

Clean Water Starts With Us

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WATERSHED IMPROVEMENT IN IOWA

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Passing on the land: start planning now

As Iowa farmers age, a record number of acres are due to change hands in the next five years – about 42 percent, according to a 2009 Iowa Farm and Rural Life Poll.



Pat and Dave Hansen have plans to protect their conservation efforts.

Planning for that future poses some difficult questions for older farmers and watershed groups. Ensuring conservation on the farm to keep soil productive and protect watershed work long into the future can be even harder.

However, many organizations can help. Watershed groups can direct landowners to these resources:

Leases and agreements

The Drake Agricultural Law Center has developed sample leases landowners can use to ensure rent-

ers follow conservation practices. According to the center's website, a sustainable lease can also include provisions that encourage a beginning farmer and provide access to land, or provide recreational or educational opportunities.

At the least, a conservation lease should include following the conservation plan, said Vince Sitzmann, an IDALS-DSC field representative.

"It could also include provisions for minimum or no-tillage, and fertilizer or manure application rates," he said.

Dave and Pat Hansen, who own about 600 acres in Cerro Gordo County, have such an agreement with their renter and another for hunters.

The couple loves prairie, restoring grasses and forbs to large tracts of land through the Conservation Reserve Program and the Wetland Reserve Program.

They've gone the extra mile, protecting about 200 acres with a WRP lease agreement that protects the land indefinitely.

"We've talked about giving or selling the WRP to the state or county. That

would give the public access to it," Dave said.

Land acquisition

Several groups buy land for conservation uses, including the Iowa Natural Heritage Foundation, the Nature Conservancy, DNR, and in some cases, county or federal government. This land usually must provide critical protection for wildlife, water quality or a unique landscape.

Passing it on

Talking about what will happen to the land can be tough. There may or may not be a future farmer in the family.

The Beginning Farmer Center at Iowa State University helps match beginning farmers with landowners interested in transitioning their land to the next generation.

The center maintains an Ag Link seminar, provides financial analysis and educational materials and seminars, and researches farm succession planning.

Practical Farmers of Iowa provides support and "farminars" for beginning farmers, resources that help them farm sustainably.

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Succession planning resources

Drake Agricultural Law Center: www.law.drake.edu/academics/agLaw/

The Beginning Farmer Center: www.extension.iastate.edu/bfc/

Practical Farmers of Iowa: www.practicalfarmers.org/programs/youth-and-next-generation.html

Study looks at retaining nitrate for crops, reducing impact on wells

Diversifying crops with plants that have living roots in the soil year-round may make nitrates better available for crops while reducing nitrates leaching into shallow drinking water wells, according to a new study.

experimenting with five cropping systems in a replicated trial on 40 acres to learn which will retain nitrogen in the upper layers of the soil for next season's crop. When nitrates are at greater depths, they are of no use

cover crops," said Schuiteman. "They help keep the nitrogen up where the plants can use it."

Because of the preliminary results, Schuiteman plans to begin a four-year rotation on some of his other acres — two years of corn, then two years of alfalfa.

Schuiteman also noted that this fall the winter wheat did not come up due to drought. Also, oat yields in the rotation haven't done as well as oats in other acres.

"It's something we haven't determined yet — how to get

the oats to do well in the rotation. That's part of the five-year project. Watching performance under different conditions and learning how to farm in sensitive areas," Schuiteman said.

Funding for De Haan's research came from the Leopold Center for Sustainable Agriculture's Ecology Initiative, Dordt College, the city of Sioux Center, the Sioux County Soil and Water Conservation District and the Iowa DNR through a pilot project for the Source Water Protection Program. This program works with priority communities to decrease nitrate risk to public wells through the use of conservation practices and other means. *Written by Mindy Kralicek*

Five cropping systems tested	Results from three of five growing seasons	
	Income 5=highest, 1=lowest	Holds Nitrogen 5=best, 1=worst
Continuous grass	1	5
Continuous corn	4	1
1 yr oats/red clover, 1 yr corn	2	4
1 yr soybeans/winter wheat, 1 yr corn	5	3
1 yr oats under seeded with alfalfa, 1 yr corn	3	3

Robb De Haan, a Dordt College environmental studies professor, is in the third year of a five-year study with farmer Matt Schuiteman that aims to reduce nitrate leaching into shallow wells by testing different cropping systems.

Schuiteman's farm is about a quarter mile east of Sioux Center's shallow drinking water wells. The city must add extra treatment as nitrate levels hover close to or over the federal maximum level of 10 parts per million (ppm). When nitrates rise above 10 ppm in drinking water, there is danger for babies under six months to develop Blue Baby Syndrome, a potentially fatal blood disorder.

De Haan and Schuiteman are

to a farmer. Schuiteman said nitrates seem to leach downward about 6 feet per year in his area.

"The initial results suggest perennial crops such as grass, hay and alfalfa are the most effective way to prevent nitrates from escaping," De Haan said. "Diversifying crops also minimizes financial risk."

Schuiteman sells wheat and oats in local markets and saves money by using less nitrogen fertilizer. In his cow-calf operation, he uses alfalfa and grass hay. He did not harvest the red clover, but sprayed both it and the alfalfa to die out when the corn crop needed to grow.

"We can continue our normal farming practices, but make use of

Give landowners resources to plan for future

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For Beth Cathcart, who returned to the family farm after a graphics arts career, the conservation ethic comes naturally. "My father was a conservationist," she said. "He was very progressive and won several awards. He started no-tilling when I was in grade school."

Her 75-year informal plan for her farm is more of a conservation ethic — restoring her oak savannah, raising premium grass-fed beef, continuing a Hereford line that's been in the family since the 1870s, and encouraging her

daughter and son-in-law to run the family farm. "As far as conservation goes, it's part of the family culture," Cathcart said. "Caring for the land is just part of what families do."

Working with landowners

Pleasing the current landowner is essential, and for many producers, there's a landowner in the background who has input on the farm.

Dan and Julie Sievers farm Buena Vista County land that's been in the family for more than 120 years and is

currently owned by different family members, including themselves.

They suggest watershed groups be aware that when they talk to an operator, they are really talking to the landowner, the operator and the person who may farm it in the future.

"You may be meeting with only one person and don't understand why they can't make a decision," said Dan. "It's important to keep in mind that he or she is thinking about what the landowner will support."

Written by Karen Grimes

From the editor: From words to action in my own front yard

When we left behind our townhouse – with a yard the size of a postage stamp – for a house in Altoona, my husband and I were eager to try our hands at landscaping.



Brown rain garden after planting, Altoona

The front yard, with its tiny planting area around a red maple, was our first target. We figured if we were going to tear up the lawn for a larger landscaping bed, we should do it the right way. After years of helping others promote urban water quality practices, I finally had the opportunity to do something in my own yard.

We had a wet townhome basement more than once thanks to poor land management. With the new house, we wanted to do all we could to keep water away from the foundation. We wanted a colorful but low-maintenance yard that would reduce runoff to the storm sewer directly in front of the house. Attracting new birds, insects and critters would be fun for our kids to watch, too.

Even though I understood the basics of how rain gardens work, I didn't know the first thing about installing one or costs involved. I wasn't too sure of where our water went, either.

I started researching, finding that our house sits in the Four Mile Creek watershed, the focus of a growing effort to address water quality and flooding. That included a watershed project, which meant we could make the rain garden more affordable with

cost-share assistance, allowing us to help our downstream neighbors.

Watershed coordinator Zach DeYoung and urban conservationist Jennifer Welch walked our yard with us, suggesting practices to divert water from our foundation and reduce runoff. They worked up options to meet our goals and budget.

To start, we dug a small hole to see how long it took water to soak into the soil. When it took days instead of hours for the water to disappear,

we went with a modified rain garden – adding drain tile and amending the soil to help the plants soak up the rain. We also added soil quality restoration to our list of practices to help the rest of the yard absorb water.

Not having much of a green thumb myself, Jennifer and Zach helped pick the best prairie flowers for our garden, eschewing prairie grasses to spare our allergies. We ordered extra plants to blend the rain garden with our existing landscaping.

Being the do-it-yourself types, we had supplies delivered and started digging. After adding landscaping block to help the plantings better fit the neighborhood aesthetic, we had a finished garden.

While our plants have some growing to do, they've already made a difference. The garden is a smorgasbord for bumblebees. We've seen more butterflies, caterpillars and our first hummingbird. We haven't had many storms to test the garden's ponding, but our basement has been dry.

Our neighbors have commented on the garden, giving us the opportunity to explain what it is and how it works – icing on the cake for this promoter of urban water quality.

Ankeny homeowners take first step on rain garden

Just upstream in Ankeny, Larry and Amy Bryant also joined the Four Mile Creek watershed project to install a modified rain garden and biocell.

Spurred by a newspaper clipping and Amy's work with Ankeny's Stormwater Stakeholder Group, the Bryants researched rain gardens and called the Polk SWCD for assistance.

Always looking for ways to conserve, the Bryants wanted to keep water away from the house foundation and mitigate stormwater pollution from their yard. Cost-share made the project possible.

Doing the work themselves, the Bryants created a modified rain garden that catches all runoff from the house and garage. They also added native plants to the drainage swale behind the house to absorb runoff.

"I've noticed that even with the both the garage and roof draining to the garden this spring there hasn't been much standing water accumulating in it for any length of time after rain events," Larry said.

"By far, my favorite part of this practice has been the native plants that have been installed and the changes that their presence has made in our yard. They are beautiful and functional," Amy said. "We had more butterflies in our yard last summer than we have ever had before. We found seven monarch chrysalis and watched a few of them emerge. It was amazing and a wonderful learning experience for our children."



Bryant rain garden, Ankeny

What motivates landowners to keep CRP when crop prices rise

It's appealing to take land out of grass and put it into crops when corn and bean prices are at all-time highs. So it's important to know what motivates a landowner to keep land in grass despite the temptation to convert it to dollar-yielding crops.

Surprisingly, the same motivations drive landowners to enroll in CRP today as when crop prices are lower. Sometimes, just talking about goals and reminding landowners of the benefits of other options can keep marginal land in some kind of cover. Often the land itself – steep, wet or highly erodible – may be the best incentive.

Below, four landowners share their motivations for keeping CRP.

Terry Carpenter, who runs a cow-calf herd in Lucas County in addition to working 50 to 60 hours a week off the farm, put about 100 of his 600 acres into CRP to save time and to provide hay for his cattle. Offered what he calls “very attractive rates,” Carpenter put in land that was highly erodible and had been in CRP in the past. He mows one-third of it every year for hay. “It reduces the payment for me, but I can always use the hay ground,” he says. “I seed it down, save the soil and put up hay.”

Mary Haleen has one goal for her land — erosion control. Her family farm in Boone County has several waterways that flow into a tributary of Beaver Creek, and they needed rebuilding. She had land in CRP before, but when it came out, she extended the contract and added more acres to

it. “It seemed like a good way to control erosion, build the land up and protect it,” she says. She had about 20 acres seeded to a mix of grasses.

Ron Main has mixed motivations. He’s a small-scale Wayne County farmer who works full time and says the cost of machinery is one reason he doesn’t farm more ground. He owns about 300 acres and four years ago enrolled about 100 acres in CRP.

“I’m an avid hunter and fisherman,” he said. His CRP pulls in a few deer and turkey, plus it guarantees that he has a place to hunt as hunting becomes more restricted on other ground. Changes in land and corn prices have driven local rental rates up, making his current CRP rental rate less competitive. When his contract expires in 2017, he says it will be tempting to go to crops and cash

rent, but a renter can’t guarantee the same payment for 10 years. Either way, if you own the land, “you have to make it pay for itself,” he says.

Carl Joy farms two farms near the Lucas/Wayne county line. “I like hunting birds,” he says. “I’m just trying to get a few birds in the neighborhood.” Joy recently put 12 acres in CRP and planted it to a high quality mix (CP 25) which includes taller prairie grasses, forbs, flowers and legumes. “It’s supposed to be better wildlife habitat. It produces more insects for the young birds and it’s not so thick so the young birds can get around in it.” On another farm, he’d like to replace the hard-to-farm small point rows on less productive soils with grasses that are easier to work with and might yield some birds, too.

Written by Karen Grimes

Contracts protecting nearly **1.5 million acres** of Iowa land under the Conservation Reserve Program are due to expire from 2010 to 2019.

If every single acre went to cropland, Iowa would lose **2,266 square miles of grasses and trees**. That’s almost the size of Delaware, Buena Vista, Madison and Washington counties combined.

More information on benefits of CRP

Benefits of CRP in the Mississippi River basin: www.fsa.usda.gov/Internet/FSA_File/mississippi_river_basin.pdf

Benefits in the prairie pothole region: www.fsa.usda.gov/Internet/FSA_File/prairie_pothole.pdf

Recreation and economic CRP survey: www.fsa.usda.gov/Internet/FSA_File/national_survey_of_landowners.pdf

DATES TO REMEMBER

January 20 and 21: 2012 Women Food and Agriculture Network Annual Conference, Des Moines, www.wfan.org

January 25: Conservation Partners Legislative Day, Iowa State Capitol, Des Moines

January 26: Watershed Improvement Review Board (WIRB) meeting

February 12: Deadline for Soil and Water Conservation Society scholarships, www.swcs.org/en/members_only/

February 15: Watershed Development and Planning Assistance Grant applications due, www.iowaagriculture.gov

March: Regional Envirothon competitions www.cdiowa.org/envirothon.html

March 6 and 7: Iowa Water Conference, Ames www.aep.iastate.edu/iwc/

March 9: WIRB meeting

April 1: DNR Watershed Planning grant and Implementation grant applications due <http://watershed.iowadnr.gov>

April 20: WIRB meeting

Network in the community to make conservation change

Forget Facebook and Twitter — new research suggests that if you want to connect with rural lowans, use social networking, but do it the old-fashioned way.

Hoping to learn how to motivate farmers to use voluntary conservation practices to benefit an entire watershed, Ryan Atwell and Lisa Schulte from Iowa State University, along with Lynn Westphal from the U.S. Forest

Service, investigated what rural stakeholders think about conservation practices by talking with farmers. Their study resulted in the following overall conclusions about the values, beliefs and behaviors within the rural communities where they worked. Of course, there are exceptions and ranges of commitment to these values among individuals.

“PEOPLE-SHED” PERSPECTIVE: Rural people’s family, neighbors, respected local leaders and local communities greatly influence beliefs, values and decisions.

TAKING PRIDE: Rural people’s priorities include pride of infield soil stewardship, freedom to be their own boss and concern about threats to rural livelihoods.

KEEPING QUIET: Rural people generally do not voice concern about farming and conservation practices’ impact on broader ecosystems, water and wildlife.

WINDS OF CHANGE: Rural people feel powerless to affect institutional change.

THINKING LOCALLY: Rural people prefer to deal with locals, rather than with government and other institutions. They are more receptive to institutions that employ local people.

HAVE A STRATEGY: Rural people aren’t likely to adopt new conservation practices unless a coordinated strategy exists at multiple levels. Conservation practices must mesh with farm practices, the government should offer consistent and straightforward conservation programs, and these programs must be administered in and through local social networks.

By accepting and working with these values, beliefs and behaviors, Atwell believes there are ways for conservationists to gain credibility and trust for conservation efforts.

“Don’t start your conversations with farmers by talking about nitrates in watersheds or government cost-share programs and technical assistance,” Atwell said. “Instead, ask farmers what and for how long they have been farming. Ask about their successes, failures and concerns.”

Begin with “social mapping”

Atwell advises beginning conservation efforts with learning about people in the community and their pressing concerns. A breakthrough for his research began with lunch in a local tavern. A women’s coffee group (ages between 50 to 70 years) was chatting and when they saw the “outsider,” they invited him to join their table to talk about his work. It resulted in Atwell gathering research contacts. Who can resist talking to someone whose mother sent him?

“I think of it as social mapping,” explains Atwell. “It’s understanding how the community works.” He sug-

gests these steps in creating the map, or social network:

1. Learn what concerns farmers and rural residents are personally wrestling with on their property and in the community. Listen to how they talk about their issues and concerns. Connect with their emotions and reflect back to them the words they use for mutual understanding.

2. Identify the local opinion leaders. These may be religious, business, farming, civic and social leaders. Talk

with the leaders about their community concerns and begin connecting how conservation actions could match up.

For instance, an area susceptible to frequent flooding could be turned into a community park to improve services and child fitness. Turn some highly erodible land into a hunting preserve to bring in out-of-town hunters who will purchase food and

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Social networking at a northeastern Iowa tree farm field day.

Courses offered on rainscaping in loess soils

Learn the basics of rainscaping in western Iowa's unique loess soils with these free courses at Iowa Western Community College in Council Bluffs:

All classes held from 8:30 a.m. to 12:30 p.m.

Jan. 1: Roadside planting/native landscaping and turf

Jan. 26: Ecosystem restoration/loess native plants

Feb. 9: Stream corridor stabilization/bioswales

Feb. 23: Urban forestry/vegetated filter boxes

March 8: Green roofs/rainwater harvesting

March 22: Permeable pavement systems

For more information, visit IWCC's website at:

www.iwcc.edu/ce/classes/GoGreen.asp

Social networking continued

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supplies from local businesses.

3. Find out who may impede conservation practice implementation. Ask about the best way to word your conservation messages. People don't want to be targets.

4. Along the way, connect with local conservation support networks, such as local representatives of agriculture organizations and industries, the rural water association, county extension staff, drainage district managers, park "friends" groups, soil conservation district staff and local NRCS staff.

5. When you hold a community meeting to discuss concerns, consider making it a potluck dinner. People feel more connected when they share a meal together. When they begin the mental work of the meeting, help with goal-setting and defining successes. Talk about environmental problems in ways that avoid blame and increase community ownership. Draw upon community talents, resources and knowledge.

6. Stay flexible. Involve the whole community: schools, local clergy, clubs, associations. If everyone is working on a common goal and you work through the local networks, watershed conservation projects will be supported and last longer.

There will be a point in this process when the residents and farmers are ready to talk about money for technical purposes and the science behind the solution in their words.

"By linking economic incentives for conservation with both community development and local-level conservation support networks, watershed-scale goals can be achieved," says Atwell.

Notes from basin coordinators:

"In my experience, increased success comes from the social networking put in before applying for a development grant. But, that can be tough with scarce staff resources. Some counties make a conscious effort at it and it shows." - James Martin

"Staff with two to three years' experience working face-to-face with agricultural producers and landowners have learned what Atwell has concluded. These tips would be beneficial for new project coordinators." - Jeff Tisl

Written by Mindy Kralicek

Rural people's desire for connectedness and their ethic of caring for their families and the local community have the potential to bring independent rural people together to achieve common goals, including landscape change. RYAN ATWELL, IOWA STATE UNIVERSITY

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