



Helping People Help the Land

Conservation Notes



USDA - Natural Resources Conservation Service - Michigan

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Mushrooms make Good Use of Forest Land

“How can we put this woods to work without turning it into pulp,” was the question that led Jeff Hatfield to start raising mushrooms.

Hatfield and friend Jeff Chiodi operate Seeds and Spores Family Farm, a 15-acre vegetable and livestock operation near Marquette. Each of their families also own land of their own, which are mostly woodlands.

Seeds and Spores, as well as some other area farms, are growing and selling mushrooms. They are growing two varieties, shiitake and oyster. The oyster mushrooms are grown indoors in straw-filled bags inoculated with spores. The shiitake mushrooms are grown outdoors on maple logs.

Shiitake were the first type of mushroom grown by Hatfield. He once received a block of wood inoculated with shiitake spores as a gift.

“That was the start of the trouble,” said Hatfield jokingly.

Shiitake mushrooms are native to Asia and are named after the type of tree they typically grow on, which are similar to oak. While the mushrooms grow better on oak logs they also do well on maple, said Hatfield. The mushrooms grow on cut maple logs that are soaked in water, inoculated with spores, and then placed on a rack in a shaded patch of forest.



Marquette farmer Jeff Hatfield holds an oyster mushroom, he also grows shiitake mushrooms on the maple logs in the background. Hatfield and Jeff Chiodi operate Seeds and Spores, which sells locally produced food through a CSA and at local markets.

“They don’t like the sun,” said Hatfield.

The forest seems to provide shiitake mushrooms with more than just shade, said Bernie Huetter. Huetter, a retired NRCS area conservationist, lives near Seeds and Spores and attempted growing his own shiitakes. Although he placed his logs in a shaded area they did not produce mature mushrooms. He had better luck when trying

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State Conservationist's Message

The American Taxpayer Relief Act of 2012, signed into law at the beginning of January, included a one-year extension of the 2008 Farm Bill. Until its passage, NRCS was unable to enroll new acres in the Wetlands Reserve Program or the Grasslands Reserve Program.

This extension means that all of the agency's conservation programs are back in operation for fiscal year 2013. The other major programs, notably the Environmental Quality Incentives Program, the Conservation Stewardship Program, the Farm and Ranch Lands Protection Program and Wildlife Habitat Incentive Program were already extended through 2014 by previous legislation.

Also extended by the American Taxpayer Relief Act was the 32 million acre enrollment cap for the Conservation Reserve Program. With 27 million acres currently enrolled in CRP there is room for more participants to take highly erodible and marginal farmland out of production.

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Two NRCS Earth Team volunteers in Michigan received national awards. Paul Rutledge received the

2013 Individual Volunteer Award and Maureen Stine received an NRCS Employee Earth Team Award. NRCS-Michigan is honored to have two of our volunteers recognized. You can read about the work Paul and Maureen are doing in this newsletter.

Earth Team is the volunteer workforce program for NRCS. The program is open to anyone over 14 years of age with an interest in conservation. In this time of limited resources volunteers are more valuable than ever in helping us complete our mission. This year we are hoping to expand the number of Earth Team Volunteers. I hope that every office makes an effort to utilize volunteers and also recognizes the work already being done by our Earth Team Volunteers.



NRCS Michigan State Conservationist Garry Lee

NRCS-Michigan 2012 Retirees

Thank you for your service!

William Anzalone - Soil Scientist, Marquette 35 years

Will Bowman - State Soil Scientist, East Lansing, 41 years

Dave Burgdorf - Plant Materials Specialist, East Lansing, 37 years

Larry Carey, MLRA Project Leader, Marquette, 31 years

Steve Davis, State Conservation Engineer, East Lansing, 36 years

Ed Lusch - District Conservationist, Marshall, 13 years

Roger Quist - District Conservationist, Manistique, 32 years

Gary Rinkenberger - State Appeals Coordinator, East Lansing, 37 years

Noella Stone - Office Automation Assistant, East Lansing, 35 years

John Werlein - Soil Scientist, Grayling, 30 years

Kenneth Wikgren - Soil Scientist, Marquette, 34 years

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Mushroom Production Makes Good Use of Forest Land

again in a neighbor's woods.

"The woods stay cooler and damper than a shaded area without trees," said Huetter.

Seeds and Spores produces about 2,000 pounds of mushrooms a year. The mushrooms are sold at the Marquette Food Co-op, area farmers markets and to the farm's Community Supported Agriculture (CSA) members.

Growing mushrooms provides Seeds and Spores a unique product and also helps them utilize their land in an ecologically responsible way. Growing mushrooms on forest land is also an eligible resource enhancement under the NRCS Conservation Stewardship Program. Hatfield and Chiodi enrolled their own land as well as Seeds and Spores, which they jointly own into CSP in 2011.

In addition to mushrooms, Hatfield and Chiodi produce a variety of vegetables (utilizing seasonal high tunnels to extend the growing season) and raise chickens and beef cattle. Seeds and Spores is not organically certified, but Chiodi and Hatfield are committed to organic principles including not using chemical pesticides or fertilizers. Seeds and Spores has been operating for 14 years and they have 150 CSA members who pay an upfront fee to receive weekly boxes of produce for about 20 weeks a year.

Chiodi and Hatfield have implemented forest, cropland and pastureland activities on their land through CSP. Some of their conservation activities include cover crop mixes, split nitrogen applications, nitrogen-scavenging cover crops, pollinator habitat and wildlife-friendly management practices. Each conservation enhancement they add to their operation helps to increase the annual payment they receive through CSP. They also utilized the Environmental Quality Incentives Program assistance to help pay for fencing and a watering system for their beef cattle grazing operation.



Seeds and Spores (above) near Marquette raises a variety of vegetables, chicken and beef in addition to mushrooms. The farm has 150-members in its community supported agriculture who receive weekly boxes of produce 20 weeks a year. The farms produces about 2,000 pounds of shiitake mushrooms a year which are grown on maple logs (below) in a forested part of the farm.



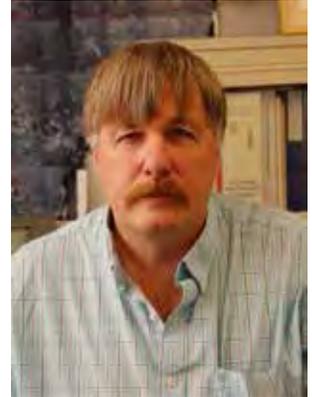
Rosek Returns Home as NRCS State Soil Scientist

Although he spent a large portion of his professional career in the west, NRCS State Soil Scientist Marty Rosek is no stranger to Michigan.

Rosek started his position in August with the retirement of Will Bowman. Rosek is a native of Midland and is happy to be back in the land of ruffed grouse and steelhead. He brings with him to Michigan a diverse professional background in the private, academic and government sectors and degrees from Michigan State and North Dakota State universities.

Prior to coming to Michigan, Rosek was the Soil Data Quality Specialist at the NRCS Major Land Resource Area Regional Office in Bismarck, N.D. for two years. Before working in Bismarck, Rosek served four years as the MLRA soil survey leader in Rock Springs, Wyo. His other professional experience includes soil survey work with NRCS in Minnesota, teaching mapping for a USDA Center for Excellence at a community and tribal college in Minnesota and private agricultural consulting

work in Michigan and Indiana. Rosek's educational background includes a BS in crop and soil sciences from Michigan State University, a Masters in soil science from North Dakota State University and a PHD in soil science from Michigan State University. Part of his research work was conducted at the Kellogg Biological Station in Hickory Corners.



State Soil Scientist
Marty Rosek

Marty and his wife Janet have three children. They have a 21-year-old daughter attending the University of North Dakota, an 18-year-old son playing junior hockey in Battle Creek and their youngest son, 11, attends school in Haslett. Rosek is an 11-year hockey dad and also enjoys hunting and fishing.

MAEAP Facebook Page Keeps Up with Latest on Conservation & Ag

More and more public and private organizations are turning to social media to reach an audience less connected to traditional media like newspapers, radio and television.

One example is the presence of the Michigan Agriculture Environmental Assurance Program on Facebook. The MAEAP Facebook page contains links to keep farmers and conservationists up to date on what is happening in Michigan agriculture. The page also has links to educational videos about MAEAP and profiles of MAEAP-verified farms.

A number of Michigan conservation districts also have a presence on Facebook and other social media like Twitter. As more people go to the Internet for their news and entertainment, utilizing these services can be an efficient and cost-effective way to spread an organization's message. Like-minded organizations can increase their following and further benefit their users by



More organizations are using social media to communicate with the public, including MAEAP.

following each other on Facebook and Twitter.

NRCS has a presence on Facebook on a national level and will soon be offering more communication options through [GovDelivery](#). Stay logged on.

Michigan Earth Team Volunteers Honored

Two Michigan Earth Team volunteers received national recognition from NRCS. Paul Rutledge received the 2013 National Individual Volunteer Award and Maureen Stine received the NRCS Employee Earth Team Award.

Stine is a part-time Farm Bill specialist and works out of the Onaway field office. Stine promotes conservation and conservation careers during her free time as an Earth Team volunteer. She started volunteering almost as soon as she started working for NRCS in 2011, said District Conservationist Perry Smeltzer who nominated her for the award.

Most of the events Stine attends involve children and teachers. Stine meets with small groups of students at events throughout the tip of northern Michigan. Through these events she has educated young people on how NRCS and landowners work together to conserve our natural resources. She also helped conduct workshops for local Native American tribes on how to conduct water quality testing.

As an Earth Team volunteer, Rutledge played an important role in a Wetlands Reserve Program project in Benzie County. NRCS sought assistance from Rutledge for a challenging project located near Crystal Lake, his assistance saved the government at least \$100,000 in construction costs, said Area Engineer Todd Zielinski who nominated Rutledge for the award.



Maureen Stine (above left) received the 2013 NRCS Employee Earth Team Award. Paul Rutledge received the 2013 National Individual Volunteer Award

Rutledge used his experience serving on the Western New York Land Conservancy Board as an Earth Team volunteer. Rutledge's work on the project not only saved construction costs for the project but was used to help alleviate the concerns of nearby landowners.

Earth Team is the USDA Natural Resource Conservation Service volunteer program. The program provide volunteer opportunities for people over age 14 who want to work with NRCS employees to help private landowners conserve our natural resources. Anyone interested in becoming an Earth Team volunteer should contact their local NRCS office or visit the [NRCS-Michigan website](#).

MSU Agriculture and Natural Resources Week March 2-6



Michigan State University is hosting it's 98th Annual Agriculture and Natural Resources Week from March 2-6 in East Lansing.

ANR Week 2013 provides a wide-variety of topics in areas such as agriculture, horticulture, and natural resources, i.e. Quiet Water Symposium, Michigan Wildflower Conference, Growing of Michigan's Organic Future, MSRBA Rabbit Show, food and nutrition conference: CHOICES and the 85th state convention of the Michigan FFA.

ANR Week continues to be one of the largest

events of its kind in the nation. Foundations for the week were laid by the Farmers' Institute more than a century ago. In 1898, Michigan Agricultural College hosted the first state-wide Farmers' Institute "Round-Up." Agriculture Hall was completed in 1909 and a fourth floor auditorium provided the meeting place. Five years later the round-up combined with farm association meetings to become the first "Farmers' Week."

More information about 2013 ANR Week at Michigan State University is available online at: <http://anrweek.canr.msu.edu/anrweek/home>.

Carbon is the “C” that Starts Conservation

by Christina Curell, Michigan State University Extension

As the world population grows, so does demand for food and the land it grows on. Farmers can keep soil healthy and productive, even under droughty conditions, by maximizing soil carbon content and minimizing soil disturbance.

That was the message that Don Reicosky, U.S. Department of Agriculture Agriculture Research Station soil scientist emeritus, shared during the Growing Michigan Agriculture Conference Jan. 24 at the Lansing Center.

“Conservation of organic matter is one of the keys to improving soil health,” said Dale Rozeboom, Michigan State University Extension specialist and one of the conference organizers. “We invited Don Reicosky because we know that farmers understand the importance of being stewards of the soil if they are to get the most value from the soil.”

Reicosky’s research focuses on maintaining and improving soil health by reducing carbon loss through minimal soil disturbance. Carbon acts like a sponge for water retention and release to plants. Soil that is high in carbon is also rich in spongy organic matter, which releases nutrients and water to growing plants. Reicosky reminded growers that adding organic matter to soil will increase water retention of even sandy soils.

“If you want to manage water-holding capacity, you have to manage soil carbon, particularly during drought years,” Reicosky said.

“Maintaining soil organic matter will aid in soil water retention. No-till and cover crops are the best ways to try to manage and maintain carbon in the soil.”

Reicosky said that not all no-till equipment is equally effective at carbon conservation. Through his research, Reicosky has determined that there is a measurable difference in carbon loss between low- and high-disturbance no-till drills. The amount of difference is small, but he has found a benefit to using the tillage that least disturbs the soil to keep the maximum amount of carbon in

the soil.

“Tillage creates twin problems: accelerated soil degradation and accelerated soil erosion,” Reicosky said. “The No. 1 environmental enemy in production agriculture is tillage-induced carbon dioxide loss – the challenge is that carbon dioxide is invisible, colorless and odorless. Soil is a complex makeup of microbes, fungi and bacteria that require carbon to feed on.”

To retain a maximum amount of soil carbon, Reicosky recommended following three practices: minimal soil disturbance, continuous residue cover and diverse crop rotation. Dead crop residue and live crop biomass help keep carbon in the soil and help to restore soil that has been degraded by inversion tillage and crop residue removal practices. Within five to six years of continuous no-till practices, many nutrients become available in the soil that can be used as slow-release natural fertilizer.

“The future of our civilization rests on this thin layer of soil that lies beneath our feet,” Reicosky said, noting that it takes nearly 1,000 years for just 1 inch of topsoil to be created in nature.

“In the future, conservation agriculture is the only option. If we want to stop erosion and save carbon, we need to park the plow.”

Reicosky was one of six professionals chosen by Michigan State University Extension to discuss important concepts necessary to keep Michigan agriculture on a growth curve. You can see his suggestions for managing soil health, as well as other presentations by experts from across the country, on the Michigan State University Extension website, www.msue.msu.edu. Click on “Agriculture” and look for “Growing Michigan Agriculture Proceedings” in the Resource channel in the lower right section of the site.

This article was published by Michigan State University Extension. For more information, visit <http://www.msue.msu.edu>. To contact an expert in your area, visit <http://expert.msue.msu.edu>, or call 888-MSUE4MI (888-678-3464).

Upcoming Events - Upcoming Events

March

5-6 Michigan Farmers Market Conference, Michigan State University - East Lansing, for more information go to: <http://mifma.org/>

April

22 Earth Day

30-1 Michigan Society of American Foresters/ Canadian Institute of Forestry Spring Conference, Lake Superior State University - Sault Sainte Marie, For more information contact Bill Cook at cookwi@msu.edu or 906-786-1575

CSP Reaches 50 Million Acres

In December of last year, NRCS announced that 50 million acres are now enrolled in the Conservation Stewardship Program. This is quite an accomplishment for a program that has only been in existence for 4 years. In Michigan there are 838 active CSP contracts including 350,168 acres.

CSP is a voluntary conservation program that encourages producers to address resource concerns in a comprehensive manner by enrolling their entire farming operation. Participants receive an annual land use payment for operation-level environmental benefits they produce. Under CSP, participants are paid for conservation performance: the higher the operational performance, the higher their payment.

NRCS Soil Quality/Soil Health Campaign Underway



Soil is a living and life-giving substance, without which we would perish.

As world population and food production demands rise, keeping our soil healthy and productive is of paramount importance.

So much so that we believe improving the health of our Nation's soil is one of the most important endeavors of our time.

By focusing more attention on soil health and by educating our customers and the public about the positive impact healthy soils can have on productivity and conservation, we can help our Nation's farmers and ranchers feed the world more profitably and sustainably – now and for generations to come.

NRCS has developed resources to help people understand the basics and benefits of soil health – and to learn about Soil Health Management Systems from farmers who are using those systems. You can find these resources online at: www.nrcs.usda.gov/wps/portal/nrcs/main/national/soils/health/

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