

2016 Annual Report

Red Cedar Demonstration Farm

Promoting Soil Health and Water Quality through Education

What is the Dunn County Soil and Water Health Partnership?

The Dunn County Soil and Water Health Partnership is just that – a partnership, which consists of community members who are all dedicated to the improvement of soil and water conservation practices. It was formed in the fall of 2014 after several conversations among Dunn County agency staff on ways to benefit the agricultural community of Dunn County.

Why was the partnership formed?

Over the past few years, Dunn County has experienced heavy spring rainfall. Soil is one of the most important fixed assets on a farm. These rainfalls have emphasized to farmers the importance of conserving this asset. Farmers, as well as community members, have expressed concerns regarding soil erosion, improving conservation practices, and better water management. These concerns were brought to the attention of the Dunn County Board of Supervisors and government agency staff. After many conversations, the Dunn County Soil and Water Health Partnership was formed.

What is the Red Cedar Demonstration Farm (RCDF)?

The Red Cedar Demonstration Farm was started by the Dunn County Soil and Water Health Partnership. Red Cedar Demonstration Farm is dedicated to promoting soil health and water quality through education in Dunn County. Field days are planned at the farm to allow for hands-on demonstration and further understanding of soil and water conservation practices and how they affect farm fields. Ongoing research projects, demonstrations, and informational reports allow for year-round education at the farm.

The goals for the Red Cedar Demonstration Farm

- Demonstrating soil and water conservation management practices for the Dunn County community, area farmers, and CVTC students
- Providing an opportunity for soil and water conservation education, on-farm research, and field demonstrations.



For more information on the Red Cedar Demonstration Farm, please visit UW-Extension Dunn County website at

<http://dunn.uwex.edu/agriculture/red-cedar-demonstration-farm-2/>

2016 Summary Report

The year 2016 was the second year of RCDF and was a growth of research, demonstration, and education on the Red Cedar Demonstration Farm.

The following is a description of the projects completed in 2016:

Demonstration Plots

- Cover crops are a large proportion of the demonstration and research that takes place at the Red Cedar Demonstration farm.
- Cover crops are planted for various purposes: prevent soil and wind erosion, adding soil organic matter, increasing water holding capacity, adding beneficial microbes, and retaining nutrients that would have otherwise been lost.
- Cover crops were planted in three demonstration plots to show the benefits of different species and mixes of cover crops. These plots were planted August 25, 2015.
- Plot A contained Winter Rye and Radish, common cover crops for Wisconsin.
- Plot B contained a cocktail mixture of Forage Peas, Hairy Vetch, Canola, Crimson Clover, Sorghum Sudan Grass, Faba Beans.
- Plot C contained three mixtures from Elk Mound Seed, including Scavenger Plus, Tilth Builder, and Nitrogen Plus.
- Interseeding Cover Crops was also demonstrated by planting cover crops in rows while the corn is growing. Planting was completed late June and mid-August 2016 with 10lbs/acre of berseem and crimson clover. See photos below of cover crop growth.



Early Interseeded Cover Crops
into corn (Late June)



Late Interseeded Cover Crops
into corn (mid August)

2016 Summary Report (continued)

Weather Station

- In 2015 a weather station was purchased through a UW-Extension Northwest Regional Innovative Grant. The weather station records temperature, rainfall amounts, dew point, relative humidity, and soil moisture levels. This weather station collects data every 10 minutes and is sent to a website where it can be accessed by the public. The website can be found at the link below, or on the Dunn County UW-Extension page under the agriculture drop down menu titled Red Cedar Demonstration Farm.
<http://dunn.uwex.edu/agriculture/red-cedar-demonstration-farm-2/>
- In addition to the weather station, 20 soil temperature thermometers were placed in 10 locations at 2" and 4" deep throughout the fields with the battery life of one year and will be pulled in the fall of 2017.
- No-Till practices have been attributed to slightly cooler soil temperatures and these thermometers will test that. Soil temperature in the spring is important for early season crop growth. The advantage of a warmer soil must be weighed against the erosion potential of a bare soil.

Education

- CVTC utilizes an agreement with local implements dealers for the use of John Deere and Case IH tractors, tillage, planting, and harvesting equipment. This provides the Agri-Science students an opportunity to use the latest field equipment and allows for hands-on education in real-world situations.
- 2016 Fall Field Days: September 28th and 29th. Both field days were funded via grants from EPA and Wisconsin DNR.
 - ◊ September 28th Farm Field Day focused on cover crops and implementation from 12:30 until 3 p.m. Topics and Speakers Included:
 - ◊ Ace Helicopters, LLC demonstrated cover crop planting with a helicopter. Rye was seeded into standing corn at a seed rate of 40 lbs/acre.
 - ◊ Elk Mound Seed discussed different cover crop seed varieties.
 - ◊ The University of Wisconsin Integrated Pest Management Specialist discussed insect management.
 - ◊ The University of Wisconsin Biological Systems Engineering Specialist talked about methods for planting cover crops.
 - ◊ Countryside Cooperative talked about weed control and herbicide carryover when selecting certain species.



Ace Helicopters demo, September 28, 2016

2016 Summary Report (continued)

- ◇ September 29th Farm Field day was focused on soil health basics. The field day was held from 10 a.m. to 3 p.m.
- ◇ 24 agronomists, agency staff, and farmers were provided basic soil health training, a toolkit of easy to use soil health tests, and a method to track usage of knowledge gained and fields impacted.
- ◇ Topics included the economic impacts of soil health, processes and management practices to better soil health, and how to measure soil health.
- ◇ This course was partnered with an online course prior to the field day.



Soil Health Field day, September 29, 2016

Educators have been asked to present on several occasions about the Red Cedar Demonstration Farm to organizations in the community as well as for larger conferences including the Red Cedar Watershed Annual Conference, UW-Extension Northwest Regional Conference, Joint Council of Extension Professional Conference, and Wisconsin Associated County Extension Committees Annual Conference.

New Releases/ Articles featuring the Red Cedar Demonstration Farm:

USDA news release: <https://www.usda.gov/media/blog/2016/08/24/partners-conservation-red-cedar-demonstration-farm-offers-hands-education>

Volume One: Wisconsin's Big Idea: http://volumeone.org/articles/2016/09/22/16435_wisconsins_big_idea

Leader Telegram: Chopper plants cover crops seeds at Red Cedar Demo Farm: <http://www.leadertelegram.com/News/Front-Page/2016/09/29/Aerial-coverage.html>

Dunn County Soil and Water Health Partnership Committee Members Include:

Mark Denk: Farm Business Production Management Instructor from Chippewa Valley Technical College (715) 577-3036 mdenk1@cvtc.edu

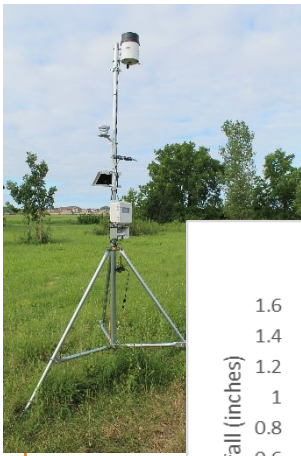
Daniel Prestebak: County Conservationist for Dunn County Division Land and Water Conservation (715) 232-1496, Ext. 2 dprestek@co.dunn.wi.us

John Sippl: District Conservationist from Natural Resources Conservation Service (NRCS) (715) 232-2614 john.sippl@wi.usda.gov

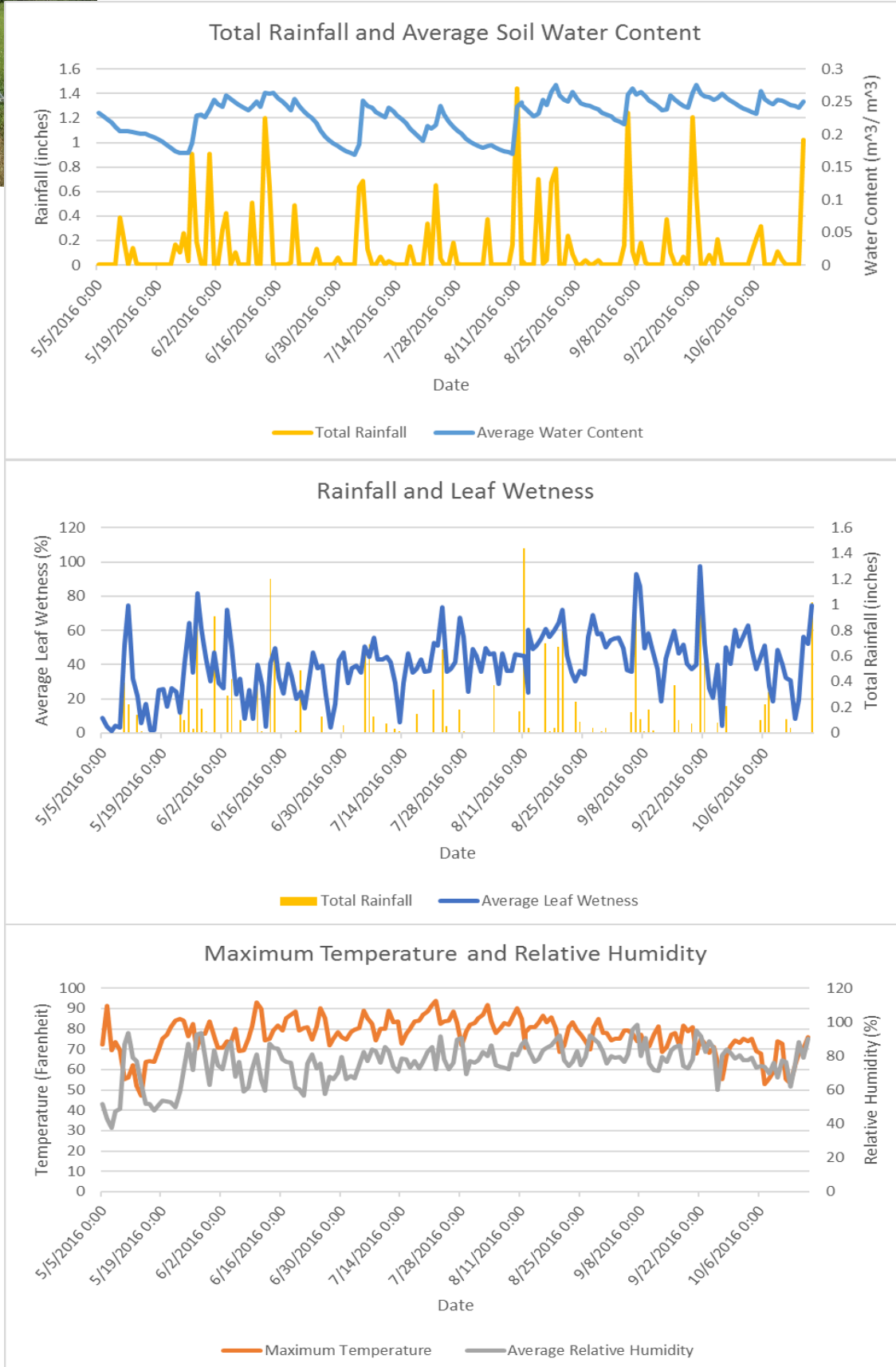
Katie Wantoch: Agricultural Agent for University of Wisconsin—Extension in Dunn County (715) 232-1636 katie.wantoch@ces.uwex.edu

Hobo weather station data for May-October 2016

All data is collected on 10 minute intervals from the HOBO weather station located on the Red Cedar Demonstration Farm.



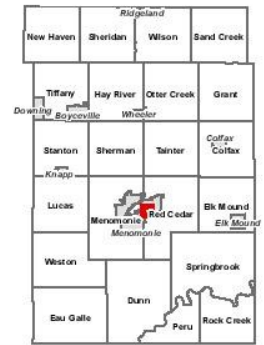
The
HOBO
weather
station



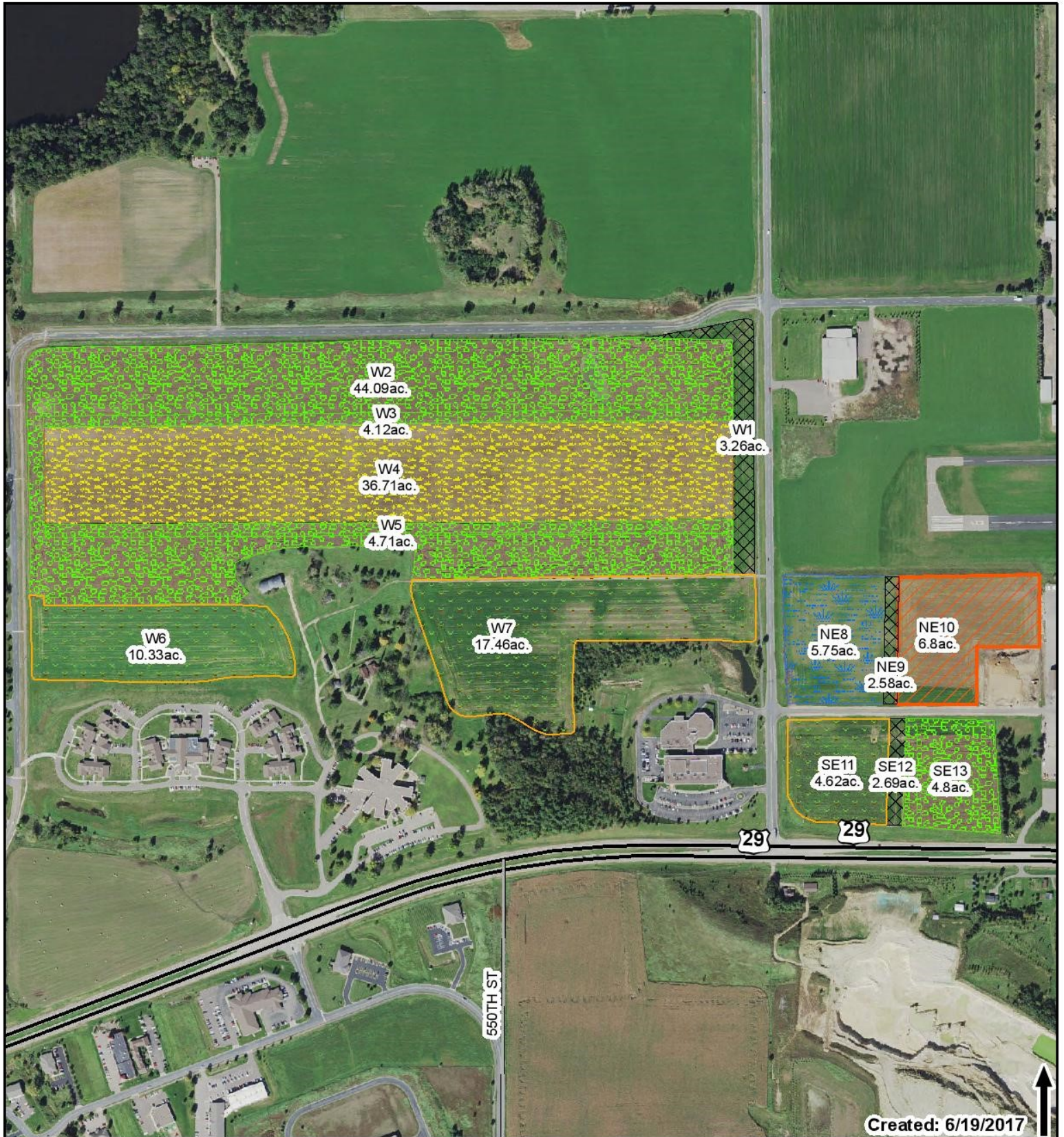


Red Cedar Demonstration Farm 2016 Cropping Map

Section 19, T28N, R12W Town of Red Cedar



- 2016 Crops**
- Oats
 - Corn grain
 - Idle Land
 - Small grain cover crop, not harvested
 - Soybeans to small grain cover crop
 - Winter Rye (grain+straw) to annual cover crop



Created: 6/19/2017

1:7,500 0 0.075 0.15 0.3 Miles

Map Information prepared by the Dunn County Land & Water Conservation Division. Information is believed to be correct but is ADVISORY only. It is based on public records believed to be reliable, but Dunn County distributes this information on an 'AS IS' basis. No warranties are implied.

2015 Imagery