



Dubois County Soil & Water Conservation District

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Fall, 2013

The Conservation Conversation

2013 SWCD Summer Events

Open House and Tour

The SWCD hosted an Open House at VUJC Campus so residents could learn more about the goals of the Land Stewardship Initiative, a partnership between the SWCD and VUJC. Participants met with Initiative Steering Committee members and visited information tables to learn more about the Initiative, and how to utilize soil conservation practices on their own property.

In conjunction with this open house, the SWCD also hosted a tour for Dubois County officials. The Commissioners and Council members received activity updates from the SWCD Supervisors and Staff.



Pictured above: ISDA Resource Specialist Gary Seibert shares information about the health of the soil on the VUJC property with NRCS Bart Pitstick, and County Council members Martha Wehr and Greg

Greener Pastures Field Day

Purdue Extension and the Soil and Water Conservation Districts in Dubois, Perry, and Spencer counties held the 2013 Greener Pastures Field Day at the Justin Roth Farm near Reo.

The event, which was attended by approximately 65 farmers, was an opportunity to discuss various livestock subjects as well as a chance to tour the Roth farm.

The event included several speakers including Robert Zupancic, NRCS Grazing Specialist who addressed “Rotational Grazing and Water Systems”, “Goat Production and Management” by Kentucky State University’s Ken Adries, “Animal Health and Feeding” by Jason Tower of the Southern Indiana Purdue Ag Center (pictured below), and “Cover Crop Grazing” by area producer Roger Robinson. Valerie Clingerman, Knox County Purdue Extension addressed weed management and herbicide resistance.



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Soil Judging

2013 Dubois County SWCD Board of Supervisors

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Bart Pitstick, District Conservationist

Dubois County SWCD Staff

Judi Brown, Executive Director
Amanda Bough, Resource Specialist
Radius Weisman, Technical Specialist
Mike Smith, Project Technician
Patti Schroeder, Program Assistant



VUJC Land Stewardship Initiative Update

Indiana's Conservation Cropping Systems Initiative for Soil Health and Productivity project is expanding to conservation practices on typical soils across the state, mentoring conservation-oriented farmers and inspiring greater adoption of conservation systems by Indiana producers.

Four regional hubs—the Purdue University Diagnostic Center, the Northeastern Purdue Agriculture Center/Wabash Farm, Southeast Purdue Agriculture Center and a farm at **Vincennes University-Jasper Center managed by the Dubois County Soil and Water Conservation District**—will host the ambitious demonstration and study plots for this three year project.

Scientists will measure the impact of a variety of conservation systems on soil health, nutrient cycling, soil water availability, and growth. Practices in the study include long-term continuous no-till and strip-till, cover crops, precision technology and several pest management practices. The impacts of the new practices on soil health and an array of other variables will be measured, documented, and compared to fields on the same or nearby farms will be made.



The new sign for VUJC Land Stewardship Initiative located on Meridian Road.

Each regional hub represents soil types, climate, and topography common to its area. The hubs will provide opportunities for learning one-on-one communication and long-term evaluation of the adoption of soil health systems. Demo plots will be within easy reach of nearly every farmer in the state. Organizers aim to demonstrate the role of conservation practices in productive, profitable, and sustainable systems.

The Conservation Cropping Systems Initiative for Soil Health and Productivity project is funded by a USDA and NRCS Conservation Innovation Grant.



On May 7th, several members of Boy Scout Troop #185 helped clean the Land Stewardship Initiative grounds on the VUJC Campus. The troop collected building debris, broken tile parts, and windblown litter from the Initiative's field borders, ditches, and woodland. Help from the Jasper-based troop is especially appreciated because the Initiative will use the areas they cleaned for future demonstrations of sustainable cropland, woodland, and water use.

Rain Garden Workshop

Learn How To Design, Install and Maintain a Rain Garden!



Photo: homeplacefarm.org

October 25, 2013

Vincennes University Jasper Campus

Classroom Building Lecture Hall

9 AM to 3 PM EDT

\$25.00

Five rain garden workshops will be offered across Indiana. These workshops are great for conservation professionals, homeowners, landscape professionals, gardeners, and anyone interested in growing beautiful plants and improving our streams and waterbodies. Topics include rain garden design & construction, planting recommendations, & maintenance.

Registration fee includes all course materials, including Blue Thumb Guide to Raingardens book, and lunch.

Note: LA CES approval requested

For more information, contact the Dubois County SWCD at 812-482-1171 Ext. 3, or Judi Brown at judi.brown@in.nacdnet.net

Workshops brought to you by the Soil & Water Conservation Districts of Clark, Dubois, Elkhart, Floyd, Hamilton, Hancock, Madison and Marion Counties, the Indiana Conservation Partnership Training & Certification Program, and other local agencies & sponsors.



Workshops feature Rusty Schmidt, wildlife biologist & landscape ecologist; and co-author of Blue Thumb Guide to Raingardens.



Photo: millcreekwatershed.org



Photo: water.epa.gov

***Raingardens capture rainwater & slow runoff.
They naturally filter stormwater runoff while attracting birds & butterflies!***

American Chestnut Tree Update

Following decades of selective breeding, researchers and forest conservationists are very close to producing blight-resistant American chestnut hybrids that will restore this majestic tree to its rightful place in eastern US forests. American chestnut (*Castanea dentate*) was once the most common tree species growing in eastern US forests until a fungal blight was introduced on imported chestnut seedlings (likely Japanese chestnuts) planted in New York City. The chestnut blight (*Cryphonectria parasitica*) was first discovered on American chestnut trees growing at the Bronx Zoo in 1904. Foresters soon discovered that American chestnut had no resistance to this new pathogen. The blight spread rapidly through northeastern forests and down the Appalachian Mountains through the heart of the American chestnut range. Futile efforts were made to stop or slow the spread of the blight. Within 50 years, nearly the entire population of American chestnut was destroyed, bringing the species to the brink of extinction. Southern Indiana is at the western frontier of the American chestnut range. George Wilson noted in his *History of Dubois County* that American chestnut groves occurred in Jackson township. The blight eventually found its way here too.

Early efforts of tree breeders at the Connecticut Agricultural Experiment Station, starting in 1925, failed to produce blight-resistant American chestnut hybrids suitable for restoring the species to the eastern forests and efforts were largely abandoned by 1962. In 1982, the founders of the American Chestnut Foundation (TACF) began a breeding program using the best American x Chinese chestnut crosses from the Connecticut Agricultural Experiment Station and pure American chestnut found flowering in Virginia. Subsequently, state chapters of TACF began forming to start breeding programs with local surviving American chestnut. The Indiana Chapter of The American Chestnut Foundation (TACF) started in 1996 under the leadership of Bruce Wakeland, a forester from northern Indiana, the third state chapter formed in the country. INTAC teamed up with Purdue University's Department of Forestry and Natural Resources and the Hardwood Tree Improvement and Regeneration Center (HTIRC) in 2006 to expand and accelerate Indiana's American chestnut breeding program and begin preparing for American chestnut restoration to Indiana's forests. Other cooperators include Indiana Division of Forestry and the US Forest Service.

A series of generations of back crosses with pure American chestnut result in a hybrid that genetically is mostly American chestnut, but hopefully contains the Chinese genes imparting resistance to the blight. Tree breeders determine blight resistance by inoculating the trees with the blight fungus. Trees that survive carry the resistance genes. Different lines of 3rd generation backcrosses (BC_3) are then intercrossed to make a BC_3F_2 . These are inoculated to determine blight resistance.

Finally, surviving BC_3F_2 trees cross pollinate to form offspring that will all have blight resistance. It is these surviving BC_3F_2 trees which form the base of American chestnut hybrid seed orchards which will produce offspring suitable for restoring American chestnut to Indiana's forests.

One of two American chestnut restoration seed orchards in Indiana is located here in Dubois County at the Southern Indiana Purdue Agricultural Center (SIPAC). Beginning in 2009, foresters and volunteers have planted different genetic lines of BC_3F_2 hybrids as their seed have become available. Ron Rathfon, Purdue Extension Forester, oversees the annual planting and the continuous maintenance of the seed orchard at SIPAC. Each spring he sends out a call for volunteers to help with the annual seedling planting that usually occurs in April. Dubois County SWCD partners with Purdue to recruit tree planting volunteers. In 2013, nine volunteers planted 340 American chestnut BC_3F_2 hybrids at SIPAC. Starting in June, 2013, the oldest trees at the SIPAC orchard were inoculated with a weaker strain of the chestnut blight fungus. Symptoms of disease should start manifesting themselves by late summer or early fall in the least resistant trees. Survivors of this initial screening will eventually be inoculated with a virulent strain of the disease.

*If you would like more information or to become a volunteer in future American chestnut restoration work, contact **Ron Rathfon**, Extension Forester, Purdue University, 812-678-5049 or email at ronr@purdue.edu. You may also want to become a member of the American Chestnut Foundation. If so, you can get more information at www.acf.org.*



Dubois County SWCD employees Judi Brown, Mike Smith, and Patti Schroeder are among the volunteers planting 340 American chestnut BC_3F_2 hybrids at SIPAC this past spring.

River Friendly Farmer Award and Pathway to Water Quality AT IN State Fair

Lt. Governor Sue Ellspermann and IN State Farm Bureau president, Don Villwock stand with Mr. and Mrs. Marvin Welp, parents of Mark and Brad Welp of Welp Homestead Inc. as they accept the 2013 River Friendly award for Dubois County. Welp Homestead Farms, Inc. is located in the Patoka Watershed and includes corn, soybeans, wheat, hay, and beef cattle. Mark and Brad rotate crops to help keep erosion under control. They also use no-till, minimum till, and cover crops to prevent erosion, and reduce nitrogen loss which helps to ensure that the streams stay cleaner. Other conservation practices include installation of drainage tile, water and sediment control basins, grassed waterways, filter strips, and Heavy Use Area Protection (HUAP) pads. They submit soil samples to determine the proper amount of fertilizer and manure to be applied. Beside providing less erosion these practices leave more organic matter, and has overall improvement to the soil's health. The farmstead uses rotational grazing and proper manure storage so it can be applied when conditions are favorable. The father-sons team fence off woodland where it is possible which limit access to woods, ponds and streams to help control erosion, reduce runoff, and contamination. They also placed water and sediment control basins in areas to reduce concentrated flow areas that are causing erosion.



Lt. Governor Sue Ellspermann and IN State Farm Bureau president, Don Villwock with Mr. and Mrs. Marvin Welp, recipients of the River Friendly Farmer Award.



Lt. Governor Sue Ellspermann stands with volunteerers in front of Pathway to Water Quality area at the Indiana State Fair in July.

In July, Lt. Governor Sue Ellspermann joined the Indiana Conservation Partnership, state fair officials, and volunteers in celebrating the 20 year anniversary of the **Pathway to Water Quality** exhibit located within the Indiana State fairgrounds. The exhibit has been a popular fixture at the Indiana State Fairgrounds since 1993. It is an excellent educational model watershed demonstration site, showing how proper management practices at home, on the farm and in business can protect our soil and water resources. The exhibit contains practical displays and information for anyone who uses the land and is managed by the Indiana Conservation Partnership. Judi Brown and Patti Schroeder, Dubois County Soil and Water Conservation District employees volunteered at the exhibit one Saturday during fair time.

Invasive Species: Giant Hogweed

If working around GIANT HOGWEED plants:

- Do not touch your bare skin with sap.
- Prevent UV sunlight from reaching skin by wearing long waterproof gloves, long sleeves, pants, boots, and eye protection, synthetic water-resistant materials are best since cotton and linen fibers can soak up the sap and be penetrated by plant hairs.
- If controlling plants with multiple people, keep a good distance from one another as the sap can splash three to four feet.
- Apply sunblock before working near Giant Hogweed.
- Launder clothes that may have contacted plants.
- Wash equipment with water immediately after use.
- Limit exposure to sunlight after control or working around Giant Hogweed plants.
- DO NOT use a 'weed wacker' or brush cutter as the sap may splatter.
- Keep water, soap, and eye-wash near working area in case of exposure.
- Wash the affected area thoroughly with soap and COLD water as soon as possible.
- Keep exposed area away from sunlight for 48 hours.
- If a reaction occurs, topical steroids applied early can reduce the severity of the reaction and ease discomfort.
- If the sap gets into the eyes, rinse them with water and wear sunglasses.
- If a reaction has occurred, the area of skin may be sensitive to sunlight for a few years and you may want to apply sunblock or keep the affected area covered from the sun when possible.
- See a physician if you have a reaction.



SAFETY ALERT

BEWARE OF THE GIANT HOGWEED!

The sap coating of this plant is toxic.

Contact can cause:

- Severe Inflammation
- Painful Blisters
- Long-term Sunlight Sensitivity
- Scars Lasting up to 6 years
- Blindness

GIANT HOGWEED plants grow between 10 and 20 feet tall, have broad leaves at the base, thick stems, and white flowers sprouting from the top.

IMPORTANT! If you happen to come across Giant Hogweed, **DO NOT TOUCH IT.**

Call 1-866-NO EXOTIC (1-866-663-9684).

You will be asked for your name, address, phone number, what species you think you have seen, and what county it is in.

If you call after hours, please leave a message. You may also email this information to depp@dnr.IN.gov

If possible, take a picture of the plant.

For more information about invasive plants go to <http://www.in.gov/dnr/3123.htm>

Upcoming Events and USDA NRCS News Release

2013 CALENDAR OF EVENTS

- October 21-23 Purdue Poultry Facilities Workshop (SIPAC/Cuzco)**
- October 25 Rain Garden Workshop featuring Rusty Schmidt (Jasper)**
- October 26 UK-Purdue Small Farms and Gardens Conference (Henderson, KY)**
- November 14, Area 3 Crops, Entomology and Forestry CDE Contest (Washington)**
- January 28, 2014 SWCD Annual Meeting (Ferdinand)**

Ways to Improve Soil Health

Barry Fisher, Indiana's Soil Health Specialist, says one of the top things you can do to improve cropland soil health is to adopt no-till practices. Long-term no-till has been shown to significantly increase organic matter level in the soil.

"Tillage is incredibly destructive to the soil structure and to the soil ecosystem," said Fisher. "In healthy soil you have 50% air and water (which is made possible by the pore space in the soil) and 50% mineral and organic matter. But tillage collapses and destroys that structure, making the soil vulnerable to erosion and compaction," he said.

"Additionally, studies have shown that each tillage pass can release a half an inch of soil moisture from each acre. In short, tillage tends to limit the availability of water in the soil," Fisher said. "And that could prove very costly during those long, summer dry spells."

Fisher explains that using a diverse rotation of crops that produce lots of residue will also boost organic matter levels; as well as, planting cover crops. Keeping live roots in the soil as long as possible each year will help support microorganisms in the soils.

Not only does additional organic matter and living roots improve your soil's health, they protect it from the erosive and hammering energy of raindrops. The additional pore space increases infiltration capacity so water can move more quickly into the ground, reducing flooding downstream.



Storms rolling in on an Indiana farm. Soil health conservation measures can help farms in bad weather.
Photo: NRCS, Barry Fisher

In times of extreme weather, farmers can manage their natural resources and sustain productivity. For more information about improving your soil's resiliency and production, contact your local NRCS office:

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Barry Fisher, Indiana Soil Health Specialist, 317-295-5850
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The Conservation Conversation

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SOIL JUDGING INVITATIONAL

Dubois County Soil and Water District hosted its annual Soil Judging Invitational on the Vincennes University Jasper Campus on Monday, September 16th. Teams from 12 southwest Indiana high schools attended, including teams from Forest Park High School. Students work in teams of four and use color charts, a slope finder, and putty knife to examine the soil properties and determine the suitability of soil for growing crops or installing septic systems.