PLANTING # 98
2010 PLANTING HISTORY
Holland Bunk House Planting
Prepared by Cody Considine 12/06/10
Updated:

~34 Acres
Doug Jr. (Hill): 8 acres
BME (Flats, surrounding Doug Jr.): 26 acres

Site Conditions:

Location: T22N R9-10E Section 16
Doug Jr. GPS: 41°54'00.45"N 89° 20'41.60"W, elevation 753ft.
BME (Surrounds Doug Jr.) GPS: 41°53'55.31"N 89° 20'41.45"W, elevation 734ft.

Ogle County IL

Soil Types: According to the Web Soil Survey for Lee County, IL soils include:

Doug Jr. (8 acres, Hill):

403D Elizabeth Loam, 10-18% slopes. Somewhat excessively drained. Parent material: Loamy residuum weathered from limestone and dolomite. Typical profile: 0-12" Loam, 12-60" Bedrock. ~16% of the planting is composed of this soil type.

397D Boone loamy fine sand, 7-15% slopes. Excessively drained. Parent material: Siliceous sandy residuum weathered from sandstone. Typical profile: 0-9" Loamy fine sand, 9-34" Fine sand, 34-60" Bedrock. ~56% of the planting is composed of this soil.

727B Waukee loam, 2-5% slopes. Well Drained. Parent material: outwash. Typical profile: 0-30" Loam, 30-60" Coarse Sand. ~27% of the planting is composed of this soil.

BME (26 acres, flats surrounding Doug Jr.)

102A La Hogue loam, 0-2% slopes. Somewhat poorly drained. Parent material: Outwash. Typical profile: 0-16" loam, 16-26" clay loam, 26-36" sandy clay loam, 36-61" Sandy loam, 61-65" stratified silt loam. ~20% of the planting is composed of this soil.

397D Boone loamy fine sand, 7-15% slopes. Excessively drained. Parent material: Siliceous sandy residuum weathered from sandstone. Typical profile: 0-9" Loamy fine sand, 9-34" Fine sand, 34-60" Bedrock. ~10% of the planting is composed of this soil.

727B Waukee loam, 2-5% slopes. Well Drained. Parent material: outwash. Typical profile: 0-30" Loam, 30-60" Coarse Sand. ~70% of the planting is composed of this soil.

*All of the soils have been under intensive agriculture. Above are basic descriptions, a complete soil test is needed to determine specific soil characteristics. For more additional information see Soil Web Survey website: http://websoilsurvey.nrcs.usda.gov/app/

Topography:
The Holland Bunk House planting has a large hill (Doug Jr.) that has 20' higher in elevation compared to the remainder of the planting which is relatively flat.

Agricultural History:
The planting site has been intensively row cropped for many decades. Corn and soy bean the main crop. No drainage tiles exist in the planting. However, there are drainage tiles in the remaining field that was not planted. These tiles will be removed next year before the field is planted back into prairie.

Site Preparations:
Corn harvested in early October.

1. Burned corn stubble, which burned very well. Almost complete removal of corn litter.

2. Harrowed BME planting (Jeff Benninghoven) same day as planting. Very cold, soil somewhat frozen, completed 95% of the planting before harrow broke. Harrow basically scratched the soil, I would have liked to plant in softer soil before it froze. Doug Jr. did not get harrowed by the larger harrow.

3. BME was planted using three drop seeders. Doug Jr. was planted with the Vicon pendulum broadcast seeder, the small harrow was hooked to the seeder to help drag in the seed.

34 acres planted December 2&3 *–prepared by Heather Baker*

Weather conditions:
Day 1 12/2/10: Cold, soil hard.
Day 2 12/3/10: Cold with frost on ground.

BME: The goal was to cover the planting with two passes of seed. Kimberly Schmidt, Heather Baker, and Trent D began planting on December 2 with the green truck, big red, and the white truck using two 10' seeders and the 12' seeder. Heather, Trent, and Jeffrey finished the morning of December 3. Kimberly and Cody finished Doug Jr. with step in planting that morning as well.

For the first pass of this section, the seeders were filled and opened all the way*. Kimberly, Heather, and Trent began by lining up at the northeast corner of the planting. The trucks were lined up with the first truck on the eastern edge as the lead, then, a second truck following behind to its right, lining its left side seeder tires up with the first truck's right side seeder tires. The third truck lined up behind the second truck, lining its left side seeder tires with the second truck's right side seeder tires. From this corner, the three trucks drove together and began to make concentric circles going clockwise around the planting. At each corner, every truck completed its turn and the right back seeder tire of the third truck was marked with an orange cone or white bucket. This would mark where the first truck would turn and line up for the next circle. The crew did 3 circles around the entire perimeter of the planting before the western side of Doug Jr. was completely covered. This western side of Doug Jr. is much narrower than the other sides of the planting therefore being covered quicker than the rest.

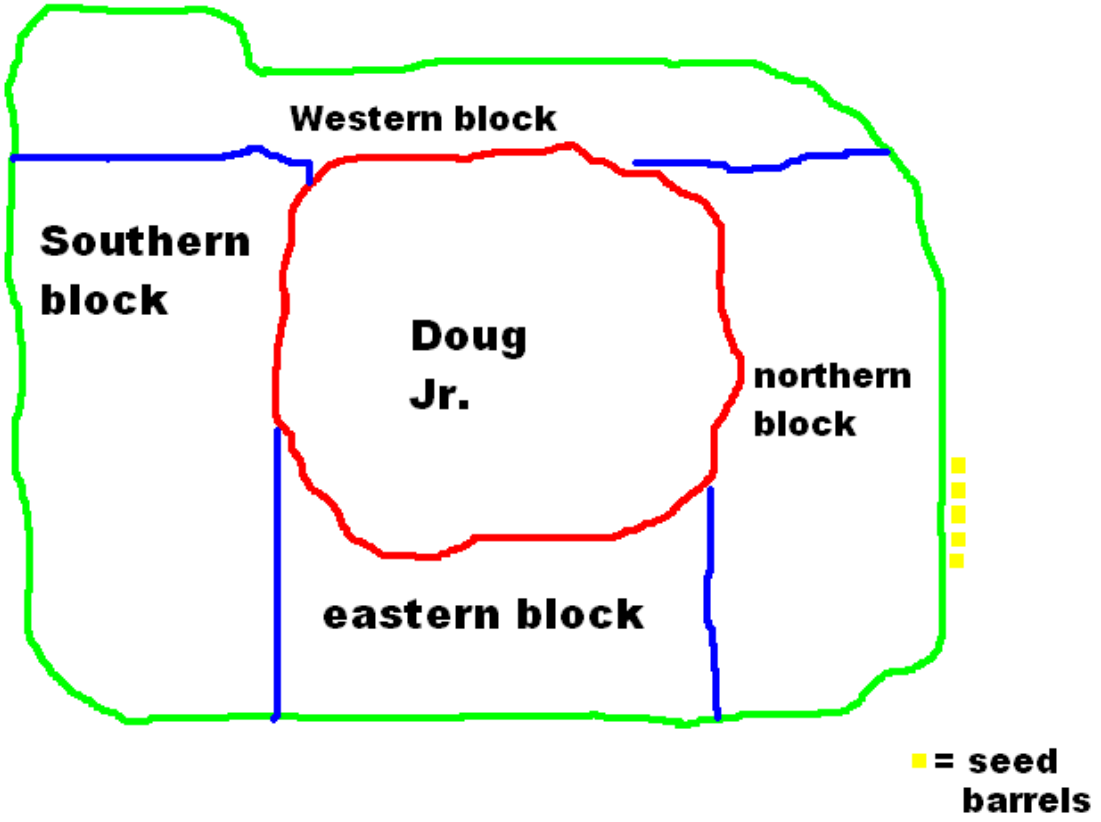
At this point, the crew decided to break the rest of the planting into three blocks; one block south of Doug Jr., One east of Doug Jr., and one to the north (see map below). Each block would be finished driving in a grid pattern back and forth. The trucks would line up with the boarders created by the previous 3 concentric circles

rather than the edges of the planting to avoid overlapping and wasting seed. Before starting, the back right seeder tire of the outside truck was marked with a cone or bucket so that when the crew was coming back the lead truck would have a guide for where to make the next turn. Once the trucks were lined up and the tire marked, all three trucks would drive lengthwise down the block and turn at the end in order to go back the other direction. The lead truck would turn first, using the other trucks as a guide to be sure that they didn't overlap or leave gaps with the next line. Then the second and third trucks followed. Once all trucks completed the turn, the back right tire of the outside truck was marked again to serve as a guide for the next turn. This pattern was repeated until each block was completely covered with seed. They started gridding the southern block first, and at the halfway point decided to close the seeders halfway so that less seed would fall while they were driving. They were concerned that they would not finish 2 passes if they continued seeding with the seeders fully opened. Because the boarders of the Doug Jr. planting were rounded, the crew made sure that no little section was missed or overseeded, which could easily happen by using a grid pattern. This is how the first pass of seed was completed.

For the second pass, the crew again did a grid pattern for the block north of Doug Jr. and the narrow block west of Doug Jr. At this point, the crew decided that they needed to close their seeders even more to conserve seed. At the rate they were going, they were concerned they would not finish two passes. They also agreed that it seemed that doing concentric circles wasted less seed than doing grids as well as provided a different patterning on top of the previous grid pattern to cover the planting more thoroughly. The crew still kept the blocks they sectioned off in the previous pass, but instead of grids did concentric circles in the block east of Doug Jr. and the Block south of Doug Jr. They did the eastern block first, then, moved to the southern block. The crew didn't completely cover the southern block with concentric circles. They came very close, but as they thought they might run out of seed before they finished the circles, they decided that each truck would zig zag in the middle to finish it off. They felt confident that they covered the area thoroughly. This finished the second pass, and the planting of the larger section of the bunk house planting.

*It was later realized that one seeder was disengaged and was not dropping seed as fast as the other two. The problem was fixed when the crew refilled their seeders for the first time.

Map created by Heather



Doug Jr.

Vicon seeder: 1st pass seeder was set at 36, planting following corn stubble rows. 2nd pass seeder was set at 28, planting in concentric rows.

Cody planted Doug Jr. with the Kubota Vicon pendulum broadcast seeder. The 8' smaller harrow/drag was attached to the seeder to increase soil contact. The drag did open the semi frozen soil up for great seed/soil contact. The drag also made it easier to see where I previously seeded. I initially started out doing concentric circles, but after two passes, I concluded to follow the rows of corn stubble as a guide because it wasn't as bumpy. The soil was too hard for the small Kubota tractor riding over the corn stubble rows. The first pass was planted on setting 36

and second pass was 28. I finished two complete passes perfectly. There were some extra passes on top of the hill.

STEP IN (Doug Jr. only)
The "step in" method was created by Jay Stacey. The very conservative or species in low abundance on the preserve were planted using this technique. Kim and Cody planted the step in mix the morning after Doug Jr. was planted 12/3/10. The temperature was well below freezing. Cody drove the Kubota RTV while Kim sprinkled the step in mix on the ground. We focused the step in mix on the top 1/3 of the hill and a small section on the smaller hill to the south east where was very sandy. Ideally I would have preferred non frozen soil, but we had a snow storm forecasted in two days so we did not much time. Next year we will try to get the seed out before Thanksgiving. We set up 4 experimental prairie bush clover plots. *A New Generation of Endangered Prairie Bush Clover, Lespedeza leptostachya, at Nachusa Grasslands* by Kimberly Schmidt is the complete report of this small experiment. Located at the end of this planting history report.

Snow: We received about 6" of snow on 12/5/10.

Buffer
Cody did 2 passes of Canada Rye along the edge of both plantings to thwart the advancement of Canada Goldenrod into the planting.

Seed Planting Mixes:
The two plantings had their own mix. Both mixes were calculated by Cody with advice from Swink and Wilhelm *Plants of the Chicago Region*, Jay Stacey and Bill Kleiman. Doug Junior's mix was formulated to a species recipe that tried to replicate the species composition on the remnant, Doug's Knob, hence the name Doug Jr. Doug Jr. would be considered a dry mix. BME would be considered a dry/mesic mix.

Planting Rate (lbs/acre): BME: 51.99lbs/acre. Doug Jr.:54.875lbs/acre
See seed list for specific rates of species planted.

Seed Species List:
BME: The planting included 104 species. This is the first year I calculated the species seed rate lbs/acre to go into the mix. The proportion of certain species and the rate to plant them has always been a topic discussed between stewards. However, we have never recorded the rate of each species planted in the planting

histories. This information can still be calculated in past plantings if the amount of each species was recorded. The species planting rate should help determine future specific rates of species and how much we time we need to focus on that particular species during the collecting season. Overtime, we should have a better understanding of the amount at which to plant certain species.

SCIENTIFIC NAME	COMMON NAME	Doug Jr. 8 acres lbs/acre	BME 26 acres lbs/acre	Step in Mix Doug Jr. lbs/acre
Allium cernuum	Nodding Wild Onion	0.375	0.099	
Amelanchier leavis	Allegheny Shadblow	0.001	0.000	
Amorpha canescens	Leadplant	1.000	1.071	1.800
Amorpha fruticosa	Indigo Bush	0.000	0.136	
Andropogon (Schizachyrium) scoparium	Little Bluestem	5.000	4.762	
Anemone cylindrica	Thimbleweed	0.063	0.420	
Antennaria neglecta	Field Cat's Foot	0.001	0.001	
Antennaria plantaginifolia	Pussy Toes (Everlasting)	0.275	0.233	
Apocynum cannabinum (X medium)	Dogbane (Indian Hemp)	0.000	0.014	
Aristida purpurascens	Arrow Feather	0.006	0.002	
Artemisia caudata (campestris)	Beach Wormwood	0.000	0.357	
Asclepias verticillata	Whorled Milkweed	0.163	0.167	
Aster azureus (oolentangiensis)	Sky-blue Aster	0.313	0.229	
Aster ericoides (prostratus)	Heath Aster	0.438	0.376	
Aster laevis	Smooth (Blue) Aster	0.275	0.236	
Aster linariifolius	Stiff Aster (Flax-Leaved)	0.688	0.010	0.056
Aster novae-angliae	New England Aster	0.000	0.062	
Aster oblongifolius	Aromatic Aster	0.275	0.005	
Aster ptarmicoides	White Aster (Stiff Aster)	0.006	0.000	
Aster sericeus	Silky Aster	0.100	0.065	
Astragalus canadensis	Canadian Milk Vetch	0.000	0.357	
Baptisia leucantha	White Wild Indigo	3.125	5.575	
Baptisia leucophaea	Cream Wild Indigo	1.000	0.214	
Bouteloua curtipendula	Side-Oats Grama	0.625	0.480	
Bouteloua hirsuta	Hairy Grama	0.000	0.000	0.006
Bromus kalmii	Prairie brome	0.003	0.001	
Cacalia atriplicifolia	Pale Indian Plantain	0.000	0.048	
Cacalia plantaginea (tuberosa)	Indian Plantain	0.000	0.052	
Callirhoe triangulata	Clustered Poppy Mallow	0.025	0.005	0.025
Carex bicknellii	Copper-shouldered oval Sedge	0.250	0.215	
Cassia fasciculata	Partridge Pea	0.063	0.081	
Castilleja sessiliflora **	Downy Yellow Painted Cup	0.000	0.000	0.075
Chrysopsis camporum (Heterotheca)	Golden Prairie Aster	0.125	0.048	
Cirsium hillii *** (pumilum)	Hill's Thistle	0.000	0.000	0.001
Coreopsis lanceolata	Sand Coreopsis	0.013	0.000	

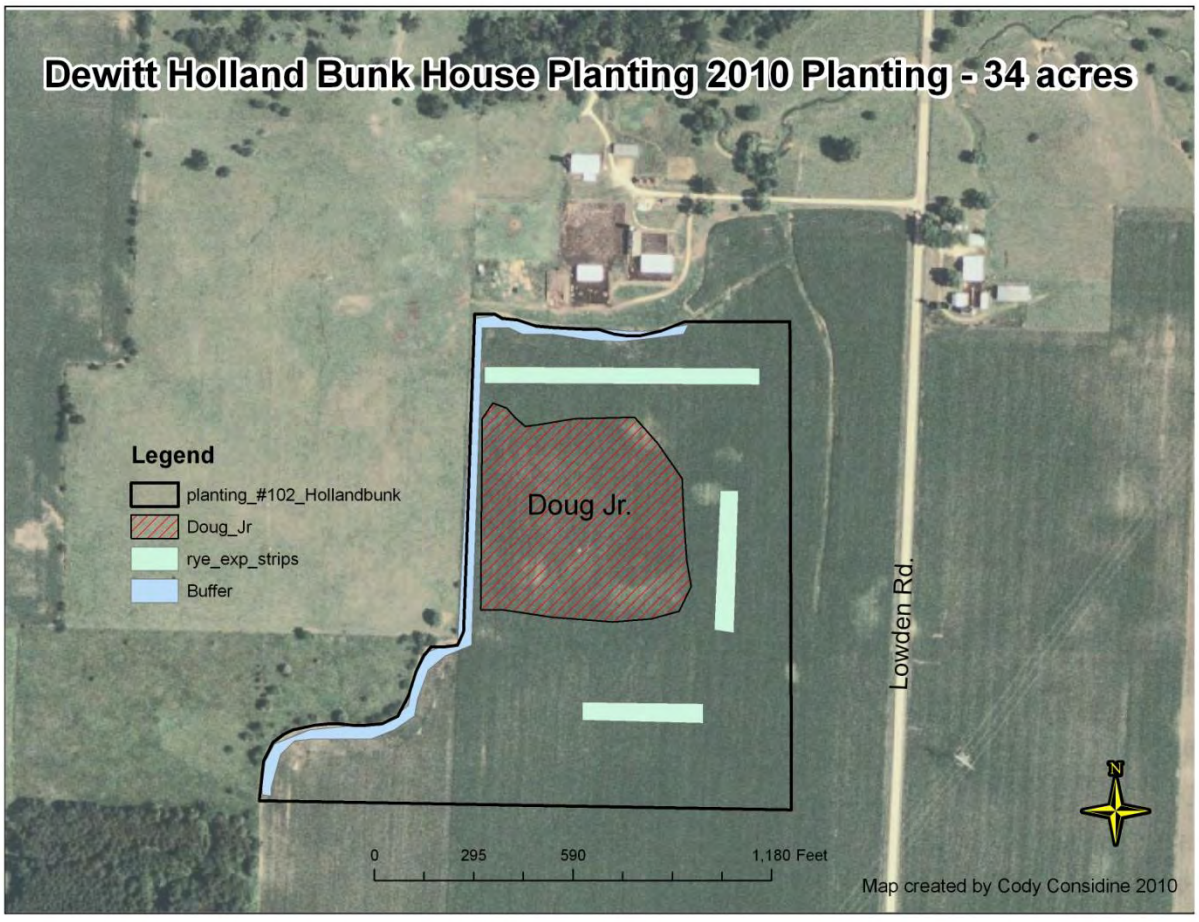
Coreopsis palmata	Prairie Coreopsis	0.563	0.476	
Coreopsis tripteris	Tall Coreopsis	0.038	0.349	
Corylus americana	American Hazelnut	0.000	0.021	
Cyperus filiculmis	Slender Sand Sedge	0.000	0.000	0.023
Danthonia spictata	Poverty Oat Grass	0.369	0.000	
Desmodium canadense	Showy Tick Trefoil	0.000	0.001	
Desmodium illinoense	Ill. Tick Trefoil	0.125	0.446	
Dodecatheon meadia	Shooting Star	0.625	0.048	0.063
Echinacea pallida	Pale Purple Coneflower	8.250	7.848	
Eragrostis spectabilis	Purple Love Grass	0.031	0.006	
Erigeron strigosus	Daisy Fleabane	0.038	0.208	
Eryngium yuccifolium	Rattlesnake Master	0.750	0.808	
Eupatorium perfoliatum	Boneset	0.013	0.135	
Eupatorium purpureum	Purple Joe-Pye Weed	0.000	0.177	
Euphorbia corollata	Flowering Spurge	0.750	0.695	
Gaura biennis pitcheri (longiflora)	Common Gaura	0.000	0.001	
Gentiana (alba) flavida	Cream Gentian	0.050	0.010	
Gentiana purberulenta	Prairie Gentian	0.075	0.007	0.038
Geum triflorum	Prairie Smoke (Long-plumed Purple Avens)	0.000	0.000	0.001
Gnaphalium obtusifolium	Sweet Everlasting (Old-Field Balsam)	0.050	0.038	
Helianthemum canadense	Common Rockrose (Frostweed)	0.150	0.140	
Helianthus occidentalis	Western Sunflower; Naked S.	0.594	0.525	
Helianthus rigidus (laetiflorus)	Prairie Sunflower	0.038	0.025	
Heliopsis helianthoides	False Sunflower; " Ox-eye "	0.038	0.076	
Heuchera richardsonii grayana	Rough Heuchera; Alum root	0.000	0.000	
Hieracium gronovii	Hairy Hawkweed	0.000	0.004	
Houstonia (Hedyotis) longifolia (canadense)	Long-Leaved Bluets	0.000	0.000	0.019
Hystrix patula (Elymus hystrix)	Bottlebrush Grass	0.000	0.000	
Juncus dudleyi	Dudley's Rush	0.000	0.000	0.001
Juncus greenei	Greene's Rush	0.000	0.000	0.001
Juncus interior	Inland Rush	0.038	0.035	
Koeleria cristata (macrantha)	Prairie June Grass	1.625	1.483	
Krigia biflora	Two-flowered Cynthia (False Dandelion)	0.000	0.000	0.001
Kuhnia (Brickellia) eupatoroides corymbulosa	False Boneset	0.063	0.307	
Leachea minor		0.022	0.000	
Lechea stricta	Bushy Pinweed	0.038	0.010	
Lechea tenuifolia	Slender-Leaved Pinweed	0.063	0.054	0.063
Lechea villosa (mucronata)	Hairy Pinweed	0.063	0.064	0.063
Lespedeza capitata --	Round-headed Bush Clover	1.000	3.874	
Lespedeza leptostachya ****	Prairie Bush Clover	0.000	0.000	0.001
Liatris aspera	Rough Blazing-star (Rough Gayfeather)	3.750	3.485	
Liatris cylindracea	Dwarf Blazingstar	0.000	0.000	0.088
Liatris pycnostachya	Tall Gayfeather; Prairie Blazing Star	1.000	0.974	
Linum sulcatum	Groved Yellow Flax	0.063	0.001	0.050
Lithospermum canescens	Hoary Puccoon	0.000	0.000	0.001

Lithospermum incisum	Fringed (Narrow-leaved) Puccoon	0.000	0.000	0.001
Lupinus perennis	Wild Lupine	0.000	0.000	
Monarda fistulosa	Wild Bergamot	0.000	0.000	
Monarda punctata villicualis	Horse Mint	0.044	0.042	
Oenothera biennis canescens	Common Evening Primrose	0.000	0.039	
Oenothera clelandii (rhombipetala)	Sand Evening Primrose	0.013	0.000	
Onosmodium hispidissimum	Marbleseed	0.056	0.024	
Opuntia humifusa (compressa)	Prickly Pear Cactus	0.001	0.000	0.013
Oxalis violacea	Violet Wood-sorrel	0.001	0.000	0.006
Panicum leibergii	Prairie Panic Grass	0.063	0.046	
Panicum oligosanthes scribneria	Scribner's Panic Grass	0.063	0.057	
Panicum villosissimum	White-Haired Panic Grass	0.001	0.000	
Panicum virgatum	Prairie Switch Grass	0.001	0.000	
Parthenium integrifolium	Wild Quinine (Feverfew)	3.125	2.452	
Penstemon digitalis	Foxglove Beardtongue	0.000	0.130	
Penstemon hirsutus	Hairy Beard tongue	0.188	0.015	
Petalostemum (Dalea) candidum	White Prairie Clover	0.813	0.763	
Petalostemum (Dalea) purpureum	Purple Prairie Clover	3.750	2.948	
Phlox pilosa	Prairie phlox	0.001	0.005	0.031
Physocarpus opulifolius	Ninebark	0.000	0.096	
Physostegia virginiana arenaria	Prairie Obedient Plant	0.000	0.000	
Polygala sanguinea	Field Milkwort	0.000	0.001	
Polytaenia nuttallii	Prairie Parsley	0.001	0.000	
Potentilla arguta	Prairie Cinquefoil	0.001	0.238	
Prunus americana	Wild Plum	0.000	0.025	
Pycnanthemum virginianum	Mountain mint (Prairie Hyssop)	0.000	0.782	
Ratibida pinnata	Yellow Coneflower	0.000	0.048	
Rhus aromatica	fragrant sumac	0.005	0.015	0.003
Rosa carolina	Pasture Rose	0.438	0.407	
Rudbeckia hirta	Black-eyed Susan	0.000	0.206	
Rudbeckia subtomentosa	Sweet Blackeyed Susan	0.000	0.083	
Ruellia humilis	Wild Petunia	0.225	0.012	
Senecio plattensis	Prairie Ragwort	0.031	0.036	
Silphium integrifolium	Rosinweed	0.000	0.518	
Silphium laciniatum	Compass plant	0.500	1.679	
Silphium perfoliatum	Cup-plant	0.000	0.178	
Silphium terebinthaceum	Prairie Dock	0.375	1.136	
Sisyrinchium albidum	Common Blue-eyed Grass	0.038	0.012	0.038
Solidago (Euthamia) graminifolia nuttallii	Grass-leaved Goldenrod	1.250	1.173	
Solidago missouriensis fasciculata	Missouri Goldenrod	0.500	0.350	
Solidago nemoralis	Gray Goldenrod; Oldfield	0.856	0.593	
Solidago rigida	Stiff Goldenrod	0.025	0.048	
Solidago speciosa	Showy Goldenrod	0.375	0.426	
Spiranthes lacera	Slender Ladies Tresses	0.000	0.000	0.001
Sporobolus heterolepis	Prairie Dropseed	1.000	0.370	0.063
Stipa spartea	Porcupine Grass	0.000	0.011	0.056
Tephrosia virginiana	Goat's Rue	0.625	0.389	

Tradescantia ohiensis	Ohio Spiderwort	3.088	2.875	
Triosteum perfoliatum	Horse Gentian	0.025	0.024	
Verbena stricta	Hoary Vervain	0.125	0.335	
Verbena urticifolia	Hairy White Vervain	0.000	0.112	
Veronicastrum virginicum	Culver's Root	0.000	0.014	
Viola fimbriatula	Sand Violet	0.000	0.000	0.001
Viola pedata lineariloba	Birdsfoot Violet	0.000	0.000	0.006
Wulfenia bullii *** (Besseya)	Kittentails	0.000	0.000	
Zizia aptera	Heart-leaved Meadow Parsnip	0.006	0.000	
Zizia aurea	Golden Alexanders	0.500	0.476	
Little blue mixed with thimble		1.375	1.571	

Map:

The planting map is also saved in the planting history folder: planting history #102 as a jpeg or the GIS folder under plantings #102



Kimberly, Trent, and Heather planting the 26 acres at the Holland Bunk House Planting.

Visual of the soil on Doug Jr. Planting. Note very little corn stubble.

Lessons Learned

Try to plant before Thanksgiving. The soil was starting to freeze, very cold weather.

Soil Map—Ogle County, Illinois
(Holland Bunkhouse Planting)

10+-
14 A. humilis - S, SE slopes, 1 sm. group lower NW slope
16 C. rotundifolia - 2 pots of 8, top
48 - Prairie Smoke - 3 pots of 10 or so, top
70± Viola - 3 pots, (10-10-14?) top east
12 A. tuberosa - 2 pots top NE
1 plum - mid slope, SSW
3 carex, amorpha: top

PLANTED PLUGS
FALL 2011

UNITED SOILS, INC.

108 South Crystal Lane • P.O. Box 226 • Fairbury, IL 61739
Phone 815-692-2626 • Fax 815-692-4483

OPERATOR: . NAPHUSA
FIELD: NAPHUSA GRASSLANDS
ACRES: 0

LAB#: 43594-99 (2356)
DATE: 05/24/2013
SUBMITTED BY: GLENDENNING FERTILIZER INC.

SOIL TEST RESULTS

SAMPLE #	SOIL pH	BUFFER pH	PHOSPHORUS lbs/A	POTASSIUM lbs/A	CALCIUM lbs/A	MAGNESIUM lbs/A	ORGANIC MATTER %	CATION EXCHANGE CAPACITY	BASE SATURATION % Ca	% Mg	% K	% H
HOLND FLAT	5.7	-	100	376	-	-	2.9	-	-	-	-	-
HOL FLAT S	5.6	-	138	352	-	-	2.9	-	-	-	-	-
N DOUG	5.7	-	250	428	-	-	2.9	-	-	-	-	-
S DOUG	5.2	-	250	200	-	-	2.6	-	-	-	-	-
S THISTLE	6.2	-	250	784	-	-	2.9	-	-	-	-	-
N THISTLE	6.3	-	176	448	-	-	2.9	-	-	-	-	-
AVERAGE	5.8	-	194	431	-	-	2.9	-	-	-	-	-

PH AVE. 5.7 EXTRACTED SAMPLES: 6,
P1 AVE. 157 EXTRACTED SAMPLES: 1, 3, 4, 5,
K AVE. 401 EXTRACTED SAMPLES: 4, 5,

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features
- Cities

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:3,630 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 16N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Ogle County, Illinois
Survey Area Data: Version 8, Jan 7, 2010

Date(s) aerial images were photographed: 6/20/2007

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Ogle County, Illinois (IL141)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
102A	La Hogue loam, 0 to 2 percent slopes	8.5	26.3%
397D	Boone loamy fine sand, 7 to 15 percent slopes	6.4	19.8%
403D	Elizabeth loam, 10 to 18 percent slopes	1.1	3.5%
727B	Waukee loam, 2 to 5 percent slopes	16.3	50.4%
Totals for Area of Interest		**32.4**	**100.0%**