Dubois County Soil & Water Conservation District

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Fall 2012

The Conservation Conversation

Open House and Cover Crop Training at VUJC

Purdue Extension is offering Advance Cover Crop Training on Tuesday, November 13th, 2012 at the **Vincennes University– Jasper Campus.**

This program is intended as advanced training for Extension Educators, Ag Educators, NRCS field staff, ISDA and SWCD field staff, CCSI mentors, and anyone needing CCA credits.

This workshop is designed to provide agricultural professionals with accurate information and the most current tools and management techniques to foster the appropriate selection and use of cover crops on Indiana farms. This advanced training will prepare participants to be better able to advise farmers and others about cover crops in their Indiana region.

Participants are asked to bring a laptop for an exercise making cover crop choices.

9:00am—9:55am Eastern time
"Cover Crop Strategies and Equipment"
Barry Fischer, NRCS and Hans Kok, CCSI
1hr. CEU Soil and Water (CCA)

10:05am—11:00am
"Benefits & Selection of Cover Crops"
Eileen Kladivko, Purdue Agronomy
1hr. CEU Soil and Water (CCA)

11:00am—11:50am
"Nutrient Management Adaptations in Cover Crop Systems"
Brad Joern and Jim Camberato, Purdue Agronomy
1hr. CEU Nutrient Mgmt.(CCA)

11:50am—12:40am

Registration, Lunch, & Refreshments, made possible through a Training Grant from SARE .

12:40pm—1:30pm
"Terminating Cover Crops and Herbicide Carryover Considerations"
1hr. CEU Pest Management (CCA)

1:30pm—2:00pm
Break and travel to field plots

2:00pm—3:30pm
"Hands-On Identification & Evaluation of Various Cover Crop species & Mixtures"
Barry Fischer, Hans Kok, Eileen Kladivko
1hr. CEU Pest Management (CCA)

4:30pm—?
Open House
Barry Fischer, presenter

This second part of the day is geared for local land owners to learn from the experts.

Watch the local media for more info

Contents

What is Soil Health?

Soil health is "the capacity of a soil to function" *(Doran and Parkin, 1993).* How well is your soil functioning to infiltrate water and cycle nutrients to water and feed growing plants?

Soil is a living factory of macroscopic and microscopic workers who need food to eat and places to live to do their work.

There are more individual organisms in a teaspoon of soil than there are people on earth; thus, the soil is controlled by these organisms.

Tillage, fertilizer, livestock, pesticides, and other management tools can be used to improve soil health, or they can significantly damage soil health if not applied correctly.

Managing for soil health (improved soil function) is mostly a matter of maintaining suitable habitat for the myriad of creatures that comprise the soil food web.

Managing for soil health can be accomplished by disturbing the soil as little as possible, growing as many different species of plants as practical, keeping living plants in the soil as often as possible, and keeping the soil covered all the time.

Tilling the soil is the equivalent of an earthquake, hurricane, tornado, and forest fire occurring simultaneously to the world of soil organisms. Simply stated, tillage is bad for the soil.

Physical soil disturbance, such as tillage with a plow, disk, or chisel plow, that results in bare or compacted soil is destructive and disruptive to soil microbes and creates a hostile, instead of hospitable, place for them to live and work.

The soil may also be disturbed chemically or biologically through the misuse of inputs, such as fertilizers and pesticides. This disrupts the symbiotic relationship between fungi, microorganisms and crop roots.

By reducing nutrient inputs, we can take advantage of the nutrient cycles in the soil to supply crop nutrients and allow plants to make essential associations with soil organisms.

Sugars made by plants are released from their roots into the soil and traded to soil microbes for nutrients to support plant growth. The key to improving soil health is assuring that the food and energy chains and webs includes as many different plants or animals as practical.

Biodiversity will ultimately be the key to success of any agricultural system. Lack of biodiversity severely limits the potential of any cropping system and disease and pest problems are increased. A diverse and fully functioning soil food web provides for nutrient, energy, and water cycling that allows a soil to express its full potential.

"Manage More by Disturbing Less"

"Grow Living Roots Throughout the Year"

There are many sources of food in the soil that feed the soil food web, but there is no better food than the sugar exuded by living roots.

Soil organisms feed on sugar from living plant roots first. Next, they feed on dead plant roots, followed by above-ground crop residues, such as straw, chaff, husks, stalks, flowers, and leaves. Lastly, they feed on the humic organic matter in the soil.

Healthy soil is dependent upon how well the soil food web is fed. Providing plenty of easily accessible food to soil microbes helps them cycle nutrients that plants need to grow.

"Keep the Soil Covered as Much as Possible"

Soil should always be covered by growing plants and /or their residues, and soil should rarely be visible from above. This is true regardless of land use (cropland, hayland, pasture, or range). Soil cover protects soil aggregates from 'taking a beating' from the force of falling raindrops. Even a healthy soil with water-stable aggregates (held together by biological glues) that can withstand wetting by rain may not be able to withstand a 'pounding' from raindrops.

A mulch of crop residues on the soil surface suppresses weeds early in the growing season giving the intended crop an advantage. They also keep the soil cool and moist which provides favorable habitat for many organisms that begin residue decomposition by shredding residues into smaller pieces.

"Soil Health for Your Farm, Ranch . . . For You!"

Soil health is improved by disturbing the soil less, growing the greatest diversity of crops (in rotation and as diverse mixtures of cover crops), maintaining living roots in the soil as much as possible (with crops and cover crops), and keeping the soil covered with residue at all times.

Drills, planters, seed, fertilizer, pesticides, livestock, fences, water, farm implements, etc. are all tools that can be used to manage the soil habitat for the benefit of living members of the soil food web.

Many soils have a water infiltration problem that causes a water runoff problem. If soil health is improved, the structure of the soil results in greater water infiltration, less runoff, less or no erosion, and reduced incidence of flooding and sedimentation.

Sourced from the Soil Quality National Technology Development Team, November 2011

"Diversity with Crop Diversity"

Sam Oxley Named Conservation Farmer of the Year, 2012

Sam Oxley has been named the 2012 Otto J. Bauer Memorial Outstanding Conservation Farmer of the Year by the Dubois County Soil and Water Conservation District (SWCD). Old National Bank is the sponsor of this annual award. Tom Krodel of Old National Bank, made the presentation to Sam Oxley at the Soil and Water Conservation District's annual meeting earlier this year.

The Soil and Water Conservation District (SWCD) presents the award annually to a Dubois County farmer. "Sam was nominated because of his use of the EQIP program, utilizing good practices in pasture management, fencing, waterline, and prescribed grazing." said Alan Weyer, SWCD Associate Supervisor. "Sam has hosted field days, has been very supportive of the conservation practices of Dubois County SWCD, and has also been an active Board Member.

The Oxley Farm is located between Kyana and Birdseye. Sam and his wife, Joan, purchased the 120 acre hay and pasture farm in the 1990's. The Oxley's have added fencing, spring development, and waterways. Sam commented that the farm land was pretty good to begin with but added that his neighbor, Lee Joe Welp gave him some good common sense tips and advice which helped to improve the land over the years. Although the fields are rented, the Oxley's son lives on the land and mows it to keep it neat.

Sam Oxley would recommend to any farmer that has rolling acreage to put those fields in grass and hay rather than crops to stop erosion and to get the waterways in better shape. He also commented that he and his wife, Joan, have loved going to the property as it is relaxing and "there is always something beautiful to see."

The Otto J. Bauer Outstanding Conservation Farmer of the Year Award is named in memory of Otto J. Bauer . Bauer was champion of soil and water conservation efforts in Dubois County and a member of the SWCD Board of Supervisors from 1969-1986.

Huntingburg Agronomy Tour

Superior Ag Resources Coop, Inc of Huntingburg hosted Answer Plot Tours. This year it was held at Mike and Linda Schmett Farms on August 7th and 8th.

Topics included:

- Extension agent PARP topic
- Cover Crops and how they help capture nutrients, compaction layers in soil, soil health, and residual chemicals
- Nutrition in corn and beans, plant health, insect control and the right fertility and GPS soil sampling to fit your needs
- Hybrid characterization and herbicide interaction along with insect and pet identification and traits in corn
- Soybean traits and weed resistant management, along with yield on RR2 vs RR1 varieties

Bart Pitstick, Dubois County NCRS, was one of the presenters for the session on Cover Crops

OFS Brands Forest Stewardship Award Presented to Dave Altman

Dave Altman was selected as the 2012 recipient of the OFS Brands Forestry Stewardship Award. Dave manages 124 acres of woodland property in Dubois, Spencer, and Perry Counties. 93.61 acres are enrolled in the IDNR's Classified Forest Program. In 1991, Dave started purchasing the Dubois County acreage from his parents who had purchased the property in 1932. The Spencer County property has been in the Altman family since the 1880's.

Dave has worked with Earl McCleery (retired), Steve Brandsasse (retired), Adam Dumond, and Carl Hauser, IDNR District Foresters, for assistance with managing his forested ground. He has worked with the District Foresters for years and has high praise for all of them. Dave commented, "They put a lot of effort into the plans and I enjoyed working with them. The District Foresters worked with Dave to create a management plan that produces timber, woodland game habitat, and continues the legacy of family ownership.

Dave was very impressed with their TSI plans (Timber Stand Improvement). Their plans also helped him become more aware of and monitor the woodlands for invasive species.

Dave's family has been heavily involved in the woodworking business for many generations before him. Besides working full time in Jasper and taking care of the multi-county properties, he has attended the local Purdue Forestry Short Courses with Ron Rathfon and Earl McCleery for both Perry and Spencer counties and Thom Kinney for Dubois County. He is a member of IN Forestry Woodlands Association and the American Chestnut Foundation which works to bring back the chestnut trees which were decimated in the 1920's due to a fungus.

OFS Brands sponsors the annual Forest Stewardship Award. The Board of Supervisors of the Soil and Water Conservation District annually recognizes forest land owners who carries out a wise forestry stewardship program on their land.

Dave Altman planted 10,000 trees consisting of various oaks, black walnut, pecan, and bald cypress.

Rain Barrels

What are they?

Rain barrels are large plastic barrels, often 50-60 gallons, which are used to collect rainwater for later use. The rain water is collected from gutter downspouts by either diverting the entire downspout into the barrel or by splicing a valve into the spout that would allow the water to flow down as usual when the rain barrel is full. The barrels have threaded spigots on them to allow you to drain the barrel with a standard garden hose.

What are the benefits?

Installing a rain barrel can bring many benefits. Once installed, these systems can save you a significant amount of money on your monthly water bill. It has been estimated that during summer months up to 40% of a household's water usage is used outdoors to water lawns and gardens, wash cars, or fill up pools. Having this source of free rainwater can greatly reduce the need for city or well water. During periods of unusual drought, this extra water reserve may be necessary to keep a garden alive if water use is restricted.

In addition to the benefits that a rain barrel gives you as a homeowner, it also benefits the environment. Rain water is naturally soft and free of chlorine, making it idea for plants. Taking water out of the gutter and giving it to plants keeps the water out of local sewer systems, which can help reduce the possibility of sewer overflow. If your downspout normally discharges on the ground, having a rain barrel can reduce erosion and the amount of pollutants entering local waterways.

Where can I get one?

Rain barrels can be purchased online and at stores such as Sam's Club and Menard's. The Dubois County SWCD will utilize grant funds and have rain barrels on sale in 2013. Or you can make your own!

Build a Rain Barrel

Materials: 55 gallon plastic drum, 2 plastic spigots, hardware cloth or a skimmer basket, elbow and extension of downspout, waterproof sealant, concrete blocks

- Drill two holes in the barrel. Drill one at the bottom for the spigot to connect to the garden hose and one at the top for a spigot for overflow or to connect to another barrel. (If you are connecting barrels the one on the end must have an overflow drain.) Line the holes with waterproof sealant before threading the spigots through the holes so water will not leak.
- Cut a hole in the top of the barrel for the downspout and place a piece of hardware cloth or a skimmer basket in the top of the barrel to collect leaves and twigs. Make sure that no mosquitoes can get into the barrel.
- Place the barrel on one or two concrete blocks and cut the downspout at the right height. Then add elbows and extension to your downspouts.

CONSERVATION PLANNING

What is a Conservation Plan?

A Conservation Plan is a written record of your management decision and the conservation practices and systems you plan to use and maintain on your farm. Carrying out your Plan will achieve the goals of protecting the environment on and off your farm. After soil, water, air, plant, and animal resources on your property are inventoried and evaluated, the NRCS Planner will review several alternatives for you to consider. The alternatives you decide are recorded in the Conservation Plan, which becomes your roadmap for better management of your natural resources.

A Conservation Plan combines your farming experience with the science-based knowledge of the conservation planner.

A Conservation Plan Includes:

- Producer/landowner determined objectives and goals.
- An aerial photo or diagram of your farm.
- A soil map and soil description of your property.
- Resource inventory data which can included forage or crop production potential or potential livestock carrying capacity.

Together we can find solutions to meet **your** land management goals.

Benefits of a Conservation Plan:

- Identifies problems or potential problems overlooks on a day-today basis.
- Protects soil along with the farm's productivity.
- Helps comply with environmental regulations.
- Qualifies you for various USDA programs that can help you install your Conservation Plan.
- Flexible to your changing farm operational goals.
- Sets up a reasonable schedule for applying needed conservation practices that fits your timetable.

Conservation Plans are now REQUIRED in Indiana for the Environmental Quality Incentives Program (EQIP) and The Wildlife Habitat Incentives Program (WHIP)

Examples of Resource problems or concerns that a Conservation Plan can address include:

- Soil being washed into streams.
- Water quality problems from soil and nutrient runoff.
- Animal operations not being managed properly.
- Plants not suited, unproductive, or not meeting land user's objectives, invasive special, and declining wildlife habitats.
- Air transporting livestock odors or soil particles.

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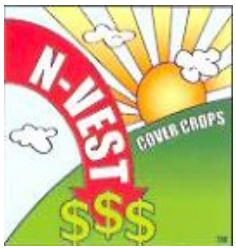

Garden Cover Crop Seed
Packets Available in The SWCD office!

Cost is $2.50 per packet

Follow the SWCD on Facebook!
facebook.com/dcswcd

Follow NRCS on Twitter!
twitter.com/IndianaNRCS

This year's Dubois County SWCD Soil Judging Competition was cancelled due to rain!

The Dubois County SWCD Public Speaking Contest is scheduled for November, 2012.

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