**FERTILIZER**

Fertilizers replenish soil nutrient supplies depleted by crop production.

Fertilizers are key to food security.

50% of food production is the result of fertilizer use.

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**4R PRINCIPLES OF NUTRIENT STEWARDSHIP**

**RIGHT SOURCE**

- Matches fertilizer type to crop needs.
  - Account for all sources of nutrients in recommendations.

**RIGHT RATE**

- Matches amount of fertilizer to crop needs.
  - Conduct soil tests regularly in uniform areas less than 25 acres.
  - Document crop yield goals based on crop history.
  - Base nutrient application on Tri-State recommendations or adaptive management using soil test and yield goals.
  - Calibrate nutrient application equipment annually.

**RIGHT PLACE**

- Keeps nutrients where crop can use them.
  - Utilize variable rate application.
  - Utilize phosphorus injection, subsurface banding or broadcasting with immediate incorporation.
  - Don’t broadcast apply nutrients without incorporation unless the risk of phosphorus loss is demonstrated to be low.
  - Apply nutrients using minimum setbacks from sensitive areas.

**RIGHT TIME**

- Makes nutrients available when crops need them.
  - Don’t apply phosphorus on frozen or snow covered ground.
  - Don’t apply phosphorus or nitrogen if a large rainfall is in the weather forecast.

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**WESTERN LAKE ERIE BASIN 4R CERTIFICATION PROGRAM**

Program for Agricultural Retailers & Service Providers Implementing the 4Rs

**CERTIFICATION PROGRAM GOALS**

- Maximize crop nutrient uptake and minimize losses.
- Positively impact local water bodies.
- Provide up-to-date information on nutrient stewardship.
- Help the agricultural sector adapt to new research and technology.

**TRAINING & EDUCATION REQUIREMENTS**

- Retail and service provider staff undergo training and demonstrate knowledge of the 4Rs.
- Professionals maintain current certification in good standing.
- 4R update training completed every two years.
- Provide 4R educational opportunities for growers.

**MONITORING 4R IMPLEMENTATION**

- 3rd party audit of retailer and service provider 4R actions occur every three years.
- Audits review training and education, recommendations to growers, and application records.

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**4R ADVOCATES**

Real People, Real Stories

**THE 4R ADVOCATE PROGRAM**

Each year the Nutrient Stewardship 4R Advocate program recognizes outstanding agriculture retailers and farmers dedicated to sustainable crop nutrition. These advocates travel the country educating local communities about the 4R principles and the benefits of sustainable farming.

Visit nutrientstewardship.com/4r-advocate

**BRAND DAIRY FARM**

The Brand Dairy Farm is a 400-head dairy farm with 2,500 acres of corn, soybeans, wheat and hay located in Waterloo, Indiana. The farmers work with their nutrient service provider at The Andersons to implement the 4Rs. They strive to be good stewards of the soil, optimizing productivity through no-till farming and to enhance their bottom line by reducing production costs.