

PLANTING #91

2009 PLANTING HISTORY

Stone Barn Prairie

Prepared by Cody Considine 12/9/09

Updated:

~20 Acres

Site Conditions:

Location: T22N R10E Section 14

GPS: 41°53'26.68"N 89° 18'36.29"W elevation 816ft.

Lee County IL

Soil Types:

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

#440B Jasper Loam, two to five percent slopes. Very dark gray loam, moderate medium and fine granular structure. 40% of planting

#106B Hitt sandy loam, two to five percent slopes. Sandy loam, moderate fine and very fine granular structure. 58% of planting.

#503B Rockton silt loam, two to five percent slopes. Silt loam, moderate very fine and fine granular structure.

*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:

Stone Barn Prairie is relatively flat with slight topographic variances.

Agricultural History:

I think it is safe to assume 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.

Site Preparations:

Corn harvested in early November.

1. Burned corn stubble, which burned very well.
 2. Harrowed unit (Chris Sonnier)
 3. Planted
- (#2 and # 3 done in the same day)

Seed Planting:

The planting was planted with one mix: dry and dry mesic. Weather conditions: slight mist/moist soil.

Planting Rate (lbs/acre): **45.19 lbs/acre**

20 acres planted November 18 & 19, 2009 –prepared by Mike Saxton

The Stone Barn Farm was in corn row crop for harvest 2009. We burned the corn stubble and harrowed before planting. The 20 acre planting is bordered on the North, South, and West by CRP grassland and by row crop corn to the East.

Brian Dugan and Mike Saxton planted the remaining acreage with the 10-foot and 12-foot antique seed spreaders, pulled by the White Truck and Little Red. Using the rows of corn stubble as their guide and communicating with hand held two-way radios, Mike and Brian worked counter clockwise around the planting. They made 2 complete passes around the entire planting and a 3rd partial coverage pass.

The 10-foot seed spreader has two settings for seed rate. We call them “half” and “full.” We matched the 10-foot and 12-foot spreaders to the same seed rate and did one full pass on “half.” A second pass was made on “full.” There was not enough seed remaining to do a complete pass on “half,” so Brian and Mike concentrated on expending the remaining seed on the parameter and then making sweeping passes running the full length of the planting. They felt that almost the entire planting received a full 3rd pass on “half.”

The method/system Mike and Brian employed was to have a lead truck followed on the inside by the other truck. At each corner, the two trucks completed the turn and then the inside truck marked with flagging tape the inside tire of the seed spreader. On the next pass, the lead truck would take the turn so that the outside tire of the seed spreader hit the flagging tape. The inside truck again marked the inside wheel of the seed spreader with marking tape. This continued round after round. They planted the first two full passes in this manner, feeling very confident of equal coverage for the entire planting. On the third “partial” pass, Mike and Brian drove at a higher rate of speed and used the corn rows to make sweeping east-west passes over the whole planting.

Buffer

Cody Considine did 3 passes of Can Rye/tallgrass mix around the entire perimeter.

Drag IN

10 lbs of “drag in” The “step in” method was created by Jay Stacey, but modified to “drag in” for crew size plantings. The very conservative or species in low abundance on the preserve were planted using this technique. See plant list for a complete list of “step in” species. This technique required two people. We tried using the new RTV but could not handle pulling the drag. We switched to the white $\frac{3}{4}$ ton truck. One person sat on the back with the seed bucket and sprinkled seed onto the ground before the new 8’ harrow passed over it. We planted all the conservative and rare species in a couple hours compared to actually stepping them in which took us a couple weeks last year. I was pleased to see the seed hit the ground and get lightly covered by the harrow. This was enjoyable. Porcupine grass was planted the same.

Seed List:

The planting included 155 species that were separated into one mix: dry, dry mesic, with a small portion of mesic mix.

Little blue stem was planted at 3.44 lbs/acre. Our seed stripper broke down along with the combine. We managed to get some seed before this equipment broke. Mechanical seed harvest was down this year. We added some combine HQ to the planting, some little blue was present. Tallgrass was planted at 2.5lbs/acre. However, this is not pure tallgrass as other species were present.

Complete seed list is saved as 2009 Seed Harvest in Stewardship file under seeds, seed harvest.

Here is a list of the highlights from the 2009 harvest. However, not all the seeds amounts were planted in the planting. See excel spreadsheet for specific rates of seed.

- Arrow leaved violet – 5 x more than in years past
- Zizia aurea – Doubled
- Spiderwort – doubled 135lbs
- Drop seed – 5 x more
- Old field – doubled 47 lbs
- Grass leaved – doubled 60 lbs
- Prairie dock – 2.5 x more 45 lbs
- Wild petunia – 40 x more 4.71 lbs
- Quinine – record
- Flowering spurge – doubled record 37 lbs
- Pale purple coneflower – record 252.85 lbs
- Bicknell sedge – record
- Can. milk vetch – record
- Whorled milkweed – record 19.5 lbs

Below is a list of all the species and weight for 50 acres (Stonebarn and Holland)

SCIENTIFIC NAME	COMMON NAME	2009 TOTAL LBS
Amelanchier leavis	Allegheny Shadblow	0.01
Callirhoe triangulata	Clustered Poppy Mallow	0.01
Corylus americana	American Hazelnut	0.01
Desmodium canadense	Showy Tick Trefoil	0.01
Elymus villosus	Silky Wild Rye	0.01
Krigia virginica	Dwarf Dandelion	0.01
Penstemon digitalis	Foxglove Beardtongue	0.01
Phlox maculata	Sweet William Phlox	0.01
Phlox pilosa	Prairie phlox	0.01
Ratibida pinnata	Yellow Coneflower	0.01
Rhus aromatica	fragrant sumac	0.01
Aster ptarmicoides	White Aster (Stiff Aster)	0.05
Panicum leibergii	Prairie Panic Grass	0.05
Polygala polygama obtusata	Purple Milkwort	0.05
Smilacina stellata	Starry False Solomons plume	0.05
Cirsium hillii *** (pumilum)	Hill's Thistle	0.06
Lithospermum canescens	Hoary Puccoon	0.06
Amorpha canescens	Leadplant	0.1
Aster praealtus	Willow Aster	0.1
Helianthemum canadense	Common Rockrose (Frostweed)	0.1

Hystrix patula (Elymus hystrix)	Bottlebrush Grass	0.1
Leptoloma cognatum	Fall Witch Grass	0.1
Lobelia inflata	Indian Tobacco	0.1
Monarda fistulosa	Wild Bergamot	0.1
Oenothera biennis canescens	Common Evening Primrose	0.1
Oenothera clelandii (rhombipetala)	Sand Evening Primrose	0.1
Panicum virgatum	Prairie Switch Grass	0.1
Polygala sanguinea	Field Milkwort	0.1
Polygonum tenue	Slender Knotweed	0.1
Antennaria neglecta	Field Cat's Foot	0.15
Asclepias hirtella	Hairy Green Milkweed	0.15
Lactuca floridana	Blue Lettuce	0.15
Lupinus perennis	Wild Lupine	0.15
Panicum villosissimum	White-Haired Panic Grass	0.15
Wulfenia bullii *** (Besseyia)	Kittentails	0.15
Paspalum ciliatifolium muhlenbergii	Hairy Lens Grass	0.2
Polytaenia nuttallii	Prairie Parsley	0.2
Anemone canadensis	Meadow Anemone	0.25
Gentiana purberulenta	Prairie Gentian	0.25
Linum sulcatum	Groved Yellow Flax	0.25
Scutellaria parvula leonardi	Small Skullcap	0.25
Viola sagittata	Arrow-leaved violet	0.25
Asclepias tuberosa interior	Butterfly Weed	0.3
Heuchera richardsonii grayana	Rough Heuchera; Alum root	0.3
Agrostis hymenalis	Tickle Grass	0.35
Gaura biennis pitcheri (longiflora)	Common Gaura	0.35
Lobelia spicata	Pale-spike Lobelia	0.35
Bouteloua hirsuta	Hairy Grama	0.4
Coreopsis lanceolata	Sand Coreopsis	0.4
Hieracium gronovii	Hairy Hawkweed	0.45
Zizia aptera	Heart-leaved Meadow Parsnip	0.45
Houstonia (Hedyotis) longifolia (canadense)	Long-Leaved Bluets	0.5
Rudbeckia subtomentosa	Sweet Blackeyed Susan	0.5
Viola pedata lineariloba	Birdsfoot Violet	0.55
Gentiana andrewsii	Bottle (or Closed) Gentian	0.6
Monarda punctata villicualis	Horse Mint	0.6
Oxalis violacea	Violet Wood-sorrel	0.6
Aristida purpurascens	Arrow Feather	0.66
Cacalia suaveolens	Sweet-scented Indian Plantain	0.7
Liatris cylindracea	Dwarf Blazingstar	0.7
Lysimachia lanceolata	Lance-Leaved Loosestrife	0.75
Cyperus filiculmis	Slender Sand Sedge	0.9
Stipa spartea	Porcupine Grass	0.95
Artemisia caudata (campestris)	Beach Wormwood	9
Senecio pauperculus	Balsam Ragwort	1
Erigeron annuus	Annual Fleabane	1.05
Helianthus rigidus (laetiflorus)	Prairie Sunflower	1.1
Sisyrinchium albidum	Common Blue-eyed Grass	1.15

Solidago rigida	Stiff Goldenrod	1.35
Aster oblongifolius	Aromatic Aster	1.4
Penstemon hirsutus	Hairy Beard tongue	1.4
Allium cernuum	Nodding Wild Onion	1.5
Apocynum sibiricum	Prairie Indian Hemp	1.55
Castilleja sessiliflora **	Downy Yellow Painted Cup	1.75
Eupatorium perfoliatum	Boneset	1.75
Juncus tenuis	Path Rush	1.75
Smilacina racemosa	Solomons Plume	1.75
Gentiana (alba) flavida	Cream Gentian	1.8
Aster sericeus	Silky Aster	1.85
Lechea tenuifolia	Slender-Leaved Pinweed	2.25
Panicum oligosanthos scribneria	Scribner's Panic Grass	2.25
Aster laevis	Smooth (Blue) Aster	2.3
Liatris pycnostachya	Tall Gayfeather; Prairie Blazing Star	2.3
Cassia fasciculata	Partridge Pea	2.35
Coreopsis tripteris	Tall Coreopsis	2.45
Heliopsis helianthoides	False Sunflower; " Ox-eye "	2.8
Physocarpus opulifolius	Ninebark	3.15
Chrysopsis camporum (Heterotheca)	Golden Prairie Aster	3.2
Danthonia spicata	Poverty Oat Grass	3.25
Lechea villosa (mucronata)	Hairy Pinweed	3.5
Petalostemum (Dalea) candidum	White Prairie Clover	3.6
Dodecatheon meadia	Shooting Star	3.8
Solidago missouriensis fasciculata	Missouri Goldenrod	3.8
Juncus greenei	Greene's Rush	4.25
Onosmodium hispidissimum	Marbleseed	4.5
Ruellia humilis	Wild Petunia	4.7
Stachys palustris homotricha	Woundwort	4.7
solidago miss, oldfield, grassleaved		5.2
Sporobolus heterolepis	Prairie Dropseed	5.3
Veronicastrum virginicum	Culver's Root	5.45
Anemone cylindrica	Thimbleweed	5.85
Lechea stricta	Bushy Pinweed	6.5
Coreopsis palmata	Prairie Coreopsis	6.55
TCP mix		7
Kuhnia (Brickellia) eupatoroides		
corymbulosa	False Boneset	7.1
Tephrosia virginiana	Goat's Rue	7.35
Desmodium illinoense	Ill. Tick Trefoil	7.5
Antennaria plantaginifolia	Pussy Toes (Everlasting)	7.55
Aster linariifolius	Stiff Aster (Flax-Leaved)	7.6
Eragrostis spectabilis	Purple Love Grass	7.75
Rudbeckia hirta	Black-eyed Susan	8
Verbena stricta	Hoary Vervain	8.2
Silphium integrifolium	Rosinweed	8.4
Amorpha fruticosa	Indigo Bush	8.6
Solidago speciosa	Showy Goldenrod	8.95
Baptisia leucophaea	Cream Wild Indigo	9.4

Triosteum perfoliatum	Horse Gentian (Feverwort)(Tinker's Weed)	9.45
Asclepias verticillata	Whorled Milkweed	10
Gnaphaleum obtusifolium	Sweet Everlasting	10.25
Helianthus occidentalis	Western Sunflower; Naked S.	10.5
Silphium perfoliatum	Cup-plant	11.5
Aster azureus (oolentangiensis)	Sky-blue Aster	12.05
Aster ericoides (prostratus)	Heath Aster	13.2
Bouteloua curtipendula	Side-Oats Grama	13.95
Rhus glabra	Smooth Sumac	14
Rosa carolina	Pasture Rose	15.25
Aster mix: silky, smooth, sky blue		16.1
Eryngium yuccifolium	Rattlesnake Master	19.2
Carex bicknellii	Copper-shouldered oval Sedge	21.4
Zizia aurea	Golden Alexanders	22.25
CCK Mix - monarda, foxglove, false sunflower, etc		28.6
Wahl Prairie mix: lead plant, golden aster, slender pinweed,		29.8
Wahl prairie continued above: Callirhoe,fragrant sumac, etc		
Pycnanthemum virginianum	Mountain mint (Prairie Hyssop)	16
Euphorbia corollata	Flowering Spurge	37.95
Silphium laciniatum	Compass plant	42.05
Silphium terebinthaceum	Prairie Dock	45
Solidago nemoralis	Gray Goldenrod; Oldfield	46.95
Solidago (Euthamia) graminifolia nuttallii	Grass-leaved Goldenrod	60.71
Parthenium integrifolium	Wild Quinine (Feverfew)	65.1
Koeleria cristata (macrantha)	Prairie June Grass - 54.65	68.9
Liatris aspera	Rough Blazing-star (Rough Gayfeather)	74.5
Petalostemum (Dalea) purpureum	Purple Prairie Clover	82.05
Astragalus canadensis	Canadian Milk Vetch	91.6
Elymus canadensis	Prairie Wild Rye	116.5
Baptisia leucantha	White Wild Indigo	131.1
Tradescantia ohiensis	Ohio Spiderwort	135.8
Lespedeza capitata --	Round-headed Bush Clover	142.11
Echinacea pallida	Pale Purple Coneflower	252.85
Combine Headquarters		94
Combine Little blue yellow house		64.4
Andropogon (Schizachyrium) scoparium	Little Bluestem	78.55
Tall grass mix		31
Little blue seed stripper		50

Map:



Photos:



Mike Saxton and Brian Dugan are ready to plant Stone Barn Prairie, the 1st planting done east of Carthage road.





Lessons Learned:

The 2009 Stone Barn Prairie planting was done without trouble. Much of this is credited to having a good crew. Mike Saxton, Brian Dugan, and Chris Sonnier were invaluable based on their previous experience and fortitude when it came time to plant. For example, the site prep and planting took place in one day.

Having two planters was great! We will never go back to one planter. The “drag in” method also worked very well.

Now we wait and see if this trouble free planting will produce.