

Planting #128

2018 Planting History

Prepared by Avery Parmiter

Name: Meiners Planting

24 Acres total

Dry Mesic: 21.7 Acres

Dry: 2.3 Acres

Site Conditions

General location – located on the south side of Naylor Road, approximately one mile from the intersection of Naylor and Lowden Road.

GPS: 41°51’56”, 89°21’43”W Elevation: 696 ft – 722 ft

County: Lee

Soil Types

According to the Web Soil Survey for the planting area, soils include:

Soil Type	Acres in AOI	Percent of AOI
St. Charles silt loam, 0 to 2 percent slopes	17.7	73.8%
Blackberry silt loam, 0 to 2 percent slopes	5.5	23.2%
Coloma sand, 7 to 15 percent slopes	0.7	3.0%
Totals for Area of Interest	23.9	100%

Figure 1: Soil types present in the planting area. Source: NRCS.

*Above are basic descriptions, a complete soil test is needed to determine specific soil characteristics. For additional information, see Web Soil Survey website: <http://websoilsurvey.nrcs.usda.gov/app/>

Refer to Figure 2 which shows where the soil types are located within the planting. The white dotted line labeled “ESO” stands for escarpment, a long slope separating areas of land at different heights.

Topography

The general topography consists of most of the planting being fairly flat with a few hills on the north side. The elevation is the lowest along the north edge and highest in the northeast corner, which leads into a weedy hilltop that was not planted. There is an average slope of 4% with a maximum slope of 15%.

Agricultural History

This area has been in agriculture since at least the early 1900's, historical imagery shows the area being in agriculture in 1918. The area was in corn right before it was planted.

Site Preparations

The corn was harvested in late October. The corn stubble that was left behind was mowed in order to make it easier to drive over with the seeders attached to the vehicles. The corn stubble was not burned. The crew planting for 2017 also was not burned, and it has been noted that the stubble possibly helps hold the seed into the ground. The weather for the 2018 season was average, not unusually wet or dry, with the temperatures dropping into the 30's and 40's for planting in early to mid-November.

Planting the Seed

Weather: The winds were variable from 5 to 15 mph. The first day that we planned on planting, it had rained the night before which made some of the slopes muddy and not drivable. We let the ground dry out for another day which proved to be a good decision. When planting resumed, it was cloudy to partly cloudy. We used three seeders that were connected to two UTV's and one truck. Crew members Nathaniel Weickert, Kim Elsenbroek, Avery Parmiter, Karey O'Brien, Tyler Pellegrini, and Tyler Berndt assisted with the planting.

Dry mesic seed mix

A total of 21.7 acres were planted using dry mesic seed mix. This mix also contained combined seed, mainly consisting of asters and goldenrods. We filled the seeders with two barrels at a time and refilled when necessary. We drove the seeders in north-south as well as east-west transects in order to get the best coverage, using the border of the planting as a turn around spot since it would later be planted with Canada rye. This took around two full days to plant. We planted the dry mesic seed mix at 60.2 pounds an acre, equaling a total of 1,306.34 pounds planted.

Dry seed mix

A total of 2.3 acres were planted using dry seed mix. We focused putting the seed on the ridges located towards the north side of the planting, as well as a small hill at the southwest corner of the planting. This took around half of a day to plant. We planted the dry seed mix at 62.56 pounds an acre, equaling a total of 143.89 pounds planted.

Canada Rye border

A Canada rye border (about 15-feet across) was planted last. We planted six barrels of seed which equates to about 120 pounds. This took us a few hours to plant.

Seed List

SCIENTIFIC NAME	COMMON NAME	lbs/acre	Dry Lbs	lbs/acre	Dry Mesic Lbs	Total Lbs
Allium cernuum	Nodding onion	0.19	1.45	0.00		1.450

<i>Amorpha canescens</i>	Leadplant	5.27	39.49	0.00		39.490
<i>Anemone cylindrica</i>	Thimbleweed	1.10	8.26	0.00		8.260
<i>Anemone virginianum</i>	Tall thimble weed	0.59	4.40	0.00		4.400
<i>Antennaria neglecta</i>	Field Pussytoes	0.01	0.07	0.00		0.074
<i>Antennaria plantaginifolia</i>	Pussytoes	2.61	19.55	0.00		19.550
<i>Aristida longiseta</i>	3 awn grass	0.93	7.00	0.00		7.000
<i>Arnoglossum atriplicifolia</i>	Pale Indian Plantain	0.17	1.30	0.50	11.90	13.200
<i>Artemisia caudata (campestris)</i>	Beach wormwood	0.67	5.05	0.41	9.95	15.000
<i>Artemisia ludoviciana</i>	White Sage	0.13	1.01	0.00		1.012
<i>Asclepias amplexicaulis</i>	Sand Milkweed	0.00	0.00	0.00		0.004
<i>Asclepias tuberosa</i>	Butterfly Milkweed	0.02	0.16	0.00		0.159
<i>Asclepias veridiflora</i>	Short Green Milkweed	0.00	0.00	0.00		0.001
<i>Asclepias verticillata</i>	Whorled Milkweed	0.13	0.96	0.00		0.959
<i>Astragalus canadensis</i>	Canada milkvetch	0.18	1.35	0.06	1.35	2.700
<i>Baptisia alba (leucantha)</i>	White wild indigo	4.99	37.40	14.61	350.56	387.960
<i>Baptisia bracteata (leucophaea)</i>	Cream wild indigo	0.89	6.69	0.00		6.694
<i>Besseyia bullii ***</i>	Kittentails	0.10	0.78	0.00		0.782
<i>Blephili ciliata</i>	Downy Wood Mint	0.09	0.65	0.00		0.650
<i>Bouteloua curtipendula</i>	Side oats	0.38	2.86	0.00		2.859
<i>Bouteloua hirsuta</i>	Hairy Grama (mustache grass)	0.07	0.55	0.00		0.548
<i>Brickellia (Kuhnia) eupatoroides</i>	False boneset	0.00		1.02	24.51	24.509
<i>Bromus kalmii</i>	Prairie brome	1.34	10.05	0.41	9.80	19.850
<i>Callirhoe triangulata</i>	Clustered poppy mallow	0.00		0.00		0.000
<i>Carex bicknellii</i>	Bicknell's sedge	0.13	1.00	0.08	2.00	3.000
<i>Carex muhlenbergii (enervis)</i>	Muhlenberg's sedge	0.05	0.40	0.00		0.400
<i>Chamecrista fasciculata</i>	Partridge Pea	0.56	4.20	0.60	14.31	18.509
<i>Castilleja sessiliflora **</i>	Downy yellow painted cup	0.44	3.31	0.00		3.310
<i>Ceanothus americanus</i>	New Jersey Tea	1.00	7.50	0.42	10.00	17.500
<i>Heterotheca camporum</i>	Golden aster	0.44	3.30	0.00		3.299
<i>Cirsium hillii *** (pumilum)</i>	Hill's Thistle	0.00		0.00		0.000
<i>Coreopsis lanceolata</i>	Sand coreopsis	0.21	1.55	0.00		1.550
<i>Coreopsis palmata</i>	Prairie coreopsis	2.09	15.66	0.45	10.80	26.459
<i>Coreopsis tripteris</i>	Tall Coreopsis	0.00		0.49	11.80	11.800
<i>Crotalaria sagittata</i>	Rattlebox	0.01	0.10	0.00		0.102
<i>Cyperus filiculmis</i>	Slender sand sedge	0.04	0.26	0.00		0.263
<i>Dalea candidum</i>	White prairie clover	1.28	9.60	1.63	39.10	48.700
<i>Dalea foliosa</i>	Bushy Prairie Clover	0.00		0.00		0.000
<i>Dalea purpureum</i>	Purple prairie clover	3.33	25.00	2.96	70.96	95.959
<i>Danthonia spicata</i>	Poverty oats	0.13	1.00	0.00		1.000
<i>Desmodium illinoense</i>	Illinois Ticktrefoil	0.13	0.99	0.00		0.987
<i>Dicanthelium leibergii</i>	Prairie Panic Grass	0.01	0.04	0.00		0.042
<i>Dichantherium (Panicum) oligosanthes scribneria</i>	Scribner's Panic Grass	0.00		0.00	0.00	0.001

Dicanthelium pseudopubescens (Panicum Villosissum)	White Haired Panic Grass	0.01	0.09	0.00		0.087
Dodecatheon meadia	Shooting star	3.16	23.70	0.00		23.700
Drymocallis (Potentilla) arguta	Prairie cinquefoil	0.27	2.00	0.37	8.80	10.800
Echinacea pallida	Pale purple coneflower	11.47	86.00	6.92	166.10	252.100
Eragrostis spectabilis	Purple love grass	0.06	0.48	0.00		0.483
Erigeron strigosus	Daisy Fleabane	0.00		0.06	1.35	1.350
Eryngium yuccifolium	Rattlesnake master	0.00		1.74	41.65	41.650
Euphorbia corollata	Flowering spurge	1.82	13.65	0.00		13.650
Eurybia Furcata (Aster furcatus)	Forked aster	0.00		0.00		0.000
Gaura biennis pitcheri (longiflora)	Biennial Gaura	0.00		0.00	0.04	0.043
Gentiana (alba) flavida	Cream Gentian	0.00		0.91	21.75	21.750
Gentiana purberulenta	Prairie Gentian	0.09	0.70	0.00		0.700
Gentiana quiquefolia	Stiff Gentian	0.00		0.00		0.000
Geum triflorum	Prairie Smoke	0.00	0.02	0.00		0.024
Gnaphalium obtusifolium	Sweet Everlasting	0.28	2.13	0.00		2.128
Crocantemum canadense	Common Rockrose (Frostweed)	0.10	0.77	0.00		0.772
Helianthus mollis	Downy Sunflower	0.04	0.31	0.06	1.45	1.759
Helianthus occidentalis	Western sunflower	0.81	6.05	0.34	8.05	14.100
Helianthus pauciflorus (rigidus)	Stiff Sunflower	0.00		0.31	7.40	7.400
Heliopsis helianthoides	False Sunflower	0.00		0.34	8.25	8.250
Heuchera richardsonii grayana	Alum Root	0.56	4.20	0.00		4.200
Hibiscus laevis	Halberd leaved rose mallow	0.08	0.58	0.00		0.584
Hieracium gronovii	Hairy hawkweed	0.15	1.13	0.00		1.132
Houstonia longifolia	Long Leaved Blueits	0.00	0.04	0.00		0.035
Hypoxis hirsuta	Yellow Star Grass	0.00		0.00		0.000
Ionactis (Aster) linariifolius	Stiff Aster	1.67	12.52	0.00		12.518
Juncus interior	Inland Rush	0.27	2.00	0.00		2.000
Juncus tenuis	Path Rush	0.00		0.02	0.48	0.482
Koeleria cristata (macrantha)	June grass	2.60	19.50	0.54	12.90	32.400
Krigia biflora	Two flowered Dwarf Dandelion	0.00	0.03	0.00		0.028
Lechea tenuifolia	Slender pinweed	0.04	0.34	0.00		0.337
Lespedeza capitata --	Round Headed Bush Clover	0.00		0.16	3.96	3.959
Lespedeza leptostachya	prairie bush clover	0.00		0.00		0.000
Liatris aspera	Rough Blazingstar	8.55	64.15	0.00		64.150
Liatris cylindracea	Dwarf Blazingstar	0.06	0.47	0.00		0.465
Liatris pycnostachya	Gayfeather	0.00		2.19	52.45	52.450
Lilium philadephicum andinum	Prairie Lily	0.00		0.00		0.000
Linum sulcatum	Grooved Yellow Flax	0.01	0.05	0.00		0.052
Lithospermum canescens	Hoary puccoon	0.01	0.09	0.00		0.093
Lithospermum croceum	Hairy puccoon	0.09	0.67	0.00		0.673
Lithospermum incisum	Fringed puccoon	0.04	0.31	0.00		0.305

Lobelia spicata	Pale spiked lobelia	0.00		0.01	0.13	0.134
Ludwiga alternifolia	Seed Box	0.00		0.00		0.000
Lupinus perennis	Wild Lupine	0.91	6.85	0.29	6.90	13.750
Minuartia michauxii	Stiff sandwort	0.00	0.01	0.00		0.007
Monarda fistulosa	Beebalm	0.00		0.20	4.85	4.850
Monarda punctata villicualis	Horse Mint	0.27	2.00	0.12	2.96	4.959
Oenothera clelandii (rhombipetala)	Sand primrose	0.07	0.50	0.00		0.500
Onosmodium (molle) bejariense hispidissimum	Softhair Marbleseed	0.00		0.44	10.51	10.509
Orobunche fasciculata	Clustered Broom rape	0.00		0.00		0.000
Oxalis violacea	Violet Wood Sorrel	0.02	0.17	0.00		0.169
Panicum capillare	Old Witchgrass	0.01	0.05	0.00		0.047
Parthenium integrifolium	Wild quinine	1.28	9.60	13.83	331.91	341.510
Paspalum setaceum	Hairy lens grass	0.01	0.11	0.00		0.110
Pedicularis canadensis	Wood betony	0.00		0.18	4.27	4.272
Penstemon digitalis	Foxglove beard tongue	0.17	1.25	0.48	11.60	12.850
Penstemon grandiflorus	Large Flowered Beardtongue	0.01	0.09	0.00		0.090
Penstemon hirsutus	Hairy beard tongue	0.67	5.00	0.00		5.000
Phemeranthes rugospermum ***	Fame Flower	0.00		0.00		0.000
Phlox bifida	Sand Phlox	0.04	0.28	0.00		0.282
Phlox pilosa	Prairie Phlox	0.00	0.02	0.00		0.023
Physocarpus opulifolius	Nine Bark	0.07	0.50	0.00		0.500
Physostegia parviflora	Western False Dragonhead	0.00		0.00	0.05	0.046
Platanthera leucophaea	Eastern Prairie Fringed Orchid	0.00		0.00		0.000
Polygala incarnata **	Pink Milkwort	0.00		0.00		0.000
Polygala polygama obtusata	Purple Milkwort	0.00	0.01	0.00		0.006
Polygala sanguinea	Field milkwort	0.01	0.04	0.00		0.041
Polytaenia nuttallii	Prairie Parsley	0.08	0.62	0.00		0.618
Prenanthes aspera	Rough White Lettuce	0.11	0.86	0.00		0.862
Ptelea trifoliata	Wafer Ash	0.02	0.18	0.00		0.181
Pulsatilla (Anemone) patens	Pasque Flower	0.00		0.00		0.000
Pycnanthemum tenuifolium	Narrow leaved mountain mint	0.00		0.27	6.55	6.550
Pycnanthemum virginianum	Mountain Mint	0.00		0.34	8.15	8.150
Ratibida pinnata	Yellow coneflower	0.00		0.22	5.20	5.200
Rhus aromatica	Fragrant Sumac	0.13	1.00	0.04	0.96	1.959
Rosa carolina	Carolina Rose	0.67	5.00	0.11	2.60	7.600
Rudbeckia hirta	Black-eyed susan	0.00		0.08	1.90	1.900
Rudebeckia subtomentosa	Sweet black-eyed susan	0.00		0.74	17.75	17.750
Rudbeckia triloba	Brown Eyed Susan	0.00		0.01	0.20	0.198
Ruellia humilis	Wild petunia	0.00		0.02	0.36	0.364
Scutellaria parvula leonardi	Small skullcap	0.00	0.03	0.00		0.028

Packera paupercula (Senecio plattensis)	Prairie ragwort	0.00		0.06	1.41	1.410
Senna (Cassia) hebecarpa	Wild Senna	0.00		0.01	0.25	0.251
Senna marylandica	Maryland Senna	0.00		0.02	0.52	0.522
Silene antirrhina	Sticky Catchfly	0.05	0.41	0.00		0.405
Silene regia	Royal Catchfly	0.00	0.00	0.00		0.001
Silphium integrifolium	Rosinweed	0.00		0.73	17.48	17.480
Silphium laciniatum	Compass plant	2.07	15.55	2.15	51.50	67.050
Silphium perfoliatum	Cup plant	0.00		0.63	15.10	15.100
Silphium terebinthaceum	Prairie Dock	1.66	12.45	0.51	12.14	24.590
Sisyrinchium campestre	Prairie Blue-Eyed Grass	0.04	0.27	0.00		0.270
Euthamia graminifolia	Grass-leaved Goldenrod	3.72	27.90	0.00		27.900
Euthamia gymnospermoides	Grass-leaved Goldenrod	0.00		0.76	18.20	18.200
Solidago missouriensis fasciculata	Missouri goldenrod	0.00		0.33	7.90	7.900
Solidago (Aster) ptarmicoides	White Aster	0.01	0.07	0.00		0.065
Solidago rigida	Stiff Goldenrod	0.00		0.51	12.15	12.150
solidago speciosa	showy goldenrod	0.00		0.33	7.81	7.809
Spiranthes cernua (magnacamporum?)	Nodding Ladies Tresses	0.00	0.01	0.00		0.005
Stachys palustris	Woundwort	0.00		0.28	6.60	6.600
Stipa spartea	Porcupine Grass	0.17	1.25	0.00		1.250
Symphotrichum ericoides	Heath aster	1.73	13.00	0.00		13.000
Symphotrichum novae-angliae	New England Aster	0.00		0.46	11.05	11.050
Symphotrichum sericeum (Aster sericeus)	Silky Aster	0.48	3.63	0.00		3.630
Taenidia integerrima	Yellow Pimpernel	0.00		0.00		0.000
Tephrosia virginiana	Goat's Rue	5.04	37.80	0.00		37.800
Tradescantia ohiensis	Spiderwort	2.03	15.20	2.69	64.50	79.700
Verbena hastata	Blue vervain	0.00		0.08	2.00	2.000
Verbena stricta	Hoary vervain	0.13	1.00	0.61	14.75	15.750
Verbena urticifolia	Hairy White Vervain	0.00		0.16	3.95	3.950
Veronicastrum virginicum	Culver's Root	0.00		0.28	6.60	6.600
Viola pedata lineariloba	Birdsfoot Violet	0.04	0.27	0.00		0.266
Viola pedatifida	Prairie Violet	0.01	0.09	0.00		0.088
Viola sagittata	Arrow Leafed Violet	0.00	0.00	0.00		0.003
Zizia aptera	Heart-leaved golden alexander	0.13	0.94	0.00		0.943
Zizia aurea	Golden alexander	0.00		0.50	12.00	12.000
carex spp.	sedge mix	0.00		0.00		0.000
	Tall Grass (Big Blue and Indian)	0.00		2.75	65.88	65.880
Schizachyrium scoparium	Little Bluestem	7.61	57.05	5.05	121.30	178.350
Elymus canadensis	Canada Rye	2.27	17.00	6.01	144.22	161.220
Sporobolus heterolepis	Prairie Dropseed	19.33	145.00	2.40	57.70	202.700
	Aster and Goldenrod Mix	9.59	71.90	8.56	205.55	277.450

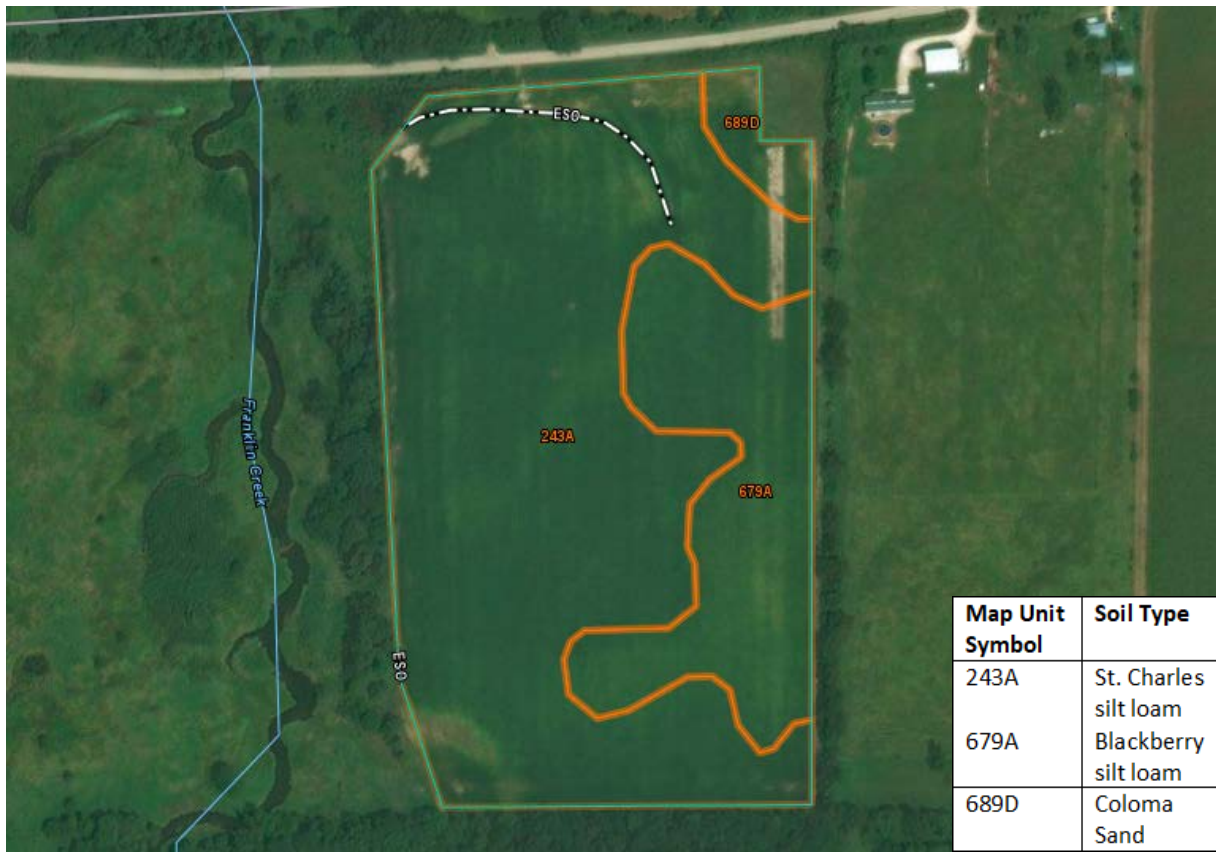


Figure 2. Map showing where the soil types are located within the planting. Source: NRCS.



Figure 3. Map showing where the dry and dry mesic areas are located within the planting. Source: GoogleEarth.