



Cover Crops and "Planting Green"

Lenawee County farmer Ray Griffin debated for two years whether or not to go all-in on adopting no-till and cover crops on his entire farm. Since making the decision about 10 years ago he has not looked back.

"I wish I'd done it many years prior to that," Griffin now says.

Griffin utilizes no-till and plants cover crops on all of his 300 acres planted with a rotation of corn, soybeans and wheat. Utilizing these two practices have helped him reduce operating costs, minimize soil erosion, and improve soil health while having some of his best yields.

What some might find more unconventional is what Griffin calls "planting green." In the spring, Griffin prefers planting directly into his standing cover crops rather than terminating them with herbicides which he only applies after planting. After planting he also uses a roller to flatten the standing cover. He has done this even after planting a sorghum sudangrass cover crop that reached 6-feet tall.

Griffin has used a wide variety of cover crops and plants a 15-way "cocktail" of cover crops after harvesting wheat. The mixture includes legumes, grasses, brassicas, broad leaves and buckwheat. He credits cover crops with providing a multitude of benefits for his crops and even more importantly his soil.

One benefit is reducing soil erosion. There's a lot of nutrients in that top layer of soil, said Griffin. Cover crops not only hold that soil in place but also holds in place the soil that blows from other fields. "I do



Lenawee County farmer Ray Griffin uses a no-till drill to plant directly into standing cover crops in the spring (above). Mary and Ray Griffin (right)



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United States Department of Agriculture

Natural Resources Conservation Service

Michigan State Office
3001 Coolidge Road, Suite 250
East Lansing, MI 48823
Phone: 517/324-5270
www.mi.nrcs.usda.gov



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State Conservationist's Message

In his New Year's message to all USDA employees, Agriculture Secretary Sonny Perdue called on us to work as "oneUSDA" to support America's farmers, ranchers and forest owners. He called on us to not think of ourselves as individual offices or agencies but as one organization serving our customers.

At the field level this means making customers' interactions with different agencies within a USDA Service Center as seamless as possible. At the state level it means USDA agencies working together so that our respective programs work collectively to support Michigan's farmers and forestland owners.

As we begin this new year I encourage all USDA employees to keep in mind the five core values established by Secretary Perdue.

- We expect and require complete honesty and integrity in all we do
- We provide service to our customers on time, every time
- We guard, conserve and preserve USDA resources the taxpayers have entrusted to us
- We make commitments with care and live up to them
- We own up to problems and are always responsive



One defining characteristic of NRCS is locally-led conservation. One way this is accomplished is through state-established initiatives through the Environmental Quality Incentives Program. Each year NRCS, after consultation with our conservation partners, targets a portion of the state's allocated EQIP funds to prioritize identified resource concerns.

New EQIP initiatives for fiscal year 2018 include targeted funds to improve habitat for monarch butterflies and to reduce erosion caused by concentrated flows of runoff, commonly known as gullies. The monarch initiative was prompted by reports of reduced numbers of monarch butterflies

reaching their wintering areas in Mexico and coastal California. Targeting funds for concentrated flow erosion is meant to assist landowners in reducing one of the most severe yet most easily identifiable sources of soil erosion. There are many tried-and-true practices such as grassed waterways to eliminate gullies as well as newer practices like vegetative barriers.



*State Conservationist
Garry Lee*

State EQIP initiatives are an effective way to address resource concerns specific to Michigan or portions of Michigan as well as the priorities

of Michigan farmers and landowners. Examples of other state EQIP initiatives are the Wayne County and Genesee County high tunnel initiatives to help make fresh locally grown produce available in areas without large grocery stores. The MAEAP initiative provides financial assistance for farmers to complete environmental verification through the Michigan Agriculture Environmental Assurance Program. These along with national EQIP initiatives, allows the USDA to address specific resource concerns and geographic areas with an outsized environmental impacts like the Western Lake Erie Basin.

Finally, I'd like to congratulate our conservation partners who had their project proposals selected for funding through the USDA Regional Conservation Partnership Program. These include; the Maple Watershed Fish Habitat Improvement project, lead partner the Institute of Water Research, and the Ann Arbor Greenbelt: Saving Michigan Farms, lead partner the City of Ann Arbor Greenbelt Program. Details about these projects will be coming out soon.

NRCS Delivers Healthier Natural Resources in 2017

In 2017, USDA's Natural Resources Conservation Service (NRCS) continued its proud tradition of working in partnership with America's farmers, ranchers, and forest landowners.

"Our data and science-based surveys of our work show that we and our partners brought a healthier resource base, used taxpayers' dollars wisely, made people safer, and brought more-efficient customer service to our customers and communities in 2017," said Dr. Robert Johansson, Acting Deputy Under Secretary for the Farm Production and Conservation mission area.

Here are some highlights:

Investments in Planning and Farm Bill Programs

NRCS and its partners helped more than 680,000

land managers invest in their operations. This work resulted in conservation plans for 27 million acres of working lands – an area the size of Tennessee.

A record \$1.1 billion investment in the Environmental Quality Incentives Program (EQIP) helped put conservation practices on more than 11.5 million acres. Conservation Stewardship Program (CSP) enhancements to build on existing conservation efforts were placed on more than 7.5 million acres. More than 8.7 million acres were re-enrolled in the program. Nearly 300,000 acres of farmland, grasslands, and wetlands were protected through new enrollments in the Agricultural Conservation Easement Program.

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not like to see soil leave through wind or water," said Griffin.

Samples of soil deposited by wind erosion can have 4 to 8 times as much phosphorus as the layer that was beneath it, said NRCS State Agronomist Jerry Grigar. Cover crops or residue will catch it, he added.

Griffin has had some of his best crops since adopting his current cropping practices and has reduced the amount of fertilizer he applies at the same time. "Rays an innovator, he thinks ahead," said his wife Mary.

Cover crops also suppress winter annual weeds like mare's tail, said Griffin. With better soil structure water infiltrates more quickly and he is able to get into the field faster in the spring. Although it's a slow process, the combination of no-till and cover crops has been steadily increasing the amount of organic matter in his soil. He notices that the soil is softer to walk on and has more earth worms than it did before.

The goal is to leave the soil better than you found it, says Mary. Their farm formerly was owned by Mary's family.

When Griffin made the decision to go to a no-till, cover crop system he did it wholeheartedly. The first year Griffin admits he "didn't make much" after the



(above left) One of Lenawee farmer Ray Griffin's cover crops in the fall. (above right) The same cover crop looks like this by spring.

cost of buying new equipment but he persevered. He was convinced in the long-run it made good financial sense.

"If you know something is going to fail, it will fail," he said.

Griffin's conservation practices made him eligible to enroll in the NRCS Conservation Stewardship Program. The program provides annual payments based on the level of conservation of the farming operation.

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NRCS Delivers Healthier Natural Resources in 2017

Targeted Conservation

In 2017, NRCS targeted the conservation of some of the nation's most-valuable resources. Because of this assistance from NRCS and its partners:

Water quality improvement practices were implemented on more than 365,000 acres and conservation plans were developed for more than 315,000 acres in the Chesapeake Bay watershed. A two-year implementation strategy was released to help landowners restore and protect 400,000 acres of longleaf pine forests in eight southern states and Texas.

More than \$32 million was invested in 10 new and 26 existing projects underway with the Joint Chiefs' Landscape Restoration Partnership – an effort between NRCS and the U.S. Forest Service – to reduce wildfire threats, protect water quality and supply, and improve habitat for at-risk species while working across public and private lands.

The holiday darter and bridled darter in the Coosa River of Georgia didn't need to be listed under the Endangered Species Act.

Disaster Assistance

Producers and communities were hit hard by storms, hurricanes, wildfires, and drought in 2017, NRCS provides disaster recovery assistance to farmers and communities through a variety of programs, including the Emergency Watershed Protection Program.

Financial assistance through EQIP played a vital role in putting producers on the road to recovery by helping them install conservation practices that protect land from erosion and prevent the erosion of soil following future disasters. Through EQIP, NRCS provided:

- Livestock carcass disposal in areas of Texas struck by Hurricane Harvey.

- \$4 million for wildfire recovery projects in California, and
- More than \$3.7 million for watering facilities, prescribed grazing, pasture and hayland planting, and cover crops in four states affected by drought.

Through EWP, NRCS works with local government entities and Tribes in impacted areas to remove debris, stabilize streambanks and fix water control structures, among other practices.



NRCS made \$1.75 million available through EWP for post-hurricane recovery in Puerto Rico and the Virgin Islands. Fifty-six employees from the agency's national, state, and soil survey offices worked with local officials to assess damages and provide information on EWP and other USDA programs. Similar efforts occurred in Texas, Florida, Georgia and California.

Customer Service

NRCS improved customer service by applying new ways to meet its customers' needs. In 2017, NRCS:

- Offered more than 200 customizable conservation activities through Farm Bill programs.
- Added customer-requested evaluation, ranking, and obligation processes to CSP.
- Awarded more than \$22.6 million nationwide for 33 Conservation Innovation Grants projects that would advance development of tools, technologies, and strategies to support conservation efforts on working lands and develop market-based solutions to resource challenges.
- In 2017, NRCS delivered funding for contracts with historically underserved customers, including socially disadvantaged, beginning, limited-resource, and veteran farmers and ranchers. Together, these contracts exceeded \$553 million and will treat more than 11.3 million acres of working land.

Cancer Survivor Shares her Story with NRCS Staff

“Mindset is what gets you through this whole journey,” said breast cancer survivor Cheryl Benjamin.

Benjamin was the featured speaker at a breast cancer awareness month event organized by the NRCS-Michigan Women’s Special Emphasis Program. The program was held at the NRCS state office on Oct. 31.

Benjamin was diagnosed with aggressive “inflammatory” breast cancer in 2014. She is now in remission after undergoing surgery, chemotherapy and radiation therapy. Benjamin now speaks to groups on behalf of the American Cancer Society.

The ACS has a number of programs and services to support people being treated for cancer and cancer survivors, Benjamin said. Two of these include Reach to Recovery, which matches breast cancer survivors with others diagnosed with the disease, and Road to Recovery, which provides volunteers to drive cancer patients to and from their treatment appointments.

The advice she offered for those diagnosed with breast cancer was to be your own advocate, know your body and don’t be afraid to get a second opinion. Choosing the right doctors and facility is important as is communicating with them.



Breast cancer survivor Cheryl Benjamin.

Three years after completing treatment, Benjamin said she still attends a breast cancer support group at Sparrow Hospital in Lansing. She has appeared in a video for ACS and was the honorary speaker at the Detroit Cancer Walk.

Costello Named CD Director of the Year

The Michigan Association of Conservation Districts honored Patrick Costello, Chairman of the Oakland Conservation District with the 2017 Director of the Year Award on Nov. 3, during the MACD Fall Convention held in Bellaire.

The Director of the Year Award recognizes the outstanding contributions of a Conservation District director; one who has provided strong leadership, advocacy and promotion of conservation practices within the community. Costello has successfully positioned the Oakland Conservation District (OCD) as the local provider of natural resource management services within the community and has led the development of strong partnerships

to expand the reach of the District within the community.



The OCD now hosts educational events at the Oakland County Farmer’s Market and provides assistance to local farmers and residents in the control of Black Swallow Wort, a high priority invasive species targeted by the Oakland County Cooperative Invasive Species Management Area. Additionally, Costello has worked diligently with the OCD to fulfill their role as local partner with the

Michigan Department of Agriculture and Rural Development and NRCS in the delivery of state and federal natural resource programs.

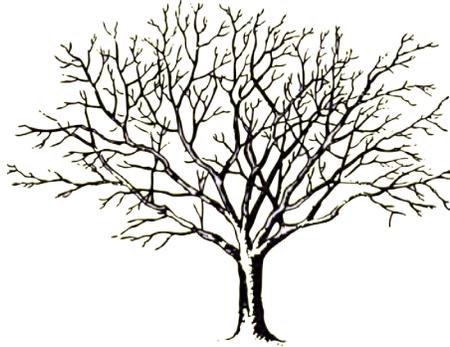
Native Pests can also be the Cause of Damage

by Mike Schira, Michigan State University Extension

Many of the high profile forest pests in the news today are relatively newly introduced exotic species. The more lethal or devastating the pest, the more attention it is likely to be getting. For example emerald ash borer (*Agrilus planipennis*), which is eliminating wide swaths of ash trees across the eastern United States, is in the news on a regular basis.

Native pest species, particularly those that don't kill trees, tend to get overlooked. A good example is sugar maple borer (*Glycobius speciosus*) a relatively obscure pest that can have devastating impact on the value of sugar maple trees.

The adult sugar maple borer, an attractive looking long horn beetle, isn't the stage of life that does the damage. As with many insect species it is the larval stage, which feeds by boring along the inner bark of



the tree that causes the damage.

Adult borers lay eggs in midsummer in rough bark pockets along the main stem of sugar maple trees. Larva hatch from the eggs shortly after they are laid, penetrate the bark and begin mining, leaving deep grooves in the sapwood. The larva overwinter two years while continuing feeding in the warmer growing months, pupate the second spring with adults emerging in June or July to restart the cycle.

Although the larva seldom kill the host tree, the feeding kills the living bark adjacent to the areas being mined causing gaping dead spots or wounds in the trees. As this damage is usually on the main stem of the trees it eliminates any chance for the tree to be used for veneer or even lumber in most cases. This damage severely reduces any potential monetary value for this valuable species and relegates its potential to firewood or, at best, pulpwood.

Sometimes, in faster growing trees, the damage will grow over but the damage to value will last throughout the life of the tree. More often, ugly open wounds will persist with the tree walling off the damaged area, eventually the dead wood will weaken and the tree will snap off at the site of the infestation.

Stressed, slower growing trees seem to be more likely to be host to the sugar maple borers so one control solution suggested is to manage you northern hardwood stands to promote the best desirable growth of the stand. The randomness of attack from this native pest doesn't lend itself to effective control through the use of pesticides.

Michigan State University Extension bulletin Northern Hardwood Forest Management (E2769) provides some valuable suggestions for management of the timber type/s where sugar maple is the predominate species. Active management of these stands should make them less desirable to the sugar maple borer and help maintain the growth, health and monetary value of your maple forest stands.

This article was published by Michigan State University Extension. For more information, visit <http://www.msue.msu.edu>.

ANR Week at MSU

The Michigan State University and the College of Agriculture and Natural Resources will host its annual Agriculture and Natural Resources Week event from March 3 to 10 in East Lansing.

With more than 50 programs and annual association meetings, ANR Week has developed into a late winter gathering of minds deeply concerned and involved in the today's world of Agriculture and Natural Resources. Registration for the event is open until 12 p.m. on January 31.

In 1898, Michigan Agricultural College hosted the first statewide Farmers' Institute "Round-Up." Topics of interest have changed with the industry over the past century to coincide with trends and technology from machine based farming equipment to chemical and biological advances, and commodity specialization. Themes have also changed to reflect the times; during the 1960s the space age was topical, the 1970s featured science and cybernetics, and the 1980s brought forth issues related to world hunger.

For more information go to www.canr.msu.edu/anrweek.

Upcoming Events - Upcoming Events - Upcoming Events - Upcoming Events

January

- 16 2018 Bean & Beet Symposium, 8 a.m. to 4 p.m., Horizon's Conference Center - Saginaw, for more information go to [tp://msue.anr.msu.edu/events/](http://msue.anr.msu.edu/events/)
- 17 Local U.P. Crop Research, Local Solutions, 6:30 to 8 p.m., Garfield Township Hall - Engadine, for more information contact MSU Extension at 906/786-3032 or atkinmon@anr.msu.edu
- 26 Gladwin County Tree Farm Field Day, 10 a.m. to 3 p.m., Butman Township Hall - Gladwin, to register go to this [link](#) or contact the Gladwin Conservation District at 989/426-9461 Ext. 5
- 26-27 Northern Michigan Small Farm Conference, Grand Traverse Resort - Acme, for more information go to www.smallfarmconference.com

February

- 5 Michigan Family Farm Conference, 8 a.m. to 4:30 p.m., Kalamazoo Community College, for more information go to www.miffs.org
- 6 SWxSW Cooperative Invasive Species Management Area Forest Pest Event, 6 to 7 p.m., Cassopolis Library - Cassopolis, contact the Cass Conservation District for more information at 269/445-8641 ext. 5
- 10 Chain-saw Safety System Certification, 9 a.m. to 3 p.m., Calvin College Bunker Interpretive Center - Grand Rapids, for more information and to RSVP call 616/222-5801 or administrator@kentconservation.org
- 19 Farmers Day, Branch Area Career Center - Cold Water, for more information call 517/278-2725 ext. 5 or email branchcd@gmail.com
- 21 Emerging Tools for Visualizing and Managing Land in Michigan, 6:30 to 8 p.m., \$10/person, Grand Traverse Conservation District Community Room - Traverse City, for more information or to register, contact Kama Ross at 231/256-9783, or kama.ross@macd.org

March

- 1 Arenac Conservation District Field Crop Seminar, 8 a.m. to 1 p.m., Anderson's Grain Elevator - Standish, for more information and to RSVP call 989/846-4565 ext. 5 or 989/726-3413
- 1 Vermicompost and Compost Tea Workshop, to 9 p.m., Missaukee Conservation District - Lake City, for more information and to register call 231/839-7193 or visit www.missaukeecd.org
- 1 Forest Heath Workshop, 9 a.m. to 3 p.m. (CST), Belgium Town Restaurant - Stephenson, for more information contact the Menominee Conservation District at 906/774-1550
- 2 Michigan Chapter Soil and Water Conservation Society ANR Seminar, 9 a.m. to 4:30 p.m., Kellogg Hotel and Conference Center - East Lansing, for more information go to www.miglswcs.org/events-and-archives/
- 3 Branch Conservation District Conservation Expo & Annual Meeting, Branch Area Career Center - Cold Water, for more information call 517/278-2725 ext. 5 or email branchcd@gmail.com
- 3-10 Agriculture and Natural Resources Week, Michigan State University - East Lansing, for more information go to anrweek.cant.msu.edu
- 8 Rain Barrel Workshop, 6 to 9 p.m., Missaukee Conservation District - Lake City, for more information and to register call 231.839.7193 or visit www.missaukeecd.org
- 14 Planting Workshop, 6:30 to 8 p.m., Government Center Community Room - Suttons Bay, for more information or to register, contact Kama Ross at 231/256-9783, or kama.ross@macd.org
- 15 Introduction to Composting and Compost Tumbler Workshop, 6 to 9 p.m., Missaukee Conservation District - Lake City, for more information and to register call 231.839.7193 or visit www.missaukeecd.org

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