



VUJC Land Stewardship Initiative

soil health...the root of everything



2017 Annual Report



Created in 2012, the Land Stewardship Initiative (LSI) is a partnership between the Dubois County Soil and Water Conservation District (SWCD) and Vincennes University Jasper Campus (VUJC). This site has been designated as the Southwest Hub farm for the Conservation Cropping System Initiative (CCSI). LSI's goal is to be a demonstration site for No-till farming practices and to educate the community about soil health practices. 50 acres of land have been set aside a VUJC to be farmed using continuous no-till and cover cropping systems in a corn and bean rotation. Many waterways and filter strips have been built into the land to prevent soil erosion and nutrient loss. Water samples are taken monthly from field tiles to monitor environmental impact.

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Cover Photo: Bart Pitstick (NRCS retired Jan. 2018) standing in Field 2 cover crops. April 2017.

Photo Credit: Alan Smock

NOTES FROM THE FIELD

The spring started off well, the cover crops planted last fall were growing after laying dormant all winter. The fields were lush with rye, peas and crimson clover. These plants were terminated and our main cash crop of corn was planted on April 26th.



However, two days after planting, Dubois County experienced an 8 inch rain overnight with additional inches falling throughout the next few days. This was a cold, wet way to start May.

Even after the deluge, the fields looked good, minimal soil loss was experienced. The soil was armored from the pounding rains and the remaining root systems from the cover crops held the soil in our fields. However, with the saturated soils and the low temperatures, the corn did not emerge until May 10th almost 2 weeks after planting.



Above: Bart Pitstick (NRCS)
Field 2 cover crops. April 2017

Left : Duane Hopf (Mill Creek
Farms) planting corn into
terminated rye cover crops.

Some parts of the field of corn were lush and well populated, some were thin and sparse, and some areas never emerged. In total, 18 acres were replanted at the end of May.



Throughout the summer both original and replant corn grew, though there were noticeable difference between the two stands. The April corn ears were larger in diameter and had better pollination than the May corn ears. In general, all the corn was growing well, not perfectly, but well, except for patches that were missed during the replant. Without tearing up everything and starting over in a replant this is bound to happen. Some bare patches were overtaken by grass or cocklebur.



Field Photos taken by Melissa Ruschau

Cockleburs became an issue in two of the fields. The decision was made in August to mow the weeds down to prevent the plants from going to seed. Invasive Stilt Grass is still present in the field border of Field 5 but the population is shrinking and will continue to be sprayed and monitored.



Time was spent this year maintaining field borders. Small trees and thorn bushes are beginning to encroach on the grass strips surrounding the fields in some areas. More time will be devoted to this task in 2018.



A stream crossing from main campus to Field 5 was rebuilt this summer. The stream bed was cleared of debris clogging the pipe and an earthwork crossing was recreated. Now small machinery and foot traffic can safely traverse the stream.

Above: Bart Pitstick & Justin Bary
constructing stream crossing .
August 2017

Right: Glenn & Wyatt Goeppner
harvesting corn. October 2017

Harvest time yielded a disappointing average of 137 bushels an acre. Much lower than hoped for but much better than if the fields had been left alone and not replanted.



Rye, oats and radish were the cover crops sown this October in preparation for the 2018 soybean crop. The goal for next season is to plant the soybeans into the growing cover crops and terminate the cover crops after planting.

EDUCATION AND DEMONSTRATION

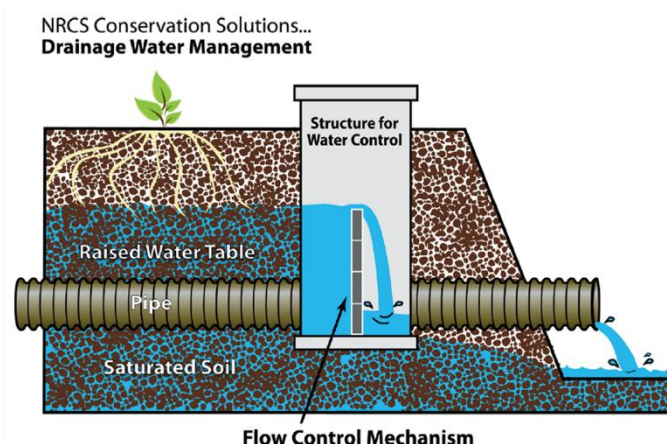
This past year Jim Hoorman was the key presenter for our two workshop days. In the spring, Mr. Hoorman (the NRCS Soil Health Specialist for NW Ohio and Southern Michigan) taught three classes “Nutrient Recycling & Soil Ecology”, “Biology of Soil Compaction” and “Economics of Cover Crops” Workshop attendees enjoyed his insights and spent time after the workshop picking his brain about soil health.

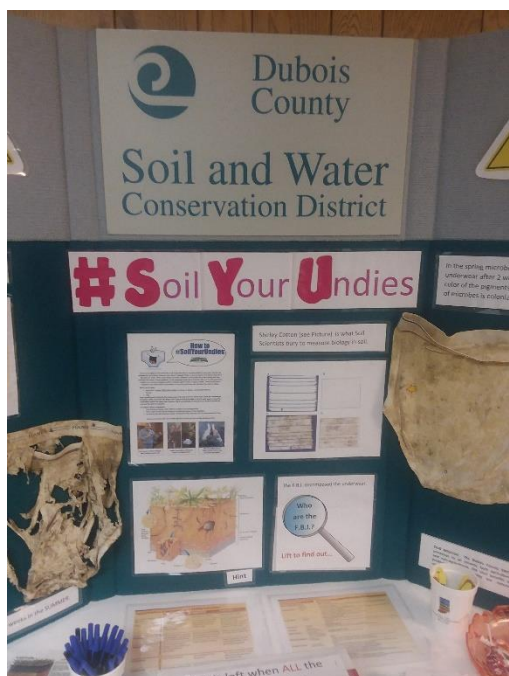


Above: Jim Hoorman (NRCS)

Jim returned again in the fall for a second workshop targeted at farmers who were successfully using cover crops and wanted to delve further into the nitrogen cycle and other nutrient management topics. The day long workshop consisted of mini presentations and discussion times. Participants took home two books- “Building Soils for Better Crops” and “Managing Cover Crops Profitably”. His spring workshop was streamed live and had over 500 hits that day.

Young Farmers of Indiana stopped by the LSI property in August to tour the site and to learn more about the Stop Log structure that is in Field 1. When the plates are in place, a measurable reduction in nitrate level coming off the field in rain water has been noted this year. More samples will be collected in 2018 to examine this trend and compare the subsurface run off from this location to fields that do not slow down the speed of the runoff water by holding in the field for a time.





In an effort to help educate the community about the multitude of life in the soil beneath their feet the LSI project embarked on an experiment to get the community talking and thinking about the microbes in the soil. This was not a scientific study. Pairs of fresh, clean men's white cotton briefs were buried in the soils in our fields. To learn more about the experiment, a group in Canada maintains a website #SoilYourUndies with information and pictures from this study. The remnants of the underwear were the focus of two educational displays one for the 4-H fair and the other for Ferdinand Folk Fest.

Samples for several long-term research projects are still being collected on the LSI property. Soil and bio mass samples are collected twice a year and sent to a lab to be analyzed for a Purdue University research project. Rain water run-off from our field tiles as an ongoing study LSI has undertaken to evaluate the impact of cover crops and nutrient run-off. This year corn stalk samples were collected as part of In Field Advantage a program that evaluates nitrogen uptake by plants. Information gleaned from these samples will influence the nutrient application to the fields using precision ag.



Top left: Fair Display

Right: Andrea Gogel (ISDA) collecting stalk samples for InField Advantage

The Land Stewardship Initiative values our partnerships with many different individuals and organizations. Without their continued support this project never would have been able to get off the ground and continue to have the presence that it currently does.

Thank you to our Sponsors and Partners.

Without your support this project would not be possible!



Dubois County SWCD



Mill Creek Farms

