
Planting 65

West portion of the “north field” in the Clear Creek Unit

Text and Map by Chris Hauser

September 24, 2008

Site Description:

Location:

Planting # 65 is located on the southern edge of Ogle County in Taylor Township (T22N, R10E). This is in the NW quarter of the SE quarter of Section 15. This approximately 4-acre rectangular planting is located in the west 5 acres of the “north field” at the north boundary of the 80-acre Clear Creek Unit. The west boundary is the old gravel driveway that accessed the homesite. The north boundary is the fenceline along Stone Barn Road, which at the time of planting was mostly smooth brome and reed canary grass. The east boundary cuts through the middle of the field, and was marked with wire flags at the time of planting. The southwest boundary is formed by a small grove of weedy trees.

These approximate coordinates were obtained from Google Earth:

NW corner: N 41°53'42", W 89°19'44"

SW corner: N 41°53'32", W 89°19'45"

SE corner: N 41°53'33", W 89°19'37"

Soils and Topography:

This planting area consisted of two approximately equal areas of soil type: (1) a dry-mesic slope, and (2) a mesic flat area. Within these 2 areas, there were two small micro-sites: a small wet spot, and a small dry sand area:

1. “dry-mesic slope”: about 2.5 acres of light-colored subsoil on a southwest-facing slope in the NE corner of the field. I considered this portion of the planting to be mostly dry-mesic, with one half-acre of very dry sandy soil.
2. “mesic flat”: about 2.5 acres of darker and finer textured soil on flat ground parallel to the riparian corridor along the SW boundary of the field. Due to the flat dark soil, and proximity to the creek, I considered this portion to be mesic.
3. “wet spot”: about 1000 square feet of what may have been a seep or spring, but was partially drained by a field tile in years past. This moist spot shows up as a dark spot in all aerial photos, and may regain its wetland hydrology following the removal of the field drain tiles in spring 2007.
4. “dry sand”: on the steepest, sandiest portion of the south-facing “dry-mesic slope” there about a quarter acre of very well drained dry sandy soil. In this area, I hand seeded a few dry species, such as porcupine grass and golden aster. These dry sandy areas show up as white spots on the aerial photo.

Site History:

The presettlement history of this field was investigated using the General Land Office 1839 survey records, which show this field to be prairie. I would imagine the dry hill portion of the field was dry-mesic prairie, of course with more topsoil than is currently present. The mesic flats portion was probably more hydric in presettlement times. Since many small creeks eroded deeply into their streambeds following first cultivation, it is likely that the small Clear Creek tributary to the northeast has eroded downward since settlement, it is likely that originally the creek was only about 2 feet below the adjacent prairie, so the flat portion of this field was probably wet prairie or even sedge meadow similar to the remnant wetland areas along Wade Creek. Currently, the stream is 4-6 feet below the adjacent fields.

The recent history of this field is not well-known to me, but I believe that it was row cropped continuously for many decades. This portion of the field was planted in Roundup Ready soybeans during the 2005 growing season (and probably for several years before that), and Jennifer and I seeded into the soybean stubble in late fall 2005.



Figure 1. An April 1999 aerial photo showing the 80-acre Clear Creek Unit. The 5-acre restoration unit is outlined in red. Stone Barn Road forms the north boundary, the gravel driveway forms the west boundary, the patch of weedy woodlot forms the south boundary, and the east boundary was flagged with orange flags to separate the planting from the remainder of the crop field which was cropped the following season.

The flat tone and smooth texture in this photo indicates that this 5-acre field was row cropped in April 1999. It seems reasonable to me that the entire planting area had been planted in row crops for many decades.

Map produced by Chris Hauser.

2005 Restoration Activities:

2005 Seed Harvest:

In spring 2003, Becky Hartman, Jennifer Hauser, and I were contracted by PPSOC to harvest the seed, prep the field, and sow the seed. The PPSOC contract was identical to their previous contracts, stipulating that seed of a given list of species was to be harvested only from Nachusa remnants, and nothing was harvested from any Nachusa plantings, nor from nearby remnant prairies off the preserve. We were a little more liberal, and harvested from plantings if we knew those plants came from remnants, and we harvested a handful of species from nearby remnants (like Track Road). The total seed weight allocated to this planting totaled over 450 pounds. A summary is included in Table 2 below, and the complete seed list is given in Table 2.

At the end of the season, for this planting, we had harvested 102 species with weight totaling nearly 500 pounds – 36 pounds of “dry” species, 48 pounds of “mesic species”, 3 pounds “wet”, and 313 pounds of “entire” species, plus 40 pounds of tall grass and 55 pounds of Canada Wild Rye. All the seed was processed using the hammermill, and these mixes were seeded using the pendulum broadcaster in the areas shown in Table 1.

Table 1. Summary of total seed weights, allocated to different habitat mixes.

36 pounds of “dry” mix, covered the 2.5-acre dry and dry-mesic hill and slopes.
48 pounds of “mesic” mix, covered the 2.5-acre mesic flat along the creek.
3 pounds of “wet” mix, covered the ~400 square foot spot at base of slope.
313 pounds of “entire” mix, covered the entire 3.5-acre field.
40 pounds “tall grass” mix, combine-harvested tall grasses, covered entire field.
55 pounds of Canada Rye, hand-harvested Canada Rye, covered entire field.

Note: due to a shortage this year, there was no Little Bluestem seeded, and we thought we would be able to seed in Little Bluestem following the 2006 fall harvest. That didn’t happen.

2005 Field Prep and Seed Broadcasting:

Following the harvest of soybeans in the fall of 2005, I sowed the seed over the course of several of weekends in November and December, using the tractor-mounted pendulum broadcaster. The soil surface was moist, muddy or snowy, and seed distribution was very even. Overall seeding rate was very heavy, and following the snow seedings, the snow was brown with seed. I took great effort to sow the seed very evenly across the planting.

Unlike many other planting, in which the seed broadcast is followed by a light harrowing, we did not follow the seeding with harrowing with this planting. I thought the early timing of the seeding and the soft soil conditions would be conducive to the seed becoming incorporated into the soil during the winter, and thus that harrowing would not be necessary.

Table 2. 102 species of seed harvested in summer 2005 and sown in early winter 2005. “Mix” designates where the seed was sown: “dry” for the dry-mesic hill, “mesic” for the mesic flat along the creek, “wet” for the small wet spot at the base of the hill, or “entire” for the entire field. These various mixes were sown separately with the pendulum broadcast seeder in December over soybean stubble with snowy or muddy soil conditions.

Latin Name	Common Name	Habitat	Amount
<i>Amorpha canescens</i>	Leadplant	dry	trace
<i>Andropogon gerardii</i>	Big Bluestem	entire	20.00
<i>Anemone canadensis</i>	Canada Anemone	mesic	trace
<i>Anemone cylindrica</i>	Thimbleweed	dry	0.40
<i>Angelica atropurpurea</i>	Great Angelica	wet	0.40
<i>Antennaria plantaginifolia</i>	Pussytoes	dry	trace
<i>Apocynum sibiricum</i>	Dog Bane	mesic	trace
<i>Aristida purpurascens</i>	Three Awn Grass	dry	5.30
<i>Asclepias syriaca</i>	Common Milkweed	entire	1.00
<i>Asclepias verticillata</i>	Whorled Milkweed	dry	trace
<i>Aster azureus</i>	Sky Blue Aster	dry	trace
<i>Aster ericoides</i>	Heath Aster	entire	10.00
<i>Aster laevis</i>	Blue Aster	mesic	1.75
<i>Aster lineariifolius</i>	Flax Leaved Aster	dry	trace
<i>Aster sericeus</i>	Silky Aster	dry	trace
<i>Baptisia leucantha</i>	White Wild Indigo	entire	100.00
<i>Baptisia leucophaea</i>	Cream Wild Indigo	dry	0.50
<i>Bouteloua curtipendula</i>	Side-Oats Grama	dry	0.60
<i>Cacalia tuberosa</i>	Indian Plantain	mesic	1.50
<i>Carex annectens</i>	Fox Sedge	wet	trace
<i>Carex bicknellii</i>	Bicknell's Sedge	dry	0.10
<i>Carex brevior</i>	Plains Oval Sedge	dry	0.10
<i>Carex cristatella</i>	Crested Oval Sedge	wet	trace
<i>Carex molesta</i>	Field Oval Sedge	dry	0.10
<i>Carex muhlenbergii</i>	Muhlenberg's Sedge	dry	0.10
<i>Carex stipata</i>	Fox Sedge	wet	trace
<i>Carex vulpinoidea</i>	Fox Sedge	wet	trace
<i>Chrysopsis camporum</i>	Golden Aster	dry	trace
<i>Cirsium hillii</i>	Hill's Thistle	dry	trace
<i>Coreopsis palmata</i>	Prairie Coreopsis	dry	1.80
<i>Coreopsis tripteris</i>	Tall Coreopsis	mesic	0.50
<i>Dalea purpurea</i>	Purple Prairie Clover	dry	6.25
<i>Desmodium illinoiense</i>	Illinois Ticktrefoil	dry	0.25
<i>Dodecatheon meadia</i>	Shooting Star	dry	trace
<i>Echinacea pallida</i>	Pale Purple Coneflower	dry	28.35
<i>Elymus canadensis</i>	Canada Wild Rye	entire	55.10
<i>Eryngium yuccafolium</i>	Rattlesnake Master	mesic	6.30
<i>Eupatorium altissimum</i>	Tall Boneset	entire	10.00

<i>Eupatorium maculatum</i>	Spotted Joe-Pye Weed	wet	2.75
<i>Euphorbia corollata</i>	Flowering Spurge	entire	2.00
<i>Galium boreale</i>	Northern Bedstraw	mesic	trace
<i>Gaura biennis</i>	Biennial Gaura	entire	trace
<i>Gentiana andrewsii</i>	Bottle Gentian	mesic	2.25
<i>Gentiana flavida</i>	Cream Gentian	entire	0.30
<i>Gentiana puberulenta</i>	Prairie Gentian	dry	trace
<i>Gnaphalium obtusifolium</i>	Sweet Everlasting	entire	trace
<i>Helianthemum canadense</i>	Frost Weed	dry	trace
<i>Helianthus occidentalis</i>	Western Sunflower	dry	trace
<i>Helianthus rigidus</i>	Stiff Sunflower	entire	trace
<i>Heliopsis helianthoides</i>	False Sunflower	mesic	0.50
<i>Heuchera richardsonii</i>	Alum Root	dry	trace
<i>Hieraceum longipilum</i>	Hairy Hawkweed	dry	trace
<i>Hypericum pyramidatum</i>	Great St. John's Wort	mesic	1.00
<i>Juncus dudleyi</i>	Upland Rush	dry	0.40
<i>Juncus tenuis</i>	Path Rush	dry	trace
<i>Kohleria cristata</i>	June Grass	dry	trace
<i>Kuhnia eupatorioides</i>	False Boneset	entire	5.00
<i>Lechea tenuifolia</i>	Narrow Leaf Pinweed	dry	trace
<i>Lechea villosa</i>	Hairy Pinweed	dry	2.00
<i>Lespedeza capitata</i>	Round -headed Bush Clover	entire	15.40
<i>Liatris aspera</i>	Rough Blazing Star	entire	3.10
<i>Linum sulcatum</i>	Groved Yellow Flax	dry	trace
<i>Lithospermum canescens</i>	Hoary Puccoon	dry	trace
<i>Lithospermum incisum</i>	Fringed Puccoon	dry	trace
<i>Lobelia spicata</i>	Pale Spiked Lobelia	mesic	trace
<i>Monarda fistulosa</i>	Wild Bergamot	entire	5.25
<i>Oxalis violacea</i>	Violet Wood Sorrel	dry	trace
<i>Panicum oligosanthes</i>	Panic Grass	dry	trace
<i>Panicum virgatum</i>	Prairie Switch Grass	dry	trace
<i>Parthenium integrifolium</i>	Wild Quinine	entire	12.20
<i>Pedicularis canadensis</i>	Wood Betony	mesic	trace
<i>Penstemon digitalis</i>	Foxglove Penstemon	mesic	14.50
<i>Penstemon hirsuta</i>	Hairy Penstemon	dry	trace
<i>Polygala polygama</i>	Purple Milkwort	dry	trace
<i>Polygala sanguinea</i>	Field Milkwort	dry	trace
<i>Potentilla arguta</i>	Prairie Cinquefoil	entire	9.75
<i>Ptelea trifoliata</i>	Wafer Ash	entire	1.50
<i>Pycnanthemum tenuifolium</i>	Narrow Leaf Mountain Mint	dry	trace
<i>Pycnanthemum virginianum</i>	Common Mountain Mint	mesic	2.50
<i>Ratibida pinnata</i>	Yellow Coneflower	entire	5.25
<i>Rosa carolina</i>	Pasture Rose	dry	trace
<i>Rudbeckia hirta</i>	Black-eyed Susan	entire	3.50
<i>Rudbeckia subtomentosa</i>	Sweet Black-eyed Susan	mesic	5.65

<i>Silphium integrifolium</i>	Rosinweed	entire	14.85
<i>Silphium laciniatum</i>	Compass Plant	entire	6.75
<i>Sisyrinchium campestre</i>	Blue-eyed Grass	dry	trace
<i>Solidago gymnospermoides</i>	Grass-leaved Goldenrod	entire	10.00
<i>Solidago missouriensis</i>	Missouri Goldenrod	entire	10.00
<i>Solidago nemoralis</i>	Gray Goldenrod	entire	10.00
<i>Solidago rigida</i>	Stiff Goldenrod	entire	7.00
<i>Solidago speciosa</i>	Showy Goldenrod	entire	7.00
<i>Sorghastrum nutans</i>	Indian Grass	entire	20.00
<i>Spiranthes cernuua</i>	Lady's Tresses	dry	trace
<i>Stachys tenuifolia</i>	Hedge Nettle	mesic	0.40
<i>Stipa spartea</i>	Porcupine Grass	dry	trace
<i>Tephrosia virginiana</i>	Goat's Rue	dry	trace
<i>Tradescantia ohiensis</i>	Common Spiderwort	entire	8.25
<i>Verbena stricta</i>	Hoary Vervain	dry	0.10
<i>Vernonia fasciculata</i>	Common Ironweed	mesic	trace
<i>Veronicastrum virginicum</i>	Culver's Root	mesic	6.65
<i>Viola pedata</i>	Bird's Foot Violet	dry	trace
<i>Zizia aurea</i>	Golden Alexanders	mesic	4.50

2008 Observations:

In early September, 2008 I walked this planting a couple of times. My first impression was that the seed had been very evenly spread on the field, with no evident rows or missed spots. I was very proud of the smoothness I got in this planting, and attribute it to the great efforts I took to sow the seed very evenly. I recommend that people sow seed as evenly as possible.

My second impression was that there might be too much tall grass, especially Big Bluestem. I had planted the combine mix at a heavy rate of 10 pounds per acre, so about 5 pounds per acre each of Indian Grass and Big Bluestem. Little Bluestem was in short supply that year, so there was none planted in the initial seed mixes. At the time, I had considered this heavy tall grass seeding as an insurance against a failed planting, but in hindsight I should have seeded all three grasses at 1 pound per acre each. I think seeding the Canada Rye at 10 pounds per acre was probably about right.

I was happily surprised to see a good recruitment of Golden Aster, Bottle Gentain, Cream Gentian, Sky Blue Aster and Smooth Blue Aster, despite relatively low seeding rates. On the other hand, I was disappointed to see a low recruitment of the conservative goldenrods, Golden Alexanders, Culvers Root, Spiderwort, Bush Clover, Common Mountain Mint and Rattlesnake Master despite very high seeding rates for all these species.

I did not see an over-abundance of Foxglove Penstemon, Stiff Goldenrod, Showy Goldenrod, Mondarda, or Ratibita. Big Bluestem will probably be the only dominator in the long run, but I am hopeful that the good diversity of aggressive forbs will keep this grass at bay.