**4R Nutrient Stewardship in the Western Lake Erie Basin**

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**A study conducted by:**

****

**In partnership with:**

****

*Thank you for completing the survey. The return postage has already been paid, so simply place the survey in the postage-paid envelope, and put it in your mailbox. If you prefer not to participate simply return the blank survey in the pre-paid envelope.*

«ID»

1. Were you operating a farm in 2015?

Yes No

2. Do you plan to operate a farm in 2016?

Yes No

*If your answer is NO to either question 1 or 2, please return the survey without completing it in the enclosed envelope. Postage is paid by the survey project. Otherwise, please continue…*

The following section has to do with 4R Nutrient Stewardship, which refers to four nutrient management principles: the right source, right rate, right time, and right place. Specifically, these principles are matching the fertilizer type and the amount to crop needs, making nutrients available when crops need them, and keeping nutrients where crops can use them. Please respond to each question with the answer you believe is most representative of you and your farm. There are no wrong or right answers; we are only interested in your opinion. Please note that you do not have to answer an item that you feel is too personal or sensitive.

3. Below is a list of statements addressing how informed you feel you are about nutrient stewardship. *Please circle the number indicating to what extent you agree or disagree with each statement.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
| a. I think I am better informed about nutrient stewardship than most farmers. | -2 | -1 | 0 | 1 | 2 |
| b. I feel that I have a pretty good understanding of the four nutrient management principles. | -2 | -1 | 0 | 1 | 2 |
| c. I often think about nutrient stewardship as it relates to my farm’s profitability. | -2 | -1 | 0 | 1 | 2 |
| d. I often think about nutrient stewardship as it relates to water quality. | -2 | -1 | 0 | 1 | 2 |

4. Over the past three years, how often have you heard or read about the following agricultural and environmental issues? *Please circle the number indicating your answer.*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **I have heard about…** | **Not at all** | |  | |  | | **A moderate amount** | |  | |  | | **A great deal** | | |
| a. Algal blooms in Lake Erie | | 0 | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 |
| b. 4R Nutrient Stewardship principles | | 0 | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 |
| c. Nutrient loss in agriculture | | 0 | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 |

5. Farmers get information about nutrient stewardship from a variety of sources. During a typical year, how often do you receive information (e.g., via mail, email, workshops, one-on-one, etc.) about nutrient stewardship from the following sources? *Please circle the number indicating your answer.*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Never** | | **Rarely** | | **Sometimes** | | **Frequently** | | **Very frequently** | |
| a. Your county Extension agent | | 0 | | 1 | | 2 | | 3 | | 4 | |
| b. University Extension generally | | 0 | | 1 | | 2 | | 3 | | 4 | |
| c. Farm bureau | | 0 | | 1 | | 2 | | 3 | | 4 | |
| d. Your county Soil and Water Conservation District | | 0 | | 1 | | 2 | | 3 | | 4 | |
| e. Your crop adviser/consultant | | 0 | | 1 | | 2 | | 3 | | 4 | |
| f. Your fertilizer applicator or retailer | | 0 | | 1 | | 2 | | 3 | | 4 | |
| g. USDA NRCS | | 0 | | 1 | | 2 | | 3 | | 4 | |
| h. Professional/industry magazines | | 0 | | 1 | | 2 | | 3 | | 4 | |
| i. Commodity groups | | 0 | | 1 | | 2 | | 3 | | 4 | |
| j. A family member or farm partner | | 0 | | 1 | | 2 | | 3 | | 4 | |
| k. Other farmers in your community | | 0 | | 1 | | 2 | | 3 | | 4 | |

6. For the following statements, *please place a check in the box for all that apply to you.*

* a. I am aware of the Ohio law requiring fertilizer applicators to be certified.
* b. I have already participated in the private fertilizer applicator certification training.
* c. I am aware of the Ohio law restricting application on saturated/frozen ground, and before storms.
* d. I work with a consultant to make my nutrient management decisions.
* e. I have noticed changes in 4R related practices in the past three years among farmers in my community.
* f. I have changed 4R related practices on my farm in the past three years.
* g. I use manure as a source of fertilizer on my farm.

7. *Please circle the number that best represents how concerned you are about the following issues.*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Not at all**  **concerned** | | | | | | **Extremely concerned** | | |
| a. Nutrient loss occurring on your farm in 2016 | | 0 | 1 | 2 | 3 | 4 | | 5 | 6 | |
| b. Your farm contributing to algal blooms in Lake Erie | | 0 | 1 | 2 | 3 | 4 | | 5 | 6 | |
| c. The negative impacts of nutrient loss on Lake Erie | | 0 | 1 | 2 | 3 | 4 | | 5 | 6 | |
| d. The negative impacts of nutrient loss to your farm’s profitability | | 0 | 1 | 2 | 3 | 4 | | 5 | 6 | |
| e. Nutrient loss occurring on your farm in 5 to 10 years | | 0 | 1 | 2 | 3 | 4 | | 5 | 6 | |
| f. Additional government regulation or rules related to nutrients | | 0 | 1 | 2 | 3 | 4 | | 5 | 6 | |
| h. Your farm’s impact on local water quality | | 0 | 1 | 2 | 3 | 4 | | 5 | 6 | |
| i. A lawsuit targeted to farmers because of nutrient loss to Lake Erie | | 0 | 1 | 2 | 3 | 4 | | 5 | 6 | |
| j. Nutrients lost from your farm during a heavy spring rain | | 0 | 1 | 2 | 3 | 4 | | 5 | 6 | |

8. In your opinion, to what extent can (or do) the following 4R practices reduce the amount of phosphorus lost from your farm fields? You should consider the overall effectiveness of each practice for both manure and commercial fertilizer. *Please circle the number that best represents your opinion.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| To what extent can/do the following practices reduce phosphorus runoff from your fields? | Not at all | A little | Some-what | A good deal | To a great extent |
| a. Avoiding broadcasting when the forecast predicts a 50% or more chance of at least 1 inch of total rainfall in the next 12 hours | 0 | 1 | 2 | 3 | 4 |
| b. Avoiding surface application of phosphorus on frozen ground | 0 | 1 | 2 | 3 | 4 |
| c. Incorporating broadcast fertilizer (via tillage) | 0 | 1 | 2 | 3 | 4 |
| d. Subsurface placement of fertilizer (via banding or in-furrow with seed) | 0 | 1 | 2 | 3 | 4 |
| e. Determining rates based on regular soil testing once within the rotation (or every 3 years) | 0 | 1 | 2 | 3 | 4 |
| f. Incorporating winter wheat or a cereal rye cover into your rotation | 0 | 1 | 2 | 3 | 4 |

9. In your opinion, to what extent can widespread adoption of the following 4R practices improve water quality in western Lake Erie? You should consider the overall effectiveness of each practice for both manure and commercial sources. *Please circle the number that best represents your opinion.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| To what extent can the widespread adoption of these practices improve water quality in western Lake Erie? | Not at all | A little | Some-what | A good deal | To a great extent |
| a. Avoiding broadcasting when the forecast predicts a 50% or more chance of at least 1 inch of total rainfall in the next 12 hours | 0 | 1 | 2 | 3 | 4 |
| b. Avoiding surface application of phosphorus on frozen ground | 0 | 1 | 2 | 3 | 4 |
| c. Incorporating broadcast fertilizer (via tillage) | 0 | 1 | 2 | 3 | 4 |
| d. Subsurface placement of fertilizer (via banding or in-furrow with seed) | 0 | 1 | 2 | 3 | 4 |
| e. Determining rates based on regular soil testing once within the rotation (or every 3 years) | 0 | 1 | 2 | 3 | 4 |
| f. Incorporating winter wheat or a cereal rye cover into your rotation | 0 | 1 | 2 | 3 | 4 |

10. When it comes to particular recommendations, there are likely those that are easier to implement than others, due to a variety of potential constraints. If you were asked to implement these recommendations on the majority of your fields this upcoming season, how confident are you that you could adopt each of the practices listed below?

*Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 10 | 20 | 30 | 40 | | 50 | 60 | | 70 | | 80 | 90 | | 100 |
| Cannot do at all |  | |  | | May be able to do | | |  | |  | | | Absolutely can do | |

|  |  |
| --- | --- |
| **How confident are you that you could adopt each practice on the majority of your fields this upcoming season?** | **Confidence (0-100)** |
| a. Avoiding broadcasting when the forecast predicts a 50% or more chance of at least 1 inch of total rainfall in the next 12 hours | \_\_\_\_\_\_\_ |
| b. Avoiding surface application of phosphorus on frozen ground | \_\_\_\_\_\_\_ |
| c. Incorporating broadcast fertilizer (via tillage) | \_\_\_\_\_\_\_ |
| d. Subsurface placement of fertilizer (via banding or in-furrow with seed) | \_\_\_\_\_\_\_ |
| e. Determining rates based on regular soil testing once within the rotation (or every 3 years) | \_\_\_\_\_\_\_ |
| f. Incorporating winter wheat or a cereal rye cover into your rotation | \_\_\_\_\_\_\_ |

11. Below is a list of statements regarding potential barriers to certain practices. *Please circle the number indicating to what extent you agree or disagree with each statement.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
| a. Weather is too unpredictable to avoid applying nutrients before heavy rain. | -2 | -1 | 0 | 1 | 2 |
| b. Nutrients must be applied to a field in the winter if that field floods in fall or spring. | -2 | -1 | 0 | 1 | 2 |
| c. Nutrients must be applied in the winter if it’s too wet to spread them in the fall. | -2 | -1 | 0 | 1 | 2 |
| d. Manure must be applied in the winter if there is a lack of manure storage space. | -2 | -1 | 0 | 1 | 2 |
| e. Injecting nutrients into the soil is a form of tillage. | -2 | -1 | 0 | 1 | 2 |
| f. The equipment needed to inject nutrients into the soil is too costly to purchase. | -2 | -1 | 0 | 1 | 2 |
| g. Alternatives to broadcasting are too slow. | -2 | -1 | 0 | 1 | 2 |
| h. Soil tests are too costly to use on my fields. | -2 | -1 | 0 | 1 | 2 |
| i. I do not need a soil test to determine rates. | -2 | -1 | 0 | 1 | 2 |
| j. It is necessary to apply more nutrients than the soil tests recommend in order to maintain very robust crops. | -2 | -1 | 0 | 1 | 2 |
| k. The profit margins for winter wheat are too small. | -2 | -1 | 0 | 1 | 2 |
| l. Establishing winter cover crops is too difficult due to uncertain planting windows. | -2 | -1 | 0 | 1 | 2 |
| m. The risks of winter cover crops interfering with spring planting are too great. | -2 | -1 | 0 | 1 | 2 |
| n. The near-term cost of cover crops is too great for the uncertain long-term payback. | -2 | -1 | 0 | 1 | 2 |

Now, think of a typical field on your farm where you harvested a crop in 2015. This should be a field with a productivity level typical for your farm. Please answer the following section of questions **with this specific field in mind**.

1. What crop was planted on this field in 2015?

Corn

Soybeans

Wheat

Other crop

2. What is the current established rotation of this field? *(Please check one)*

None or continuous single crop

Corn/Soybeans

Corn/Soybeans/Wheat

Soybeans/Wheat

Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Was a cover crop planted on this field after the 2015 harvest?

No Yes: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(write-in crop)

4. What type of tillage was last used in this field based on crop residue after planting?

Conventional (<30% residue)

Conservation (30-90% residue)

No-till (>90% residue)

5. What is the size of this field in acres?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_acres

6. Do you have phosphorus custom applied?

No Yes

7. What was last year’s phosphorus application intent?

No application

Enough for the current year

Enough for the next two years

Enough for the next three years

Enough for the next four years

8. Considering all commercial fertilizers on this field for your 2015 crop, how much phosphorus and nitrogen were applied? *(Please write ‘0’ if none was applied)*

P2O5 N

Rate (lbs/acre): \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_

Form (P): MAP DAP Fluid other

Form (N): Urea UAN NH3 other

9. When was phosphorus applied on this field for the most recent crop? *(Check all that apply)*

|  |  |  |
| --- | --- | --- |
| 🞎 No application | 🞎 Previous season | |
| 🞎 Spring pre-planting | 🞎 Spring at planting | 🞎 After planting |
| 🞎 Fall | 🞎 Winter |  |

10. How was phosphorus applied on this field for this most recent crop? *(Check all that apply)*

No fertilizer applied

Surface banding

Subsurface banding

In furrow with seed

Surface applied broadcast (no incorporation)

Surface broadcast and incorporated with tillage within 7 days

11. Did you apply manure on this field for this most recent crop?

No (*Please skip to #14*)

Yes → Amount of manure

Liquid: \_\_\_\_\_\_\_\_ gallons/acre

Solid: \_\_\_\_\_\_\_\_ tons/acre

12. When was manure applied on this field for the most recent crop? *(Check all that apply)*

|  |  |  |
| --- | --- | --- |
| 🞎 None applied | 🞎 Previous season | |
| 🞎 Spring pre-planting | 🞎 Spring at planting | 🞎 After planting |
| 🞎 Fall | 🞎 Winter |  |

13. How was manure applied on this field for this most recent crop? *(Check all that apply)*

None applied

Surface applied, incorporated with tillage

Surface applied, no incorporation

Subsurface banding or injection

Surface banding

14. Do you use soil testing on this field to inform your nutrient management decisions?

No (*please skip to #15*)

Yes**→** How often do you test this field?

Every 2 years

Every 3 years

Every 4 years or more

**→** What was this field’s last soil test P in ppm?

Bray P1: <15 ppm 15-30 ppm >30 ppm I don’t know

Mehlich-3: <28 ppm 28-46 ppm >46ppm I don’t know

**→** What type of sampling do you use?

Random Zone Grid

15. Do you rent this particular field?

No (*please skip to #16*)

Yes**→** Who is primarily responsible for nutrient management decisions? *(Check one)*

Me alone

Me and my landlord

Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**→** What is your rental agreement with your landlord? *(Check all that apply)*

Rent for cash

Rent for a share of crop

16. We are interested in knowing whether you have adopted the following practices on this particular field. **Please indicate whether or not you have used the practice on this field in the last 3 years by checking the appropriate box in the first column**. **Then, in the second column, please indicate how likely you are to use it this coming season on this same field by circling the most appropriate number.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **In the last three years, I…** | | **In the next year, I…** | | | |
| **Practices** | **…have used this practice** | **…have not used this practice** | **Will not use it** | **Am unlikely to use it** | **Am likely to use it** | **Will definitely use it** |
| a. Avoiding broadcasting when the forecast predicts a 50% or more chance of at least 1 inch of total rainfall in the next 12 hours |  |  | 0 | 1 | 2 | 3 |
| b. Avoiding surface application of phosphorus on frozen ground |  |  | 0 | 1 | 2 | 3 |
| c. Incorporating broadcast fertilizer (via tillage) |  |  | 0 | 1 | 2 | 3 |
| d. Subsurface placement of fertilizer (via banding or in-furrow with seed) |  |  | 0 | 1 | 2 | 3 |
| e. Determining rates based on regular soil testing once within the rotation (or every 3 years) |  |  | 0 | 1 | 2 | 3 |
| g. Installing or updating subsurface tile |  |  | 0 | 1 | 2 | 3 |
| h. Adding subsurface tile drainage management (via blind inlets or controlled drainage) |  |  | 0 | 1 | 2 | 3 |
| i. Planting cover crops after fall harvest, assuming the weather is favorable |  |  | 0 | 1 | 2 | 3 |
| j. Changing the crop rotation from soybean/corn to include wheat, regardless of wheat prices |  |  | 0 | 1 | 2 | 3 |

1. Nutrient Service Providers (NSP) are any agricultural retailers, service providers and other certified professionals who provide sales or services related to the nutrients applied to crops. Which of the following goods and services do you obtain from NSPs? *Check all that apply.*

* a. Soil testing
* b. Nutrient recommendations
* c. Fertilizer application services
* d. Bulk fertilizer sales
* e. Bagged fertilizer sales
* f. Sales or application of other chemicals
* g. Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. How many NSPs could feasibly provide service to your operation? \_\_\_\_\_\_\_\_\_\_\_\_\_

3. How many different NSPs have you worked with during the past 12 months? \_\_\_\_\_\_

4. How long have you been using your longest-serving NSP? \_\_\_\_\_ years

5. For corn and soybean services received from your primary NSP for the entire crop year, about how much do you spend per acre with this provider (including all services)?

$\_\_\_\_\_\_\_\_/acre for corn

$\_\_\_\_\_\_\_\_/acre for soybean

6. Have you switched your primary NSP in the past two years?

* No
* Yes 🡪 if yes, what aspects of service led to the change? (*Check all that apply.*)
* a. Price
* b. Range of products and services
* c. Quality of service
* d. Timeliness of service
* e. Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. How much of an influence does your primary NSP have on the nutrient application practices you implement? *Please circle the number indicating the degree of influence.*

|  |  |  |  |
| --- | --- | --- | --- |
| **No influence** | **Weak** | **Moderate** | **Strong** |
| 0 | 1 | 2 | 3 |

8. Overall, how satisfied are you with your current NSP? (*Please circle the number indicating your answer.*)

|  |  |  |  |
| --- | --- | --- | --- |
| **Not at all satisfied** | **Somewhat satisfied** | **Satisfied** | **Very satisfied** |
| 0 | 1 | 2 | 3 |

9. The 4R Nutrient Stewardship Certification Program is for Nutrient Service Providers (NSPs) who are voluntarily certified to use practices that adhere to criteria of the Lake Erie Watershed Nutrient Stewardship Certification Program.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Yes** | **No** | **Unsure** |
| a. Prior to this survey, were you aware of the 4R Nutrient Stewardship Certification Program for NSPs? | 🞎 | 🞎 | 🞎 |
| b. Are any of the NSPs who work with your farm certified by the 4R Nutrient Stewardship Certification Program? | 🞎 | 🞎 | 🞎 |

10. NSPs who are certified by the 4R Nutrient Stewardship Certification Program agree to follow steps that are not required of other firms. Considering each requirement below, *please circle the number* indicating how likely or unlikely you would be to work with the firm if they followed that requirement.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***How likely are you to work with the firm if they…*** | **Very unlikely** | **Unlikely** | **No impact on decision** | **Likely** | **Very likely** |
| a. Maintain field-by-field records of nutrient applications | -2 | -1 | 0 | 1 | 2 |
| b. Acquire customers’ signatures that confirm customer support of 4R Nutrient practices | -2 | -1 | 0 | 1 | 2 |
| c. Recommend fertilizer rates based on current science and your yields | -2 | -1 | 0 | 1 | 2 |
| d. Avoid nutrient applications on frozen ground or if weather forecasts call for heavy precipitation | -2 | -1 | 0 | 1 | 2 |
| e. Use variable rate planning and application of nutrients | -2 | -1 | 0 | 1 | 2 |
| f. Complete an audit to a private 3rd party auditor every 3 years to ensure 4R practices are followed | -2 | -1 | 0 | 1 | 2 |
| g. Recommend using setback in field areas that have a high potential for nutrient loss | -2 | -1 | 0 | 1 | 2 |

11. How likely is it that hiring an NSP with this program certification will …

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Very unlikely** | **Unlikely** | **No impact** | **Likely** | **Very likely** |
| a. Help your farm meet any new regulatory requirements | -2 | -1 | 0 | 1 | 2 |
| b. Make meeting any new regulations easier | -2 | -1 | 0 | 1 | 2 |
| c. Improve your farm’s profitability | -2 | -1 | 0 | 1 | 2 |
| d. Improve your operation’s reputation in the community | -2 | -1 | 0 | 1 | 2 |

12. Suppose your primary Nutrient Service Provider (NSP) were to be certified by the 4R Nutrient Stewardship Certification Program and follow all the requirements listed above. Would you keep your business with this firm if …

* *Check here* if your primary NSP has already been certified by the 4R Nutrient Stewardship Certification Program (and *skip to #13*).

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Yes** | **No** | **Unsure** |
| a. Their prices decreased «q12a»% | 🞎 | 🞎 | 🞎 |
| b. Their prices didn’t change | 🞎 | 🞎 | 🞎 |
| c. Their prices increased «q12b\_»% | 🞎 | 🞎 | 🞎 |

13. Suppose you received a competing quote from a different NSP who can meet your needs for the upcoming crop year. The firm has a similar reputation to your current NSP in terms of the range of products, quality and timeliness of service and distance to your operation. The competing firm «cert» been certified by the 4R Nutrient Stewardship Certification Program and will follow all the program’s requirements. *Please check whether you would accept the competing offer.*

|  |  |  |  |
| --- | --- | --- | --- |
| ***Would you accept the competing offer if the competitor quotes a long-term price that…*** | **Yes** | **No** | **Unsure** |
| a. … is «q13a»% below your current provider | 🞎 | 🞎 | 🞎 |
| b. …matches your current provider | 🞎 | 🞎 | 🞎 |
| c. …is «q13b»% higher than your current provider | 🞎 | 🞎 | 🞎 |

14. Do you think strictly following the recommendations of NSPs who are certified by the 4R Program would lead to crop yields that are….

|  |  |  |  |
| --- | --- | --- | --- |
| * **Lower** | * **About the same** | * **Higher** | * **Not sure** |

This final section asks for basic demographic information. Why do we ask this? We like to understand if certain types of farms or farmers take different approaches or have different views about nutrient management. All information provided will be anonymous and never reported other than as averages across many other respondents. Thank you for your candid responses.

1. Are you: Male Female

2. What is your age? \_\_\_\_\_\_\_ years

3. How much formal education have you completed?

Some high school

High school degree or equivalent

Some college, no degree

Associate’s degree

Bachelor’s degree

Graduate or Professional degree

4. How many years have you been farming?

\_\_\_\_\_\_\_\_\_ years

5. This past year, what was your **total farm operation’s** annual net income?

Less than $50,000

$50,000 - $99,999

$100,000 - $249,999

$250,000 - $499,999

$500,000 or greater

6. Do you or your spouse receive off-farm income? (*Check all that apply*)

Yes No *(continue to #8)*

7. If you or your spouse receives off-farm income, what was your annual gross household income from off-farm sources this past year?

Less than $10,000

$10,000 - $49,999

$50,000 - $99,999

$100,000 or more

8. Are you retired from an occupation other than farming?

Yes No

9. Is your farm registered as a Concentrated Animal Feeding Operation (CAFO)?

Yes No

10. How large was your **total farm operation this past growing season**? For total acres, include cropland, woodland, pasture, wasteland, land in farmsteads, and land in government programs.

a. Owned \_\_\_\_\_\_\_\_\_\_ b. Rented \_\_\_\_\_\_\_\_\_\_\_

11. If you would like to receive a copy of the results of this study electronically, please provide your email address below.

E-mail Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Check here if you are willing to be contacted by email in the future for an additional follow-up study of 4R Nutrient Stewardship in the western Lake Erie Basin.

Do you have any other thoughts or comments about 4R Nutrient Stewardship, farmer nutrient management decisions in the western Lake Erie Basin, or local water quality? Please share them with us here, or contact us with the information listed at the bottom of the page:

**Thank you**!! Please place the completed survey in the postage-paid envelope and drop it in the mail at your earliest convenience. Feel free to contact Robyn Wilson by phone at 614.247.6128 or by email at [4RSurvey@osu.edu](mailto:4RSurvey@osu.edu) with any questions or concerns.