

Encouraging No-till in 2019

Doug Adams, Natural Resources Conservation Service

If you have fields with standing cornstalks and plan to plant soybeans this spring, you may be searching for the best way to prepare the seedbed. With low soybean prices, there are ways to cut costs but still maintain productivity. The Kossuth, Humboldt and Wright County Soil & Water Conservation District (SWCD) encourages you to give no-till a try.

There are several cost-share opportunities available in the area, including financial assistance through the Environmental Quality Incentives Program (EQIP), a statewide Water Quality Initiative program that pays \$10 per acre (max of 160 acres) and a Boone River Watershed project that could pay up to \$15 per acre (max of 320 acres) if you are within the Eagle or Prairie Creek Watersheds. You may visit with USDA-Natural Resources Conservation Service (NRCS) or SWCD employees in our Algona, Clarion or Humboldt USDA Service Centers for more information about financial assistance options.

If you are concerned about yields, Iowa State University studies show no-till soybeans typically yield the same as tilled fields, and no-tilling reduces costs by \$15-\$30 per acre, helping your bottom line. No-till has positive impacts on soil health, productivity and profitability under extreme weather events.

While there may be some challenges in managing corn residue, tillage is not the answer. Modifying the planter by adding residue cleaners, down pressure springs or other residue management attachments are far more cost effective given the environmental cost and economic expense associated with conventional tillage.

Most of the planters in the field today are ready to handle the challenges of planting into no-till conditions. The main adjustment that needs to be made is ensuring the planter is properly placing the seeds at the correct depth. If planting too shallow, check if down pressure is adequate before adjusting seed depth. This is something to keep in mind if you have individual boxes on your planter. If they are empty, you have much less down pressure compared to when they are filled. Some planters have sensors and automatically adjust down pressure to keep row units in the ground.

We are here at the NRCS office to answer questions about no-till. In addition to information, we have financial assistance programs available if you are trying no-till for the first time. We also have a group of farmers who have been using no-till on their farms and are willing to answer questions. These farmers have made the switch from conventional tillage and are making no-till work on their farm.



NO TILL FIELD BEANS
PHOTO CREDIT: DOUG ADAMS



Boone River to Host River Cleanup Expedition

Brian Soenen, Iowa Project AWARE

The Boone River in north-central Iowa will be a lot lighter, and arguably prettier, in just a few short months. This July, hundreds of volunteers will spend their vacations muscling trash from 61 contiguous miles of the river between Goldfield and the Boone Forks Wildlife Area near Stratford.

Iowa Project AWARE, an abbreviation for A Watershed Awareness River Expedition, is scheduled for July 7-12, 2019. Now in its seventeenth year, Iowa Project AWARE is a one-of-a-kind, multi-day, family-friendly annual river cleanup. It is one of the only opportunities in Iowa for outdoor recreation and environmental education fully coordinated by volunteers, for volunteers.

“We are excited to be part of this year’s project on the Boone River,” explained Hamilton County Conservation Director Brian Lammers. “Not only will the cleanup directly benefit our local river ecosystem and improve water quality and recreation potential, the event also brings awareness to the community and brings volunteers together to work on the effort.”

During the cleanup, participants paddle canoes searching for river and riverbank trash by day and camp in local campgrounds and communities by night. Throughout the week, volunteers also attend educational programs emphasizing local history, culture and nature. While the expedition lasts six days, participants can register for as few or as many days as they choose. Paddling equipment, boats and daily meals are included with registration fees.

N-Compass, Inc. is the nonprofit organization that produces Iowa Project AWARE. The group is working with the Webster City-based Boone River Cleanup Committee, which has organized local cleanups in Hamilton County since 2007. Despite years of successful local cleanup efforts, local organizers report there is always trash to be found. With the expedition starting in the Wright County hamlet of Goldfield, cleanup volunteers will traverse nearly the entire navigable portion of the Boone River.

In the past 16 years, more than 2,610 volunteers from across the country have participated in the multi-day river cleanup. This includes paddling 1,200 river miles of Iowa waters and removing 436 tons of trash, of which more than three quarters has been recycled.

For more information about Iowa Project AWARE, N-Compass, Inc., and to register as a river cleanup volunteer for the 2019 event, please visit www.iowaprojectaware.org.

Water Monitoring: 2018 Results and Progress

Anthony Seeman, Iowa Soybean Association

In 2018, Agriculture's Clean Water Alliance (ACWA) and partners again collected water samples from the Boone River and its tributaries during the crop growing season. This was the 12th consecutive year, building a significant data record of spatial water quality. The program enlists local volunteers to collect samples from 30 sites throughout the watershed every other Thursday between April and August. These samples are analyzed by the Iowa Soybean Association's (ISA) certified water lab for nitrate-nitrogen and other parameters. At the end of each year's sampling, nitrate results are summarized in both table and map form and posted on ACWA's website alongside similar data for other ACWA projects.

Looking at water quality results is a challenging exercise in most cases, particularly when trying to account for the impact of weather. In addition to affecting water quality in the near term, sometimes the effects can linger in the soil or groundwater for a period of months or years. As nice as it would be to see nitrate levels steadily drop as more conservation practices are implemented, it is highly unlikely in a watershed as large as the Boone River. Depending on the data analyzed, there are a variety of methods that can be employed to look beyond this variation for more meaningful results.

By sampling the Boone River and its tributaries, we can divide the watershed into smaller areas and compare them to the entire river. One natural way to break out sub-watersheds is to look at the areas implemented as Water Quality Initiative (WQI) demonstration projects. Prairie Creek, in the north end of the Boone River, is one example of these projects with increased levels of conservation practices. If we simply look at the average nitrate-N concentration since 2007, there is significant variation (Figure 1). But if we compare the concentration to the overall Boone River as a baseline, we see some interesting results. Since the Boone River is the sum of all the sub-watersheds, it makes sense that it would fluctuate with the weather as Prairie Creek does. Figure 2 compares Prairie Creek to the Boone River, which shows a general downward slope, indicating a decrease in nitrate-N over time in Prairie Creek. Figure 3 is a similar graph for Otter Creek, another nearby sub-watershed that doesn't have a WQI project, showing no consistent trend when compared to the Boone River.

While this analysis is not exhaustive or definitive, it does suggest that focused conservation efforts in Prairie Creek are having a positive impact on water quality. The amount of time and data needed to confidently show a quantitative reduction of nitrogen loss is still quite a way off. However, with more time, implementation and data, this picture may continue to emerge and show that improvement is possible with dedicated resources and funding toward conservation.

Figure 1

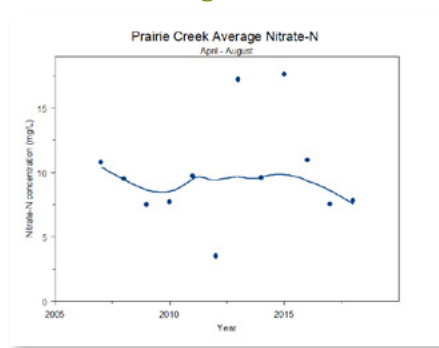


Figure 2

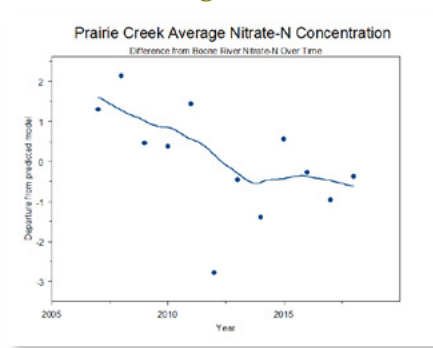
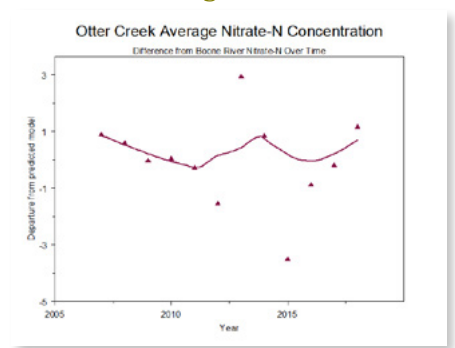


Figure 3



Upcoming events

Hamilton County Going Greener
Webster City council chambers
400 Second St.
April 23 • 5:30 - 7:30 p.m.

Master Conservationist Program
May 21 - July 2
Call (515) 832-9597
to learn more or register.

Project AWARE
July 7-12
To register or learn more:
www.iowaprojectaware.org



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