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4R Nutrient Stewardship in Ohio

Farms and agribusinesses are doing our part to improve water quality in Ohio ***by using the right fertilizer source at the right rate, the right time and in the right place.***

- While the potential causes of the algal bloom in the Western Lake Erie Basin are many, farmers and the fertilizer industry are doing their part to improve and protect the waters of Lake Erie and other key bodies of water by supporting education, research and outreach on innovative farm practices.
- 4R Nutrient Stewardship (use of the right fertilizer source at the right rate, the right time and in the right place) is the foundation for science-based management of all nutrients – whether from commercial or organic sources.
- Farmers in Ohio are using phosphorus with increasing efficiency. Phosphorus use has decreased over the past twenty years, while also increasing corn production at the same time.
- This year, the agriculture community launched the **4R Nutrient Stewardship Certification Program** for fertilizer retailers. The program, which includes training and education, monitoring and field implementation of 4R practices culminates with third party audits and is a sign of the industry's commitment to nutrient stewardship. Requirements and additional details regarding the program are available at www.4Rcertified.org/how.
 - ❖ 49 agricultural retailers in the Lake Erie region have signed up for the voluntary certification program.
- The **Certified Crop Adviser Program** was established in 1992 to provide accredited agronomic professionals to work with farmers on day-to-day nutrient management decisions. CCAs have demonstrated their commitment, education, expertise and experience to make a difference. Certification includes four major competency areas: nutrient management, soil and water management, integrated pest management and crop management. Continuing education is required for on-going certification.
- The **4R Research Fund**, which is supported by the fertilizer industry and key ag industry stakeholders, has awarded more than \$2.4 million in grants for research in

support of science-based research aimed at identifying nutrient management practices that protect the environment.

- ❖ In July, 2014 the 4R Research Fund awarded a grant to United States Department of Agriculture's (USDA) Agricultural Research Service (ARS) to work in partnership with Heidelberg University, LimnoTech, The Ohio State University, The Nature Conservancy and the International Plant Nutrition Institute (IPNI) to evaluate nutrient management practices and their relative impact on the Western Lake Erie Basin (WLEB). The research will also examine the 4R Certification Program's impact on crop productivity and profitability, water quality, and perceptions of growers, nutrient service providers and residents in the WLEB.
- ❖ Current studies include:
 - **Edge of Field and In-Stream Treatment Effects on Water Quality** – Analyzing different practices of water management, including alternative ditch design, with their impact on nutrient retention and water quality and translating into a revised Phosphorus Risk Index
 - **Soil Fertility Recommendations** – Evaluating phosphorus, nitrogen and potassium management on Ohio crops
 - **Yield-Limiting Factors on Soybean Production** – Identifying limiting factors on soybean yields, including fertility variables, across more than 100 on-farm test sites
 - **Economic Impact of 4R Adoption by Agricultural Retailers** – Understanding the economic considerations in 4R adoption through clientele service shifts and capital needs
 - **Farmer Opinion Survey** – Learning values, beliefs and attitudes of people who contribute to and are most impacted by land management and environmental impacts
 - **Understanding Climate and Best Management Practices Effects on Lake Erie Watershed** – Modeling of climate and the use of different practices with their potential effect on water quality outcomes
- **Agricultural retailers are working closely with USDA's Natural Resources Conservation Services (NRCS)** on promoting voluntary conservation practices for farmers and ranchers, including using **Adaptive Management** to meet conservation goals.

Sources

www.4Rcertified.org