



The Fertilizer Institute's 4R Strategic Plan

Nutrient Stewardship is a science-based approach that offers enhanced environmental protection, increased production, increased farmer profitability, and improved sustainability. The concept is to use the right fertilizer source, at the right rate, at the right time, with the right placement. Proper nutrient management provides economic, social and environmental benefits to support regionally established goals. On the other hand, poorly managed nutrient applications can decrease a farmer's profitability and increase nutrient losses, potentially degrading the environment. A farmer's implementation of the 4R nutrient stewardship principles are the same globally, but how practices are implemented locally will vary depending on field and site specific characteristics such as soil, cropping system, management techniques and climate. Documentation of 4R efforts and assessment of implementation results support continuous improvement towards identified goals.

Vision: All plant nutrients are applied using a measurable and recognized 4R nutrient stewardship framework, evidenced through better crop performance, improved soil health, and cleaner air and water.

Desired Future Outcomes: The 4R Nutrient Stewardship program has been successfully adopted by the fertilizer industry and their farmer customers, and the industry is recognized as an influential contributor, in partnership with the rest of the food supply chain, in obtaining a sustainable, safe, nutritious, and secure food supply. The industry collectively supports 4R Nutrient Stewardship with each sector of the chain doing their part. Agriculture advisors fully embrace and promote the 4Rs leading to farmers embracing it and utilizing its concepts. All nutrient applications are performed using 4R practices resulting in optimized production for increased yield and maximal nutrient utilization. 4R practices are recognized by NGOs, the public, and government decision-makers as contributing to a safe and healthy food supply and cleaner air and water.



Educating Nutrient Consultants and Farmer Advisors

Goal: Crop production advisors engaging their customers on 4R Nutrient Stewardship and how it relates to environmental, economic, and social outcomes.

1. Expand 4R recognition in CCA Specialty Certifications, 4R CCA training, and CCA Specialty Certification adoption.
2. Expand utilization of existing materials and programs (4R Advocates), adapting content as needed.
3. Increase incorporation of 4R language targeting crop production advisors.

Fill Knowledge Gaps

Goal: Understand the factors affecting nutrient movement within the environment and the role of nutrient best management practices (BMPs) to increase sustainability.

1. Increase nutrient BMP research to minimize adverse environmental impacts while optimizing productivity.
2. Identify and address knowledge gaps and barriers to farmer adoption of nutrient BMPs.
 - a. ROI to inputs
 - b. Logistical issues and productivity
 - c. New technologies
 - d. Environmental costs
 - e. Risk management
 - f. Liability
3. Disseminate research findings to members and stakeholders
4. Leverage resources and expand strategic partnerships to determine nutrient movement within the environment.

Farmer Practices

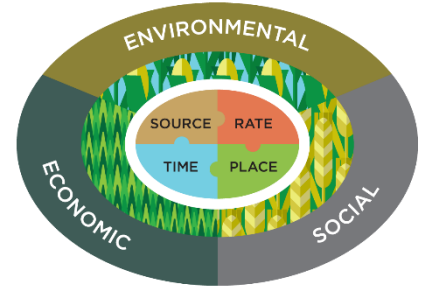
Goal: 4R practices are adopted by farmers in partnership with retailers, state agribusiness associations, and others.

1. Increase monitoring and understanding of current farmer practices by geographic areas and cropping systems.
2. Expand data collection regarding implementation.
3. Increase validation of current practices through measuring and forecasting 4R impacts to water, air, yields, soil health, etc.
4. Increase reporting of implementation trends.

Strategic Geographic Targets

Goal: Successful partnerships and prioritized implementation of 4R practices at the farm gate in key, issue based geographies (suggested areas: Lake Erie, Iowa, Chesapeake Bay, MRB, and California).

1. Annually assess and select key, issue based geographies.
2. Expand and align constituencies in key geographic areas.
3. Share results (4R Advocates and other state efforts).
4. Explore expansion of certification-like programs.



4R Advocacy

Goal: Develop an informed and knowledgeable stakeholder base.

1. Increase utilization of 4R messaging within fertilizer business and marketing structures.
2. Expand awareness and develop strategic partnerships with agricultural stakeholders.
3. Expand awareness and knowledge of non-agricultural stakeholders engaging in food supply chain sustainability.