

**GOBBLER RIDGE @CLEAR CREEK KNOLLS – PLANTING #68 (planted 2006)  
UPDATED FOR 2009 by Bernie Buchholz, December 8, 2009**

1. Stepped about 1 pound of New Jersey tea (*Ceanothus*) into mucky spring soil in early March; seed scarified at 180 F.
2. In late spring noticed a roughly 20' by 35' area in SE of planting with heavy ground clover growth, well beyond the potential for hand management. By late summer it was substantially abated, possibly due to heavy moisture levels?
3. See Seed list for other overseeding and note *Comandra umbellata* test plot in north central location .
4. Appears that Canada milk vetch (*Astragalus*) is too frequent.
5. Swept planting 3-4 times, finding red clover and intermediate clover though November.
6. Beach wormwood (*Artemisia*) substantially reduced; juveniles appear far less frequent and dramatically smaller in size than in spring 2007.
7. Excellent burn spring March 17, 2009.
8. Removed 2-3 barrels of native tall/Canada goldenrod (*Solidago*) and rigid goldenrod (*Solidago*) seed heads to reduce rate of increase.
9. In June, tractor access for herbicide on two track to CRP field to north (of Jay's planting) resulted in creation of a new track that remains visible to this time.

**GOBBLER RIDGE @CLEAR CREEK KNOLLS – PLANTING #68 (planted 2006)  
UPDATED FOR 2008 by Bernie Buchholz, March 8, 2009**

1. The planting thrived in 2008; good species distribution and coverage except: second year beach wormwood (*Artemisia*) which is extremely abundant, oldfield goldenrod (*Solidago nemoralis*) which is very heavy in the southern half, horsemint (*Monarda punctata*) is heavy in the northeast sandy area and Canada rye (*Elymus canadensis*) is heavy along the two track and the extreme southwest corner.
2. An attempt to burn the planting in the fall failed; swept for weeds about 4 times.
3. Most pleasing plant seedling surprise was cream gentian (*Gentiana*).
4. In addition to hand plants, used pendulum spreader along two track and thin west edge with 2007 planting; planted two large plugs of toad flax (*Comandra*) and am uncertain if they survived.
5. Closed two track in November.
6. Black medic (*Medicago lupulina*) is thriving in southern third of the planting; J Stacy attributes this to spring burns but there have been no effective burns in the unit.

**GOBBLER RIDGE @CLEAR CREEK KNOLLS – PLANTING #68 (planted 2006)  
UPDATED FOR 2007 by Bernie Buchholz, March 3, 2008**

1. According to veterans, one of the most successful first year plantings. Why? It's not clear; well-timed rains contributed to unusual 1<sup>st</sup> year plant growth. Species blooming in first year include *Hel. hel.* (false sunflower), *Pol. San.* (field milkwort), *Par. int.* (wild quinine), *Lia. asp.* (rough blazing star), *Lia. pys.* (tall gayfeather), *Ast. eri.* (heath aster), *Ast. lae.* (smooth aster), *Ast. lin.* (stiff aster), *Ast. azu.* (skyblue aster), *Hel. gro.* (sawtooth sunflower), *Gau. bie.* (*gaura biennis*), *Gna. obt.* (sweet everlasting). Finally, being down gradient from Jay Stacy's planting always helps! (Note 7/08: some of these bloomed because they are annuals.)
2. Areas requiring over seeding (need grid map of this and future planting): a. southernmost 35 feet of planting possibly due to soil accretion from up field erosion; b. two areas of concentrated dandelions which restricted germination and seedling growth.
3. Species frequency; *Mon. pun.* (horse mint) is quite heavy in the NE corner which is both the sandiest and driest soil; well spaced to too few elsewhere; *Art. cau.* (beach wormwood) is extremely heavy throughout north half; aster species were very successful, growing in abundant numbers.
4. Weed growth relatively uniform throughout except dry sandy NE corner where it is dramatically reduced; some areas with concentrated dandelions had much reduced growth of other weeds; the planting was "swept" for weeds at least 4 complete and several more partial times; guesstimate weeds treated (pulled or cut/herbiced): 400 Queen Anne's lace, 200 yarrow, 300 wild parsnip, 400 box elder, 35 red clover, plus 400 misc. weeds.
5. The six foot wide strip of *Ely. Can.* (Canada rye) along the planting's west edge was designed to buffer the planting from agricultural operations, primarily overspray, and to conserve seed in an area that would serve as the two track for working the planting; the rye thrived by late summer but had no discernable effect in buffering due to being short when herbicide and fertilizers were applied. (There was no discernible overspray damage.) I would not do this again for same objectives; it might, however, be useful in buffering the southern edge from seed/weed intrusion from the adjacent hay field over several years.
6. Its difficult to evaluate the rate of goldenrod germination until the second growing season; thus, it is hard to evaluate the Stacy maxim that the weight of aster seed should equal or exceed the weight of goldenrods which, of course, are much easier to collect in volume.
7. It would be helpful to have much more detailed maps of the planting, including a grid marked by T posts on site to better kept track over seed targets, weed sweeps, weed species, etc.
8. Regarding the original species list from 2006 (below), note that the last 24 species on the list (3.44 lbs) were NOT planted. These are all Obligate or Facultative species that I had expected to plant in the adjacent flood plain. However, we did not clear all

the trees before the 2006/2007 fall/winter planting window closed; seeds were held for future use.

9. Miscellaneous planting and herbicide: 12/06: planted 5 Ame pru. (American plum) in cluster; April 1, 2007: applied 5 gallons Poast Plus @ 2.5 oz per gallon on brome on south side of savanna; light rain fell within 3 hours of application; April 15, 2007: applied 6.5 gallons of Poast Plus @ 2.5 oz/gallon on about 60% of brome (omitting east side) south of savanna; April 29, 2007: planted ~200 loose culms and 3-5 plugs of Dutchman's breeches in savanna; April 28, 2007: applied 2.5 gallons of P.P. on west edge of brome field abutting planting; June 12, 2007: applied Poast Plus on non-native brome on east edge of planting and 15' into planting; June 22, 2007: planted 28 plugs of Vio. sag. (arrow leaved violet) July 7, 2007: applied Roundup adjacent south side of planting; Sept. 1, 2007: planted 50 white oak acorns; Nov. 8, 2008: applied 5 to 8 pounds of 2007 seed mix to southernmost 60 feet of planting with pendulum spreader being used on 2007 planting; Nov 18 and 20, 2007: hand planted 3 to 4 pounds of mix of conservative species, all stepped-in to some degree (esp. included Amo. can. and Tep. vir.).

October 14, 2007:

Bill Kleiman here. Today I created pdf of Jay's hand typed seed list. He did not give us a weight per species, but promises to do this next time. Bernie did give a per species list which is below. Jay's seed harvest list is for his 6 acres. Jay and Bernie's first year planting look awesome! The weather was perfect with rain at the right times. They planted in November and gentle rains followed sealing in the seed nicely. They harrowed both before and after seeding. Jay did some hand seeding and tractor seeding. The main factor for success was likely planting a high rate and diversity of seed, and getting it in before Thanksgiving. I hope to follow that this year. Generally, the fire season makes us tardy enough that Christmas is our target.

GOBBLER RIDGE @CLEAR CREEK KNOLLS – PLANTING #68 (planted 2006)  
SEED LIST & SITE PREPARATION NOTES by Bernie Buchholz Nov. 30, 2006

## I. SITE CONDITIONS

According to the 1985 Soil Survey of Lee County, Bernie's 2 acre cornfield and the adjacent (approx. 0.4A) brome covered field to the east is 570C2 Martinsville "silt loam with 5-10% slope with severe limitations" for erosion. It is a fine-silted, mixed, mesic soil. The adjacent terraced creek side is 776 Comfrey clay loam, a fine-loamy, mixed mesic soil.

A drainage course running NW to SE cuts across the extreme SW edge of the cornfield toward a concrete water control device. That device no longer restricts flows but suggests that rainwater runoff must be substantial.

Jay's six acre site to the north is primarily 507C2 Martinsville with a 290b Warsaw loam escarpment between the cornfield and the creek side.

The combined 8 acre site is part of a much larger field that has been in row crops/corn for a least 60 years. The 1939 aerials show this field in row crops. In 2006 it was treated with Roundup herbicide.

Pre-settlement ecotype is believed to have been oak savannah due to the presence of a substantial number of burr and black oaks, Pennsylvania sedge and other conservative species. Preliminary observation suggests that all of Jay's and the northern half of Bernie's planting is dry prairie; the southern acre is dry/mesic to mesic.

## II. SITE PREPARATIONS

The corn stubble was mowed with the "batwing" in late October. This action lifted out some of the stalk/root balls but most remained with about 4" stalk stub.

On November 2 to prepare the site for burning we used the alfalfa rake around the perimeter (3 laps) of the combined 8 acre site to create a fire break; the rake captured about 60-70% of corn bio mass into wind rows but a steady wind redistributed some of the lighter plant matter. Most of the 2 acre site was subsequently raked into scattered piles while the portion of the six acre site within the perimeter windrow was not disturbed.

Excellent weather conditions allowed the raked windrows to burn thoroughly. The 6 acre site which was not raked (except perimeter) was burned thoroughly (about 90% of the area). The 2 acre site had a considerable amount of stubble remaining because 30-40% of the bio mass not captured by the raking.

On November 3 we harrowed the entire 2 acre site with a 15' wide steel chain "rake": we first worked the site north to south and then east to west, dropping accumulated stubble just off site to the west. This action removed a significant additional amount of bio mass and loosened the top one quarter to one inch of soil, creating an attractive planting condition. Remaining bio mass is roughly 15%, apparently well less than the acceptable maximum.

## III. SEED LIST & PLANTING PLAN (Bernie's 2 Acre site only)

The attached exhibit reflects more than 130 dry and mesic species (plus 20 wetland species), about 45+/- pounds per acre of forbs and non-dominant grasses. Dominant grasses include 5 pounds little blue and a three quarter pound mix of big blue/Indian grass per acre. Seeds that are normally collected in the spring and early summer are underrepresented because Bernie did not retain seeds collected at the start of the season.

A base mix was planted across the entire site with specific additional seeds only in the northern acre of dry prairie and others sown only in the southern more mesic section; a few shade edge species lined the tree edge; a six foot wide Canada rye border on the western edge is intended to buffer the site from any agricultural herbicide overspray from the adjacent cornfield. Note that the "Planting Zones" listed on the Seed List Exhibit were to organize seed mixes and do not reflect any generally recognized nomenclature.

Due to the manageable size of the 2 acre planting seeds were sown broadcast fashion by hand – one pass east to west (in 10' to 15' swaths) and another pass north to south. Broadcasting took approximately 8 man hours. The field was then raked with the harrow to further distribute and cover the seed. This procedure took less than one hour. Several additional species were then planted "one by one", including lupine, hills thistle, porcupine grass, burr oak, hickory, etc.

About 2.5 pounds of seed were held back for repairing site disturbances over the next few months. Additionally, about six pounds of crew collected savannah mix (not reflected in the Seed List) were used to over seed the existing remnant, primarily under the oaks; an additional 5-6 pounds were held back to plant in the existing brome field after the application of Poast in the spring.

Seed identified on the exhibit for Planting Zones "Wetland" and "Wetland Obligate" was over seeded in the wettest areas of the adjacent creek side.

Lessons learned: (1) burning the corn stubble in-place was much more effective than raking it into piles; (2) proper repair of the harrow greatly increases its effectiveness; (3) even on a two acre site, flags are mandatory for keeping your place while broadcasting; (4) converting cornfields

SCIENTIFIC NAME	COMMON NAME	S/W	06 LBS	07 OS	08 OS	09 OS	NOTES
Agastache scrophulariaefolia	Purple Giant Hyssop	5	0.10				07: general: pulled seed spreader southern 20 meter during adjacent 07 planting
Agrimonia gryposepala	Tall (?) Agrimony	2					
Agrimonia pubescens	Soft Agrimony	5	0.01				
Allium canadense	Wild Garlic	2	0.05				
Allium cernuum	Nodding Wild Onion	7	0.60				
Amorpha canescens	Leadplant	9	2.70	2.20			
Amorpha fruticosa	Indigo Bush	6	0.05				
Andropogon gerardii	Big Bluestem; Turkeyfoot	5	1.00				
Andropogon (Schizachyrium) scoparium	Little Bluestem	5	10.00				
Anemone canadensis	Meadow Anemone	4				0.01	
Anemone cylindrica	Thimbleweed	6	2.80				
Anemone virginiana	Tall Thimbleweed	5	0.20				
Antennaria neglecta	Field Cat's Foot	4					
Antennaria plantaginifolia	Pussy Toes (Everlasting)	3					
Apocynum androsaemifolium	Spreading Dogbane	5					
Apocynum cannabinum (X medium)	Dogbane (Indian Hemp)	4	0.01				
Aristida purpurascens	Arrow Feather	5	1.10				
Aronia prunifolia	Chokeberry	6			0.45		8-Sep
Artemisia caudata (campestris)	Beach Wormwood	5	2.50				
Asclepias amplexicaulis	Sand Milkweed	7	0.01			0.01	
Asclepias tuberosa interior	Butterfly Weed	7	0.01	0.01			07: 4 plugs planted Oct
Asclepias verticillata	Whorled Milkweed	1	0.20	0.05			07: pint fluff
Asclepias viridiflora	Short Green Milkweed	10					
		[15]					
Aster azureus (oolentangiensis)	Sky-blue Aster	8	1.75				
Aster ericoides (prostratus)	Heath Aster	5	1.55				
Aster laevis	Smooth (Blue)(Silky) Aster	9	0.01				
Aster linariifolius	Stiff Aster (Flax-Leaved)	10	0.20	0.10			
Aster novae-angliae	New England Aster	4	0.01				
Aster oblongifolius	Aromatic Aster	10					
		[15]					
Aster ptarmicoides	White Aster ( Stiff Aster)	10					
		[15]					
Aster sericeus	Silky Aster	10	0.70				
		[15]					
Astragalus canadensis	Canadian Milk Vetch	10	1.20				
		[15]					
Baptisia leucantha	White Wild Indigo	8	0.70				
Baptisia leucophaea	Cream Wild Indigo	10	1.20				
		[15]					
Bouteloua curtipendula	Side-Oats Grama	8	1.90		1.35		
Bouteloua hirsuta	Hairy Grama	8	0.05				
Cacalia atriplicifolia	Pale Indian Plantain	8	1.00				
Cacalia plantaginea (tuberosa)	Indian Plantain	10					
		[15]					
Cacalia suaveolens	Sweet-scented Indian Plantain	10					
		[15]					
Callirhoe triangulata	Clustered Poppy Mallow	10	0.01	0.01			07: 1 tbl sp
		[15]					

SCIENTIFIC NAME	COMMON NAME	S/W	06 LBS	07 OS	08 OS	09 OS	NOTES
Carex bicknellii	Copper-shouldered oval Sedge	10	0.40				
Carex muhlenbergii (enervis)	Sand Bracted Sedge (Muhlenberg's)	5	0.20				
Carex pennsylvanica	Common Oak (Penn) Sedge	5					
Carya ovata	Shagbark Hickory	5	0.40		0.40		/~20 seeds adjacent sav
Castilleja sessiliflora **	Downy Yellow Painted Cup	10 (20)	0.15		0.05		
Ceanothus americanus	New Jersey Tea	6			1.15		fall '08: 10%; Mar '09: 90%
Chrysopsis camporum (Heterotheca)	Golden Prairie Aster	5	0.10				
Cirsium hillii *** (pumilum)	Hill's Thistle	10 (20)	0.01				
Comandra umbellata (richardsiana)	False Toadflax	7			0.01	0.01	08: two large plugs; 09: 100 seed test
Coreopsis lanceolata	Sand Coreopsis	5					
Coreopsis palmata	Prairie Coreopsis	6	0.40		0.80		
Coreopsis tripteris	Tall Coreopsis	5	0.10				
Corylus americana	American Hazelnut	5	0.25				
Cyperus filiculmis	Slender Sand Sedge	5	0.15				
Danthonia spicata	Poverty Oat Grass	3			0.30		
Desmodium canadense	Showy Tick Trefoil	4	0.01				
Desmodium illinoense	Ill. Tick Trefoil	6	0.15				
Dodecatheon meadia	Shooting Star	6	1.90	0.01		0.01	07: 1 tbl sp (06 weight seems quite high); 09: halfcup
Echinacea pallida	Pale Purple Coneflower	8	10.00	3.90			
Elymus canadensis	Prairie Wild Rye	4	2.90				
Elymus villosus	Silky Wild Rye	5	0.55				
Eragrostis spectabilis	Purple Love Grass	3	0.75				
Erigeron strigosus	Daisy Fleabane	5					
Eryngium yuccifolium	Rattlesnake Master	9	0.70				
Eupatorium altissimum	Tall Boneset	0	0.15				
Eupatorium perfoliatum	Boneset	4	0.10				
Euphorbia corollata	Flowering Spurge	2	1.50				
Festuca obtusa (subverticillata)	Nodding Fescue	5	0.30				
Gaura biennis pitcheri (longiflora)	Common Gaura	2	0.05				
Gentiana (alba) flavida	Cream Gentian	9	0.05				
Gentiana (Gentianopsis) crinita	Fringed Gentian	10	0.01				
Gentiana purberulenta	Prairie Gentian	10					
Geum triflorum	Prairie Smoke (Long-plumed Purple Avens)	10 [15]				0.01	
Gnaphalium obtusifolium	Sweet Everlasting (Old-Field Balsam)	2	0.20				
Helianthemum bicknellii	Rockrose (Frostweed)	10					
Helianthemum canadense	Common Rockrose (Frostweed)	8	0.30	0.15	0.45		
Helianthus hirsutus	Hispid sunflower	5					
Helianthus occidentalis	Western Sunflower; Naked S.	10	0.85				
Helianthus rigidus (laetiflorus)	Prairie Sunflower	8	0.10				
Helianthus tuberosus	Jerusalem Artichoke	3	0.01				
Heliopsis helianthoides	False Sunflower; " Ox-eye "	5	0.50				
Heuchera richardsonii grayana	Rough Heuchera; Alum root	8	0.30				

SCIENTIFIC NAME	COMMON NAME	S/W	06	07	08	09	NOTES
			LBS	OS	OS	OS	
Hieracium gronovii	Hairy Hawkweed	6	0.05				
Hieracium longipilum	Long-Bearded Hawkweed	9					
Houstonia (Hedyotis) longifolia (canadense)	Long-Leaved Bluets	10 (20)	0.01	0.01		0.05	07: tsp
Hystrix patula (Elymus hystrix)	Bottlebrush Grass	5	0.15				
Isanthus (Trichostema) brachiatus (m)	False Pennyroyal	8					
Juncus greenei	Greene's Rush	8	2.00				
Juncus interior	Inland Rush	6					
Juncus tenuis	Path Rush	0	0.01				
Koeleria cristata (macrantha)	Prairie June Grass	7	1.10				
Krigia virginica	Dwarf Dandelion	6					
Kuhnia (Brickellia) eupatoroides corymbulosa	False Boneset	4	0.65				
Lechea stricta	Bushy Pinweed	10	0.05				
Lechea tenuifolia	Slender-Leaved Pinweed	8	0.10				
Lechea villosa (mucronata)	Hairy Pinweed	6					
Lespedeza capitata --	Round-headed Bush Clover	4	2.30				
Liatris aspera	Rough Blazing-star (Rough Gayfeather)	6	15.00				
Liatris cylindracea	Dwarf Blazingstar	8	0.01		0.05		8 cups fluff
Liatris pycnostachya	Tall Gayfeather; Prairie Blazing Star	8	0.25				
Linaria canadensis	Blue Toadflax	6					
Linum sulcatum	Groved Yellow Flax	8				0.01	
Lithospermum canescens	Hoary Puccoon	6		0.01			07: 25 seeds
Lithospermum incisum	Fringed (Narrow-leaved) Puccoon	8					
Lobelia inflata	Indian Tobacco	4					
Lobelia spicata	Pale-spike Lobelia	6					
Lupinus perennis	Wild Lupine	7	0.01				
Lysimachia lanceolata	Lance-Leaved Loosestrife	7	0.01			0.25	
Lysimachia quadriflora	Narrow-Leaved (Whorled) Loosestrife	9	0.05				
Monarda fistulosa	Wild Bergamot	4	0.15				
Monarda punctata villicualis	Horse Mint	5	0.75				
Napaea dioica	Glade Mallow	10		0.01			07: 1/2 cup
Oenothera biennis canescens	Common Evening Primrose	0					
Oenothera clelandii (rhombipetala)	Sand Evening Primrose	7					
Onosmodium hispidissimum	Marbleseed	9				0.05	09: hand planted ~50 seeds
Opuntia humifusa (compressa)	Prickly Pear Cactus	5	0.55				
Oxalis violacea	Violet Wood-sorrel	9					
		[15]					
Panicum capillare	Old Witch Grass	1					
Panicum leibergii	Prairie Panic Grass	10					
Panicum oligosanthos scribneria	Scribner's Panic Grass	4	0.10				
Panicum perlongum	Long-stalked Panic Grass	10					
Panicum villosissimum	White-Haired Panic Grass	8					
Panicum virgatum	Prairie Switch Grass	5	0.25				
Parthenium integrifolium	Wild Quinine (Feverfew)	8	3.00	0.60			
Paspalum ciliatifolium muhlenbergii	Hairy Lens Grass	6	0.45				

SCIENTIFIC NAME	COMMON NAME	S/W	06	07	08	09	NOTES
			LBS	OS	OS	OS	
Pendicularis canadensis	Wood Betony	9					
Penstemon digitalis	Foxglove Beardtongue	4	0.05				
Penstemon hirsutus	Hairy Beard tongue	9	0.01				
Penstemon pallidus	Pale Beard Tongue	6					
Petalostemum (Dalea) candidum	White Prairie Clover	9	1.55				
Petalostemum (Dalea) purpureum	Purple Prairie Clover	9	2.50		0.70		
Phlox maculata	Sweet William Phlox	10 (20)					
Physocarpus opulifolius	Ninebark	8	0.55				
Polemonium reptans	Jacob's Ladder	5	0.10				
Polygala incarnata **	Pink Milkwort	10				0.01	
Polygala polygama obtusata	Purple Milkwort	9	0.01			0.1	09: 3 cups
Polygala sanguinea	Field Milkwort	6	0.01				
Polytaenia nuttallii	Prairie Parsley	10 [15]	0.01	0.01			07: 200 seeds, possibly picked too early
Potentilla arguta	Prairie Cinquefoil	9	0.10				
Prunus americana	Wild Plum	5	0.05				
Pycnanthemum tenuifolium	Narrow-leaved Mountain Mint	7	0.01				
Quercus alba	White Oak	5		5.00			07: 50 acorns planted 9/11
Quercus macrocarpa	Bur Oak	5	1.85				
Quercus velutina	Black Oak	6					
Ranunculus ficularis	Early Buttercup	6					
Ranunculus flabellaris	Yellow Water Crowfoot	7					
Rhus aromatica	Aromatic sumac				0.1		2 cups, primarily adj. oak sav.
Rhus aromatica	Aromatic sumac				0.01		07: 2 cups primarily near oaks
Rosa carolina	Pasture Rose	5	1.70				
Rudbeckia hirta	Black-eyed Susan	1	0.05				
Rudbeckia subtomentosa	Sweet Blackeyed Susan	9	0.20				
Ruellia humilis	Wild Petunia	7	0.10				
Salix humilis	Prairie Willow	6			0.05		seed from possibly fertile FFK female
Scrophularia lanceolata	Early figwort	5	0.85				
Scrophularia marilandica	Late Figwort	4					
Scutellaria parvula leonardi	Small Skullcap	7					
Senecio plattensis	Prairie Ragwort	6					
Silene antirrhina	Sleepy Catchfly	1	0.01				
Silphium integrifolium	Rosinweed	5	0.85				
Silphium laciniatum	Compass plant	5	0.90				
Silphium terebinthaceum	Prairie Dock	5	1.15				
Sisyrinchium albidum	Common Blue-eyed Grass	7	0.01	0.01			07: 1/4 tbl
Solidago (Euthamia) graminifolia nuttallii	Grass-leaved Goldenrod	4	1.00				
Solidago missouriensis fasciculata	Missouri Goldenrod	7	0.55				
Solidago nemoralis	Gray Goldenrod; Oldfield	4	1.00				
Solidago rigida	Stiff Goldenrod	4	0.15				
Solidago speciosa	Showy Goldenrod	7	0.45				
Sorghastrum nutans	Indian Grass	5	0.50				
Specularia (Triodanis) perfoliata	Venus' Looking Glass	4	0.01				
Spiraea alba	Meadowsweet	7	0.01				

SCIENTIFIC NAME	COMMON NAME	S/W	06	07	08	09	NOTES
			LBS	OS	OS	OS	
Sporobolus heterolepis	Prairie Dropseed	10	0.65	0.20			
Stipa spartea	Porcupine Grass	7	0.10				
Talinum rugospermum ***	Sand Farnetflower	10					
		[15]					
Tephrosia virginiana	Goat's Rue	8	0.50				
Teucrium canadense	American Germander (Wood Sage)	3	0.80				
Tradescantia ohiensis	Ohio Spiderwort	4	1.35			1.5	
Triosteum aurantiacum	Early Horse Gentian (Orange-fruited)(Feverwort)(Tinker's Weed)	5	0.01				
Triosteum perfoliatum	Horse Gentian (Feverwort)(Tinker's Weed)	5	1.35				
Tsuga canadensis	Hemlock						
Verbena stricta	Hoary Vervain	4	0.75				
Verbena urticifolia	Hairy White Vervain	5	0.35				
Veronicastrum virginicum	Culver's Root	7	0.65				
Viburnum prunifolium	Black Haw	5					
Viola fimbriatula	Sand Violet	6					
Viola pedata lineariloba	Birdsfoot Violet	9					
Viola sagittata	Arrow-leaved violet	7		0.01			07: 38 plugs in July
Vulpia octoflora tenella	Six-weeks fescue	4					
Wulfenia bullii *** (Besseyia)	Kittentails	10	0.60			0.1	
		(20)					
Zizia aptera	Heart-leaved Meadow Parsnip	10	0.01		0.05		
Zizia aurea	Golden Alexanders	7	0.55				
ZZ	2008 mix				5.00	0.50	two track overseed
	Totals		105.6	12.3	10.9	2.62	

The following is incorporated above except for the wetland species.

**Seed list for Bernie's 2-acre plantings**

SCIENTIFIC NAME	COMMON NAME	2006 Weight lbs
Agastache scrophulariaefolia	Purple Giant Hyssop	0.1
Agrimonia pubescens	Soft Agrimony	0.01
Amorpha canescens	Leadplant	2.7
Aristida purpurascens	Arrow Feather	1.1
Artemisia caudata (campestris)	Beach Wormwood	2.5
Asclepias amplexicaulis	Sand Milkweed	0.01
Asclepias tuberosa interior	Butterfly Weed	0.01
Aster azureus (oolentangiensis)	Sky-blue Aster	1.75
Aster laevis	Smooth (Blue)(Silky) Aster	0.01
Aster linariifolius	Stiff Aster (Flax-Leaved)	0.2
Astragalus canadensis	Canadian Milk Vetch	1.2
Baptisia leucophaea	Cream Wild Indigo	1.2
Bouteloua curtipendula	Side-Oats Grama	1.9
Bouteloua hirsuta	Hairy Grama	0.05
Callirhoe triangulata	Clustered Poppy Mallow	0.01
Carex muhlenbergii (enervis)	Sand Bracted Sedge (Muhlenberg's)	0.2
Castilleja sessiliflora **	Downy Yellow Painted Cup	0.15

**Seed list for Bernie's 2-acre plantings**

<b>SCIENTIFIC NAME</b>	<b>COMMON NAME</b>	<b>2006 Weight lbs</b>
Chrysopsis camporum (Heterotheca)	Golden Prairie Aster	0.1
Cirsium hillii *** (pumilum)	Hill's Thistle	0.01
Coreopsis palmata	Prairie Coreopsis	0.4
Desmodium canadense	Showy Tick Trefoil	0.01
Desmodium illinoense	Ill. Tick Trefoil	0.15
Dodecatheon meadia	Shooting Star	1.9
Echinacea purpurea	Broad-leaved Purple coneflower	10
Eragrostis spectabilis	Purple Love Grass	0.75
Euphorbia corollata	Flowering Spurge	1.5
Gnaphalium obtusifolium	Sweet Everlasting (Old-Field Balsam)	0.2
Helianthemum canadense	Common Rockrose (Frostweed)	0.3
Helianthus rigidus (laetiflorus)	Prairie Sunflower	0.1
Heuchera richardsonii grayana	Rough Heuchera; Alum root	0.3
Hieracium gronovii	Hairy Hawkweed	0.05
Houstonia (Hedyotis) longifolia (canadense)	Long-Leaved Bluets	0.01
Koeleria cristata (macrantha)	Prairie June Grass	1.1
Kuhnia (Brickellia) eupatoroides corymbulosa	False Boneset	0.65
Lechea stricta	Bushy Pinweed	0.05
Lechea tenuifolia	Slender-Leaved Pinweed	0.1
Liatris cylindracea	Dwarf Blazingstar	0.01
Monarda fistulosa	Wild Bergamot	0.15
Opuntia humifusa (compressa)	Prickly Pear Cactus	0.55
Paspalum ciliatifolium muhlenbergii	Hairy Lens Grass	0.45
Penstemon hirsutus	Hairy Beard tongue	0.01
Polygala polygama obtusata	Purple Milkwort	0.01
Polytaenia nuttallii	Prairie Parsley	0.01
Prunus americana	Wild Plum	0.05
Rosa carolina	Pasture Rose	1.7
Ruellia humilis	Wild Petunia	0.1
Silene antirrhina	Sleepy Catchfly	0.01
Sisyrinchium albidum	Common Blue-eyed Grass	0.01
Talinum rugospermum ***	Sand Fameflower	0.01
Tephrosia virginiana	Goat's Rue	0.5
Wulfenia bullii *** (Besseyia)	Kittentails	0.6
Antennaria plantaginifolia	Pussy Toes (Everlasting)	0.2
Lysimachia quadriflora	Narrow-Leaved (Whorled) Loosestrife	0.05
Solidago (Euthamia) graminifolia nuttallii	Grass-leaved Goldenrod	1
Stipa spartea	Porcupine Grass	0.1
Eupatorium altissimum	Tall Boneset	0.15
Allium canadense	Wild Garlic	0.05
Anemone cylindrica	Thimbleweed	2.8
Anemone virginiana	Tall Thimbleweed	0.2
Apocynum cannabinum (X medium)	Dogbane (Indian Hemp)	0.01
Asclepias verticillata	Whorled Milkweed	0.2
Aster ericoides (prostratus)	Heath Aster	1.55
Aster sericeus	Silky Aster	0.7
Baptisia leucantha	White Wild Indigo	0.7
Cacalia atriplicifolia	Pale Indian Plantain	1

**Seed list for Bernie's 2-acre plantings**

<b>SCIENTIFIC NAME</b>	<b>COMMON NAME</b>	<b>2006 Weight lbs</b>
Carex bicknellii	Copper-shouldered oval Sedge	0.4
Carya ovata	Shagbark Hickory	0.4
Coreopsis tripteris	Tall Coreopsis	0.1
Cyperus filiculmis	Slender Sand Sedge	0.15
Elymus canadensis	Prairie Wild Rye	2.9
Elymus villosus	Silky Wild Rye	0.55
Festuca obtusa (subverticillata)	Nodding Fescue	0.3
Gentiana (alba) flavida	Cream Gentian	0.05
Juncus interior	Inland Rush	2
Juncus tenuis	Path Rush	0.01
Lespedeza capitata --	Round-headed Bush Clover	2.3
Liatis aspera	Rough Blazing-star (Rough Gayfeather)	15
Monarda punctata villicualis	Horse Mint	0.75
Panicum oligosanthos scribneria	Scribner's Panic Grass	0.1
Parthenium integrifolium	Wild Quinine (Feverfew)	3
Petalostemum (Dalea) candidum	White Prairie Clover	1.55
Petalostemum (Dalea) purpureum	Purple Prairie Clover	2.5
Potentilla arguta	Prairie Cinquefoil	0.1
Quercus macrocarpa	Bur Oak	1.85
Rudbeckia hirta	Black-eyed Susan	0.05
Rudbeckia subtomentosa	Sweet Blackeyed Susan	0.2
Silphium laciniatum	Compass plant	0.9
Solidago missouriensis fasciculata	Missouri Goldenrod	0.55
Solidago nemoralis	Gray Goldenrod; Oldfield	1
Solidago speciosa	Showy Goldenrod	0.45
Sporobolus heterolepis	Prairie Dropseed	0.65
Tradescantia ohiensis	Ohio Spiderwort	1.35
Triosteum aurantiacum	Early Horse Gentian (Orange- fruited)(Feverwort)(Tinker's Weed)	1.35
Verbena stricta	Hoary Vervain	0.75
Verbena urticifolia	Hairy White Vervain	0.35
Zizia aptera	Heart-leaved Meadow Parsnip	0.01
Allium cernuum	Nodding Wild Onion	0.6
Heliopsis helianthoides	False Sunflower; " Ox-eye "	0.5
Lupinus perennis	Wild Lupine	0.01
Panicum virgatum	Prairie Switch Grass	0.25
Silphium integrifolium	Rosinweed	0.85
Solidago rigida	Stiff Goldenrod	0.15
Teucrium canadense	American Germander (Wood Sage)	0.8
Zizia aurea	Golden Alexanders	0.55
Andropogon (Schizachyrium) scoparium	Little Bluestem	10
Eupatorium perfoliatum	Boneset	0.1
Amorpha fruticosa	Indigo Bush	0.05
Eryngium yuccifolium	Rattlesnake Master	0.7
Gaura biennis pitcheri (longiflora)	Common Gaura	0.05
Gentiana (Gentianopsis) crinita	Fringed Gentian	0.01
Helianthus occidentalis	Western Sunflower; Naked S.	0.85
Liatis pycnostachya	Tall Gayfeather; Prairie Blazing	0.25

**Seed list for Bernie's 2-acre plantings**

<b>SCIENTIFIC NAME</b>	<b>COMMON NAME</b>	<b>2006 Weight lbs</b>
	Star	
<i>Lysimachia lanceolata</i>	Lance-Leaved Loosestrife	0.01
<i>Penstemon digitalis</i>	Foxglove Beardtongue	0.05
<i>Physocarpus opulifolius</i>	Ninebark	0.55
<i>Polemonium reptans</i>	Jacob's Ladder	0.1
<i>Polygala sanguinea</i>	Field Milkwort	0.01
<i>Pycnanthemum tenuifolium</i>	Narrow-leaved Mountain Mint	0.01
<i>Silphium terebinthaceum</i>	Prairie Dock	1.15
<i>Specularia (Triodanis) perfoliata</i>	Venus' Looking Glass	0.01
<i>Veronicastrum virginicum</i>	Culver's Root	0.65
<i>Andropogon gerardii</i>	Big Bluestem; Turkeyfoot	1
<i>Aster novae-angliae</i>	New England Aster	0.01
<i>Spiraea alba</i>	Meadowsweet	0.01
<i>Sorghastrum nutans</i>	Indian Grass	0.5
<i>Helianthus tuberosus</i>	Jerusalem Artichoke	0.01
<i>Corylus americana</i>	American Hazelnut	0.25
<i>Hystrix patula (Elymus hystrix)</i>	Bottlebrush Grass	0.15
<i>Scrophularia lanceolata</i>	Early figwort	0.85
<i>Angelica atropurpurea</i>	Alexander's Angelica; Great Angelica	0.1
<i>Agrimonia parviflora</i>	Swamp Agrimony	0.01
<i>Anemone canadensis</i>	Meadow Anemone	0.01
<i>Cassia hebecarpa</i>	Wild Senna	0.01
<i>Helenium autumnale</i>	Sneezeweed	0.1
<i>Hypericum pyramidatum</i>	Great St. Johnswort	0.4
<i>Onoclea sensibilis</i>	Sensitive Fern	0.05
<i>Pycnanthemum virginianum</i>	Mountain mint (Prairie Hyssop)	0.3
<i>Silphium perfoliatum</i>	Cup-plant	0.5
<i>Solidago gigantea</i>	Late Goldenrod	0.1
<i>Spartina pectinata</i>	Prairie Cord Grass	0.5
<i>Verbena hastata</i>	Blue Vervain	0.1
<i>Vernonia fasciculata</i>	Common Ironweed	0.01
<i>Actinomeris (Verbesina) alternifolia</i>	Wingstem	0.1
<i>Asclepias incarnata</i>	Swamp Milkweed	0.01
<i>Cacalia suaveolens</i>	Sweet-scented Indian Plantain	0.1
<i>Chelone glabra</i>	Turtlehead	0.01
<i>Cirsium muticum</i>	Swamp Thistle	0.01
<i>Epilobium coloratum</i>	Cinnamon Willow Herb	0.01
<i>Eupatorium maculatum</i>	Spotted Joe Pye Weed	0.6
<i>Hibiscus palustris</i>	Swamp rose mallow	0.15
<i>Scirpus cyperinus</i>	Wool Grass	0.05
<i>Solidago patula</i>	Swamp Goldenrod	0.2
<i>Rumex orbiculatus</i>	Great Water dock	0.01
	<b>TOTAL</b>	<b>100.17</b>