



Indiana Ag Nutrient Alliance

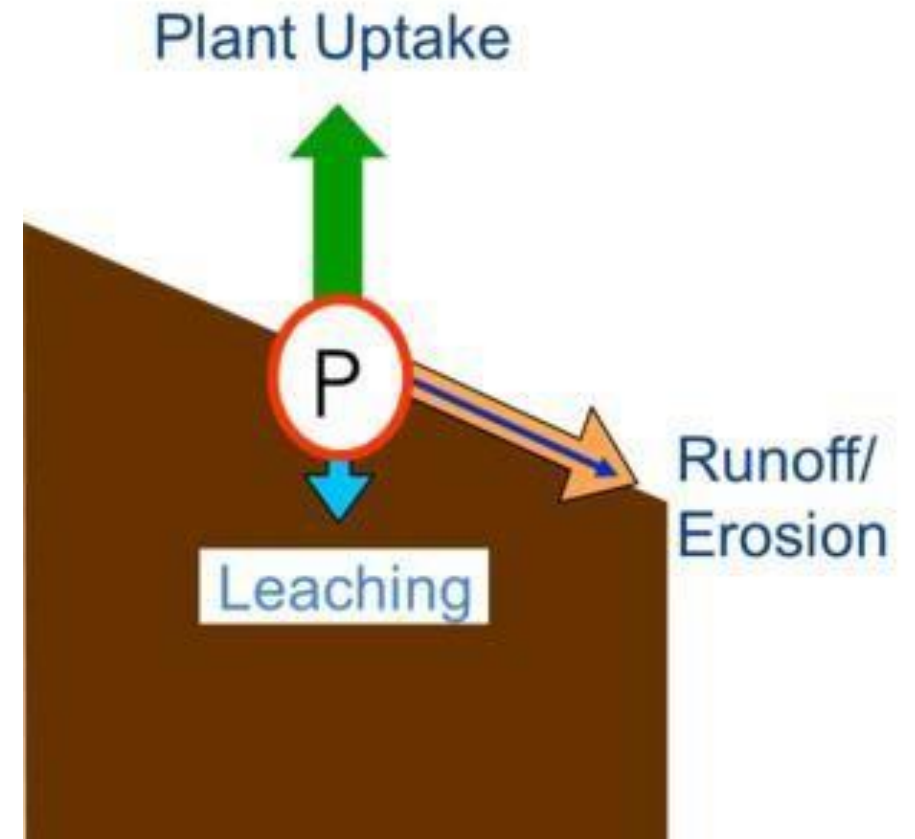
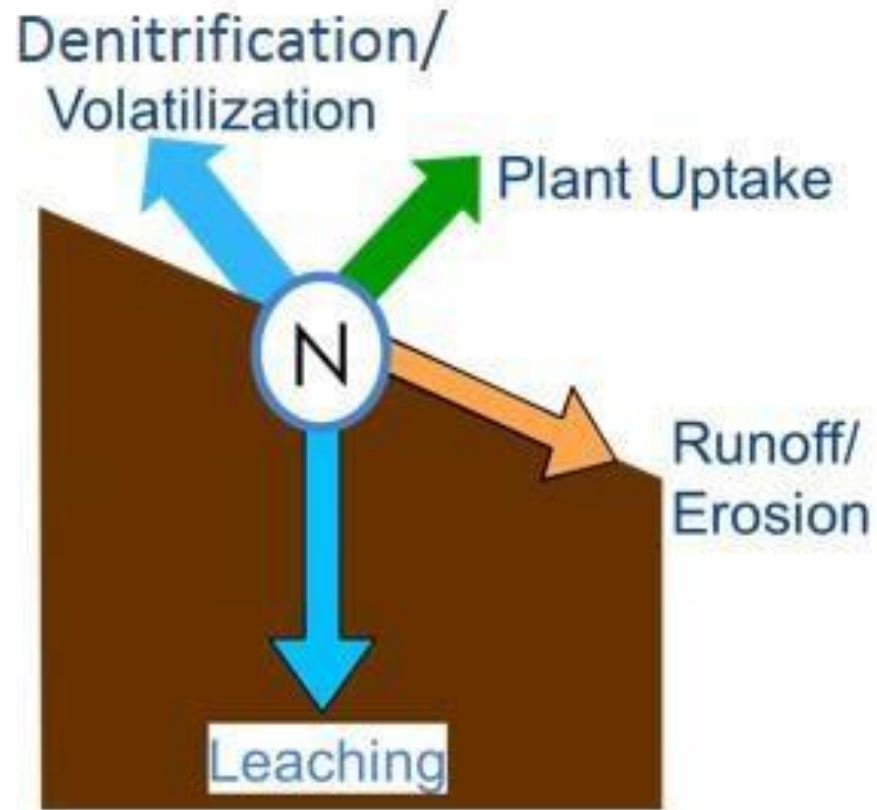


Nutrients are Necessary



	Crop Budgets for Three Yield Levels ¹														
	Low Productivity Soil					Average Productivity Soil					High Productivity Soil				
	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans
Expected yield per acre ²	130	138	43	61	30	162	172	53	76	37	194	206	63	91	44
Harvest price ³	\$3.60	\$3.60	\$9.70	\$4.30	\$9.70	\$3.60	\$3.60	\$9.70	\$4.30	\$9.70	\$3.60	\$3.60	\$9.70	\$4.30	\$9.70
Market revenue	\$468	\$497	\$417	\$262	\$291	\$583	\$619	\$514	\$327	\$359	\$698	\$742	\$611	\$391	\$427
Less variable costs ⁴															
Fertilizer ⁵	\$105	\$95	\$36	\$51	\$27	\$112	\$103	\$43	\$67	\$32	\$119	\$111	\$50	\$83	\$37
Seed ⁶	91	91	67	44	78	111	111	67	44	78	111	111	67	44	78
Pesticides ⁷	60	60	65	25	55	60	60	65	25	55	60	60	65	25	55
Dryer fuel ⁸	31	25	N/A	N/A	4	38	31	N/A	N/A	5	46	37	N/A	N/A	5
Machinery fuel @ \$2.46	18	18	11	11	8	18	18	11	11	8	18	18	11	11	8
Machinery repairs ⁹	22	22	18	18	15	22	22	18	18	15	22	22	18	18	15
Hauling ¹⁰	13	14	4	6	3	16	17	5	8	4	19	21	6	9	4
Interest ¹¹	11	10	7	5	6	12	11	7	6	7	12	12	8	6	7
Insurance/misc. ¹²	36	36	31	9	9	38	38	34	9	9	40	40	34	9	9
Total variable cost	\$387	\$371	\$239	\$169	\$205	\$427	\$411	\$250	\$188	\$213	\$447	\$432	\$259	\$205	\$218
Contribution margin ¹³ (Revenue - variable costs) per acre	\$81	\$126	\$178	\$93	\$86	\$156	\$208	\$264	\$139	\$146	\$251	\$310	\$352	\$186	\$209

Fate of Nutrients in Our Fields

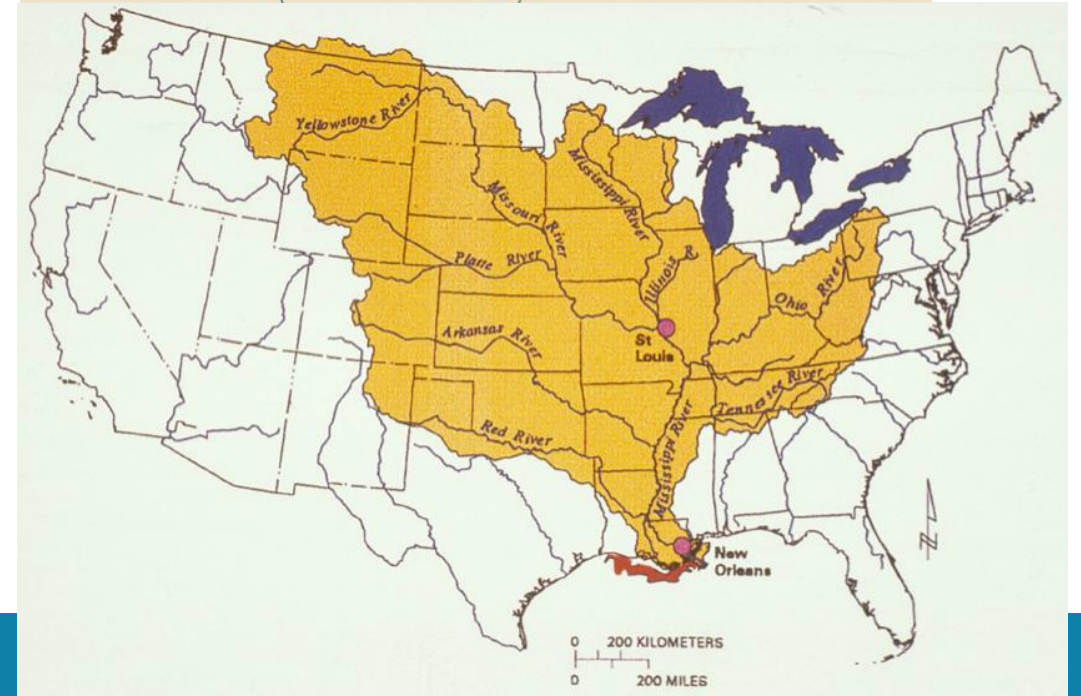


Simplified Mechanisms of N & P Loss, Credit: Amy Schober, Univ of Delaware

Indiana HUC 4 Watersheds



Indiana's major drainage basins



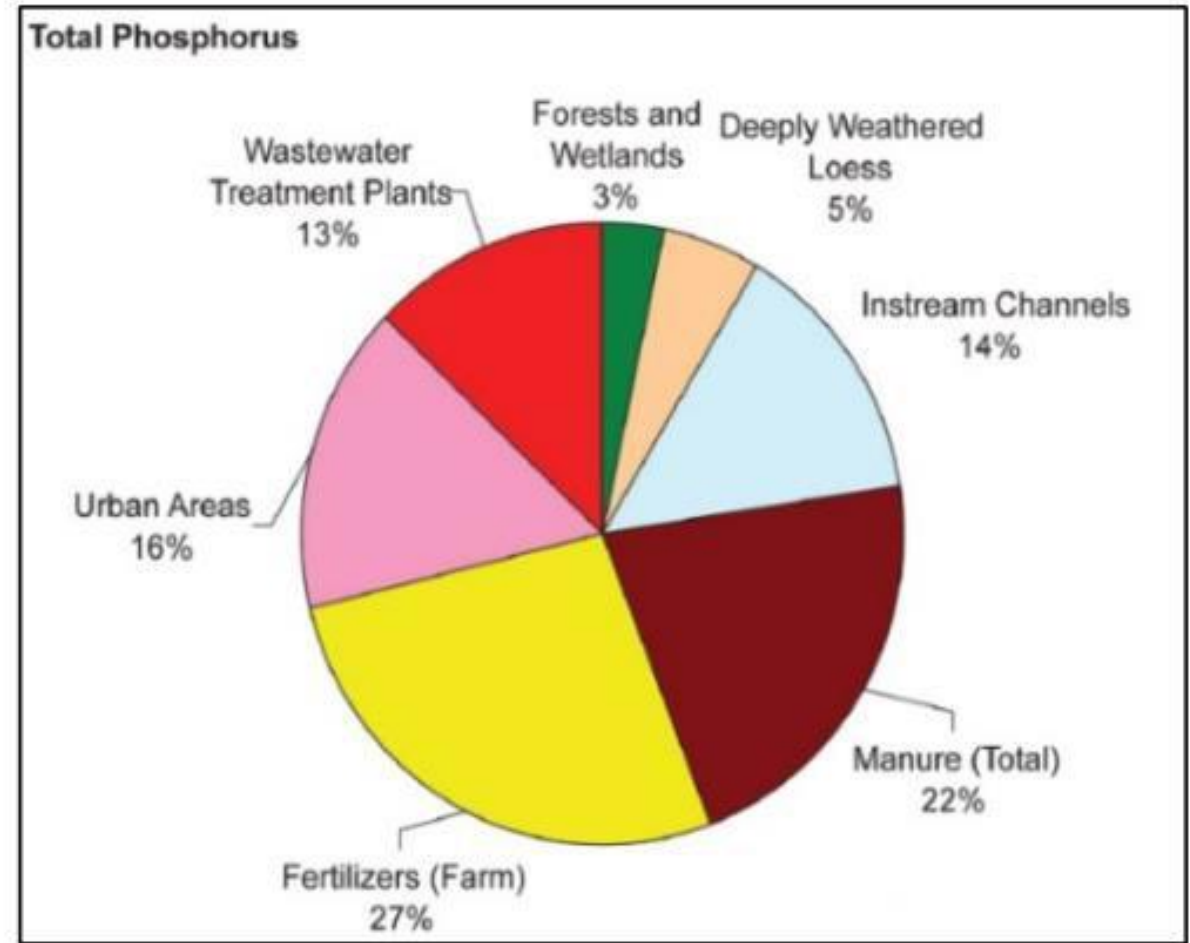
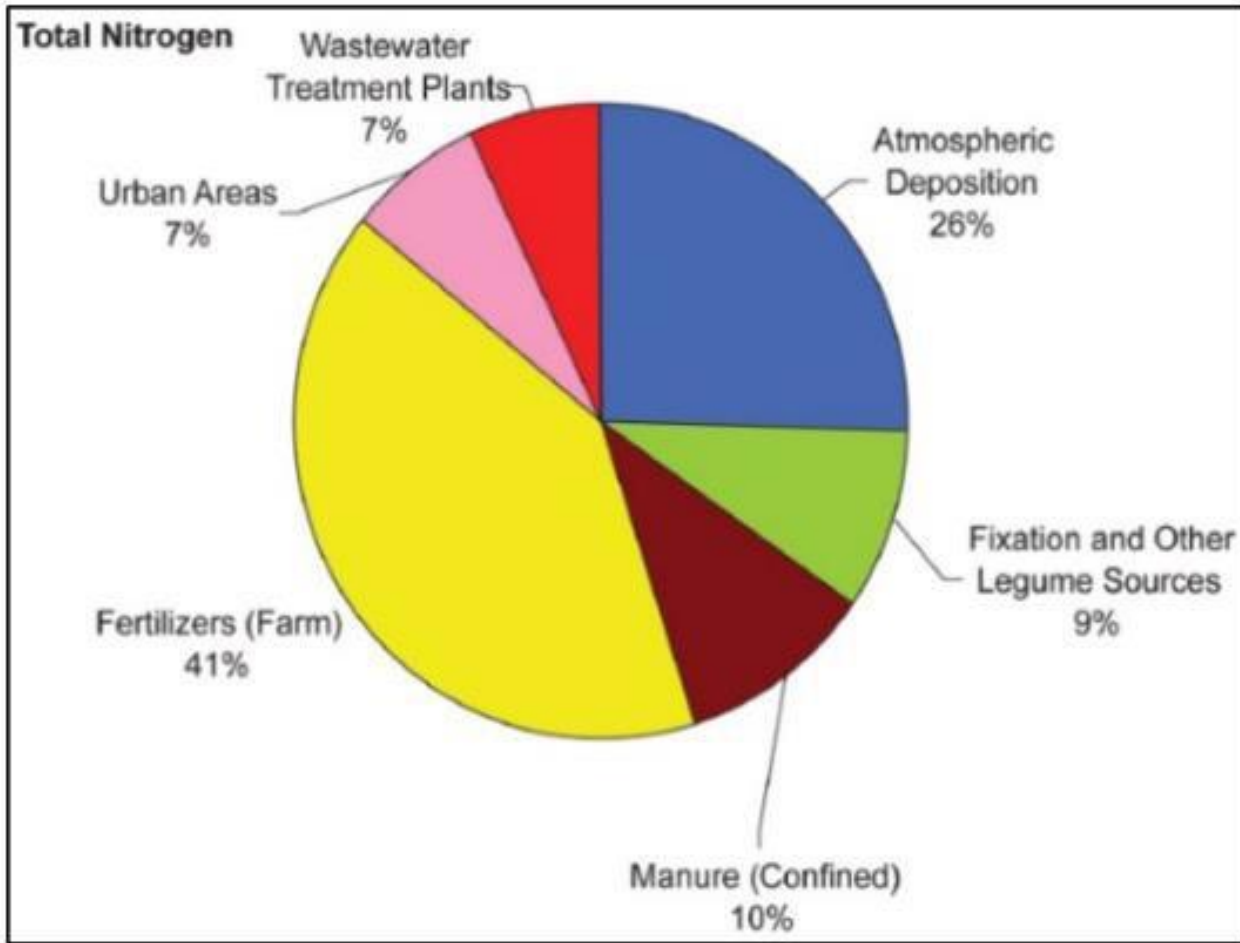


Figure 9. USGS SPARROW model estimates of sources of total nitrogen and total phosphorus transported from Mississippi River Basin to Gulf of Mexico (Robertson and Saad 2013).

Expectations Have Been Established

- Gulf Hypoxia Taskforce
- Western Lake Erie Basin
- **20% Nitrogen Loading Reduction by 2025**
- **40% Phosphorus Loading Reduction by 2025**

Resources, Strategies, Initiatives and Other Organizations to Support Effort

Farm Bill Cost-Share Programs **(\$ to Private Landowners)**

Agricultural Conservation Easement Program (ACEP)
Conservation Innovation Grant (CIG)
Conservation Reserve Enhancement Program (CREP)
Conservation Stewardship Program (CSP)
Environmental Quality Incentives Program (EQIP)
Great Lakes Restoration Initiative (GLRI)
Mississippi River Basin Initiative (MRBI)
National Water Quality Index (NWQI)
Regional Conservation Partnership Program (RCPP)
Western Lake Erie Basin (WLEB)
Wetlands Reserve Program (WRP)

Other Cost-Share Programs **(\$ to Private Landowners)**

Clean Water Indiana (CWI)
IDEM 319 Watershed Program Grants
Lake and River Enhancement Program (LARE)
Water Quality Trading Program (EPRI & GLCP)

Indiana Initiatives

4R Programs (Time, Place, Form & Rate)
Conservation Cropping Systems Initiative (CCSI)
Healthy Rivers Initiative (HRI)
INfield Advantage (INFA)
Small Changes / Big Impact
Soil Health Partnership (SHP)

Indiana State Strategies

Domestic Action Plan (DAP)
Indiana State Nutrient Reduction Strategy (SNRS)
Nutrient Management & Soil Health Strategy (NMSH)
State Nonpoint Source Management Plan

Monitoring

Agencies/Organizations/Partners

Indiana Water Monitoring Council (IWMC)
Indiana Water Resources Association (IWRA)
United States Geological Survey (USGS)
Indiana Department of Environmental Management (IDEM)
Universities
Municipalities

Other Engaged Organizations

Agree
American Farmland Trust (AFT)
Conservation Technology Information Center (CTIC)
Crop Production Services - CARES Program (CPS)
Environmental Defense Fund (EDF)
Land O'Lakes - SUSTAIN Program (LOL)

Indiana Agriculture Nutrient Alliance

Agricultural Executives

Agribusiness Council of Indiana (ACI)
 American Dairy Association of Indiana (ADAI)
 Indiana Beef Cattle Association (IBCA)
 Indiana Corn Growers Association (ICGA)
 Indiana Corn Marketing Council (ICMC)
 Indiana Dairy Producers (IDP)
 Indiana Farm Bureau (IFB)
 Indiana Pork
 Indiana Soybean Alliance (ISA)
 Indiana State Department of Agriculture (ISDA)
 Indiana State Poultry Association (ISPA)
 Purdue University (PU)



Indiana Nutrient Management and Soil Health Strategy (NMSH)

*Agribusiness Council of Indiana (ACI)
 Certified Crop Advisors (CCAs)
 Indiana Beef Cattle Association (IBCA)
 Indiana Corn Growers Association (ICGA)
 *Indiana Corn Marketing Council (ICMC)
 Indiana Dairy Producers (IDP)
 *Indiana Farm Bureau (IFB)
 *Indiana Pork
 *Indiana Soybean Alliance (ISA)
 *Indiana State Department of Agriculture (ISDA)
 Indiana State Poultry Association (ISPA)
 *Purdue University (PU)
 *The Nature Conservancy
 *USDA - Natural Resources Conservation Service (NRCS)

**Leads/Authors*

Agricultural Nutrient Taskforce (ANT)

Agricultural Executives
Indiana Conservation Partnership
The Nature Conservancy

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IANA

All ANT Agencies and Organizations are Partners

Primary Goals:

Nutrient Management & Soil Health
 for Better Water Quality
 Reach Farmers Not Currently Engaged

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Indiana Conservation Partnership (ICP)

Indiana Association of Soil and Water Conservation Districts &
 92 Soil and Water Conservation Districts (IASWCD)
 Indiana Department of Environmental Management (IDEM)
 Indiana Department of Natural Resources (DNR)
 Indiana State Department of Agriculture Division of Soil Conservation (ISDA)
 Purdue University Cooperative Extension Service (PU)
 State Soil Conservation Board (SSCB)
 USDA - Farm Service Agency (FSA)
 USDA - Natural Resources Conservation Service (NRCS)



Indiana State Nutrient Reduction Strategy (SNRS) - Gulf Hypoxia Task Force

Agribusiness Council of Indiana (ACI)
 Conservation Cropping System Initiative
 Indiana Association of Soil and Water Conservation Districts &
 92 Soil and Water Conservation Districts (IASWCD)
 *Indiana Department of Environmental Management (IDEM)
 Indiana Department of Natural Resources (DNR)
 Indiana Farm Bureau (IFB)
 *Indiana State Department of Agriculture Division of Soil Conservation (ISDA)
 Purdue University Cooperative Extension Service (PU)
 State Soil Conservation Board (SSCB)
 The Nature Conservancy (TNC)
 USDA - Farm Service Agency (FSA)
 USDA - Natural Resources Conservation Service (NRCS)

**Leads/Authors*

Call to Action

A stylized, dark green illustration of a corn cob with its husk partially peeled back, showing the kernels. It is positioned on the left side of the slide.

50%

**About half of
Indiana's farmers
either don't know
of or don't see
specific water
pollutant problems
in their area¹**

Indiana Agriculture Nutrient Alliance

Agriculture
Organizations

+

Indiana
Conservation
Partnership

+

Conservation
Organizations

- **Keeping Indiana farmers at the forefront of proactive nutrient management and soil health practices that improve farm viability and, ultimately, reduce nutrient loss to water**



IANA Board Members

Executive Committee

- **Agribusiness Council of Indiana**
- **Indiana Farm Bureau**
- **USDA Natural Resources Conservation Services of Indiana**
- **Indiana Soybean Alliance**

- **American Dairy Association of Indiana**
- **Indiana Association of SWCDs**
- **Indiana Beef Cattle Association**
- **Indiana Corn Marketing Council**
- **Indiana Dairy Producers**
- **Indiana Pork**
- **Indiana State Department of Agriculture**
- **Indiana State Poultry Association**
- **Purdue University College of Agriculture**
- **The Nature Conservancy of Indiana**

SHARED SOLUTIONS

Focused efforts for greater success – To further the adoption and implementation of practices that optimize nutrient use efficiency and enhance soil health, IANA will focus on four main areas:

1

Foundation:

SHARED GOALS

Establish goals for statewide practice adoption that encourage fertilizer and nutrient loss reductions

2

Collaboration:

SHARED OPPORTUNITIES

Communicate IANA partnership organizations' efforts to strengthen synergies and maximize awareness, support and implementation of strategic objectives

3

Education:

SHARED INFORMATION

Develop best management practice (BMP) educational materials for our farmers and stakeholders to encourage fertilizer and nutrient loss reductions

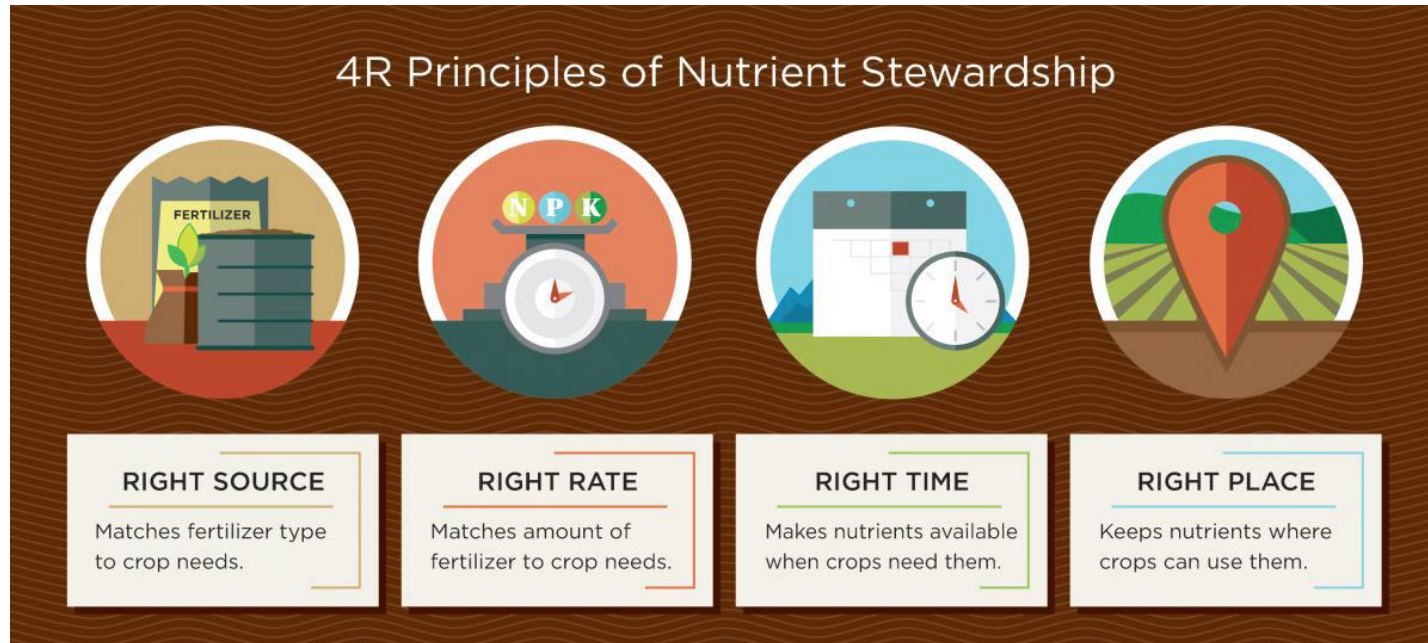
4

Research:

SHARED OUTCOMES

Assist partners with pursuing collaborative nutrient-focused research, identifying synergies and compiling outcomes

Guiding Principles: 4Rs & Soil Health



SHARED GOAL: MANAGING NUTRIENTS

1 PLAN

GOAL: 100% of farmers regularly perform soil sampling

GOAL: 100% of farmers implement plans for nutrient management

A SHARED GOAL: MANAGING NUTRIENTS

2} APPLY

GOAL: 75% of Indiana farmers making nutrient applications at planting or in-season

GOAL: 100% of Indiana farmers making frozen and snow covered ground applications only as a last resort

SHARED GOAL: MANAGING NUTRIENTS

3 PROTECT

GOAL: Increase living green cover acres to 40% of Indiana cropland

GOAL: 25% increase of Indiana cropland acres using reduced tillage systems

GOAL: 10% increase of Indiana cropland acres using no-till or strip-till systems



Healthy Soil Clean Water Viable Farms

