Continuing Agriculture’s Commitment to Water Quality

The Iowa Water Quality Initiative

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The Iowa Nutrient Reduction Strategy is a voluntary program that works to reduce the impact of Nitrogen and Phosphorous entering Iowa waters from point (cities) and non-point (agriculture) sources. This program is designed to show measurable progress of the reduction of nutrients from the innovation and verification of new practices and technologies. The key focus of the Iowa Nutrient Reduction Strategy Includes:

- Accountability and Verification Measures: Track progress and establish reporting system for practice adoption
- Increased Public Awareness and Recognition: Marketing and education campaign
- Research and Technology: Support advancing the science of Gulf hypoxia and the development of new technologies to find innovative solutions
- Outreach, Education, and Collaboration: Build broader awareness and information to farmers and landowners
- Funding: Effective utilization of existing programs

The Nutrient Reduction Strategy was spawned from concerns of the Gulf Hypoxia Task Force. Excessive nutrients were entering the Gulf of Mexico from the rivers that fed into it. The excess nutrients created a hypoxic or “dead zone” that lacks oxygen and, therefore, lacks life. The concerns regarding the non-point sources from the Midwest specifically target the corn and soybean production systems. This is due to the highly organic material the soils of the Midwest contain, stating that nitrates are lost to the water systems even without the use of fertilizer.

### Improvements over the Decades:

Efficiencies of pork production and cropping systems over the last decades have drastically improved environmental sustainability of agriculture. This has allowed for reduced manure output while producing more pork.

A study was conducted by the National Pork Board and the University of Arkansas to provide a 50-year comparison of the carbon footprint and resource use of the swine herd in the United States.

- “Today, it only takes five hogs (breeding and market) to produce the same amount of pork that required eight hogs in 1959.”
- “Increased crop yields have resulted in a 59 percent decrease in the total amount of land required, resulting in a 78 percent decrease in the amount of land required per 1,000 pounds of dressed carcass produced.”
- “The carbon footprint per pound of dressed carcass produced has been reduced 35 percent from 3.8 kg/CO2e to 2.5 kg/CO2e.”

This study shows the pork industry has been taking steps in the right direction. Proper management of land and water are critical components of working to maintain a sustainable industry.
The application of liquid swine manure compared to commercial fertilizer already has nitrogen and phosphorus reduction benefits. A study conducted by Iowa State University showed that there is 4 percent load reduction of Nitrogen and 46 percent load reduction of Phosphorus in liquid swine manure utilized as fertilizer in comparison to commercial fertilizer. A primary goal of the Nutrient Reduction Strategy is to reduce the Nitrogen and Phosphorus load in the Gulf by 45 percent. This means that non-point sources must reduce Nitrogen by 41 percent and Phosphorus by 29 percent to achieve the goal for Iowa. Even though nutrient load is reduced in liquid manure, pork producers can play a role in this nutrient reduction goal. There are different practices pork producers can utilize to help play their part in this strategy. Taking time to consider the pros and cons of manure application may create drastic impacts on nutrient conservation.

**Time of Application: Fall vs. Spring**

**Pro:** Injection or broadcast application in the fall allows more time for organic portions of manure to break down and be available for plant uptake.

**Con:** A longer period of time allowed for breakdown allows more potential nitrogen loss to the environment.

**Pro:** Manure applied in the spring has less amount of time for nitrogen loss to occur.

**Con:** Saturated soil conditions in the spring can cause significant denitrification and leaching loss of nitrogen and also can create challenges due to compaction.
**Method and Rate of Application**

Injecting or incorporating manure soon after application is both beneficial to you and the neighbors. This practice reduces nitrogen loss and minimizes odor.

It is important to consider the proper manure application amount based on manure tests, crop needs, soil tests and proper calibration techniques.

**Moving Forward**

13 watershed demonstration projects are currently underway with $5.8 million in state funding allocations and more than $10 million in commitments from landowners and other partners. More information on these projects is available at www.cleanwateriowa.org. The Iowa Pork Producers Association is one of the project partners of the West Branch of the Floyd River project in Northwest Iowa. This area is known to have one of the highest concentrations of livestock in the state of Iowa. The objectives of this project are to strengthen outreach, education and collaboration efforts among both public and private agricultural entities. Relaying the results of the demonstration projects to farmers will show them the impact of utilizing different conservation practices on their own land.
The Alliance also will:

- Enhance understanding by the public and key decision makers about the needed flexibility in addressing non-point nutrient sources impacting water quality;
- Support Iowa State University and other committed partners in developing environmental performance metrics and measurements supported by credible data; and
- Secure significant funding from public and private sources to accomplish the IAWA’s mission and goals.

The IAWA will not replace existing programs. It will serve as a coordinating entity with dedicated professionals focused on communication and outreach to advance the success of the Iowa Nutrient Reduction Strategy. This entity will only enhance, complement, understand and communicate the work of environmental and agricultural stakeholders who are serious about implementing workable and effective strategies that provide farmers flexibility to adopt practices that work best on their farms.

The non-profit alliance is headquartered at the Iowa Soybean Association in Ankeny. It’s governed by a board of directors chaired by ISA CEO Kirk Leeds. Iowa Corn CEO Craig Floss serves as vice chair and Rich Degner, Iowa Pork Producers CEO, serves as secretary-treasurer.

“A simplistic, regulatory scheme will not improve water quality nor will another marketing campaign touting the importance of farming,” Leeds said. “Serious matters demand a serious approach and farmers are committed to achieving results. The IAWA is one more example of their readiness to invest private resources to make a real and meaningful impact.”

More information is available at www.iowaagwateralliance.com

Iowa Ag Groups Launch Iowa Agriculture Water Alliance

Created and funded by Iowa Corn Growers Association, Iowa Soybean Association and Iowa Pork Producers Association, the Iowa Agriculture Water Alliance will increase farmer awareness of the Iowa Nutrient Reduction Strategy and their adoption of science-based practices proven to have environmental benefits.

A recent incentive of $1.4 million in cost share funds was obligated in just five days. The funds will be used to help farmers install new nutrient reduction practices, such as cover crops, no-till or strip-till, or using nitrification inhibitors when applying fertilizer.

“The tremendous response to these cost share funds shows again that farmers are committed to using voluntary, science-based conservation practices to continue to improve water quality,” Iowa Secretary of Agriculture Bill Northey said. “In less than one week, Iowa farmers committed to matching the state investment, so $2.8 million in new water quality practices will be going on the ground this fall.”

The Iowa Department of Agriculture and Land Stewardship received applications covering 59,883 acres from 597 different farmers seeking to participate in the program. That includes 54,679 acres of cover crops, 2,531 acres of nitrification inhibitor, 1,656 acres of no-till and 1,015 acres of strip-till. Farmers in 90 of 100 Soil and Water Conservation Districts across the state received funding.

Farmers are encouraged to still reach out to their local Soil and Water Conservation District office as there may be other programs available to help them implement these voluntary, science-based water quality practices on their farm.
Meet Sean McMahon
Iowa Agriculture Water Alliance Executive Director

Sean McMahon will serve as IAWA executive director effective Sept. 15, 2014. He lives in Cumming, Iowa, and recently directed The Nature Conservancy’s (TNC) North America Agriculture Program. He also served as state director of the Iowa Chapter of TNC and prior to that, directed national land stewardship campaigns with the National Wildlife Federation.

As executive director, McMahon will work with partners to champion farmer adoption and engagement in conservation and production practices for continuous improvement of nutrient management and water quality. He also will take the lead on adding staff to assist with program and project facilitation and communications outreach.

“I welcome the opportunity to lead such a unique and important effort because I care deeply about Iowa’s natural resources and improving our water quality for current and future generations of Iowans,” said McMahon. “Iowa producers have a crucial role to play in helping meet the growing domestic and international demand for food, feed, fiber and fuel and they can do so in an increasingly sustainable manner.

New IAWA Executive Director Sean McMahon addressed reporters at a news conference launching the alliance at the Iowa Capitol on Aug. 25.
Producers are encouraged to apply for the Iowa Environmental Steward Award. This award recognizes an individual who demonstrates the positive contributions the pork industry makes to the natural environment. To be a candidate for this recognition, the candidate must be nominated by another individual, such as another pork producer, county Extension agent or county pork producer group.

The award recipient will receive a $2,500 cash award and be recognized at the Iowa Pork Congress in January. In addition, the person nominating the award recipient will receive $500. For more information, contact Tyler Bettin at tbettin@iowapork.org.

For More Information:
Contact the Iowa Pork Producers Association at (800)-372-7675 or visit:
- www.iowapork.org
- www.pork.org
- www.cleanwateriowa.org
- www.nutrientstrategy.iastate.edu/
- www.agriculture.state.ia.us/
- www.iowaagwateralliance.com
The Iowa Pork Producer *Headlines* newsletter is an official publication of the Iowa Pork Producers Association. Editorial and advertising offices are located at the address listed below.

*Headlines* is published three times a year and mailed from Des Moines, Iowa. The publisher cannot guarantee the accuracy of all information or the absence of errors and omissions, nor be liable for content of any advertisements that may appear in the newsletter.

All *Headlines* inquiries should be directed to the editor at:

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Mission Statement  
The Iowa Pork Producers Association is an industry inclusive organization whose mission is to provide a unified voice to promote and educate for a sustainable, socially responsible, profitable and globally competitive pork industry.

About the Author  
This issue of *Headlines* was organized by Amanda Outhouse, 2014 IPPA Checkoff intern. Amanda is from Defiance, Iowa. She is a senior this year at Iowa State University with a major in animal science and a minor in meat science. Amanda is looking forward to a career in the swine industry.