



## Dubois County Soil & Water Conservation District

1486 Executive Blvd. Suite A • Jasper, IN 47546  
812-482-1171 x3 • [www.duboisswcd.org](http://www.duboisswcd.org)

Summer 2012

# The Conservation Conversation

## Cost Share Available for Cover Crops Until June 29th

For the fourth year in a row, the Dubois County SWCD has received a grant for a cost-share program for cover crops. Applications will be taken to plant winter cover crops on Dubois County land until June 29th.

Once again the cover crop program will allow for the option of having the crops aerially applied by a small plane. The SWCD will bring in a plane to the Dubois County Airport in Huntington, where the plane will be filled with a special mix of cover crop seed. The mix selected this year includes crimson clover, daikon radish and winter oats.

Dubois County landowners will also be able to no-till drill or broadcast this mix onto their land if they choose not to aerially apply it. An extra incentive will be paid to landowners who have never used cover crops on their land.

In order to qualify for the program, landowners must either aerially apply the seed or broadcast or drill the seed into the land using no-till or vertical tillage



*Oilseed radishes used as a cover crop. Cover crops provide great benefits to the soil, including reduced erosion, increased earthworm populations and improved soil microbiology. Cover crops, like the radish pictured above, also scavenge and hold nitrogen in the soil, a great benefit for nitrogen-loving cash crops like corn.*

practices. Conventional tillage will not be allowed in this program. Additionally, applicants must agree to no-till their spring 2013 cash crops into these same fields. Harvesting the cover crops for forage will also not be allowed.

The cost share program is being offered thanks to a Clean Water Indiana (CWI) grant received by the SWCD from the State of Indiana. This is the fourth CWI grant the SWCD has received for cover crop cost share. The current grant received by the SWCD is valid for three years and will guarantee cost share will be available for cover crops for Dubois County landowners through at least 2014.

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## Cost Share Available for Cover Crops Until June 29th, Cont.

Cost share will be offered at the following rates:

- \$20 per acre for aerial application, with a cap of 50 acres. Must use the SWCD's prescribed mix if aerially applying. Landowners can also choose to apply more than 50 acres, but cost share will be capped.
- \$15 per acre for a diverse mix of cover crop seed, with a cap of 50 acres. A diverse mix is defined as a mix with at least one broadleaf and at least one legume species, including the SWCD's prescribed mix. Mix can either be drilled or broadcast.
- \$8 per acre for any non-diverse mix of cover crop seed, with a cap of 25 acres. A non-diverse mix is defined as wheat or any combination of grasses or a single legume or broadleaf species. Mix can either be drilled or broadcast.
- Landowners who are using cover crops for the first time on their land are also eligible for another \$2 per acre, with a cap of 50 acres for diverse mixes and a cap of 25 acres for non-diverse mixes.



Cover crops when used with no-till farming help build soil organic matter, leading to increased soil productivity and higher yield potential.

Applicants to the program will also need to provide proof of completion through receipts and/or photos and will agree to allow a representative of the SWCD to confirm completion of the project through a field visit. Cover crops must also be

sown according to NRCS specifications, which will be given at the time of sign-up.

For complete details on the program and to fill out your application, stop by the SWCD office.

Call us at 812-482-1171 x3 for more information.

Complete details of the program and the application are also on our website at

[www.duboisswcd.org](http://www.duboisswcd.org).

Our website also has pictures of fully grown cover crops and descriptions of common cover crops and how they are useful for your land. If you have never used cover crops before, feel free to stop by the office to pick up a packet of information on cover crops and no-tilling practices and to ask any questions you may have.

Having trouble deciding which cover crops to use on your land? Check out the Midwest Cover Crop Council's Cover Crop Decision Tool. Designed to be user-friendly, the tool allows users to immediately see how their input changes their cover crop options. Users can generate an information sheet for a selected cover crop that provides additional information and references relevant to application within the state.

The tool is pictured at left. To access the tool, go to [mccdev.anr.msu.edu](http://mccdev.anr.msu.edu). Or simply go to the SWCD website at [www.duboisswcd.org](http://www.duboisswcd.org) and look under the Resources link at the top of the page and choose the Cover Crops option. The decision tool is linked on our website.

**Midwest Cover Crops Council - Cover Crop Decision Tool**  
Indiana: Dubois County Seeding Dates

Location Information: State/Province: Indiana, County: Dubois

Cash Crop Information: Crop: None or Prevented Planting, Plant Date: , Harvest Date:

Field Information: Soil Drainage Class: Moderately Well Drained, Flooding/Ponding: No

Cover Crop Attributes: #1 Select an attribute, #2 Select an attribute, #3 Select an attribute

Species listed include: Nonlegumes (Barley, Broomrape, Millet, Pearl, Oats, Rice, Winter Cereal, Ryegrass, Annual, Sorghum-sudangrass, Sudangrass, Trifolium, Winter, Wheat, Winter), Grasses (Ryegrass, Annual, Ryegrass, Perennial, Sorghum-sudangrass, Sudangrass, Trifolium, Winter, Wheat, Winter), Legumes (Alfalfa - Non-dormant, Clover, Barren, Clover, Crimson, Clover, Red, Clover, White), Peas, Field/Winter, Vetch, Hairy, Winter, Wheat, Winter.

Attributes: 50% HV/50% WC Rye, 50% W/Pea/50% OGR, 60% A/Rye/40% OGR, 60% C/Ch40% A/Rye, 60% C/Ch40% Oats, 60% Oats/40% OGR.

Select cover crop to create information sheet: 50% HV/50% WC Rye [Submit]

## Control Needed for Poison Hemlock

**P**oison hemlock is now commonly found in the Midwest, growing in wet, wooded areas and open fields, and along roadsides and railroad tracks. Stan Smith, Ohio State University Extension, said people should learn to recognize poison hemlock. The noxious weed looks similar to other plants in the carrot family.

Poison hemlock can be fatal if ingested. The active ingredient in the plant is also a poison that causes paralysis of the muscles, including those used for breathing. "All parts of the plant are poisonous including the leaves, stems, seeds and roots. Simply handling the plant can cause toxic reactions in humans," said Smith.

The main feature that distinguishes poison hemlock from other carrot family members is its tall size, growing upwards of 10 to 12 feet in moist conditions. The plant produces small white flowers that are typical of the carrot



*Poison Hemlock.*

family, and has a smooth, purple-spotted stem and dark, glossy-green and fern-like triangular leaves. It has a fleshy white taproot. Both the leaves and roots have a disagreeable parsnip-like odor.

Smith said that herbicides are the best way to control poison hemlock. "Crossbow and Banvel are fairly effective on small poison hemlock. Taller plants may need to be controlled with glyphosate," said Smith. "Mowing after the plants have bolted and before setting seed will prevent seed production."

## Weed Laws and the Dubois County Weed Board

**A**s the planting season wraps up in Dubois and surrounding counties, landowners are reminded that now is the time to complete weed eradication efforts on any noxious weeds on their properties. Not only does control make sense economically for better crops and higher yields, but it is also a requirement for landowners under Indiana law.

Indiana Code (IC) 15-16-8 states that a person owning or possessing real estate in Indiana must control noxious weeds on property they own or manage by cutting or mowing and, if necessary, by plowing, cultivating, smothering or using chemicals in the bud state of growth or earlier, to prevent detrimental plants from maturing. Named specifically in

the law as noxious plants in need of control are Canada thistle, Johnson grass, Columbusgrass, bur cucumber and shattercane.



*Johnson grass is one of several noxious plants named specifically in Indiana law that are required to be controlled by landowners.*

Individuals not attempting to control these weeds are notified by the Weed Board upon complaint or observation of the need to control the spread of these weeds, and, if no actions are taken, the Weed Board is empowered to control the weeds themselves with costs passed on through the landowner's county taxes.

Charged with enforcing this law in Dubois County are the following individuals and their respective positions: Larry Vollmer (Chairman), County Commissioner; Jack Welp, Soil & Water Conservation District; Kenny Mundy, Trustee – Madison Township; Mark Hochgesang, Agricultural Interest; and Kenneth Eck (Non-Voting), Purdue CES/Technical Advisor.

## Land Stewardship Initiative to Promote Soil Health

Vincennes University and the Dubois County Soil & Water Conservation District have recently entered into a strategic partnership to test and demonstrate agricultural best management practices. Titled the VUJC Land Stewardship Initiative, the five-year agreement will use about forty acres of cropland on the VUJC campus to showcase these conservation management practices.

One of the main goals of the Initiative is to improve the health of the soil on the VUJC land and to promote those practices that lead to the best soil health possible on cropland. To accomplish this goal, spring cash crops will be no-tilled into the soil and cover crops will be

drilled after harvest each fall. No-till planting with a cover crop rotation will greatly improve the health of the soil. Healthy soils provide greater yields for farmers, meaning more grain will be available for the world's growing agricultural demands. It also means that greater profit can be achieved, as less input costs are associated with soils in healthy condition.

Before partnering with VUJC, the cropland had been in conventional tillage. Conventional tillage consists of breaking up the earth prior to planting. Farmers often use conventional tillage to try to alleviate soil compaction issues and because it allows the soil to dry out and warm up faster, allowing for a quicker planting time. But the disadvantage to conventional tillage is that it destroys the health of the soil. When farmers use conventional tillage to try to alleviate soil compaction issues, those issues

actually get much worse. That's because traditional tillage tools, like a moldboard plow or a disk ripper, actually create a layer of soil compaction a few inches below the surface called a hardpan layer. This hardpan layer then blocks the roots of a cash crop from going deeper into the soil, and can actually decrease yields.

To make matters worse, each time the soil is tilled, the soil is robbed of its organic matter that makes it beneficial for growing cash crops. This is because tillage aids in destroying the living organisms in the soil that naturally produce and recycle the micronutrients needed for a healthy soil. As the soil is tilled, these micronutrients are exposed to the air and the sun. Most of them oxidize within a few hours and leave the soil robbed of a wealth of micronutrients that could

have been there had the soil been left untouched. Speaking about this issue at the Dubois County SWCD's Soil Health Workshop in July 2011, Ray Archuleta, Conservation Agronomist at the NRCS East National Technology Center, said, "You till, you kill."

After partnering with VUJC in February, the SWCD planted an early harvest soybean using no-till technology. In order to showcase the value of no-till planting methods with the use of cover crops after each harvest, a forty-foot wide control strip has been left in conventional tillage that runs the entire length of the largest field. Soil tests to determine current soil health are being conducted. These same soil tests will be repeated each year to show the effect that long-term no-till practices have on improving the health of the soil. Yield differences will also be compared each year between the control strip left in conventional tillage and the rest of the cropland converted to no-till.



*The SWCD no-till drilled an early maturity soybean into the cropland at VUJC this spring.*

After the soybeans are harvested this fall, a diverse mixture of cover crop seed will be broadcast or drilled on all of the cropland. The mixture will include daikon radish, crimson clover and winter oats. These three species have been chosen for their differing values in the soil health equation. Crimson clover, for example, actually produces Nitrogen at a rate of 30-60 pounds per acre, making it a perfect choice for a cover crop planted before planting Nitrogen-loving corn in the spring. While daikon radishes do not produce Nitrogen, they do scavenge leftover Nitrogen and other micronutrients in the soil. As the radishes decay in the spring, these micronutrients are released close to the time of planting, greatly benefiting the spring cash crop.

Because the radishes are also quite large, they act as natural tillage, breaking through the hardpan layers that have been left by conventional tillage tools and making channels that future roots of cash crops can follow. Because the tillage all happens naturally and does not require the topsoil to be broken, none of the micronutrients will be lost due to exposure to the sun and air. The winter oats chosen in the mixture also serve an important role. They aid in building organic matter into the soil and serve as an excellent erosion control crop. As more organic matter is built, more earthworms and microorganisms will be present in the soil, meaning the soil will become much more nutrient-rich and over time will become prime soil for planting cash crops which can experience greater yields.

To showcase the value of no-till technology with winter cover crops, a field day is being planned for this fall. A three acre section of the cropland will be planted with a larger variety of cover crops than on the rest of the land. This test plot will be available for display at the field day. Guest speakers from the Natural Resources Conservation Service and Purdue University

will be at the field day to share information and answer your questions. The field day will be planned for mid-November and more details will come as they are available. Be sure to watch for it in the Fall 2012 edition of this newsletter and check out our website at [www.duboisswcd.org](http://www.duboisswcd.org) for regular updates on the Initiative.

The Initiative is a part of a larger group of projects with similar research and education goals throughout the state. The SWCD is working with the Indiana Association of SWCD's to apply for a federal grant which will provide funding to help install other conservation best management practices on the VUJC cropland. Grassed waterways, filter strips, surface inlets and a two-stage ditch are all being planned for the cropland. Additionally, the wooded land on the VUJC campus will undergo timber stand improvement and invasive species control.

If you would like to be involved in any way with the Initiative, contact the SWCD office at 812-482-1171 extension 3. Volunteers from a diverse range of disciplines are needed for this project and there is a place for you!

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*“Tillage aids in destroying the living organisms in the soil...you till, you kill.”*

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*In order to showcase the value of no-till planting methods with the use of cover crops after each harvest, a forty-foot wide control strip has been left in conventional tillage that runs the entire length of the largest field.*

## Backyard Conservation: Bluebird Habitat Basics

**B**right blue in color, melodious in song, the eastern bluebird is a welcome visitor to backyards across much of the United States. Bluebird populations blossomed when the frontier was settled and forests were cut to establish small fields and pastures. They were helped more by the hundreds of thousands of wooden fence posts used for new field boundaries.

But more recent increasing pesticide use, the introduction of the European starling and the English house sparrow, replacement of wooden posts with steel, and clearing of fence rows hurt bluebirds. Most recently, thousands of concerned people have put up bluebird houses in an ongoing recovery effort to ensure a future for the bluebird.

Nesting from southern Canada to the southern U.S. border, and from the Rocky Mountains to the east coast, the bluebird migrates to winter habitat in the middle parts of eastern North America south into Mexico, the Gulf coast, and southern Florida.

### **Food Preferences**

Two-thirds of the bluebird's diet is insects and other invertebrates; the remainder is wild fruits. Insects include grasshoppers, crickets, katydids, beetles, earthworms, spiders, centipedes, and sow bugs. Fruits, especially useful for winter food when insects are scarce, are wild grape, dogwood, hawthorn, and sumac and hackberry seeds.

### **Cover**

Grassy areas with scattered hardwoods, including meadows, grazed pastures, yards, roadsides

and grassed farmlands are ideal habitat. Mowed areas including golf courses, large lawns, and rights of way are also well used. Open grasses provide foraging habitat; scattered trees or fence posts offer the perches bluebirds use to spot and then swoop down on insects on or near the ground.

### **Nesting**

The eastern bluebird is a cavity-nesting bird, but cannot make its own cavity. It relies on abandoned woodpecker cavities, open tops of rotted out stumps, and holes in wooden fence posts. Manmade wooden boxes are also readily accepted if they are designed and installed correctly. Nest boxes can be used to augment natural cavities in grassy areas that lack snags or natural cavities.



*Scattered trees or fence posts offer the perches bluebirds use to spot and then swoop down on insects on or near the ground.*

### **Attracting Bluebirds to Your Backyard**

The key to attracting bluebirds to nest in your yard is having plenty of potential nesting locations, food, and water. Bluebirds do prefer more "open area" so if your yard is heavily wooded you'll enjoy many other nesting birds, but probably not bluebirds.

Planting native plants like American Bittersweet is a great way to attract and help bluebirds. Having a birdbath in your landscape can also help. Another way to attract and help bluebirds is by feeding mealworms. At 50.4% protein, they are an excellent nutrition source. Start feeding mealworms in a bluebird feeder. In this type of feeder, the bird has to go through an entrance hole to find the worms and few birds besides the bluebird will do so. Specialized feeders for bluebirds can be purchased at home centers such as Lowes or Home Depot.

Check out our website for more great how-to's on backyard conservation topics! Visit us today at [www.duboisswcd.org](http://www.duboisswcd.org) and choose the Backyard Conservation links under the Resources menu.

## Conservation Practices Preserve Soil, Save Money

**F**arm conservation practices not only preserve soil and water, but they also can save growers money, says a Purdue Extension agronomist.

Techniques such as no-till and sub-surface nutrient banding can keep soils productive, protect nutrients from runoff, lessen the amount of fuel farmers use and reduce labor costs.

"Farmers should always keep conservation practices in mind because it's important to the stewardship of the soils they farm and because it's important to their economics, whether it's capital costs, operating costs or the overall labor investment they put into each acre," Tony Vyn said.

While the adoption of no-till soybean systems has been widespread, no-till corn systems have not gained as much momentum. Vyn said that even though no-till corn can be successful, there also are other conservation tillage methods growers can try.

"Time and time again we continue to show very good results from no-till and strip-till when corn follows soybeans or wheat in rotation," he said.

"We've only been stymied a bit in no-till success for corn following corn on finely textured and poorly drained soils. But, aside from that, it's been surprising how well the no-till and strip-till systems have done, even in progressively higher residue-producing fields associated with increased crop yields and planting corn at higher plant densities."

Strip tillage is a method that disturbs only ground cover where farmers will actually plant crops. It offers the potential for deep nutrient banding and provides warmer, dryer berms to plant into.

Vertical tillage is another option. In this, farmers redistribute surface residue and only shallowly penetrate soils. It helps the near-surface soil dry faster and can allow earlier planting.

When it comes to conserving nutrients, tillage systems matter. Broadcast- or surface-applied

nutrients have a higher likelihood of runoff, especially during a big rain. Vyn said this could especially be a problem with broadcast-applied phosphorus.

"Long-term, systems that conserve nutrients as a whole would be enhanced even more if we began to think through our farming practices to try and deliver more sub-surface banded application, particularly of phosphorus and certainly nitrogen as well," he said.

Vyn said the keys to farmers adopting these conservation practices are more integrated tillage-nutrient systems research, whether in on-farm strip-trials, or in greater detail at university research farms, and using modern technologies, such as tillage and nutrient application equipment, precision automatic guidance, and stress-tolerant crop varieties, all while continuing efforts to make the education and tools more readily available.

"If our goals are conservation, reduced costs, carbon sequestration and less greenhouse gas emissions, we need to look at ways to optimize conservation practices to remove the obstacles," Vyn said. "We need these practices to be rational and we need farmers not to have valid excuses not to adopt them."

*Story Courtesy Purdue University*



*No-till corn planted into a winter cover crop.*

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*"When it comes to conserving nutrients, tillage systems matter."*

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**The Conservation Conversation**

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*Cover Crop Incentive  
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*See front cover  
for details*



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**Dubois County SWCD Contractors List**

The Dubois County SWCD maintains this list under a 501(c)(3) nonprofit status. This list does not represent an endorsement by the SWCD, the United States Department of Agriculture or any other partnering agency. While an effort has been made to provide a complete and accurate listing, contractors on other services may occur. Other available sources of information should also be consulted.

Erosion Control Planning & Supply	
<b>Bosmer Land Surveying, Inc.</b> Address: 205 S. 9th St. Jasper, IN 47546 Phone: 812-482-9819 Email: <a href="mailto:info@bosmerland.com">info@bosmerland.com</a> Land surveying, erosion and sediment control plans.	<b>Commonwealth Engineers Inc.</b> Contact: David Lantz Address: 2001 N. 10th Street, Suite 200 Evansville, IN 47715 Phone: 812-473-1717 Email: <a href="mailto:dylantz@commonwealtheng.com">dylantz@commonwealtheng.com</a> Erosion and sediment control plans.
<b>Ladd Engineering</b> Address: 127 Brookside Dr. Laparosa, IN 46032 Phone: 765-402-8219 Erosion and sediment control plans.	<b>Landmark Surveying Company, Inc.</b> Contact: Curtis Harris Address: 12 NE 1st St. Ellettsville, IN 47501 Phone: 812-257-0500 Fax: 812-257-0500 Email: <a href="mailto:info@landmark-surveying.com">info@landmark-surveying.com</a> Erosion and sediment control plans, land surveying, site design, drainage analysis.
<b>Merkley &amp; Associates, Inc.</b> Contact: Richard D. Palmer II, P.E. Address: 112 W. 9th St., Suite 203 Jasper, IN 47546 Phone: 812-255-9761, 812-464-2514 Email: <a href="mailto:info@merkleys.com">info@merkleys.com</a> Consulting engineers, land surveyors, architects, construction managers, erosion and sediment control plans.	<b>RS&amp;M Corporation</b> Address: 4755 Kingsway Dr., Suite 400 Indianapolis, IN 46205 Phone: 317-255-6500 Consulting engineers/architects, erosion and sediment control plans.
<b>Smith, Neubecker &amp; Associates</b> Address: 440 S. Logan Blvd. Ellettsville, IN 47501 Phone: 812-236-8039 Fax: 812-236-6112 Erosion and sediment control plans.	<b>Southern Indiana Supply</b> Address: 1004 W. 14th Street Ellettsville, IN 47501 Phone: 812-483-2267 Culvert pipe, corrugated metal pipe, soil fences, erosion control blankets, geotextiles.
<b>Universal Design Associates</b> Address: 813 Main St. Fort Gibson, IN 47532 Phone: 812-367-2811 Fax: 812-367-2401 Erosion and sediment control plans, consulting engineers and construction managers.	

*Contractor lists  
are available!  
Get yours online  
today!*

[www.duboisswcd.org](http://www.duboisswcd.org)