

Conservation Notes

USDA - Natural Resources Conservation Service - Michigan



Fall 2012

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UP Tribal College Promotes Small-Scale Farming



Casey Munz, farm manager for Bay Mills Community College's Waiskey Bay Farm.

Farmers, or would-be farmers, in the eastern Upper Peninsula who would like to see a small-scale agricultural operation in action are welcome to visit the Waiskey Bay Farm near Brimley.

Waiskey Bay Farm is operated by Bay Mills Community College as a teaching, research, and demonstration facility as part of its Land Grant mission. The farm began operation with a tribal community garden in 2011. The college also started some livestock production on the school's west campus which was moved to Waiskey Bay Farm in 2012.

"The focus will be on small-scale, sustainable agriculture," said Stephen Yanni, director of extension and research for BMCC.

The farm is on 40 acres of Bay Mills Indian Community tribal land south of Brimley that were leased to the college. In its second year, the farm is raising pastured chickens, goats, hogs and cattle and has a seasonal high tunnel and community garden. Technical and financial assistance from the USDA played an important role in getting the farm up and running.

"It could not happen without
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NRCS Mission Continues Through Change

NRCS-Michigan is experiencing change and some uncertainty at the end of 2012. NRCS Chief Dave White announced that he will retire effective Dec. 3. Chief White made many valuable contributions to conservation and he will be missed.

The lack of a new Farm Bill and federal budget is a source of uncertainty both for our conservation partners and within the agency. The expiration of the 2008 Farm Bill has temporarily halted new enrollments in some of the agency's easement programs. The Conservation Stewardship Program is still authorized but sign-up details for 2013 are not yet available.

It should be a relief to our partners to know that it is business as usual for the Environmental Quality Incentives Program. State-level funding for EQIP has not been announced but a first-selection of applications is expected early next year. Dedicated funding for organic producers and for the seasonal high tunnel practice will be continued under the 2013 sign-up. Farmers and forestland owners should be encouraged to develop a conservation plan if they don't already have one and to start the application process early.

Following Chief White's retirement announcement, it was announced that Jason Weller will serve as acting chief until a new appointment can be approved. Weller laid out his seven top priorities for the agency.

1. Strengthen business operations
2. Expand soil health campaign
3. Landscape conservation initiatives
4. Underserved community access
5. Broaden regulatory



NRCS Michigan State Conservationist Garry Lee



NRCS Chief Dave White

- predictability (water and air quality)
6. Harnessing private markets
7. Deepen strategic partnerships (core and new)

Although legislation and budgets may be slow in coming, the goals of our agency are clear: Help farmers make good conservation choices for their land and improve our efficiency as a government agency during difficult economic times.

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Tribal College Provides Model for Small Ag

USDA and other partners,” said Yanni.

USDA Rural Development provided financial assistance for the construction of a storage building with a meeting room on the farm site. The Farm Service Agency assisted with the installation of fencing and watering facilities and NRCS helped to fund the purchase of a seasonal high tunnel for extended vegetable production. Farm Manager Casey Munz credits District Conservationist Kent Dankenbring and other NRCS staff with helping the college access USDA assistance programs.

“They were a big part of Waiskey Bay Farm becoming a reality,” said Munz.

Munz is a Bay Mills Indian Community tribal member who grew up on a dairy farm in southern Wisconsin. She graduated from Lake Superior State University and volunteered with the tribe’s community garden program before being hired full-time under a grant position. Munz and a part-time student employee run the day-to-day operations of the farm.

This year the farm hosted workshops on raising pastured chickens in movable pens called “chicken tractors” and another workshop on processing mature chickens. The workshops are open to tribal members and the public. The farm also demonstrated different models of chicken tractors including manufactured and self-built versions.

The college hopes to offer 6 – 8 week short courses similar to those offered by their fellow Land Grant institution, Michigan State University. Some planned course offerings include seasonal high tunnel production and grass-based livestock production.

“The eastern UP has great pasture land that is just lying fallow,” said Munz.



Waiskey Bay Farm demonstrated various “chicken tractor” designs for grazing chickens (top). A seasonal high tunnel was under construction at the farm in late-September (middle). A tribal community garden was established at the farm with both individual and communal plots for raising vegetables(bottom).

Fish Passages Expand Habitat

Workers for the Keweenaw Bay Indian Community Public Works department knew they were doing more than installing a new road culvert, they were also helping to improve fish habitat on the tribe's reservation.

The tribal employees enjoy working on this project, they see its value," said project foreman Tom Deschaire.

Deschaire and his crew replaced a county road crossing on the north branch of Comanche Creek in Baraga County that will give native brook trout and other fish access to more stream habitat for feeding and spawning. The project is one of five in Baraga County that will improve fish passages at county road crossings. The projects are partially funded by Great Lakes Restoration Initiative funds provided through the NRCS Wildlife Habitat Incentives Program.

All of the projects are on the Keweenaw Bay Indian Community reservation, three of the projects will be completed by the KBIC Public Works Department and two by the Baraga County Road Commission.

The Comanche Creek project has been a good learning experience for the tribe, said Deschaire. The crossing required steeper headwalls to stay within the road right-of-way and not intrude on private property. The tribe used geo cells to keep the steeper headwalls stable. The tribe will build two more fish passages in 2013, one similar to the Comanche Creek passage and one larger.

The KBIC crew is mostly middle-aged tribal members but the goal is to get younger tribal members involved, said Deschaire. He hopes his crew can teach what they learned on this project to young seasonal workers next year.

A second fish passage was constructed on the Falls River in 2012 by the Baraga County Road Commission. The county project also received funding from NRCS through the Great Lakes Restoration Initiative. The Falls River passage

involved a bridge replacement and required a temporary bridge during construction.

The five road crossings being replaced were all identified as impeding fish passage during low or high water conditions. Widening the passages at road crossings will also prevent roads from washing out when large amounts of water are released up stream such as when a beaver dam collapses, said NRCS Soil Technician Todd Larson.



District Conservationist Jim Sweeting stands on a temporary bridge while a new bridge with improved fish passage is built by the Baraga County Road Commission (above). A road crossing with fish passage built by the KBIC Public Works department included the use geo cells to hold up the steep headwall (below).



Restoring Rivers While Retaining History

A 22-acre parcel of land in the Keweenaw Peninsula, once covered by mine waste, now resembles what it may have looked like before the area's copper mining days.

The project included the removal of stamp sands, left behind after copper was mined from the nearby Central Mine, and the re-creation of 4,400 feet of stream channel on the east branch of the Eagle River. NRCS provided engineering design and construction oversight for the project in partnership with the Houghton-Keweenaw Conservation District and the Michigan Department of Environmental Quality.

The project, completed in September, was the biggest reclamation project the Houghton – Keweenaw Conservation District has been involved with, said Gina Nicholas, the district's chairperson. Most of the project is on county land so the public will have access to it.

"Now this will be popular for fishing."

The largest component of the project was the removal of the stamp sands. The dark-colored sand waste was left behind after copper ore was processed at stamp mills and they contain trace amount of metals (primarily copper). The Michigan Department of Environmental Quality detected elevated dissolved copper downstream from the site and decided to remove the sands, said NRCS Project Engineer Rob Aho.

About 85,000 yards of stamp sands were removed from the site and hauled to a nearby location, said Aho. Removing the sands lowered the floodplain on the site by about 3 ½ feet. The county road commission will use the discarded sands for road maintenance projects.

After the sands were removed, a new stream channel was created through the site. The new channel was designed to mimic a natural portion of the stream up river. The stream is narrower and deeper than before with many bends. Rather than designing the stream to handle a 100-year flood, it will spread out over the surrounding



Houghton/Keweenaw Conservation District Administrator Sue Haralson, NRCS Project Engineer Rob Aho and HKCD Chairperson Gina Nicholas at the upstream portion of the Central Mine II project (above). A Michigan Department of Environmental Quality employee inspects a portion of the re-created stream channel (below).



wetland during peak flows, said Aho. Transplanted woody vegetation was placed along the entire reach of stream banks for added stabilization.

The area received a large amount of rain shortly after the stream was re-routed and it handled the flow exactly as it was hoped. Pools have formed and a gravel bottom is already developing. Tributaries to the stream contain brook trout, and Aho hopes the natural design of the stream will create more habitat for them.

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Sailing Workshops Promote Water Quality

by Amy Gilhouse, MAEAP Technician

Lenawee Conservation District hosted three "Science Under Sail," Water Quality Workshops aboard the Appledore IV Schooner, taking more than 75 participants out on the water during three sails over the summer. The sailors included Michigan Association of Conservation District and Natural Resources Conservation Service staff, board members, community leaders and partners.

The Appledore crew engaged participants in water quality sampling, microscopic plankton sampling, benthic samples, local watershed impacts, and phosphorus and nitrate loading. On the September 8 sail, Tom VanWagner, Lenawee County NRCS district conservationist, remarked that the sails are an excellent way for staff and community leaders to gain a first-hand look at the resources that we are working to protect. The June 17 sail left out of the Detroit Port Authority docks.

During the September 10 sail, in addition to the water quality educational component taught by the Appledore IV crew, Amy Gilhouse, Michigan Agriculture Environmental Assurance Program Technician Lenawee Conservation District, talked about the many impacts to our water resources and how important conservation programming is to reducing runoff. Joe Kelpinski, MAEAP verifier, gave a history of the watershed and talked about the local fishery. Jen Silveri, MAEAP Technician for Barry and Eaton counties, provided



NRCS and conservation district employees were among those taking part in water quality workshops on the Appledore IV Schooner.

information on the Lake Erie Algae Bloom. Bob Pigg, Resource Specialist, MDARD, presented Water Quality Monitoring and Evaluation Strategies.

For more information about water quality contact your local Conservation District, for more information about Bay Sail go to www.baysailbaycity.org.

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More Stamp Sand Projects Planned

Two more projects are planned on the Eagle River, said Nicholas. One is another stamp sand deposit from the Central Mine further downstream and the other is the Cliff Mine site. The Cliff Mine was one of the first important mines in the area and the project has concerned historical

preservationists, she said. On a previous project a deposit of stamp sands were left in place for historical preservation. Nicholas is confident that the area can preserve its mining history while restoring the water quality of its streams and rivers.

Cover Crops Offer Many Benefits

by Toni Pastotnik, Area 2 Soil Conservationist & Maureen Stine, Area 2 Farm Bill Specialist

“Good husbandry with us consists in; tending small grains, some red clover, fallowing, and endeavoring to have, while lands are at rest, a spontaneous cover of white clover.”

Letter from Thomas Jefferson to George Washington (1793)



NRCS District Conservationist Perry Smeltzer talks about cover crops at a public field day in northern Michigan.

Thomas Jefferson was one of the first American farmers to understand that our nation's natural resources were finite. Through concentrated agricultural research and keen observations our third President quickly realized the human impact on the land and soil, and how practices such as crop rotation and cover crops were vital to our prosperity and survival. Jefferson practiced crop rotation and the utilization of cover crops with legumes and grasses to ensure healthy, stable mutualism between soil and the environment distinguishing him as an early American master agronomist.

Fast forward two hundred years and landowners and resource managers are continuing to grow and evolve our knowledge base, developing and discovering lessons new and old particularly regarding the husbandry of soil and crops.

NRCS/Partner Field Days have become powerful tools to showcase agricultural advancements in a

community. From seasonal high tunnels to forest management strategies, education and outreach is a driving force in disseminating sound agricultural practices, while fostering partnerships and significant networking among neighbors across an entire region. I point to a premier example of outstanding boots-on-the-ground workshops - the Cover Crop Field Day held at the Bonnett Farmstead in Cheboygan County. NRCS participants and staff, along with Michigan State University Extension, gathered to exchange information and promote the unique value of the Great Lakes Cover Crop Initiative. The GLCCI project, funded by EPA's Great Lakes Restoration Initiative, demonstrates the effectiveness of cover crops and conservation tillage systems to decrease agricultural nonpoint source pollution and inform producers about the economic benefits of the systems. GLCCI consists of resource professionals from MSUE, Ohio State University Extension, Purdue University, Great Lakes Restoration, and the Conservation Technology Information Center.

Participants caught a break in the fall weather for the event. Despite a chilly breeze, the rain held off as NRCS participant Matthew Bonnett welcomed guests from across northern Michigan to his over-500-acre farm to demonstrate his successes with utilizing cover crops in northern Michigan. Various regional resource professionals and landowners gathered first in Bonnett's comfortable and inviting deer camp to share ideas and strategies in managing cover crops. After morning presentations we were treated to a delicious lunch (Courtesy of MSUE) followed by a tour of Bonnett's 10-acre plot of cover crops which highlighted dynamic examples of oilseed radish, oats, sorghum/sudan, cereal rye, and crimson clover.

So why cover crops?

Christina Curell of MSUE launched the event by explaining the history and purpose for cover crops.

“Cover crops can benefit agriculture for many

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Field Days Educate about Cover Crops

reasons. Traditionally cover crops were used to protect water quality and to prevent soil erosion. With the knowledge of plants increasing, we know that cover crops can be used for more non-traditional uses. Cover crops are being used for weed suppression and to fight insect and nematode invasions. Research is currently being done throughout the United States to learn to best uses of cover crops to increase soil health," said Curell. "We also are using cover crops to help farms survive through variability in weather patterns such as the drought of 2012. Cover crops are an exciting area in our modern agricultural world that farmers in the past used but did not understand all the facets of the practice; they just knew it made good environmental and financial sense."

Curell, along with colleague Paul Gross, cover a statewide service area. Both Gross and Curell provide site visits for farmers upon request. Gross, who is stationed out of Isabella County, calls to mind a recent article by *the Economist*: Feeding the 9 Billion. With the world population now at 7 billion we are expected to grow to 9 billion in 2050.

"Our weather patterns are different and climate change is an ever-growing topic. The future of Ag is energy and water. For every tillage pass we lose a quarter- inch of water. We've got to take measures like incorporating cover crops and reach 30-50 percent more production on the same acreage," said Gross.

Compounded Benefits of Cover Crops

The application of cover crops into a farming system provides many beneficial results with regard to controlling soil erosion, nitrogen management, pest control, and enhancing overall soil quality. Cover crops take work however, and require attention and annual maintenance in order to keep them effective and prevent them from spreading like weeds. Cover crops should not interfere with primary agricultural crops. Common methods to control cover crops include:

1. Cultural: Utilizing species such as oats or oilseed radish make it easy to control. These types of cover crop species will typically die over winter, avoiding the need for tilling or use of chemicals.
2. Mechanical: Using a variety of tillage systems proves to be generally effective, however some grass species can cause soil to dry quickly and make late season plowing difficult.
3. Chemical: The use of some common herbicides make good choices but it is important to follow directions and proper application timing carefully for the most effective results.

NRCS District Conservationist Perry Smeltzer encourages farmers to integrate cover crops into their farming plans. "Enable cover crops to be a part of NRCS conservation plans," Smeltzer said. "Complement a cover crop practice with other agency program practices to get the full utilization of your work."

What Cover Crops Should I Use?

James DeDecker of MSUE provided information about Michigan State University's Midwest Cover Crop Council website.

"After selecting your county of interest for your farming system, the tool will look at location, weather and soil type, and it will give you a recommendation for what to plant and how to plant. From this site, farmers can link to the cover crop decision tool and select the proper cover crop species to use on your farm."

State Agronomist Jerry Grigar also shared the benefits of switch grass and how it may be used as a living snow fence in addition to the practice of using grass dams to slow water in gullies instead of earthen berms.

To determine which species to use and how to establish the cover crops on your farm visit the Midwest Cover Crop Council Website at: www.mccc.msu.edu for full details or contact your local NRCS office for ideas on sound conservation practices.

PMC Studies Cover Crops and Tree Growth

Plant MUSIC Making Us Sound In Conservation

This past spring, a 0.6-acre area of sod was tilled up at the Rose Lake Plant Materials Center (PMC) and planted to two species of wildrye and two species of trees. The purpose of this planting is to investigate the effects of native wildrye cover crops on tree growth and survival.

Cover crops are widely recognized as being beneficial when used in conjunction with tree and shrub plantings – they can reduce establishment of aggressive weeds that out-compete tree seedlings, improve soil quality by increasing organic matter, protect the soil from erosion, improve access to the site, and more. However, traditionally, foresters and conservationists have used non-native cover crops like timothy grass or clover species in tree plantings.



Wildrye cover crops were planted in drill rows among newly planted trees at the Rose Lake Plant Materials Center, shown in May 2012. The test plot was part of a study on the use of native cover crops for tree plantings.

Some tree planters in neighboring states have been using native wildrye cover crops for a few years, and anecdotal information indicates they have been successful, but following a comprehensive scientific literature review, it was determined that additional scientific information was needed

regarding native species cover crops.

As a result, the NRCS staff in Michigan designed this study. In the spring, 432 trees – half red oak (*Quercus rubra*) and half Shagbark Hickory (*Carya ovata*) – were planted into three cover crop blocks: Canada wildrye (*Elymus canadensis*), Virginia Wildrye (*Elymus virginicus*), and a control. In addition, spot application of herbicide was used around 50% of the trees, to assess whether there is a significant difference in tree growth response when cover crops are used in conjunction with herbicides.

Due to high deer browse pressure in the Rose Lake area, mesh tree protectors were installed on all the tree seedlings as well.

This is a long-term study; data on tree height and survival, as well as plant species diversity and abundance will be collected regularly over the next 4 years or more to determine what, if any, effects the various treatments have on the trees. In the meantime, the site provides an excellent opportunity to see different treatment methods first-hand and learn about the establishment and growth of wildrye species.

As with any scientific study, more data is better: if you have a potential site available in your service area to install a replication of this study, would like more information about the study, or would like to visit the site, contact the PMC at 517-641-6300 or NRCS State Forester Andy Henriksen at 517-324-5234.

Plant MUSIC is provided by the NRCS-Michigan Plant Materials Committee.

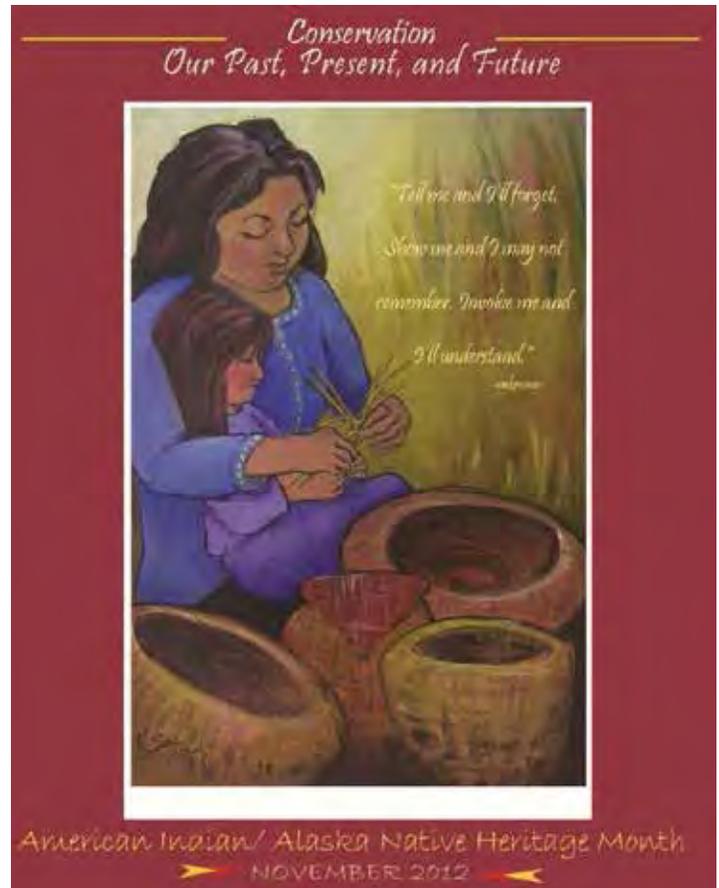
November is American Indian/Alaska Native Heritage Month

submitted by Sandy Penn, NRCS Outreach Specialist

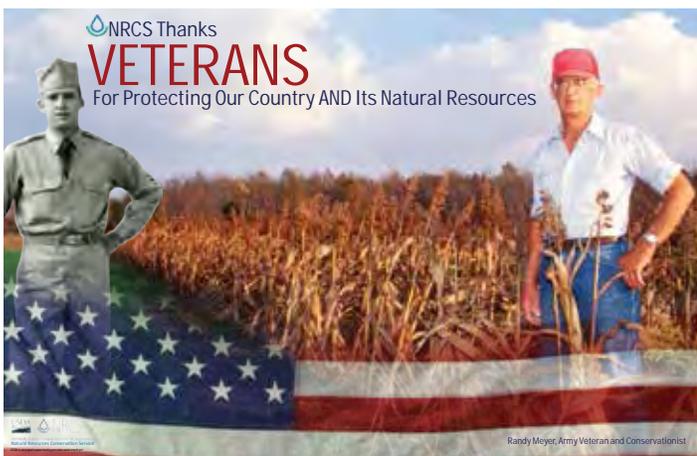
American Indians have a long tradition of passing their history and teachings through oral storytelling. Within Ojibwe teachings, there are nine core values that have been passed down through generations by elders to Ojibwe youth. The nine core values are:

- Honor the Creator;
- Honor Elders;
- Honor Women;
- Honor Our Elder Brothers (the plant and animal beings);
- Be Peaceful;
- Be Kind to Everyone;
- Be Moderate in Our Thoughts, Words, and Deeds;
- Be Courageous; and
- Keep Our Promises.

These nine core values are timeless and transcend gender, race or ethnicity. They are fundamentally sound principles that should be followed by everyone.



Veteran's Day Observance



SEPM for MI-Silvester Perez

On the eleventh hour of the eleventh day of the eleventh month, World War I ended. The end of the War to End All Wars was commemorated on every following November 11 by the observance of what was once known as Armistice Day. This observance became a national holiday by an act of Congress, and in 1954 U.S. President Dwight Eisenhower changed the name to Veterans Day. In this way all U.S. veterans are honored on November 11 of each year.

News in Brief - News in Brief - News in Brief - News in Brief

Volunteers Battle Japanese Barberry

by Craig Aho, District Conservationist Menominee County

In late September, a work crew removed invasive Japanese Barberry from about five acres of land near Powers in Menominee County.

The crew was made up of the landowner, who is an NRCS program cooperator, and staff from NRCS and the Menominee, Dickinson, and Delta conservation districts, and the Wild Rivers Invasive Species Coalition. Japanese Barberry is often planted as an ornamental in landscaping, but it can spread to forest and pasture land by birds that eat its red berries. Thick stands of the shrub can crowd out native understory species and form an impenetrable thorny barrier if left uncontrolled.

Two types of control measures were demonstrated, including foliar spraying and “cut-stump treatment.” In a cut-stump treatment, the stems



A work crew removed invasive Japanese Barberry from about five acres of land near Powers in Menominee County.

are cut near the ground and open wounds are painted with herbicide. Follow-up analysis is planned to assess regrowth.

Cattlemen Seek Nominations

Sponsors are seeking nominations of cattle producers for the 2013 Environmental Stewardship Award. NRCS is one of the sponsors of this award along with the National Cattlemen’s Beef Association and the National Cattlemen’s Foundation.



Anyone, including NRCS and conservation district employees, can nominate an individual or business that raises cattle for this award. Nominations are due by March 1, 2013.

Applicants for the award will be judged on their environmental stewardship practices, leadership activities in promoting conservation, endorsements from cattle groups and organizations and the economic viability and size of their operation. For more information including an application guide go to www.environmentalstewardship.org.

Farm Conference Set for Battle Creek

“Family Farming - It’s in Our Roots” is the theme of the 10th Annual Michigan Family Farms Conference.

The conference is planned for Jan. 19 at Lakeview High School in Battle Creek.

The conference will run from 9 a.m. to 4:30 p.m. with registration beginning at 8 a.m.

The conference provides an opportunity to connect with other growers and resource providers for assistance and advice on a wide variety of issues important to small-scale agricultural producers. NRCS is one of the planning partners for the conference.

For more information go to www.miffs.org or contact Michigan Food and Farming Systems at 517/432-0712 or miffs@msu.edu.



Upcoming Events

December

January

- 4** Food and Farming Innovation Network Monthly Networking Forum, 7 a.m. to 9:30 a.m., Washtenaw Food Hub - Ann Arbor, for more information call 734/222-6859 or e-mail RSVP@fsepmichigan.org.
- 4-6** Great Lakes Fruit, Vegetable and Farm Market EXPO/Michigan Greenhouse Growers Expo, DeVos Place-Grand Rapids, for more information go to: www.glexpo.com
- 12** Thumb Ag Day, 8:30 a.m. to 4 p.m., Ubyly Heights County Club - Ubyly, for more information go to: www.msue.msu.edu
- 14** 2012 Integrated Crop and Pest Management Update, MSU Pavilion - East Lansing, for more information go to: www.maeap.org
- 19** Michigan Family Farm Conference, 9 a.m. to 4:40 p.m., Lakeview High School - Battle Creek, for more information go to: www.miffs.org/mffc/index.asp
- 21-22** Northwest Michigan Orchard & Vineyard Show, Grand Traverse Resort - Acme, for more information e-mail nwmihort@msu.edu.
- 26** Northern Michigan Small Farm Conference, Grayling High School - Grayling, for more information go to: www.smallfarmconference.com/

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