Dubois County Soil & Water Conservation District

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Winter, 2017-2018

The Conservation Conversation

LSI Update

Wild rollercoaster ride is probably the single best phrase that can be used to describe the Land Stewardship Initiative project (LSI) for 2017. The year was filled with highs, lows, and some unexpected twists.

The spring started off well. The fields of cover crops planted the previous fall were growing well with rye, peas, and crimson clover. These cover crop plants were terminated and the main cash crops of corn was planted on April 26th. There was a general feeling that the cover crops had enough time to grow and fix nitrogen to later be dispersed to the corn.

Two days later, in late April, Dubois County experienced an eight inch rain overnight with additional inches falling throughout the next few days. Even after the deluge, the fields looked good and did not experience soil loss. The soil was armored from the pounding rains by the remaining root systems from the cover crops holding the soil in the crop fields.

However, with the saturated soils and the low temperatures, the corn (which usually sprouts in about 5 days) did not emerge until May 10th. The popular opinion in Dubois County was seed emergence was stunted and a replant was necessary. Some stands of corn were lush and well populated, some were thin, and some acres never emerged. In total 18 acres were replanted at the end of May.

Throughout summer, both the original and the replanted corn were growing; although there were differences between the two stands. The April planted corn ears were larger in diameter and had better pollination that the May replanted corn ears. Then cockleburs became an issue in two of the fields. A decision was made to mow down the offending plants to prevent seeds from entering the fields.

At harvest time, there was a yield of 137 bushels an acre which was lower than expected but much better than if the fields were left alone and not replanted. Rye, oats, and radish were the cover crops seeds planted after harvest in preparation for the 2018 soybean crop. In 2018, the adventure begins again.

Created in 2012, the LSI is a partnership between Dubois County SWCD and Vincennes University Jasper Campus. This site has been designated the SW Hub Farm for the Conservation Cropping System Initiative (CCSI) as a community demonstration and educational site for no-tilling farming practices. Water samples are also taken monthly from field tiles to monitor the environment impact.

Contents

Pitstick's Retirement and Lind's New Start

In early January, 2018, Bart Pitstick, Dubois County USDA NRCS District Conservationist, retired after more than 40 years of service.

Pitstick started his career for IDNR (Indiana Department of Natural Resources) prior to joining NRCS in 1983 as a Soil Conservationist. He became a District Conservationist in Daviess County from 1989 to October 1997 and later moved to the Jasper office in 1997.

Dan Hoveland, USDA NRCS Area Conservationist, commented, "Bart has been one of the best conservation planners I've had the opportunity to work with in my career, always looking out for both the resource and the producer's best interest. We wish him well in all his future endeavors."

In January, Nathan Lind became a partner of the Dubois County SWCD staff by taking the role of USDA NRCS District Conservationist.

He is a graduate of Western Kentucky university in Bowling Green, KY, receiving a BS in agronomy. He was raised on a family farm of 200 acres near the community of Elizabeth, Harrison County, Indiana. He started his career in 2010 in Kentucky as a Civil Engineering Technician. He moved to Southwest Kansas in 2012 through 2013 as a Soil Conservationist. Later in 2013 through 2015, he moved to Richmond, Indiana as District Conservationist. He was at Boonville as a District Conservationist prior to being hired as Dubois County District Conservationist.

If you haven't met Nathan Lind yet, please stop by the office and discuss different conservation options and plans with him.

NRCS, Jane Hardisty's Retirement

Times are a changing and that holds true for Indiana's Natural Resources Conservation Service (NRCS).

After 43 years with the agency, Jane Hardisty has officially retired as Indiana's NRCS State Conservationist. Jane was the longest serving State Conservationist in the country for the NRCS, leading hundreds of employees and serving in Indiana for over 17 years. This born leader and dedicated public servant has affected many within Indiana with her quick wit and visionary outlook. She personifies partnership, teamwork, energy, drive, and passion.

In a mostly male dominated field, Jane Hardisty began her career with the Natural Resources Conservation Service as Indiana's first female Soil Conservationist. Gas was 59 cents a gallon, the average price of a home was $12,700 and NASA launched their first Space Shuttle that year. However, no one could have guessed that this farm girl from Hancock County and new Ball State University graduate was starting a lifelong career dedicated to protecting the natural resources of our country, especially Indiana.

Throughout Jane's career, she pioneered innovation and change, helping to streamline the USDA-NRCS agency in Indiana. Her concept of aligning personnel in work teams rather than by counties allowed NRCS staff and partners to complete a backlog of conservation projects and deliver effective conservation planning to Indiana landowners.

In 2010, Jane spearheaded the Soil Health movement, which recognizes soil as a living and life giving natural resource. She promoted this movement, strengthening Indiana's role as a conservation leader, while proving the positive environmental impacts farmers achieve with voluntary conservation efforts. This effort is growing stronger each day and as a result, farmers are sequestering more carbon, increasing water infiltration, improving wildlife and pollinator habitat—all while harvesting better profits and often better yields.

Because of Jane's leadership and vision, Indiana is recognized as a national leader and role model for our effective conservation partnership, seamlessly working together to deliver state of the art and direct technical assistance to private landowners. Through her gift of persuasion and public speaking, she has been able to reach out to local, state and national partners to accomplish even greater conservation efforts as a team. Henry Ford said, "Coming together is a beginning, keeping together is progress, working together is success." This success is what Jane has exemplified in her Partnership crusade throughout the Hoosier state.

But Jane didn't only make a valuable impact in Indiana. Her expertise in policy development and implementation allowed Jane to serve on special assignments and advisory councils that had nation-wide impacts, such as Acting Deputy Chief for Management and Acting Associate Chief for Operations. She was also an advisor of the agency's National Healthy, Productive Soils Campaign.

Jane has received numerous awards throughout her career including the Ball State Natural Resources and Environmental Management Alumni Award of Achievement in 2000, the Ball State Distinguished Alumni Award in 2006, the Ball State Distinction in Natural Resources Conservation Indiana Women of Achievement Award, and most recently the 2017 Purdue Women in Agriculture Leadership Award. She was also selected to attend the White House Conference on Cooperative Conservation in 2005.

Jane's leadership, will be missed but the drive of the conservation partnership will continue because of her strong, yet kind, leadership. Jane always said that she had the greatest job in the agency working every day with Hoosier farmers, partners, and a dedicated workforce. We say it was us who has been privileged to work alongside Jane.

Infield Advantage

Infield Advantage (INFA) works with small regional groups of farmers who are interested in improving their nutrient use efficiency on their corn fields by sharing their management decisions and resulting impact those decisions had on their production with a goal of creating personalize local guidance for future management innovations. This year the program completed its seventh year and continues to be one of the largest adaptive nutrient management farmer networks in the country. In 2017, there were 35 active regional groups located across more than 60 Indiana counties. State-wide, nearly 1,100 fields, over 70,000 acres, were monitored using the Infield Advantage tools, Based on a participant survey, the participants have a direct impact on the management of over a half million cropland acres across the state.

The Dubois County group continued working in 2017. This group was formed by local growers in Dubois and Pike Counties to improve their nitrogen use efficiency in corn. This year, 16 local growers participated in INFA and was part of the state-wide program coordinated b the Indiana Department of Agriculture (ISDA). More information about the program and previous years' results can be found at: www.INfieldAdvantage.org. INFA uses aerial imagery and the Corn Stalk Nitrate Test (CSNT) to determine nitrogen use efficiency in each field enrolled. Producers are not restricted to tillage, rotation, nitrogen form, timing or rate and many enroll multiple fields. The basic level of the program is called Guided Stalk Sampling (GSS). Growers may also use INFA to conduct on-farm research using Replicated Strip Trials (RST). At the end of the year, fields with a Replicated Strip Trial will also have an RST report. Each grower also receives a regional report, with each field assigned an anonymous ID number.

In 2017 INFA continued a joint project with Indiana Pork focused on fields with hog manure. It also developed a nutrient management project on soybean fields with Dr. Shaun Casteel, Purdue University In addition, major cost savings were captured by changing the contracting format with suppliers.

The 2017 working group consisted of 45 GSS corn fields. INFA costs are funded through Indiana Corn Marketing Council/Indiana Soybean Alliance (ICMC/ISA) checkoff funds and is offered free of charge to producers. The total value of the imagery and lab work to our producers in 2017 was $7,695. The program was possibly due to the coordination and support of local Indiana Conservation Partnership staff. Our group also received additional support from State-wide coordination by ISDA, central office, and ICMC?ISDA. This in-kind support is roughly valued at $4,500.

2018 INFA registration forms are available. If you are interested in enrolling fields as either GSS or RST, please contact the Dubois County group leader, Andrea Gogel at 812-480-1498.

From Sewage to Drinking Water by Julie Loehr

Many Americans are disconnected from the process of how raw water is obtained and transformed into our drinking water; thus teaching the water cycle is important.

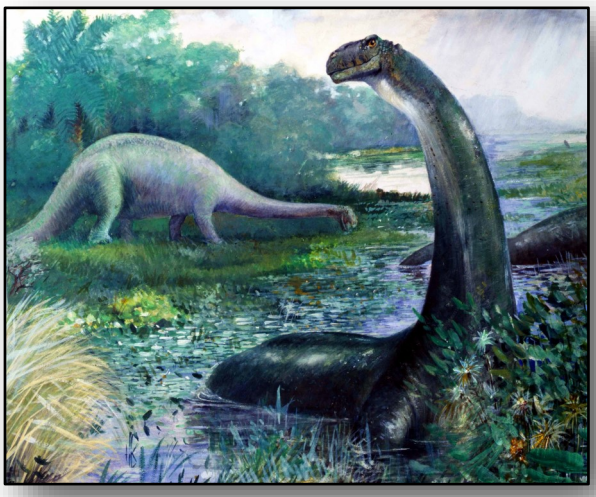
Our National 4-H curriculum has a topic on water conservation entitled, "There's No New Water!". This water conservation and water quality curriculum is grounded in the simple, yet powerful truth that water is a finite natural resource whose quantity and quality must be responsibly preserved, protected, used, and reused.

It is a little gross to even speak about this, but we all should be informed enough to know exactly where our toilet water goes once we flush. Some homes have septic systems in which the flushed water leaves the toilet and enters a septic field in the yard. Other homes and our businesses are connected to the town's sewer system, meaning the flushed water enters the waste water treatment system. But from there, where does it go? Waste water is treated in the wastewater plant and is released back into the water cycle, usually being discharged into a lake, stream, or aquifer. Drinking water is then drawn from that lake, stream, or aquifer and enters the water plan, is treated, and prepped to be piped to your home.

This cycle should have us all thinking about the treatment capabilities we have as humans. Is there anything entering our drinking water supply that we one day won't be able to 'fix' or treat?

Recent studies across the U.S. have indicated that caffeine is indeed showing up in our water supply. Perhaps this is because of America's every increasing obsession with caffeinated products. The average adult consumes around 280 mg of caffeine daily, but not all of what is consumed is absorbed by the body. Some of that daily caffeine is excreted by the body. Also, many people and restaurants dump the used coffee grounds down the sink or disposal. Even if used Caffeine is thrown in the trash for the landfill, it will enter our ground water supply after percolating down though the soil layers. For the coffee and energy drinking adult, this many not sound like a serious problem, but it is alarming to see lab results.

Caffeine is not a naturally occurring molecule in most ecosystems, yet it is now present in them. Ted Kallmyer of the Caffeine Informer reports that Erie, PA had 60 parts per trillion in their drinking water supply when it was tested. National Geographic reported a study that the Pacific Northwest has an elevated caffeine level. And the National Center for Biotechnology Information reports that Boston Harbor and Massachusetts Bay have concentrations of caffeine. Understanding that there is no new water, we drink the same water the dinosaurs drank and this research is new and still unclear exactly what consequences are coming. These two thoughts are heavy enough but a more sobering though is agriculture and industry do not tend to release caffeine into the environment, so high levels of caffeine is an indicator of the presence of sewer contamination.



So like the water cycle, I circle back to the beginning. Knowledge of how we obtain our drinking water, knowledge that there is no new water, and knowledge that what we are doing today can affect future days may just be the key to bringing you on board protecting this life giving, but finite natural resource. If you want to learn more about water conservation, water quality, and ways you can help protect our drinking water, call your local SWCD office and ask to speak to the watershed Coordinator.

Invasive Species Control

Attractive as wintercreeper may seem, it can choke out native species if established in an area. It is an evergreen climbing woody vine that forms a very dense ground cover, an unfortunate trait common in invasive species. Also known as climbing euonymus, it was first introduced from China as an ornamental in the early 1900's. Traits that made the wintercreeper a desirable landscaping plants are the same traits that make it such a threat to our natural areas today.

Wintercreeper grows quite rapidly, even in harsh growing conditions. This shade tolerant plant forms in dense mats, depriving native species of space and sunlight. Wintercreeper will also deplete soil nutrients and moisture from nearby plants, making growth and regeneration harder on the native species. The invasive plant colonizes by vine growth and its pink-capsulated seeds spread by birds, small mammals, and water. If allowed to grow out of hand, the vine will spread over anything in its way, even overtopping trees. The wintercreeper's rapid growth, evergreen nature, and tolerance of harsh conditions allowed it to easily escape cultivation and quickly spread to forests in every country of the state.

As an evergreen, wintercreeper can be spotted on the forest floor even in the dead of winter. Late fall or early winter would be a good time to eradicate juvenile plants with smaller root systems. Young plants can be hand-pulled; make sure no roots remain as they may re-sprout. The entire plant should be bagged and disposed of to prevent reestablishment. Mature stands; however, are much more difficult to control. Both mechanical and chemical methods can be considered. For small populations, use a small digging tools to remove the entire plant, roots, and all. In larger stands, use clippers to cut vines off trees and trunks; if necessary, cut down the vine to ground level. Allow wintercreeper to re-sprout and then spray the ground level foliage with appropriate herbicide.

Instead of invasive species, plant native plants like American Bittersweet or American Wisteria if interested in planting pretty vines.

The Nature Conservancy

Rental Equipment Available at Dubois County SWCD

- **No-Till Drill**

Great Plains No-Till drill has a seeding width of 7 feet, and can be used to plant soybeans, wheat, legumes, grasses, etc. It can also be used to plant native, or warm season, grasses. *Rental fee is $8/acre* or minimum of $50.

- **Stapler/Staples**

Installing erosion control blankets? This stapler makes completing the job easy! The plunger simply pushes the staples into the ground. *Rental fee is $10/use and box of 1,000 staples is $50 per box.*

- **Spinning Jenny**

Use to install high-tensile wire fences. Load with wire and set on the ground. Walk away pulling the end of the wire and it will spin, preventing your wire from tangling. Slow down gradually before stopping to prevent over-spinning and tangling. Can also be used to rewind wire in the field. *No Rental Fees.*

- **Tile Flags**

Flags on 36" wire staff can be used to mark underground power lines, or surveying jobs. *Cost is $7.00/bundle of 100.*

Grazing Bites by Victor Shelton

I keep hearing in my mind the tune, "Baby It's Cold Outside." In the last week or so, I've received several inquiries on water systems from producers trying to diagnose pump issues. I guess I just couldn't be left out of that crowd because I now have a leak in an area where I moved some soil around late summer.

Sometimes trying to figure out exactly what is going on with a leak can be difficult. An example of that is trying to find a leak in a long pipeline run going down a hill. The leak is most likely not where the water is coming to the surface, but where it found the easiest route out. That spot is quite often close to the actual elevation of the leak, very similar to the workings of a spring. If the pipeline is three feet deep, then start looking about three feet in elevation uphill from the leak. Sometimes you are lucky, especially if it is on relatively flat ground and the water just surfaces from the same spot.

It is always good to adhere to good installation practices when installing pipeline. Before covering up a newly installed pipeline, it is always best to pressurize it for a day to check for leaks before burying it. If you have tees going off those lines, it never hurts to write down reference points, take a GPS point and/or picture for later reference. That has paid off for me more than once, especially when I wanted to add on to the system. I like to install a tee with a short stub or pipe on it for any spot where I might want to add on in the future. That stub of a pipe is a lot easier to connect to than having to splice in a tee after the fact.

The next thing I highly recommend is installing shut-off valves. Just like switches on an electric fence system, shut-off valves do two valuable things: they help you narrow down where the problem is and then allow you to be able to just shut off that portion of the system. I prefer ball-type shut-off valves. They take a lot of abuse and the handle is normally very effective for shutting off with a tool from ground level. For most smaller ball valves, a piece of 1.5 or 2 inch PVC pipe can be notched and used as a handle to turn these valves off and on from the surface.

Water systems that are put in above the freeze line, temporary or seasonal systems, need to be drained prior to deep freeze temperatures. For all systems that are not temporary or seasonal, that depth varies some, but it needs to be below freezing levels. It is normally recommended that the minimum depth to be at least 3 feet for most of southern Indiana and up to 4 feet for the northern part of the state. If the pipeline is going under a road, lane, or an area with limited cover; such as a barn lot, it is advisable to run it a foot deeper.

We talk about forage residual and residue quite frequently when it comes to forage management, but it is also important for the water lines. That sod layer on top of the soil is actually very good insulation. I'm confident that if I had my normal cover on that area of my leak, I wouldn't have had a problem. I will procrastinate a day or two with that portion of the watering system shut-off in hopes that the weather will warm up a little.

If you are on municipal water, then being able to shut off a leak as soon as possible will certainly save you money. You and your livestock are still going to need water so hopefully any issues are narrowed down to a particular tank, hydrant, or specific water line so you can use another tank or system until that problem area is fixed. If you are using a well, the pump will be cycling a lot more than normal if you have a leak. If the leak is bad, it will run almost constantly. If you don't know where the leak is, then shut off valves to different parts of the system until the pump is working normally, not losing pressure. That will help narrow the search.

Most livestock prefer water between the temperatures of 37 and 65 degrees Fahrenheit. Cows will consume a fair amount of snow, especially if they are grazing stockpiled forages or winter annuals covered with it. The moisture content of what the cattle are grazing and their personal water needs play a big part here, with dry (non-lactating) cows, snow probably most likely is sufficient. I have never seen them turn down available water which tells me they still prefer to be able to drink some. Liquid water (or warmer water) won't require as much energy. When planning ahead, especially thinking about what you might need or like to do for the next grazing season or winter, consider contacting your NRCS office for assistance on planning and possible financial assistance.

(For past issues of Grazing Bits—http://www.nrcs.usda.gov/wps/portal/nrca/main/in/technical/landuse/pasture)

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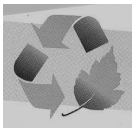

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The Dubois County SWCD Annual Report was again published as an insert in *The Ferdinand News* in January 2018.

If you would like to have a complimentary copy, stop by the SWCD office 1486 Executive Blvd , Jasper.