

Planting 124  
2017 Planting History  
Williams Tract planting  
Prepared by Nathaniel Weickert

**81 Acres Total**

**Dry Mesic: 51**

**Dry: 20**

**Wet: 2.43**

**Woodland:**

**Combine Mix: 8.7**

**Transline Experimental plot:**

**Step-in:**

**Site Conditions**

Location:

General location – located north of Flagg rd. just west of Lost Nation and northwest of the Senger tract

GPS: 41°54'16.88"N, 89°22'48.44"W Elevation: 736ft – 799ft

County: Ogle

**Soil Types**

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

\*All soil has been in row crop Agriculture for several decades. Above are basic descriptions, a complete soil test is needed to determine specific soil characteristics. For more additional information, see the Soil Web Survey website: <http://websoilsurvey.nrcs.usda.gov/app/>

**Topography**

The Topography of the 2017 planting is rolling hills with a wetland CRP dividing the planting into east and west sides. The dry points are easy to distinguish once you pass the gradual slope that leads to the ridgeline of Dry 1. On the west side, just north of the ridge is a low-lying drainage channel that leads to the CRP. In general, the low areas lie to the south and the west with a single high ridgeline to the north breaking up the western half of the planting.

**Agricultural History**

The planting site has been in row crop for several decades. Corn and soy bean were the main crops. The area spent one year in no till. In 2017 the entire planting was in corn.

**Site Preparations**

The Crops were harvested (Mid or Late October?) the 2017 season was wet from spring to early summer, dry through (Late September or early/mid-October?) the temperature was cool (Highs in the

30's to low 40's) in the week leading up to the planting and remained low until after planting. The weekend following planting there was light precipitation.

The corn stubble was mowed to increase mobility while planting. This year the field was not burned to see if the extra stubble that would be left would hold the seed in place better. It will be interesting to see how the lack of a fall burn will affect the initial growth, or if the lack of an ash layer will affect the initial seed composition.

### **Planting the Seed**

The entire area was seeded by 4 broadcast seeders pulled primarily by Cody Cassidy, Daniel Crosby, Avery Parmiter, and Nate Scott. Leah Kleiman, Sandra Vaughn-Pottorff, and Nathaniel Weickert took over driving these seeders during several points in the planting. The seeders were originally pulled by Silver, White, and Blue trucks, and the Gator UTV, however several vehicular malfunctions occurred during planting. Blue truck overheated and Silver had a tire punctured, so at the end of the planting the seeders were pulled by White Truck, two Blue Kubota Mules, and the Gator. The general strategy for planting was to do a full sweep of the perimeter to allow a range of area with which to turn around when doing transects. Then, follow the direction of the corn stubble for the initial transects to get full coverage of the plot. Some smaller mixes were hand seeded.

Commented [T1]: awk

**Weather:** There was no precipitation during the days the planting occurred. In general winds were low, picking up to the 20mph on the third day of the planting otherwise they remained below 10mph. Following the week of planting, snow fell during the weekend.

A map of the unit is included at the end of the file.

### **Dry Mesic**

The dry mesic area was split into 6 different segments for ease of planting, they are labeled A-F.

Dry Mesic A (15 acres) – all seeders were set to full open and seeding began by using all four seeders, pulled by three UTVs and White Truck, to run the boundary of the planting area. From there, the seeders ran north-south transects beginning on the east side and moving west until a full pass of the unit was completed. The ground was damp and soft enough that the previous passes were visible on the ground. At one point a seeder malfunction took a UTV out of the formation for several passes. Several full barrels were occasionally carried along in white truck, otherwise barrels were staged at the edge of the oak island on the west side of the planting. Some extra seeding occurred as the seeders were refilled. The second pass was made in east-west transects following the corn rows beginning in the south and moving north. At the peninsula of wet area that pushes into the planting on the northern edge, the east side was planted using east-west transects. After the eastern side of the planting was finished the border of the wet area was followed around to continue east-west transects on the west side of the planting area. After the second pass, another north-south transect was followed going from west to east and beginning in the area where the seeder had broken down to cover any passes where seed may not have been dropped. The remaining seed was sown where it was thought to be needed most. The planting took approximately 4 hours and used around 22 barrels.

Dry Mesic B (4.89 acres) – All 4 seeders were set to the same disposition as in "A". All 4 seeders lined up and did a run around the perimeter of the plot to begin. The first full pass was done using north-south

transects following the corn rows. There was some overlap with the wet area which projected into the plot from the east. The second pass was done using east-west transects which had less overlap with the wet area. The remaining seed was deposited in a random fashion. There was no need to stage barrels for this plot. The planting took about 1 hour and used 8 barrels.

Dry Mesic C (1.14 acres) – This plot was planted by Avery Parmiter and Nate Scott using two Blue Mules. The seed was first dropped along the perimeter of the planting before north-south transects following the corn rows were used. East-west transects were used for the second pass. Any remaining seed was planted in a random fashion. The planting took around 30 minutes and used 2 barrels.

Dry Mesic D (13.01 acres) – The perimeter of the plot was seeded first using all 4 seeders. The first pass was done north-south following the corn rows followed by east-west transects. A series of northwest to southeast transects were run through the odd area to the west of Dry 1. The rest of the seed was spread in a more random manner covering areas that may have been missed. Silver Truck had earlier suffered a punctured tire and was moved to a location in this plot; it spent several days in the same spot, this may cause the seed to be sparse there. Barrels were staged in along the east border of the plot and along the south boundary of the northwest area. This plot was planted in 4 hours and used around 20 barrels of seed.

Dry Mesic E (6.44 acres) – Four seeders first planted around the perimeter of the plot. Then, north-south transects were performed following the corn stubble. There was some overlap with the combine mix region near the drainage. The plot was then covered in east west transects. Finally, any remaining seed was sown where it was thought to be needed most.

Dry Mesic F (11.33 acres) – Because the area of Plot F wraps completely around Dry 2, it was planted in a somewhat segmented manner. Three seeders planted the perimeter of the plot, joined by the fourth halfway around. All four seeders then planted the area immediately bordering Dry 2. Then, the area just south and to the west of Dry 2 was seeded with east-west transects after which the area east and to the north of Dry 2 was planted with north-south transects. The area immediately to the northwest of Dry two was covered with its own set of north-south transects followed by east-west. Then, the other two subdivisions were covered using transects that were perpendicular to the original covering. After each of the three subdivisions of Plot F were covered with both north-south and east-west transects, the rest of the seed was distributed by following the exterior of Dry 2 and moving out into the rest of the planting. This took around 3 hours and 17 barrels.

## **Dry**

The dry mix was divided among 4 separate hilltops, numbered 1-4. These areas were marked off using t-posts prior to planting.

Dry 1 (13.6 acres) – Planting began with Cody Cassidy and Daniel Crosby driving White and Silver trucks. The perimeter of the plot was planted by the two seeders, using cones to mark the inside edge and heading towards the center in concentric circles. Avery Parmiter and Sandra Vaughn-Pottorff brought two extra seeders in two UTVs around halfway through the planting. The 4 seeders covered the plot using north-south transects following the corn rows. Silver truck had a Tire puncture, was moved out of the dry area, and replaced with a UTV midway through the north-south transects. This plot took 6 hours and 24 barrels.

Dry 2 (2.6 acres) – Leah Kleiman and Avery Parmiter used a Blue mule and Blue truck to lay seed in concentric circles around the perimeter of the planting and moving in to the center. During the initial stages of seeding, one of the seeders was not set up properly and was not dropping seed, which may have caused some areas to have a patchier coverage. Also, blue truck overheated and it was replaced by another mule. These problems were fixed and all the seed was successfully dispersed. This plot took two hours to plant and used approximately 4 barrels of seed.

Dry 3 (0.15 acres) – One seeder operated by Leah Kleiman planted this area by running a perimeter followed by short north-south transects. It was covered with a half barrel in a couple minutes.

Dry 4 (1.8 acres) – Cody Cassidy and Daniel Crosby ran 2 seeders attached to UTVs running a perimeter of the dry area. East-west transects were then done following the corn rows until seed ran out. This plot was seeded in a half hour and used 2 barrels of seed.

#### **Wet**

Wet (2.73 acres) – The 2 wet areas were planted by Leah Kleiman using the Gator and a broadcast seeder. Wet A was seeded using east-west transects and used 2.5 barrels of wet mix.

Wet B was seeded using north-south transects and used 1.5 barrels of wet mix. Planting the wet area took about 1 hour and used a total of 4 barrels.

#### **Woodland**

The woodland edge along the north side of the planting was hand seeded by Avery Parmiter and Sandra Vaughn-Pottorff. Approximately  $\frac{3}{4}$  of a barrel of seed was planted taking around 30 minutes.

#### **Combine Mix**

Combine Mix (8.7 acres) – This area was planted by Cody Cassidy, Daniel Crosby, and Nate Scott. This area was planted using repeated east-west transects following the curve of the wet drainage area. The plot was planted without directly crossing the middle of the drainage area and rather doing seeding north and south of it.

#### **Transline Experimental Plot**

12lbs of a Transline resistant mix was pulled aside to make test plots for a Transline resistant planting experiment. The plot was hand sown by Cody Cassidy. Seeding density was 2lbs of seed per cell.

Key:

R+ Transline resistant mix, treat with Transline.

R- Transline resistant mix, untreated

T- Traditional seed mix, untreated

The list of seeds in the Transline mix can be found in the seed mix section.

West	North side			East
	R+	R-	T-	
	R-	T-	R+	
	T-	R+	R-	
South side 100ft from Flagg road				

Formatted Table

### Step-in

There was 1 ¼ barrels of “step-in” mix. It was determined quite a few of these species should just have been placed in the dry mix, and two species from the dry mix which were missed were added to the step-in mix. The step-in mix was all placed on Dry 1 and Dry 2. Several rare plants, with specific needs or small quantities, were kept separate to be hand planted where they would be most successful. The full barrel of step-in was planted on Dry 1 by Leah Kleiman and Nathaniel Weickert using a Blue Mule and a broadcast seeder. The first pass was planted by driving in concentric circles 1/3 of the way down the slope and working up to the ridgeline. Then, several diagonal passes from northwest to southeast were made following the ridgeline. The planting was finished by driving randomly around from the ridgeline to approximately 1/3 of the way down the slope.

Dry 2 was hand sown by Cody Cassidy and Leah Kleiman.

### Canada Rye Border

A Canada Rye border was planted By Nathaniel Weickert using Blue truck and a broadcast seeder driving the perimeter of the two larger planting areas (east and west of the CRP). The border is located between the wet areas and the dry mesic areas on the west half of the planting, and does not connect across the drainage area on the east. On the first pass through, the west side blue truck was stuck in the wet area and the border was finished using a UTV. Around 6 passes were made on each side of the planting. They were made three strips deep from the edge and each line was passed over two times. This took 6 barrels.

### Planting Mixes

Several planting mixes were made for the Williams 2017 Planting. The vast majority of the seed was placed in the dry mesic mix which was comprised mostly of dry and dry mesic species, but also included several mesic species. The second largest mix was the dry mix. There were several new species added this year thanks to seed trading (and donations? From where?). Planting in several soil types made picking more complicated due to the need for diversity in several different habitats. This also made planting somewhat complicated because of the need to sort through the seed picked to make proper mixes for each soil type. The primary focus of picking this year was to collect a wide diversity of seed species while still collecting a large enough quantity to seed an 83-acre planting. The dry mesic mix was planted at 53 lbs/acre. The dry mix was planted at 64 lbs/acre. The wetland mix was planted at 51

lbs/acre. The combine mix was planted at 42 lbs/acre. The remaining wet mix was saved to be planted in the combine mix area at a future date.

**Species Richness**

**Dry Mesic: 61**

**Dry: 53**

**Wet: 48**

**Woodland: 47**

**Step In: 68**

**Total Species for Planting: 235** (this number does not include all species represented in the combine mixes.)

\*The number found in the Transline R column is not representative of the weight included, only of presence in the mix.

		Dry	Dry Mesic	Step-In	Wet	Transline R Prairie Species*	Woodland	Total Lbs
SCIENTIFIC NAME	COMMON NAME	Total lbs	Total lbs	Total lbs	Total lbs		Total lbs	
Actinomeris alternifolia	Wingstem						0.35	<b>0.35</b>
Agastache scrophulariaefolia	Purple Giant Hyssop						5.65	<b>5.65</b>
Agrimonia parviflora	Swamp Agrimony				2.05			<b>2.05</b>
Agalinis tenuifolia	Slender False foxglove				1.14			<b>1.14</b>
Alisma subcordatum	Water Plantain				0.10			<b>0.10</b>
Allium cernuum	Nodding Wild Onion	5.20				1.00		<b>5.20</b>
Allium canadense	Wild Onion						0.10	<b>0.10</b>
Amorpha fruticosa	Indigo Bush		0.15					<b>0.15</b>
Amorpha canescens	Leadplant	31.50						<b>31.50</b>
Anemone canadensis	Meadow Anemone						0.25	<b>0.25</b>
Anemone cylindrica	Thimbleweed	10.95				1.00		<b>10.95</b>
Anemone patens	Pasque Flower			0.02				<b>0.02</b>
Anemone virginianum	Tall Thimbleweed	4.30						<b>4.30</b>
Angelica atropurpurea	Great Angelica				3.25			<b>3.25</b>
Antennaria plantaginifolia	Pussy Toes (Everlasting)	8.55						<b>8.55</b>
Apocynum androsaemifolium	Spreading Dogbane						0.04	<b>0.04</b>
Aeisaema triphyllum	Jack In The Pulpit						0.32	<b>0.32</b>
Aristida longiseta	3 Awn Grass			0.10				<b>0.10</b>
Aronia prunifolia	Black Chokeberry			0.30				<b>0.30</b>
Artemisia caudata (campestris)	Beach Wormwood	10.40	25.00					<b>35.40</b>
Asclepias incarnata	Swamp Milkweed				0.60			<b>0.60</b>

<i>Asclepias purpurea</i>	Purple Milkweed				0.03			<b>0.03</b>
<i>Asclepias amlexicaulis</i>	Sand Milkweed			0.02				<b>0.02</b>
<i>Asclepias syriaca</i>	Common Milkweed		0.60			1.00		<b>0.60</b>
<i>Asclepias tuberosa interior</i>	Butterfly Weed			0.40				<b>0.40</b>
<i>Asclepias verticillata</i>	Whorled Milkweed	0.65						<b>0.65</b>
<i>Asclepias viridiflora</i>	Short Green Milkweed			0.04				<b>0.04</b>
<i>Aster ericoides (prostratus)</i>	Heath Aster	14.45				1.00		<b>14.45</b>
<i>Aster furcatus ***</i>	Forked Aster			0.13				<b>0.13</b>
<i>Aster linariifolius</i>	Stiff Aster (Flax-Leaved)	5.90				1.00		<b>5.90</b>
<i>Aster novae-angliae</i>	New England Aster		0.35			1.00		<b>0.35</b>
<i>Aster oblongifolius</i>	Aromatic Aster			2.30				<b>2.30</b>
<i>Aster sericeus</i>	Silky Aster			2.49		1.00		<b>2.49</b>
<i>Astragalus canadensis</i>	Canadian Milk Vetch	1.35						<b>1.35</b>
<i>Aureolaria (Gerardia) grandiflora pulchra</i>	Yellow False Foxglove						1.15	<b>1.15</b>
<i>Baptisia leucantha</i>	White Wild Indigo	13.50	30.00					<b>43.50</b>
<i>Baptisia leucophaea</i>	Cream Wild Indigo			6.80				<b>6.80</b>
<i>Boltonia latiscuama ** (asteroides)</i>	False Aster				3.80			<b>3.80</b>
<i>Bouteloua curtipendula</i>	Side-Oats Grama	6.70				1.00		<b>6.70</b>
<i>Bouteloua hirsuta</i>	Hairy Grama			0.22				<b>0.22</b>
<i>Brachyelytrum erectum</i>	Long Awnead Wood Grass						0.35	<b>0.35</b>
<i>Bromus kalmii</i>	Prairie brome	25.00	60.90					<b>85.90</b>
<i>Cacalia atriplicifolia</i>	Pale Indian Plantain	4.40	10.15			1.00		<b>14.55</b>
<i>Cacalia muhlenbergii</i>	Great Indian Plantain			0.02				<b>0.02</b>
<i>cacalia plantaginea</i>	Indian Plantain				6.05			<b>6.05</b>
<i>Calamagrostis canadensis</i>	Blue Joint Grass				51.70			<b>51.70</b>
<i>Caltha palustris</i>	Marsh Marigold				0.05			<b>0.05</b>
<i>Carex bicknellii</i>	Copper-shouldered oval Sedge				25.06			<b>25.06</b>
<i>Cares spp.</i>					8.40			<b>8.40</b>
<i>Carex stipata</i>	Common Fox Sedge				8.20			<b>8.20</b>
<i>Carex utriculata</i>	Common Yellow Lake Sedge				1.20			<b>1.20</b>
<i>Cassia fasciculata</i>	Partridge Pea	0.10						<b>0.10</b>
<i>Cassia hebecarpa</i>	Wild Senna							<b>0.00</b>
<i>Castilleja coccinea</i>	Indian Paintbrush			0.07				<b>0.07</b>

Castilleja sessiliflora **	Downy Yellow Painted Cup			4.35				<b>4.35</b>
Ceanothus americanus	New Jersey Tea			3.45				<b>3.45</b>
Celastrus scandens	American Bittersweet				0.05			<b>0.05</b>
Cephalanthus occidentalis	Buttonbush				1.05			<b>1.05</b>
Chamerion (Epilobium) angustifolium	Fireweed				4.70			<b>4.70</b>
Chelone glabra	Turtlehead				0.41			<b>0.41</b>
Chrysopsis camporum (Heterotheca)	Golden Prairie Aster	5.15						<b>5.15</b>
Cirsium hillii *** (pumilum)	Hill's Thistle			1.00				<b>1.00</b>
Clematis virginiana	Virgin's Bower							<b>0.00</b>
Comandra umbellata (richardsoniana)	False Toadflax			0.10				<b>0.10</b>
Coreopsis lanceolata	Sand Coreopsis	9.60						<b>9.60</b>
Coreopsis palmata	Prairie Coreopsis	9.00						<b>9.00</b>
Coreopsis tripteris	Tall Coreopsis		27.10			1.00		<b>27.10</b>
Corylus americana	American Hazelnut							<b>0.00</b>
Cuscuta campestris	Field Dodder				0.21			<b>0.21</b>
Crataegus sp	Hawthorn							<b>0.00</b>
Cyperus filiculmis	Slender Sand Sedge			0.45				<b>0.45</b>
Cyperus strigosus	False Nutsedge				0.95			<b>0.95</b>
Danthonia spicata	Poverty Oat Grass			3.00				<b>3.00</b>
Desmodium glutinosum	Pointed Tick Trefoil						0.70	<b>0.70</b>
Desmodium illinoense	Ill. Tick Trefoil	2.53						<b>2.53</b>
Dodecatheon meadia	Shooting Star	15.10		2.00			1.00	<b>18.10</b>
Draba reptans	Common Whitlow Grass			0.05				<b>0.05</b>
Echinacea pallida	Pale Purple Coneflower	224.00	224.13			1.00		<b>448.13</b>
Echinocystis lobata	Wild Cucumber				0.10			<b>0.10</b>
Elymus canadensis	Prairie Wild Rye	28.20	160.50					<b>188.70</b>
Elymus villosus	Silky Wild Rye						4.80	<b>4.80</b>
Epilobium coloratum	Cinnamon Willow Herb				0.20			<b>0.20</b>
Eragrostis spectabilis	Purple Love Grass	0.48						<b>0.48</b>
Erigeron strigosus	Daisy Fleabane	5.75	12.00					<b>17.75</b>
Eryngium yuccifolium	Rattlesnake Master		57.15			1.00		<b>57.15</b>
Eupatorium altissimum	Tall Boneset		4.50			1.00		<b>4.50</b>
Eupatorium maculatum	Spotted Joe Pye Weed				9.05			<b>9.05</b>
Eupatorium perfoliatum	Boneset		1.10			1.00		<b>1.10</b>



Eupatorium purpureum	Purple Joe-Pye Weed						3.00	<b>3.00</b>
Euphorbia corollata	Flowering Spurge	34.70						<b>34.70</b>
Festuca obtusa (subverticillata)	Nodding Fescue						0.30	<b>0.30</b>
Filipendula rubra **	Queen-of-the-Prairie			0.02				<b>0.02</b>
Galium borale	Northern Bedstraw				0.70			<b>0.70</b>
Gaura biennis pitcheri (longiflora)	Common Gaura	0.50	1.00					<b>1.50</b>
Gentiana (alba) flavida	Cream Gentian		9.00					<b>9.00</b>
Gentiana (Gentianopsis) crinita	Fringed Gentian			0.05				<b>0.05</b>
Gentiana andrewsii	Bottle (or Closed) Gentian				3.50			<b>3.50</b>
Gentiana purberulenta	Prairie Gentian			0.60				<b>0.60</b>
Geum triflorum	Prairie Smoke (Long-plumed Purple Avens)			0.03				<b>0.03</b>
Gnaphalium obtusifolium	Sweet Everlasting (Old-Field Balsam)	1.40						<b>1.40</b>
Helenium autumnale	Sneezeweed				4.55			<b>4.55</b>
Helianthemum bicknellii	Rock Rose			0.16				<b>0.16</b>
Helianthemum canadense	Common Rockrose (Frostweed)			3.50				<b>3.50</b>
Helianthus divaricatus	Woodland Sunflower					1.00		<b>1.00</b>
Helianthus grosseserratus	Sawtooth Sunflower		4.90					<b>4.90</b>
Helianthus mollis	Hairy Sunflower							<b>0.00</b>
Helianthus occidentalis	Western Sunflower; Naked S.	20.00	16.45					<b>36.45</b>
Helianthus rigidus (laetiflorus)	Prairie Sunflower		2.81					<b>2.81</b>
Helianthus tuberosus	Jerusalem Artichoke		7.00					<b>7.00</b>
Heliopsis helianthoides	False Sunflower; " Ox-eye "		17.00					<b>17.00</b>
Heuchera richardsonii grayana	Rough Heuchera; Alum root	3.90						<b>3.90</b>
Hibiscus laevis	Halberd-Leaved Rose Mallow				1.40			<b>1.40</b>
Hieracium gronovii	Hairy Hawkweed	1.04						<b>1.04</b>
Houstonia (Hedyotis) longifolia (canadense)	Long-Leaved Bluets			0.01				<b>0.01</b>
Hypericum pyramidatum	Great St. Johnswort				3.10			<b>3.10</b>

Hypericum virginianum	Marsh St Jonnsword				0.01			<b>0.01</b>
Hystrix patula (Elymus hystrix)	Bottlebrush Grass						1.45	<b>1.45</b>
Impatiens capensis (biflora)	Spotted Touch-Me-Not (Jewelweed)				0.10			<b>0.10</b>
Iris versicolor	Tall Blue Flag Iris				0.53			<b>0.53</b>
Iris virginica shrevei	Blue Flag				0.52			<b>0.52</b>
Juncus interior	Inland Rush		4.45					<b>4.45</b>
Juncus tenuis	Path Rush		16.75	5.00		1.00		<b>21.75</b>
Koeleria cristata (macrantha)	Prairie June Grass	28.05	32.20			1.00		<b>60.25</b>
Krigia virginica	Dwarf Dandelion				0.05			<b>0.05</b>
Kuhnia (Brickellia) eupatoroides corymbulosa	False Boneset		14.40			1.00		<b>14.40</b>
Lechea stricta	Bushy Pinweed				0.30			<b>0.30</b>
Lechea tenuifolia	Slender-Leaved Pinweed				0.40			<b>0.40</b>
Liatris aspera	Rough Blazing- star (Rough Gayfeather)	68.15				1.00		<b>68.15</b>
Liatris cylindracea	Dwarf Blazingstar				0.84			<b>0.84</b>
Liatris pycnostachya	Tall Gayfeather; Prairie Blazing Star		72.15					<b>72.15</b>
Lilium michiganense	Turk's Cap lily				0.10			<b>0.10</b>
Lilium philadelphicum andinum	Prairie Lily; Wood Lily; Western Lily				0.03			<b>0.03</b>
Linaria canadensis	Blue Toadflax				0.02			<b>0.02</b>
Lithospermum canescens	Hoary Puccoon				0.30			<b>0.30</b>
Lithospermum incisum	fringed puccoon				0.75			<b>0.75</b>
Lobelia cardinalis	Cardinal Flower				1.25			<b>1.25</b>
Lobelia inflata	Indian Tobacco				0.15			<b>0.15</b>
Lobelia siphilitica	Great Lobelia				0.12			<b>0.12</b>
Lobelia spicata	Pale-spike Lobelia				0.40			<b>0.40</b>
Ludwigia alternifolia	Seed Box				0.06			<b>0.06</b>
Lupinus perennis	Wild Lupine	2.65					3.00	<b>5.65</b>
Lycopus unifloris	Northern Bugleweed				0.60			<b>0.60</b>
Lythrum alatum	Winged Loosestrife				0.35			<b>0.35</b>
Mimulus ringens	Monkey Flower				0.31			<b>0.31</b>
Monarda fistulosa	Wild Bergamot		28.90			1.00		<b>28.90</b>
Monarda punctata villicualis	Horse Mint	5.70				1.00		<b>5.70</b>
Napaea dioica	Glade Mallow				2.85			<b>2.85</b>
Oenothera biennis canescens	Common Evening Primrose	1.25				1.00		<b>1.25</b>

Oenothera clelandii (rhombipetala)	Sand Evening Primrose			0.65				<b>0.65</b>
Onoclea sensibilis	Sensitive Fern					0.91		<b>0.91</b>
Onosmodium hispidissimum	Marbleseed		8.40					<b>8.40</b>
Opuntia humifusa (compressa)	Prickly Pear Cactus			0.01				<b>0.01</b>
Orobunche fasciculata	Clustered Broom Rape			0.04				<b>0.04</b>
Oxalis violacea	Violet Wood-sorrel			0.03				<b>0.03</b>
Panicum capillare	Old Witch Grass			0.30				<b>0.30</b>
Panicum oligoanthes scribneria	Scribner's Panic Grass		2.10					<b>2.10</b>
Panicum villosissimum	White-Haired Panic Grass			0.50				<b>0.50</b>
Parnassia glauca	Grass of parnassus			0.03				<b>0.03</b>
Parthenium integrifolium	Wild Quinine (Feverfew)	10.00	34.15					<b>44.15</b>
Pedicularis canadensis	Wood Betony		8.40					<b>8.40</b>
Pedicularis lanceolata	Fen (Swamp) Betony; Lousewort					9.80		<b>9.80</b>
Penthorum sedoides	Ditch Stone crop					0.01		<b>0.01</b>
Penstemon digitalis	Foxglove Beardtongue	10.00	15.70				1.00	<b>25.70</b>
Penstemon grandiflorus	Large Flowered Beardtongue			0.25				<b>0.25</b>
Penstemon hirsutus	Hairy Beard tongue	7.00	7.30				1.00	<b>14.30</b>
Petalostemum (Dalea) candidum	White Prairie Clover	20.00	71.45				1.00	<b>91.45</b>
Petalostemum (Dalea) purpureum	Purple Prairie Clover	60.00	72.70				1.00	<b>132.70</b>
Phlox bifida	Sand Phlox			0.12				<b>0.12</b>
Phlox pilosa	Prairie phlox			0.15				<b>0.15</b>
Physocarpus opulifolius	Ninebark		1.20					<b>1.20</b>
Plantago patagonica	Woolly Plantain			1.80				<b>1.80</b>
Podophyllum peltatum	May Apple						0.05	<b>0.05</b>
Polemonium reptans	Jacob's Ladder						0.10	<b>0.10</b>
Polygala polygama obtusata	Purple Milkwort			0.20				<b>0.20</b>
Polygonatum canaliculatum (commutatum)	Smooth Solomon's Seal						0.15	<b>0.15</b>
Polytaenia nuttallii	Prairie Parsley			1.15				<b>1.15</b>
Potentilla arguta	Prairie Cinquefoil	6.75	15.00				1.00	<b>21.75</b>
Prenanthes aspera	Rough White Lettuce			0.45				<b>0.45</b>
Prunus americana	Wild Plum			0.05				<b>0.05</b>
Ptelea trifoliata	Wafer Ash, Hop Tree			0.25				<b>0.25</b>
Pycnanthemum virginianum	Mountain mint (Prairie Hyssop)		19.45					<b>19.45</b>

Ratibida pinnata	Yellow Coneflower		9.15					<b>9.15</b>
Rhus aromatica	Fragrant Sumac			0.80				<b>0.80</b>
Rosa carolina	Pasture Rose	7.80	6.00					<b>13.80</b>
Rudbeckia hirta	Black-eyed Susan		9.00			1.00		<b>9.00</b>
Rudbeckia subtomentosa	Sweet Blackeyed Susan		15.55					<b>15.55</b>
Salix humilis	Prairie Willow			0.02				<b>0.02</b>
Scirpus cyperinus	Wool Grass				56.75			<b>56.75</b>
Scrophularia lanceolata	Early figwort						1.65	<b>1.65</b>
Scrophularia marilandica	Late Figwort						0.02	<b>0.02</b>
Scutellaria parvula leonardi	Small Skullcap			0.10				<b>0.10</b>
Senecio plattensis	Prairie Ragwort		2.60					<b>2.60</b>
Silene antirrhina	Sleepy Catchfly			0.20				<b>0.20</b>
Silene stellata	Starry Campion			0.21				<b>0.21</b>
Silphium integrifolium	Rosinweed		46.45			1.00		<b>46.45</b>
Silphium laciniatum	Compass plant	39.95	102.45			1.00		<b>142.40</b>
Silphium perfoliatum	Cup-plant		15.00		5.00			<b>20.00</b>
Silphium terebinthaceum	Prairie Dock	25.00	42.00			1.00		<b>67.00</b>
Sisyrinchium albidum	Common Blue-eyed Grass			0.35				<b>0.35</b>
Smilacina stellata	Starry False Solomons plume						0.65	<b>0.65</b>
Smilacina racemosa	Solomons Plume						0.80	<b>0.80</b>
Solidago (Euthamia) graminifolia nuttallii	Grass-leaved Goldenrod		44.30			1.00		<b>44.30</b>
Solidago (Euthamia) gymnospermoides	Viscid Grass-leaved Goldenrod	40.75						<b>40.75</b>
Solidago missouriensis fasciculata	Missouri Goldenrod		6.15					<b>6.15</b>
Solidago patula	Swamp Goldenrod				1.21			<b>1.21</b>
Solidago riddellii	Riddell's goldenrod				0.05			<b>0.05</b>
Solidago speciosa	Showy Goldenrod		5.05			1.00		<b>5.05</b>
Spartina pectinata	Prairie Cord Grass				4.15			<b>4.15</b>
Spiraea alba	Meadowsweet							<b>0.00</b>
Spiranthes cernua	Nodding Ladies Tresses			0.01				<b>0.01</b>
Sporobolus heterolepis	Prairie Dropseed	38.20	103.90			1.00		<b>142.10</b>
Stachys palustris homotricha	Woundwort		7.85					<b>7.85</b>
Stipa spartea	Porcupine Grass	1.10				1.00		<b>1.10</b>

Talinum rugospermum ***	Sand Farnflower			0.02				<b>0.02</b>
Tephrosia virginiana	Goat's Rue	9.45						<b>9.45</b>
Teucrium canadense	American Germander (Wood Sage)			0.40				<b>0.40</b>
Thalictrum dasycarpum	Purple Meadow Rue			0.03				<b>0.03</b>
Tradescantia ohiensis	Ohio Spiderwort	57.50	263.05			1.00		<b>320.55</b>
Triosteum perfoliatum	Horse Gentian (Feverwort)(Tinker's Weed)						0.51	<b>0.51</b>
Verbena hastata	Blue Vervain		1.50		1.00	1.00		<b>2.50</b>
Verbena stricta	Hoary Vervain	2.30	10.00			1.00		<b>12.30</b>
Verbena urticifolia	Hairy White Vervain		3.65			1.00		<b>3.65</b>
Vernonia fasciculata	Common Ironweed				22.40			<b>22.40</b>
Veronicastrum virginicum	Culver's Root		10.00		10.35			<b>20.35</b>
Viola pedata lineariloba	Birdsfoot Violet			0.65				<b>0.65</b>
Viola pedatifida	Prairie Violet			0.45				<b>0.45</b>
Viola sagittata	Arrow-leaved violet			0.06				<b>0.06</b>
Wulfenia bullii *** (Besseyia)	Kittentails			0.20				<b>0.20</b>
Zizia aptera	Heart-leaved Meadow Parsnip	4.25				1.00		<b>4.25</b>
Zizia aurea	Golden Alexander		42.50			1.00		<b>42.50</b>
ODD MIXES								<b>0.00</b>
Little blue combine		157.40	230.24			1.00		<b>387.64</b>
tall grasses combine - big blue and indian			219.30			1.00		<b>219.30</b>
Combined Asters and Oldfield GR		196.20	617.85			1.00		<b>814.05</b>

Note: The aster and goldenrod combine mix contained: smooth aster, sky-blue aster, silky aster, old field goldenrod, showy goldenrod, Missouri goldenrod, stiff goldenrod, round headed bush clover, Liatris aspera, and Echinacea pallida. The asters and most goldenrods are not accounted for in the excel spreadsheet.

#### Lessons Learned:

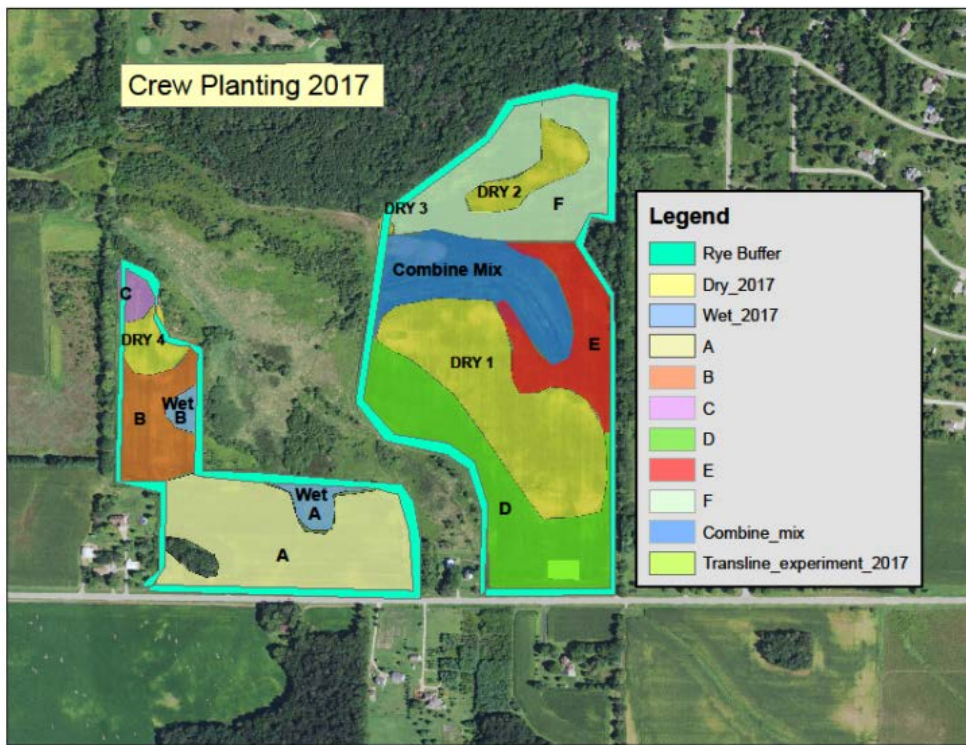
One lesson learned is that it would be a good idea to revisit the previous planting logs before starting planting. It would have been apparent earlier that more seed was put in the step-in mix than should have been there, had we read last year's log beforehand. Another lesson that could have been learned from looking at previous planting logs would be to double check barrels before they are included in the mix. Beach wormwood and Scribner's Panic grass that was supposed to go into the dry mix were not added and had to be added later to the step-in mix. One way to avoid this would be to make sure that the mixing process is not rushed, or at least doesn't feel rushed. When we were trying to make good time, we got sloppy on checking our barrels and failed to check off our seed as we went along, which would have caught our omission of the Beach Wormwood and Panic Grass. Sorting out the

seed in Excel could have been made easier with some front-end work making sure the seed habitat preference was entered on the spreadsheet along with new seed.

Dividing the Planting into smaller units made planting easy and helped avoid some of the stranger lines that may otherwise need to have been driven. The smaller blocks also gave a sense of completion at several times during a day of planting, which is nice. One potential downside is this made a perceived need to begin planting with a run around the perimeter. This gives a good idea of the general shape of the planting, especially when that shape is irregular, and can help with understanding the best way to cover an irregular area. It may have been unnecessary due to the rye border. Another downside is that the need to divide the barrels among the different planting areas made extra work when it came to mixing and getting the seed out to the planting. However, this extra work was a small quantity and was worth it for the extra ease of planting provided by the subdivision of the planting areas.

Arc Collector was useful in mapping the dry areas. There is not currently a layer for keeping track of the planting as it is in progress. Such a layer may be useful for writing future reports.

#### Planting Map:



End.

