

IOWA NUTRIENT RESEARCH CENTER

FY16 Request

An incremental increase of \$23,188 (1.75%) for the Iowa Nutrient Research Center to continue research in improving Iowa's water quality and developing new ways for farmers to manage nutrients. Current FY15 funding is \$1.325 million. (The increase is included as part of Iowa State University's Special Purpose Appropriations Requests.)

The Iowa Nutrient Research Center was established in 2013 by the State Board of Regents in response to legislation passed by the Iowa Legislature and signed by Governor Branstad. The center, administered by Iowa State University, is meeting the need for continued research and innovation to address Iowa's water quality concerns. Center research evaluates the performance of current and emerging in-field and edge-of-field practices, providing recommendations on implementing new or tested practices and developing tools to help decision-making in adopting effective management practices.

Meeting Iowa's Needs in Water Quality

The work of the Iowa Nutrient Research Center is important to fill gaps in nitrogen and phosphorus research that are important to Iowa in reducing loss of nutrients to the environment. The center has funded 20 projects in its first two years, led by scientists at Iowa State University, the University of Iowa and University of Northern Iowa and in collaboration with other agencies, organizations, cities, farmers and landowners. Scientists meet on an annual basis to discuss research results and gauge progress.

Highlights of Research Progress

- ▶ Field and lab experiments are improving the understanding of winter cover crop management and the relationship to impacts on corn yield.
- ▶ Saturated buffers are being evaluated as a method to remove nitrates from tile flow.

- ▶ New models are under development to analyze 40 years of Raccoon River water data and shed light on the impact of climate and agricultural practices on water quality.
- ▶ Extensive fieldwork and in-stream research is establishing baseline data useful for studying nutrient loading to the Cedar River when waters are running deep and fast.
- ▶ Intensive research in the Onion Creek Watershed in Boone County is providing new insights on the contributions of stream bed and bank erosion to phosphorus transport.
- ▶ Research is taking a much more precise look at nutrient movement at the scale at which they are delivered to surface waters from various watersheds—for most of Iowa's cropland, a scale of a few hundred to a few thousand acres.
- ▶ How trading nutrient credits may benefit cities and farmers—and water quality as a whole—is explored in a pilot project in the Catfish Creek Watershed near Dubuque.
- ▶ Work on research farms and in farmers' fields is evaluating species and mixes of native perennials for prairie strips to reduce soil erosion and nutrient losses.
- ▶ Research is seeking to improve bioreactor performance and reduce cost.

www.cals.iastate.edu/nutrientcenter

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