring a balanced supply of essential plant nutrients including granular or liquid fertilizers or manures

# Right Time

- Carrying out annual nutrient management plans
- Ensuring that timing of fertilizer application matches crop uptake
- Avoiding applying fertilizer or manure on frozen soil or snow



# Right Rate

- Perform annual soil testing
- Calibrate application equipment to deliver the target rates
- Apply nutrients to meet crop requirements while taking into account the nutrients already within the soil
- Considering the availability of nutrients from all sources (eg. livestock manures, commercial fertilizers and atmospheric nitrogen fixed by pulses)

# Right Place

- Selecting the correct placement of fertilizer to ensure that fertilizer is available for plant uptake as well as avoiding fertilizer losses
- Avoiding broadcast applications of volatile fertilizers

# 4R Nutrient Stewardship Plan

- Create a site-specific management plan where 4R nutrient management practices are optimized to match the requirements of the crop and manage environmental risks at the individual field level
  - **Results:** A series of Best Management Practices (BMPs) that provide a plan to convert the principles into practice that fits local conditions
  - **Results:** Having a 4R Nutrient Plan in place allows Producers to set goals for incremental improvement
- 4R Nutrient Stewardship Plans are a great way to validate and document the great work Producers are already doing in regards to the BMPs that are already being implemented on the farm

# 4R Training

For Agronomists

OUR FOCUS > STEWARDSHIP

# 4R Designation

4R Designation provides recognition for farmers who complete and apply 4R Nutrient Stewardship grower plans.

## 1. Education

>> Aimed for PAg or CCA



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# 4R Designation

4R Designation provides recognition for farmers who complete and apply 4R Nutrient Stewardship grower plans.

## 2. 4R Attestation

>> Document completion confirms credentials and competency to prepare and sign-off on 4R Nutrient Stewardship Plans



**4R Agri-Retailer Attestation**



**4R Agronomist Attestation**

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# 4R Designation

4R Designation provides recognition for farmers who complete and apply 4R Nutrient Stewardship grower plans.

## 3. Working with A Grower to implement 4R Nutrient Stewardship on their Farms



FERTILIZER CANADA  
FERTILISANTS CANADA

**Saskatchewan  
4R Nutrient Stewardship  
Management Plan**

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• Temp  
a 4R

Planned Nutrient Application and Performance Results						
Field		Source (List all that apply) analysis N, P2O5, K2O-S)	Rate (include units)	Time (date, crop growth stage)	Place (depth, method)	Performance Results: (yield bu/A, grain quality %CP, P index, nitrate leaching index) or barriers to adoption
1	Current Application					
	Alternate future application					
2	Current Application					
	Alternate future application					

**Farm Information**

Enterprise Name (F

Contact Information  
Phone, Email):

Contact Information  
Adviser, or Consult

Dates That This Plk  
(Month/Year):

Enterprise Descrip  
etc):

Total Crop Area:

Crops Grown:

Livestock and/or P

On Farm Nutrient S  
posts, and Other M  
annually:

Quantity of Manure

en developing

Indicators Related to Nutrients	
es)	Performance Indicators (ex. Yield, quality of crop, nutrient use efficiency etc)
ue to input ertilizer by years	<input type="checkbox"/> Value to input cost ratio (Dollars of crop produced per dollar of nutrient input)
venue to operations	<input type="checkbox"/> Farm Profit
ient use % over two	<input type="checkbox"/> Nutrient use efficiency (amount of crop produced per pound of nitrogen applied)
shouts/soil	<input type="checkbox"/> Measure level of ground cover by cover crops or crop residue during high risk times for soil erosion.
ciety's low farmers askatche- iboine Wa- sponsible a land.	<input type="checkbox"/> Become a 4R Advocate or participate in similar programs with Saskatchewan Soil Conservation Association (SSCA), Agricultural Producer Association of Saskatchewan (APAS), or another regional group.
venue to operations	<input type="checkbox"/> Ecosystem Services





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# 4R Designation

4R Designation provides recognition for farmers who complete and apply 4R Nutrient Stewardship grower plans.

## 4. Get Grower Acres Counted Under 4R Nutrient Stewardship Framework

- Acres counted under the 4R Nutrient Stewardship framework is the best way to demonstrate to customers and stakeholders what our industry is doing to be forward thinking on sustainable agriculture

# Get Grower Acres Counted Under 4R Nutrient Stewardship Framework



## Acre Recording Form

If you are a 4R Designated Agronomist please use this form to record the number of crop acres that you verified to be 4R over the 2024 growing season.

Designated Agronomist Name \*

Today's Date \*

Province \*

\*Note if your territory/customers are over multiple provinces please fill out a form for each province.

Agri-Retail/Consulting Location \*

Designated Agronomist Email \*

# Acres Perennial Forages

#Acres Wheat (Winter, Durum, and Spring)

# Acres Canola

# Acres Corn

# Acres Barley

# Acres Soybeans

# Acres Oats

# Acres Lentils

# Acres Field Peas

#Acres Flaxseed

# Acres Potatoes

# Acres OTHER

I agree that information provide on this form is accurate to my best knowledge \*

By signing this Repository form and based on my professional judgement as P.Ag and/or CCA, I verify that the principles of the 4R Nutrient Stewardship have been reviewed and the grower's nutrient management as discussed is consistent with the the principles of 4R Nutrient Stewardship.

Submit



# 4R Programming

For Producers

# Get Your Acres Counted Under 4R Nutrient Stewardship Framework

- **Why?**

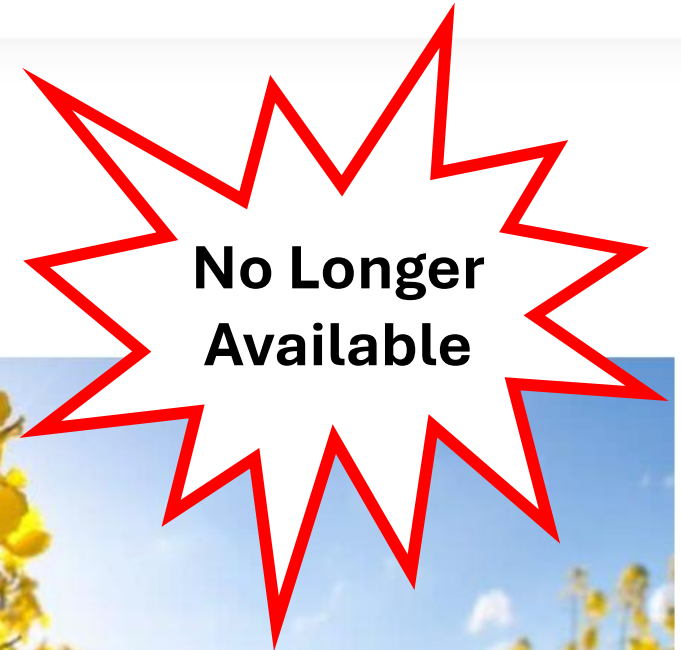
- By having increased acres that are 4R Designated through Fertilizer Canada (updated on a yearly basis by crop), it explains to commodity buyers and consumers that producers are focused on BMPs that are sustainable
- **Proactive Approach** that provides producers proof that potentially could be needed to market their commodity to a sustainability sensitive buyer or potentially gain better market access

# Looking Back: Past Programming



HOME / CANOLA 4R ADVANTAGE

## Canola 4R Advantage



**April 1, 2023 to March 31, 2024**

PRINT

The end of year two of Canola 4R Advantage marks the completion of the CCC's role as a delivery partner under the On-Farm Climate Action Fund (OFCAF).

**Quick links**



# Looking Ahead: What's Available



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## Prairie Watersheds Climate Program (PWCP)

***Program Extended to 2028*** (Falls under Federal On-Farm Climate Action Fund (OFCAF))

**BMPs eligible under the PWCP focus on three categories:**

- 1.) Improving Nitrogen Management
- 2.) Increasing adoption of cover cropping
- 3.) Expanding the adoption of rotational grazing

<https://saskwatersheds.ca/praire-watershed-climate-program/>



# Prairie Watersheds Climate Program (PWCP)

## Eligible activities under the Improving Nitrogen Management BMP:

### 1.) Use of Polymer Coated Urea (PCU) Fertilizer

>> 85% of the increased cost of PCU fertilizer compared to regular nitrogen fertilizer, up to a maximum of \$75,000

### 2.) Use of Dual Inhibitors (using both Nitrification and Urease Inhibitors together)

>> 85% of the cost of the inhibitors, up to a maximum of \$75,000

### 3.) Agronomic Support for Nitrogen Management Plans

>> 50% of total cost, up to a maximum of \$10,000

### 4.) Soil Testing

>> 85% of total cost, up to a maximum of \$2,500

<https://saskwatersheds.ca/praire-watershed-climate-program/>





# Prairie Watersheds Climate Program (PWCP)

## Eligible activities under the Improving Nitrogen Management BMP Continued:

### 5.) Soil Mapping

>> 50% of total cost, up to a maximum of \$10,000

### 6.) Adding Legumes to crop rotation

>> Up to \$35/ac for seeds and seeding costs, up to a maximum of \$75,000

### 7.) Upgrading seeder equipment to allow for banding, side dressing and inter-row weeding

>> Up to \$200 per foot of seeding equipment, up to a maximum of \$30,000

### 8.) Split Application of Fertilizer to improve nitrogen use

>> 85% of total cost of a second pass of fertilization, up to a maximum of \$75,000



**Funded projects must be new practices for an operation**

<https://saskwatersheds.ca/praire-watershed-climate-program/>



# Looking Ahead: What's Available



Agriculture and  
Agri-Food Canada

Agriculture et  
Agroalimentaire Canada

***Program Extended to 2028*** (Falls under Federal On-Farm Climate Action Fund (OFCAF))

>> The farm must hold organic certification under the Canada Organic Regime (COR) issued by a certification body accredited by the CFIA

**BMPs eligible under ECOCERT focus on two categories:**

- 1.) Nitrogen Management
- 2.) Cover Cropping

<https://www.ecocert.com/en-CA/contact>



## **Eligible activities under the Nitrogen Management BMP:**

- 1.) Plan, assessment, design work and consultancy fees and cost of other agronomic support/technical training**
- 2.) Soil testing and soil mapping costs**
- 3.) Offsetting higher cost of synthetic fertilizer substitutes (manure, compost, digestates), where applicable**
- 4.) Seed and planting costs to increase legumes in rotation**
- 5.) If transitioning to manure, costs associated with spreading using hoses or equipment for shallow incorporation (to avoid volatilization)**

<https://www.ecocert.com/en-CA/contact>



# Looking Ahead: What's Available



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[Sustainability Incentive Program](#) / [Fertilizer Canada's Nutrient Stewardship Program – 4R](#)

## Fertilizer Canada's Nutrient Stewardship Program – 4R

***Applications are closed for 2024 will re-open in 2025***

- >> Incentive Program that integrates **AgExpert Field** with **Fertilizer Canada's Nutrient Stewardship Program** for eligible customers who use 4R practices in their operations, work with a 4R Designated Agronomist, Agrologist, or Certified Crop Adviser (CCA)

<https://www.fcc-fac.ca/en/financing/agriculture/sustainability-incentive-program/4r>



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[Sustainability Incentive Program](#) / Fertilizer Canada's Nutrient Stewardship Program – 4R

## Fertilizer Canada's Nutrient Stewardship Program – 4R

- >> Incentive payments are calculated as a portion of your FCC lending, up to a maximum of \$2,000 in one year
- >> You can reapply annually throughout the life of the program

<https://www.fcc-fac.ca/en/financing/agriculture/sustainability-incentive-program/4r>





## Fertilizer Canada's Nutrient Stewardship Program – 4R

### >> Program Eligibility:

- Be an FCC customer in good standing with a balance owing on eligible, existing FCC lending
- Have an **AgExpert Field Premium** account
- Have a 4R plan in place for the growing season
- Record production activities (like fertilizer applications) in AgExpert Field during the crop year
- Have 4R beneficial management practices verified by a 4R Designated Agronomist, Agrologist or CCA in AgExpert Field at the end of the growing season

<https://www.fcc-fac.ca/en/financing/agriculture/sustainability-incentive-program/4r>



# Summary

- Recognize the improvements Producers have made already over the years
- Not a one size fits all approach

- **Additional Resources Available Related to 4R:**

- 4R Webinar Series available through the Ministry of Agriculture
- Research validating 4R practices (<https://agriculturereports.saskatchewan.ca/>)



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[x.com/SKAgiculture](https://x.com/SKAgiculture) and 1 more link



**Strategic Field Program  
(SFP)**

**TOP DRESSING NITROGEN FERTILIZER ON FROZEN OR SNOW  
COVERED SOILS IN SASKATCHEWAN**

- Ministry of Agriculture will continue extension focused on research and BMPs for Saskatchewan Producers

*Saskatchewan!*

# Questions?

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