



# Spring 2020 Newsletter

## Q&A with New District Conservationalist Doug Ruopp

### Can you provide a brief introduction and background on yourself?

I live southeast of Marshalltown on an acreage of our former family farm with my wife LeighAnn, sons five-year-old Drake and three-year-old Levi. I'm an avid outdoorsman, enjoying hunting, fishing, kayaking, camping, hiking, and gardening. I also have a small herd of Dexter beef cows. I graduated from Iowa State with a bachelor's degree in environmental science.

### How long have you been at Natural Resources Conservation Service (NRCS)?

I have been with NRCS for 15 years now. I spent nine years in Jasper County as a soil conservation technician and six years in Poweshiek County as a soil conservationist before coming to Story County as the district conservationist in October. I also interned in Madison County during my junior year at Iowa State University.

### Favorite projects that you've worked on so far?

My favorite projects would be all the ones that have supplied wildlife with habitat. These would include the ponds I've designed, the wetlands I've overseen being installed, and the thousands of acres of prairie that I've been involved with, being seeded down through enrolling ground into the Conservation Reserve Program (CRP).

### What are the biggest challenges you've faced at NRCS?

The biggest challenges I've faced with NRCS are our ever-changing policies and programs. Also, as an NRCS

employee, it feels like we all need to wear the hat of an agronomist, economist, engineer, naturalist, farmer, forester, salesman, soil scientist, biologist, and conservationist all in any given day.

### What are you most excited about in your new position?

I'm most excited about my new position so that I can share my knowledge of practices and programs that can be used to address the resource concerns here in Story County.

### What advice can you offer to landowners wanting to get started in conservation?

My advice to landowners is to not be afraid of working with the government when it comes to addressing the conservation concerns on your farms. We are here to help with technical and sometimes financial assistance.



Story County Soil & Water Conservation District (SWCD)  
We are available by appointment during the Covid-19 outbreak. Please call:  
(515) 382-2217, Ext.3 in Nevada, Iowa

## Get Assistance with These Conservation Practices and More

### Cover Crops



Cover crops are plants that protect the soil during the off-season of row crop season here in Iowa. These plants are seeded in the fall (into the existing crops or immediately

after harvest) and will either die during the winter or will need to be killed in early spring before planting the next crop.

### Conservation Tillage (No-Till/Strip-Till)



Strip-till is a system in which residue-free strips of soil are tilled ahead of planting, either in fall after harvest or in spring. No-till is a system in which the soil is not disturbed

before planting - except for injecting fertilizer nutrients (liquid manure or anhydrous ammonia).

### Pasture and Hayland Planting



Establishment of native or introduced forage species applied on cropland, hayland, pastureland, or other agricultural lands where forage production is

planned. Benefits include reduced soil erosion, improved water quality, improved or maintained levels of livestock nutrition.

### Grassed Waterways



Grassed waterways are constructed graded channels that are seeded to grass or other suitable vegetation. The vegetation slows the water and the grassed waterway

conveys the water to a stable outlet at a non-erosive velocity. Grassed waterways significantly reduce gully erosion.

### Windbreaks



A single row or more of trees and shrubs in lines that protect areas from the wind. Benefits include reduced wind erosion, protection for crops and plants from wind damage, improved

irrigation efficiency, increased carbon storage in biomass and soils, and food and shelter for wildlife and pollinators.

### Bioreactors



Denitrifying bioreactors move water through a woodchip-filled trench. Bacteria that live in the woodchips convert nitrate runoff into nitrogen gas. Bioreactors

are an edge of field practice that benefit water quality underground and can be covered with native vegetation to provide additional habitat benefits.

**For Technical and Financial Assistance to Implement Practices Like These  
Contact Your Story County SWCD and NRCS at 515-382-2217 Ext. 3**

# Justin Hanson Implements Conservation on His Farm for the Next Generation

Justin Hanson farms near Roland in Story County, Iowa where he has farmed with his family since he graduated from Iowa State University as an undergraduate. He raises corn and soybeans on a variety of different soils and slopes ranging from good quality, flat soils to sandier, and sloped fields next to creeks. Recently he answered some questions for us about his conservation journey from reduced tillage to saturated buffers, cover crops to pollinator habitat - at a safe distance of course!

## **When did you first get interested in conservation?**

In the early 1990s, Iowa State had been doing research and installed a buffer strip on a farm that borders Bear Creek. This got me thinking about the conservation and impacts our farm could have on that water source. I could see how our row-crop practices had been moved away from the creek, and I also noticed the wildlife habitat improvement. My time in college also got me thinking about conservation. There, I learned to think about alternatives and also met friends and had discussions about trying things differently. I believe sharing ideas and talking with other producers is highly valuable. I also feel we have a responsibility to maintain our highly productive farmland for the next generation, not just use it for today. This also means being conscious of our water sources and the impact that non-action could be having on them.

## **What conservation practices are you currently using, and how many acres?**

We first experimented with strip-till and no-till about 10 years ago on a farm that also bordered a creek and had some slope to it. At that time, we had the challenge of getting our strips made ahead of spring planting. Since then, we have expanded our strip-till to over half of our acres, as we are better able to have our strips built in the fall in a timely manner. We also have two saturated buffers on our farms. These have been great to work with as they have very little impact on our farming practices, but are extremely beneficial to the drainage tile water that gets cleaned before being discharged into the stream. We also have Conservation Reserve Program (CRP) areas, a pollinator habitat, and waterways in our farms. In the last 3 years, we have begun using cover crops as well.

## **Why did you go with those practices?**

The buffer strips and saturated buffer systems were both initiated by Iowa State University. Our close distance to Ames has been valuable for us to see these practices on our farm and the benefits they provide. It has also been great to talk with the faculty and students that have done research associated with these projects and be able to learn from each other. We have installed grass waterways and CRP in areas that are vulnerable to erosion.

## **How was your experience working with the SWCD and/or United States Department of Agriculture (USDA)?**

The NRCS staff was very helpful and was able to answer all of the questions that we had. After sitting down with NRCS staff, it quickly became evident which programs were best suited for our operation. We applied for strip/no-till, nutrient management, and cover crop funding through the Environmental Quality Incentives Program (EQIP) program and reduced tillage, pest management, and nutrient management through the Conservation Stewardship Program (CSP) program. Overall, our experience with NRCS, USDA and the SWCD has been a benefit to us.

## **What advice do you have for other farmers starting to get involved with conservation practices?**

One piece of advice we were given early on was to start small. It can be hard to change the farming practices you use all at once. Not only from an equipment standpoint but also from a mental perspective. Several things might need change and it's not always, "the way we used to do things". I feel the most important piece of advice is to talk with people. Farmers who have tried these practices are a great resource, not only about what worked but also learning what challenges they had along the way. Also, the local USDA office is an important point of contact. Lastly, listen to your community members and concerns they have. I feel we can all (me included) do a better job sharing our story.

# The Endangered Species in your Backyard

by Prairie Rivers of Iowa Watershed Coordinator David Stein

When someone thinks of an endangered species, their mind often wanders away from home, imagining big, exotic animals like lions, elephants, and pandas. However, those of us in Iowa usually don't think of an endangered animal calling our neighborhood home, but this couldn't be further from the truth. In 2017, we got an endangered species to call our own. This was the rusty patched bumblebee. Like honeybees, rusty patched bumblebees make hives with a queen, workers, drones, and even a honey-like substance. Being pollinators, we depend on them for food production. In fact, bumblebees, like the rusty patched, are the best pollinators we have for tomatoes, peppers, eggplant, blueberries, and cranberries. Several decades ago, hardly anyone would believe you if you said this was going to be an endangered species. With a range that stretched from Nebraska all the way to the east coast, it was among the most widespread insects in North America. However now, you'd be lucky to find one in your lifetime. How can an animal that was so widespread just a few decades ago could fall so hard and so fast? Like so many other species of animals that have gone endangered or extinct it all boils down to us; our bad.

There are quite a few reasons why the population of rusty patched bumblebees is falling so quickly. In the pollinator conservation field, we like to call these the "3 P's" pesticides, pathogens, and poor forage. Pesticide is a bit of an all-purpose term, it's something that kills what we would consider pests, including weeds, fungi, bugs, etc. A problem with pesticides is that some aren't very picky in what they kill. Meaning that someone spraying for one bad pest might take some good animals and plants out with it. On top of that, even when pesticides don't kill bees, they can still make them sick. They can cause worker bees to gather fewer resources, leading to less food for the hive, and eventually leading to the collapse of the hive. Pathogens or diseases are spread from commercial bumblebees used for greenhouse pollination to the surrounding native bumblebees including the rusty patched bumblebee, and for a species with as small of a population as the rusty patched bumblebee, this could be devastating. By far the biggest danger to rusty patched bumblebees is poor forage and the loss of habitat. The rusty patched

bumblebees are native to the tallgrass prairies and grassland that was once widespread across Central and Eastern North America. Here, they had an abundance of flowering plants to feed on, and which could provide plenty of nectar and pollen to grow their colonies. However, as the prairie was cleared for farmland, the wildflowers, pollen, and nectar disappeared and the bees responded in turn.



You might now be asking yourself what can be done about this now? All hope is not lost in Story County. Last year two rusty patched bumblebees were spotted in the heart of Ames, meaning we still have a few bees to save. Cities and towns like Ames, Nevada, and Boone might be a refuge for endangered bees due to a lack of predators and being far away from pesticides. The saving grace for the bumblebees might just be responsible citizens like you and me. Planting large gardens full of native plants and flowering fruits and vegetables can provide bumblebees and plenty of other pollinators with the pollen and nectar they need to survive. Having more natural areas in parks and green spaces, introducing flowering turf alternatives, reducing pesticide use, and planting native landscapes are all great ways for responsible landowners to contribute. With a little bit of effort on our part, the rusty patched bumblebee may change from being the endangered species in your backyard to just another bumblebee in your backyard.