

JULY 26th

10:00 am – 1:00 pm

NEBRASKA EXTENSION

in cooperation with

Local Landowners

Middle Niobrara Natural Resources District

Nebraska Forest Service

NE Department of Environmental Quality

Natural Resources Conservation Service

Nebraska Environmental Trust

will host a

MIDDLE NIOBRARA NRD LONG PINE CREEK WATERSHED CONSERVATION FIELD DAY

Demonstrations & Session Topics:

- Overview of Long Pine Creek Watershed conservation efforts
- Value-added products from cedar tree management
- Soil and water conservation with cedar mulch
- Soil health
- Manure in cropping systems
- Rainfall simulator
- Soil monitoring data

Registration is free!
Lunch will be served.

Register online at
www.surveymonkey.com/r/UNL726

Location

GJW Farms

7½ miles south of Ainsworth on Hwy. 7,
East 2 miles on Richardson Rd., and south
1¼ miles on Grammy's Bumpy Rd.
Follow field day signs.



MIDDLE NIOBRARA
Natural Resources District
Valentine, NE



Nebraska
Department
of Environmental
Quality

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EXTENSION



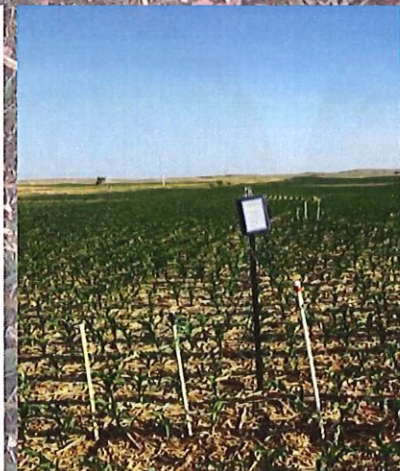
Long Pine Creek Watershed
Improvement Project



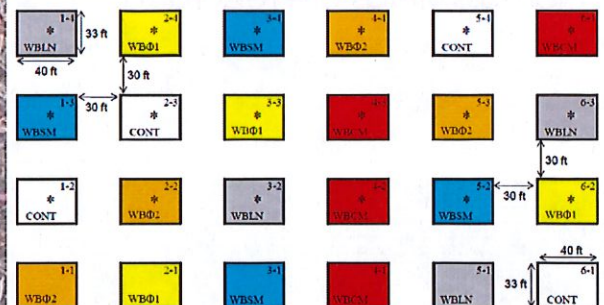
Natural Resources Conservation Service



CropMetrics™
YIELD OPTIMIZATION TECHNOLOGY



Woody Biomass Study Plots



Legend	
WBD1	woody biomass
WBD2	woody biomass, double rate
WBD3	woody biomass, triple rate
WBSM	woody biomass with swine manure
WBLN	woody biomass with liquid nitrogen
CONT	control plot
*	location of soil moisture sensor

Utilization of Woody Biomass as an Agronomic Land Treatment and Conservation Practice in the Middle Niobrara Natural Resources District Long Pine Creek Watershed

PURPOSE

A value-added market for woody biomass (wood chips) generated during management of Eastern Red Cedar and native trees in riparian forests and rangeland is critical to offset the cost to landowners of managing forested areas for fire prevention, invasive plant species control, improving wildlife habitat and ecological preservation.

APPROACH

Utilization of wood chips alone and co-mingled with livestock manure or nitrogen fertilizer is being investigated (since 2015) as a land treatment practice on local landowner crop fields with research focused on evaluating impacts on soil moisture holding capacity, temperature, biology, & other properties that impact crop productivity.

IMPACT

Watershed Quality Management Plan activities in the Long Pine Creek Watershed are focused on improving water and soil quality through implementation of conservation practices by landowners and producers. Woody biomass application to crop land to improve soil quality, conserve water, improve crop productivity, reduce soil & wind erosion, and improve soil/water conservation are practices being assessed.

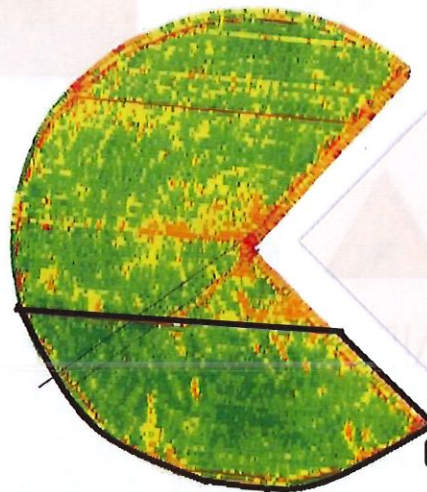


Treatments (listed on other side) were applied in fall 2015 and 2016 on cooperating landowner fields. Soils are sampled following harvest in fall and prior to planting in spring for soil chemical and biological property analyses.

Soil moisture/temperature sensors provide in-season monitoring and crop grain and biomass yields are recorded.

“Essentially, all life depends upon the soil... There can be no life without soil and no soil without life; they have evolved together.”

— Charles E. Kellogg
USDA Yearbook of Agriculture (1938)



Yield monitoring data comparison for corn production under woody biomass + cattle manure application vs. no treatment.

Woody Biomass/Cattle Manure Application