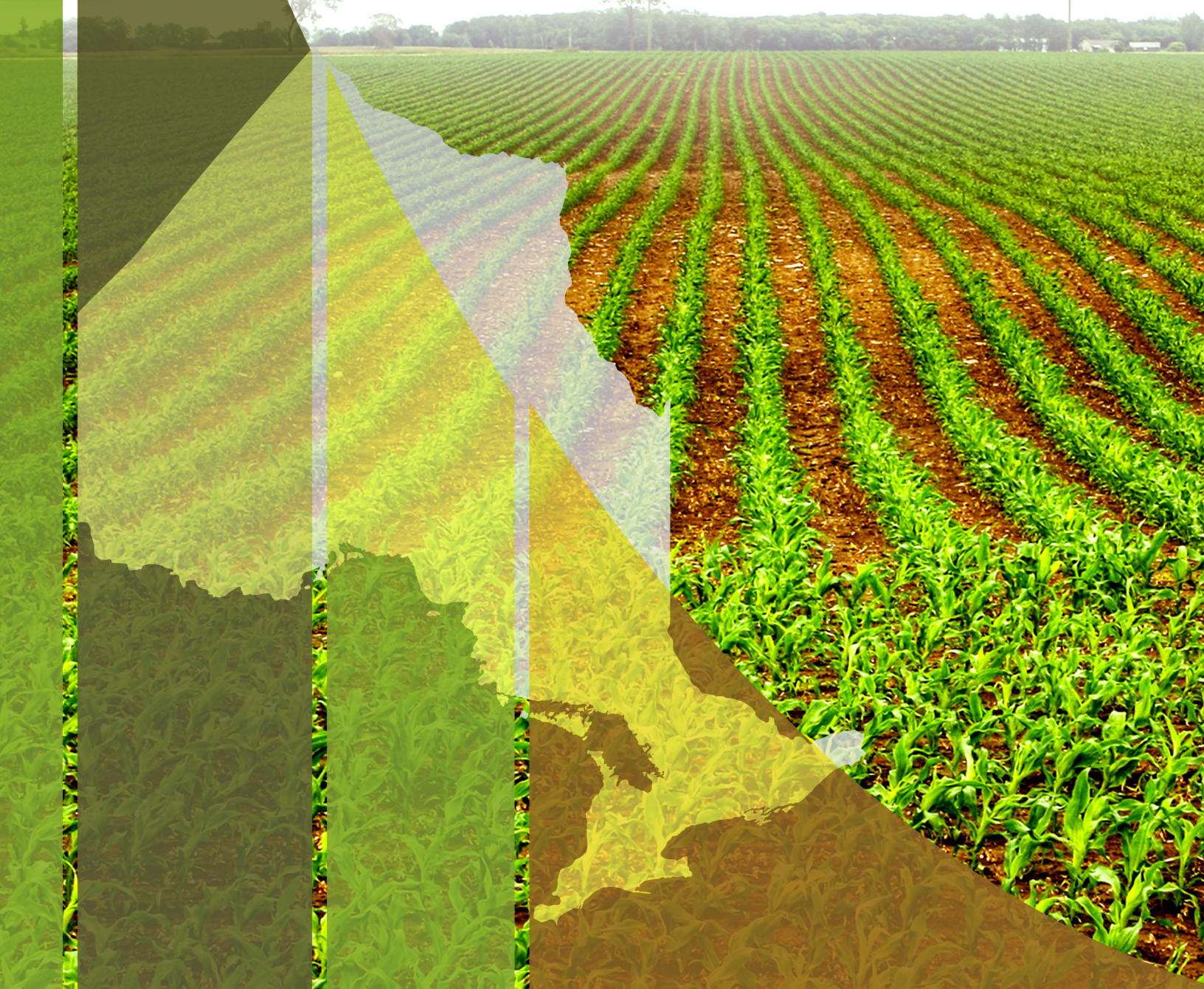




4R NUTRIENT STEWARDSHIP

and the Farmland Health Check-up

Current Status and Opportunities for Nutrient and Land Management Practices in Ontario



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4R Nutrient Stewardship and the Farmland Health Check-up Current Status and Opportunities for Nutrient and Land Management Practices in Ontario

4R Nutrient Stewardship (Right Source @ Right Rate, Right Time, Right Place ®) is an innovative approach for fertilizer best management practices (BMPs). This method considers economic, social and environmental dimensions of nutrient stewardship and is essential to the sustainability of agricultural systems.

The concept is simple — apply the right source of nutrient, at the right rate, at the right time and in the right place — but the implementation is knowledge-intensive and site-specific.

The agricultural industry, government, and conservation authorities in Ontario are committed to sustainable food production. 4R Nutrient Stewardship provides a science-based framework for implementing, validating, and communicating those efforts.

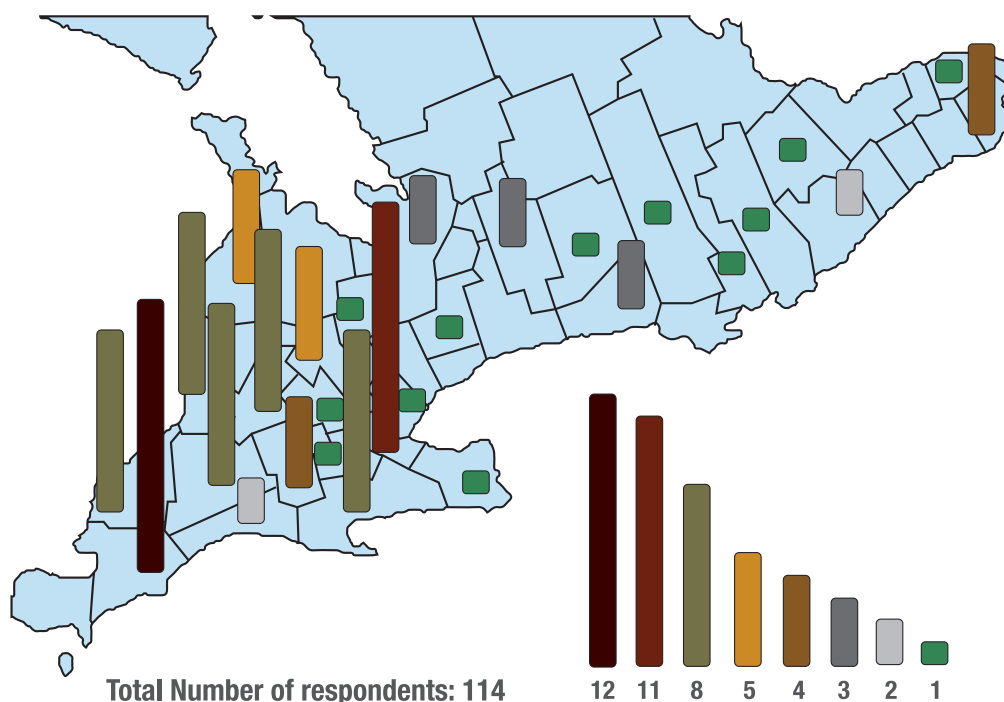
The activity summarized herein is part of an overarching Memorandum of Cooperation (MOC) between Fertilizer Canada, the Ontario Ministry of Food and Rural Affairs and The Ontario Agri-Business Association. Through this MOC, 4R Nutrient Stewardship BMPs will be adopted to Ontario's agricultural soils, water quality, and ecosystems as they relate to nutrients.

Activity Overview

A presentation highlighting 4R Nutrient Stewardship principles, practical on-farm approaches to 4R Nutrient Stewardship, and the Great Lakes Agricultural Stewardship Initiative (GLASI) was delivered to three audiences during March 2016, including meetings with Halton Region Conservation Authority and the Grain Farmers of Ontario at their semi-annual meeting, as well as a webinar. The attendees of the three

presentations came from all across southern Ontario, with the majority coming from Southwestern Ontario. A brief survey assessing the audience members' knowledge of the 4R Nutrient Stewardship and their agricultural stewardship practices was distributed at each presentation. The following data has been derived from the 114 survey responses that were submitted.

4R Nutrient Stewardship in Ontario by County

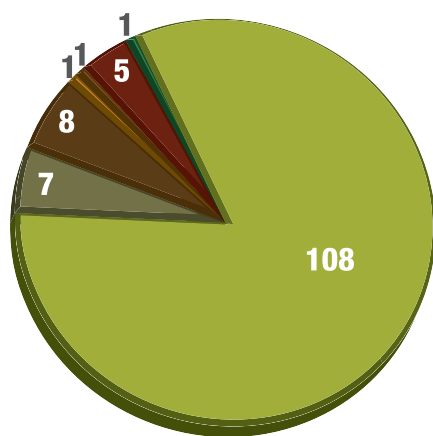


4R Nutrient Stewardship Across Ontario

While farmers were the primary audience group, agronomists and agricultural sales people were the other two notable demographics, which also included 10 Certified Crop Advisors and three Professional Agrologists (P.Ag). The 114 respondents represented nearly 113,000 acres of cropland. Two-thirds of these respondents indicated that they are currently practicing some form of 4R Nutrient Stewardship in their current farming operation. Of these respondents,

a fairly uniform distribution across each of the 4R Nutrient Stewardship principles of Right Source, Right Rate, Right Time and Right Place with more than half of respondents utilizing at least two 4R Nutrient Stewardship BMPs for each 4R principle within this framework. The survey respondents also showed a strong commitment to the continued use of 4R Nutrient Stewardship BMPs in their operations.

Survey Respondent's Role in Agriculture



Number of respondents



108 Farmers

113,000
Acres of cropland



2/3 practicing some form of 4R Nutrient Stewardship

*** 10 respondents also identified as certified crop advisors (CCA)

*** 3 respondents also identified as professional agrologists (P.Ag)

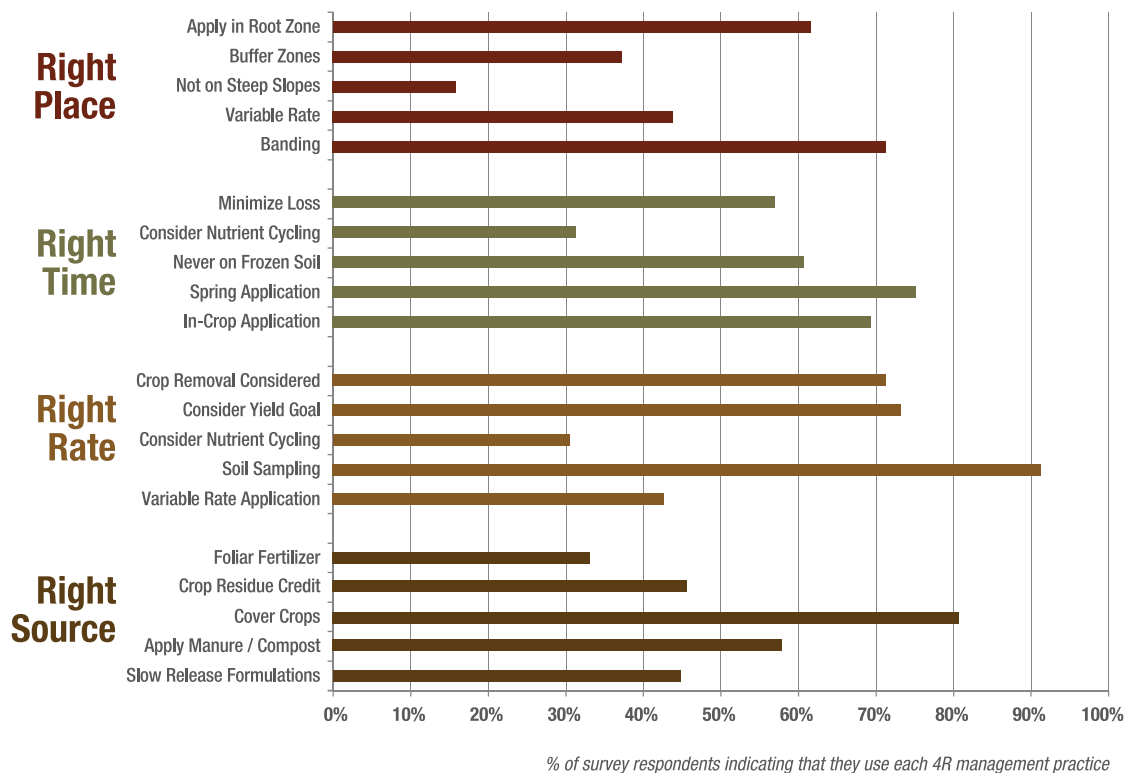
Current Agricultural Nutrient and Land Management Practices



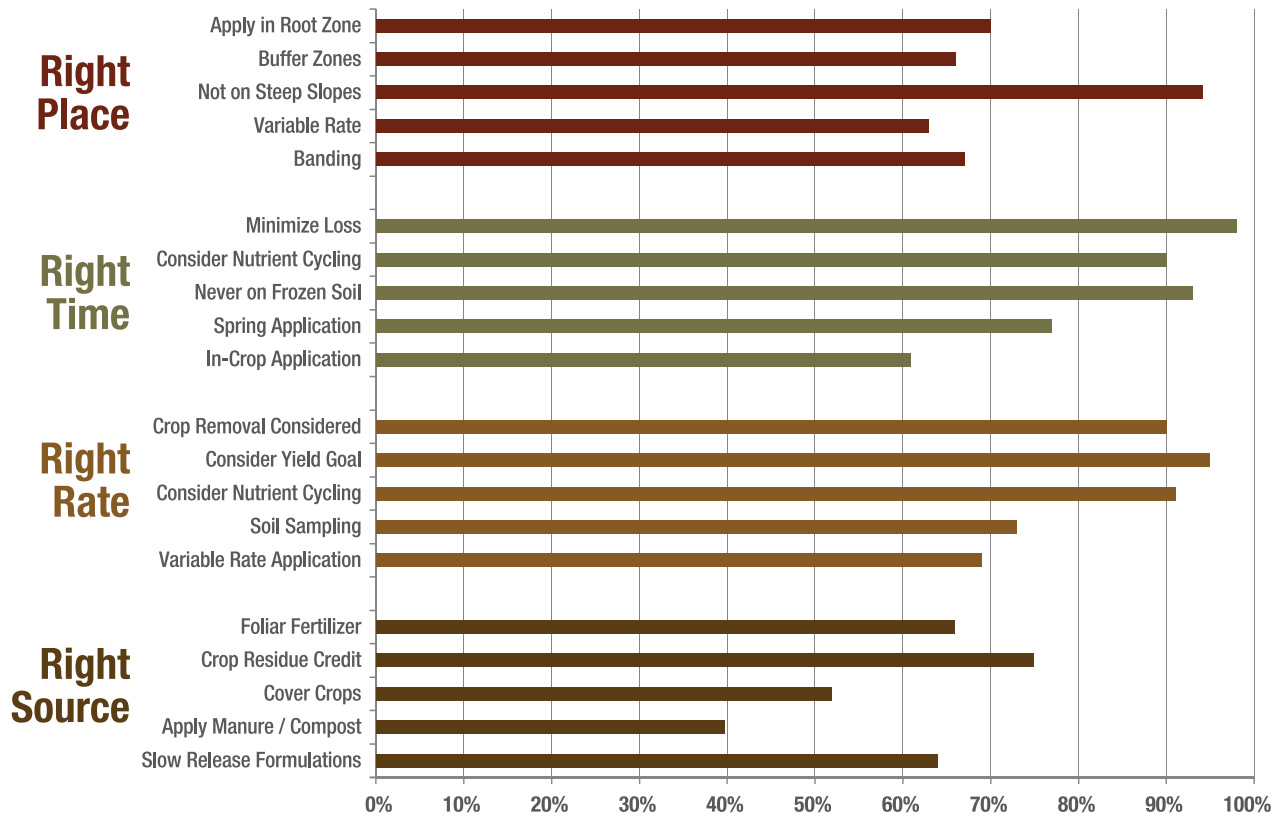
Of the respondents that indicated they are using or intend to use 4R Nutrient Stewardship BMPs within the next few years, they will implement 19 out of 20 of the identified BMPs on more than half of their total acreage.

The Farmland Health Check Up (FHCU) under GLASI proved to be a more contentious subject. More than 70% indicated that they had previously heard about GLASI, and while only 16% had already completed a Farmland Health Check-up, over 65% indicated that they intended to complete one soon.

Current Agricultural Nutrient and Land Management Practices



Plans to Implement 4R Nutrient Stewardship Practices



Average % acres on which respondents plan to implement 4R practices over the next few years.

A great number of survey respondents chose to acknowledge on their survey forms that the GLASI program is not extended to all farmers throughout Ontario.

There was a clear trend from growers outside of the GLASI implementation area indicated that they are not able to access the same guidance surrounding

4R Nutrient Stewardship BMPs and subsequent supplementary funding available through this program.

4R Nutrient Stewardship helps farmers to increase production and while enhancing environmental protection and improving sustainability. To achieve these goals, the 4R Nutrient Stewardship encourages farmers to use

BMPs that ensure the right source is applied at the right rate, at the right time and in the right place.

In summary, the findings show that there is an opportunity for 4R Nutrient Stewardship to play a role in the FHCU) program. The farmers attending the three workshops were well informed on

4R Nutrient Stewardship initiatives, with 60% saying that they learned a lot from the presentations. The high percentage indicating that they are currently, or intend to implement 4R Nutrient Stewardship on their farm, on more than 50% of their total acreages shows that Ontario farmers agree; **The Right Time for Nutrient Stewardship is Right Now.**

Project Awareness

