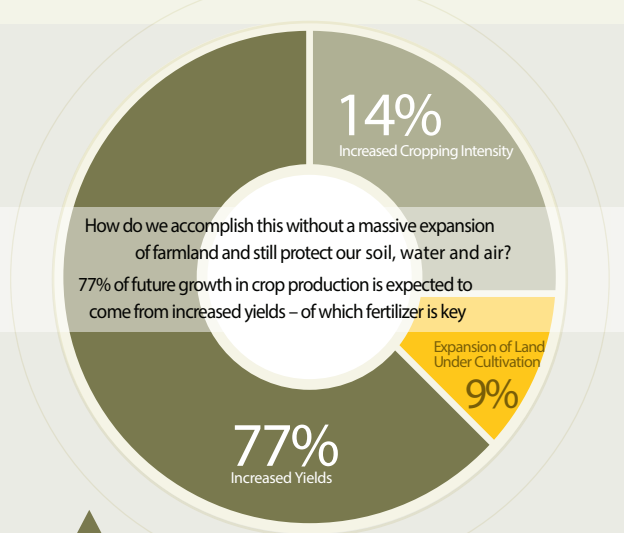


The world's population is expanding & food production must rise. By 2050 we will need to increase food production by 70%.



Fertilizer is an important input for crop production, but poorly managed nutrient applications can decrease profitability and increase nutrient losses, potentially degrading water and air.

4R Nutrient Stewardship empowers farmers with the knowledge & resources they need to grow crops sustainably.

The 4Rs increase production & profitability for farmers while ensuring the future of the agricultural industry:

- Right Source** – Select the correct source of nutrient for your soil ensuring a balanced supply of essential plant nutrients
- Right Rate** – Perform annual soil testing & apply nutrients to meet crop requirements while accounting for nutrients already in the soil
- Right Time** – Apply nutrients at the right time so nutrients will be available when crop demand is high & do not apply fertilizer on frozen soils
- Right Place** – Place nutrients below the soil surface where they can be taken up by growing roots when needed

Through sustainable actions, we can protect our soil, water and air for society.



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4R Nutrient Stewardship



4R Designation



CANADIAN FERTILIZER INSTITUTE
INSTITUT CANADIEN DES ENGRAIS

The 4R Nutrient Stewardship Program will play a key role in meeting the sustainability challenge

What is 4R designation?

Farmers are increasingly facing pressures from the supply chain and the general public to demonstrate on farm stewardship and the 4R Nutrient Stewardship Program can provide a strategic opportunity to meet those challenges.

4R Nutrient Stewardship provides a framework to achieve cropping system goals — increased production, increased farmer profitability, enhanced environmental protection and improved sustainability. 4R Nutrient Stewardship requires the implementation of best management practices (BMPs) that optimize the efficiency of fertilizer use. The goal of fertilizer BMPs is to match nutrient supply with crop requirements and to minimize nutrient losses. Selection of BMPs varies by location, and those chosen for a given farm are dependent on local soil and climatic conditions, crop, management conditions and other site-specific factors.

The 4R designation provides recognition for farmers who complete and apply 4R Nutrient Stewardship Plans on field.

Minimize impact to the environment

Contribute to Canada's environmental goals by adopting 4Rs on farm. Retaining nutrients within a field's boundaries and in the crop rooting zone greatly reduces the amount that is not utilized by plants and thereby escapes into the environment as pollution.



» 4R Designation

Step	Grower	4R Agronomist	Agri-Retailer	Registry Organization (Measurement)	Other Parties
1. Education	Learn about 4R Nutrient Stewardship (e.g. via web, print, workshop, conference) and see if it makes sense	Ensure credentials: <ul style="list-style-type: none">> CCA> 4R Training (overarching and region-specific courses)> Other required provincial designations such as PAg/Nutrient management planner	<ul style="list-style-type: none">> Corporate decision to buy-in> Internal and external marketing	May be: <ul style="list-style-type: none">> General Farm Group> Provincial agency> Professional group	–
2. Planning	Meet with the agri-retailer to develop 4R plan along with fertilizer recommendations	Develop retailer procedures for 4R programming: <ul style="list-style-type: none">> Training> Manuals> Other items of relevance Independents may have flexibility while larger companies may need ISO-type procedures	<ul style="list-style-type: none">> Work with 4R Agronomist to provide 4R training to staff, update credentials as required, build 4Rs into agronomy software> Meet grower to make NPK 4R plan with CCA or equivalent advisor	Provide online system for agri-retailer to register 4R acres as they are approved by 4R Agronomist	CFI maintains and communicates recent, updated programs to retailer/registry
3. Reporting	Consent to have 4R acres reported	Review and sign-off of 4R plan by agri-retailer and grower	Attestation of 4R readiness via PAg, 4R Agronomist and 4R 'checklist' guidelines	<ul style="list-style-type: none">> Keep directory of 4R agronomists	–
4. Implementation	Implement their 4R plan	Follow up with agri-retail CCAs and growers to check on progress	Reports acres to appropriate, registry	Register information on acres, eco district, and crops Protect confidentiality of grower/ agri-retailer and keep data simple	–
5. Recognition	Receive 4R signage and recognition	–	Support grower 4R implementation and provide recognition Build relationship with customer	–	–
6. Review	Review progress with agri-retailer	End of season tune-up with 4R plans and actual implementation	Review progress with grower	Publish annual report on crop, eco district, level of attainment (not rated on how well it was done but that the farmer did it), etc.	Endorse annual report

Get Involved

The right time for nutrient stewardship is right now!

Become involved in helping to identify solutions that face the agricultural community today.

farming4Rfuture.ca



The Canadian Fertilizer Institute's online training platform, Grow Zone, is home to a number of 4R training programs.

- > Introduction to 4R Nutrient Stewardship
- > 4R Essentials – A short course in 4R Nutrient Stewardship
- > Nitrous Oxide Emissions Reduction Protocol (NERP)
- > Nitrous Oxide Emissions Reduction Protocol (NERP) Lite
- > Region-specific 4R Nutrient Stewardship Courses (where applicable)

To find out more information or to participate in the initiative, please visit farming4Rfuture.ca and commit your acres to help us get the word out.

** Continuing Education Units are available for all courses identified here.*