AN INREC OVERVIEW:

Enhancing Agricultural Sustainability through Conservation Practices

IowaNREC

INREC, established in 2015, focuses on promoting sustainable agriculture practices in Iowa to improve water quality and soil health while optimizing productivity. Key areas of focus include cover crops, edge-of-field practices, and in-field management strategies to reduce nutrient runoff into Iowa waterways.

COVER CROPS

Cover crops are integral to the efforts in reducing nutrient runoff and enhancing soil health across Iowa's agricultural landscapes. Research and adoption rates have shown significant benefits:

ADOPTION RATES:
Over the past decade, the adoption of cover crops has increased drastically from 1.6 million acres in 2017 to 3.4 million acres in 2025.

STUDIES SHOW COVER CROPS CONTRIBUTE TO:

- Reduction in nitrate leaching by up to 30%.
- Improvement in soil organic matter content and structure.
- Mitigation of soil erosion, protecting Iowa's valuable topsoil.

EDGE-OF-FIELD PRACTICES

INREC promotes various edge-of-field practices aimed at intercepting and filtering nutrients before they reach water bodies. These practices are highly effective at reducing nitrogen loss and can last for decades.

PRACTICE	NUTRIENT REMOVAL EFFICIENCY
Bioreactors	24%
Saturated Buffers	45%
Oxbows	63%
Wetlands	30%

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IN-FIELD PRACTICES

INREC supports in-field strategies to enhance nutrient management and soil health:

- **Reduced Tillage:** INREC's survey shows adoption of no till and conservation tillage on 63.9% of Iowa's cropland in 2025, reducing soil erosion and enhancing water infiltration.
- **Precision Agriculture:** Utilization of technology for precise nutrient application optimizes yield and minimizes environmental impact. In 2025, 58.9% of phosphorus applications utilized variable rate technology.

RESEARCH + EDUCATION

INREC's initiatives prove its commitment to advancing sustainable agriculture in Iowa through evidence-based research, widespread adoption of conservation practices, and continuous education. By promoting the adoption of cover crops and other conservation practices, INREC aims to achieve long-term environmental sustainability and agricultural resilience in Iowa.

A key part of Iowa NREC is collaboration with organizations, agencies, and farmers within Iowa—but also outside of our state. Outside of Iowa and interested in replicating the Iowa NREC survey? Reach out! We welcome the chance to assist other states in an effort to improve water quality.

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IowaNREC

Looking for more information? Check out the process in more detail on our website.