

PLANTING HISTORY #88 (2009) 5 Acres
GOBBLER RIDGE @ CLEAR CREEK KNOLLS
Prepared by Bernie Buchholz 11/17/09

SITE CONDITIONS:

Location:

Ogle County - Taylor Township 22N - Range 9 - Section 10E; the south east quadrant of Lowden and Flagg roads; adjacent and immediately north of Fame Flower Knob

Soil Types:

According to the Ogle County Soil Study, the soil is primarily #221B-Parr loam with gentle sloping (2 to 5 percent) and well drained soil. "Typically, the surface layer is very dark brown loam about 7 inches thick. The subsurface layer is very dark brown and very dark grayish brown loam about 5 inches thick. The subsoil is dark yellowish brown and brown, friable clay loam about 17 inches thick. The substratum, to a depth of about 60 inches, is yellowish brown, calcareous loam."

"This Parr soil has moderate permeability. Surface runoff from cultivated areas is medium...The surface area is generally slightly acid, depending on local liming. The subsoil is medium or slightly acid...Root development is restricted below a depth of about 28 inches by compact, loamy glacial till."

During preparation to plant I observed that there is no visible gravel but there was a notable sand component. The few scattered surface rocks are generally 5-6 inches in diameter with a few apparently large (> 15" diameter) rocks partially protruding.

Topographic Features:

Much of the site slopes very gently from a high point running NW to SE, falling perhaps 4 meters over a 210 meter length; a gentle drainage swale cuts diagonally across the site from north/northwest to south central, flattening and disappearing into the east boundary at a point 140 meters from the south boundary. Access from Lowden Rd through corn planting is via a generous two track to the southwestern corner.

Prior to planting, a Bobcat operated by Mike Saxton was used to successfully ameliorate plow erosion at the juncture with the Fame Flower Knob remnant. Soil was pushed south and up grade from the cornfield from a depth of perhaps 5-6 inches and from a distance of about 20 meters. This caused some soil compaction in the planting. We will look for special weed growth in the disturbed area.

Agricultural History:

The 1939 aerial photos indicate the field to be in row crops; recent years have seen the site in corn.

SPECIES SELECTION AND STRATEGY:

See GR #75 Planting History for a generalized species selection strategy. This year we generally chose species suitable for National Wetland Categories of F (Facultative) or drier.

We used a single seed mix in the mechanical seeding application across the entire site. However, partly in response to the high rates of erosion and seed loss experienced in the 2008 Planting #83, the more rare/limited availability seeds were concentrated on the flattest portions of the site – planted either by hand broadcasting or one-by-one hand planting. The flattest areas are also the driest and most suitable for many of the seeds needing less competitive environments.

Our seeding was at a combined rate of **49 pound per acre**. This rate is in line with the average (un-weighted) of the three prior plantings of 47 pounds per acre. However, we would have planted at a lower rate, say 40 to 42 pounds per acre had we planted more acres. We ultimately planted 5 acres instead of 6+ acres in order to be able to maintain a high standard of weed management.



This year's seed mix included about 140 forbs and non-dominant grass species at 47 pounds per acre and 2 pounds per acre of (dominant) little blue stem (Sci sco). We would have preferred about 5 pounds of little bluestem but the mechanical seed

striper failed and we were obligated to cut the seed by hand (approx. 100 pounds of stem and seed = 2 pounds of net seed per acre is a WAG.)



New species (to GR) collected this year included:

Ranunculus abortivus – small-flowered buttercup

Ranunculus ficularis – early buttercup

Arenaria lateriflora – wood sandwort

Geum triflorum – prairie smoke

Prenanthes aspera - rough white lettuce

Casia fasciculata – partridge pea

Erechtites hieracifolia – fireweed

Lespedeza leptostachya – prairie bush clover

Spiranthes lacera – slender ladies tresses

Polygonum tenue – slender knotweed

SITE PREPARATION:

Weather conditions Nov 4 thru November 13 were excellent for planting: dry with above average temperatures.

Oct 27: Don Rogers combined his corn crop

Oct 28: Bernie measured and staked western edge of 5 acres to protect from possible accidental chisel plow damage; stakes @ 25m spacing, paired with 2008 stakes to east

Nov 2: planting was mowed and then burned; burn was moderately successful but left considerable corn stover (see photo below)



Nov 2: collected 2 barrels of tall goldenrod, hairy aster and Queen Anne's lace from FFK along edge of planting site to reduce weed growth in planting – 3 hrs

Nov 4: Mike Saxton used Bobcat to repair plow erosion at north edge of FFK remnant adjacent Planting site – 3 hours



Nov 5: Cindy harrowed field with JD 540 in preparation for planting – N to S and E to W – 2.5 hrs.



SEED PLANTING:

Nov 2: Bernie sorted seed bags and made quantity adjustments; moved seed to Morton for mixing – 4 hours

Nov 5: Bernie and Cindy mixed seed in Morton bldg; Cindy finished hand milling and last minute hammermilling; loaded barrels on trailer – 5 hrs each; after lunch, Bernie pulled 12" New Idea seeder with Kleiman's Jimmy; Cindy marked spreader "passes" with flags but additionally stood as human marker: effectively mcompleted four complete passes; started at mid-level setting on seeder but soon advanced to highest setting short of full open – 4hours each person; tracking progress was very difficult but we gained a lot of confidence from the multiple passes; Cindy could see the seed falling nicely from New Idea seeder; Jimmy overheated; mild winds made for cleaner work than normal; face mask and goggles unnecessary

No 5: made passes along S edge of 2008 planting and along two track in 2006 planting – 30 minutes

No 6: placed erosion mat where I noticed heavy erosion in the prior corn planting – 3 hours

Nov 11-13: Cindy and Bernie hand planting, including half of little bluestem that was not milled before the mechanical planting – 12 hrs

Nov 11: Cindy made 1.5 passes with the harrow – 2 hrs
 Nov 19-20: Cindy and Bernie hand planting – 8 hrs

LESSONS LEARNED:

1. It appears that compared to Jay’s unit to the north which was not mowed in advance of the prescribed burn, we may have gotten a slightly better burn and we do have less stubble; I will mow next year. See photo of plant residue, above.
2. More harrowing before planting might have further loosened a fairly hard seed bed; use multiple harrowings in advance of planting.
3. Preparing and mixing seed always takes longer than we expect.

IN 2010, LOOK FOR:

1. Different rates of germination under erosion mat.
2. Fewer Queen Anne lace, yarrow, red clover and hairy aster due to hand collection of little blue stem.
3. Does subsurface of calcerious loam impact species dominance.
4. Special weed growth where surface was scraped to heal plow erosion (SW corner).

2009 SEED LIST:

SCIENTIFIC NAME	COMMON NAME	PICK
Agastache scrophulariaefolia	Purple Giant Hyssop	
Agrimonia gryposepala	Tall (?) Agrimony	
Agrimonia pubescens	Soft Agrimony	
Allium canadense	Wild Garlic	
Allium cernuum	Nodding Wild Onion	10/10
Amelanchier leavis	Allegheny Shadblow	
Amorpha canescens	Leadplant	7-
Amorpha fruticosa	Indigo Bush	
Andropogon gerardii	Big Bluestem; Turkeyfoot	21-
Andropogon (Schizachyrium) scoparium	Little Bluestem	25-
Anemone canadensis	Meadow Anemone	29-
Anemone cylindrica	Thimbleweed	8-
Anemone virginiana	Tall Thimbleweed	4-M
Antennaria neglecta	Field Cat's Foot	5/30
Antennaria plantaginifolia	Pussy Toes (Everlasting)	3-
Apocynum androsaemifolium	Spreading Dogbane	
Apocynum cannabinum (X medium)	Dogbane (Indian Hemp)	26-S
Arenaria (Minuartia) stricta	Stiff Sandwort	

Arenaria (Moehringia) lateriflora	Wood Sandwort	
Aristida purpurascens	Arrow Feather	24-
Aronia (Pyrus) prunifolia (melanocarpa)	Black Chokeberry	
Artemisia caudata (campestris)	Beach Wormwood	23-
Asclepias amplexicaulis	Sand Milkweed	
Asclepias hirtella	Hairy Green Milkweed	
Asclepias tuberosa interior	Butterfly Weed	
Asclepias verticillata	Whorled Milkweed	5-
Asclepias viridiflora	Short Green Milkweed	
Aster azureus (oolentangiensis)	Sky-blue Aster	24-
Aster ericoides (prostratus)	Heath Aster	25-
Aster laevis	Smooth (Blue)(Silky) Aster	23-
Aster linariifolius	Stiff Aster (Flax-Leaved)	2-N
Aster novae-angliae	New England Aster	
Aster oblongifolius	Aromatic Aster	
Aster ptarmicoides	White Aster (Stiff Aster)	15-
Aster sericeus	Silky Aster	8-N
Aster umbellatus	Flat-topped Aster	15-S
Astragalus canadensis	Canadian Milk Vetch	5-N
Baptisia leucantha	White Wild Indigo	14-A
Baptisia leucophaea	Cream Wild Indigo	1-S
Bouteloua curtipendula	Side-Oats Grama	14-S
Bouteloua hirsuta	Hairy Grama	
Bromus Kalmii	Prairie Brome	
Cacalia atriplicifolia	Pale Indian Plantain	26-S
Cacalia plantaginea (tuberosa)	Indian Plantain	
Cacalia suaveolens	Sweet-scented Indian Plantain	21-
Callirhoe triangulata	Clustered Poppy Mallow	3-S
Carex bicknellii	Copper-shouldered oval Sedge	20-
Carex muhlenbergii (enervis)	Sand Bracted Sedge (Muhlenberg's)	
Carex pennsylvanica	Common Oak (Penn) Sedge	
Carex richardsonii	Prairie Hummock sedge	
Carya ovata	Shagbark Hickory	18-S
Cassia fasciculata	Partridge Pea	
Castilleja sessiliflora **	Downy Yellow Painted Cup	16-A
Ceanothus americanus	New Jersey Tea	
Chrysopsis camporum (Heterotheca)	Golden Prairie Aster	28-
Cirsium hillii *** (pumilum)	Hill's Thistle	15-
Comandra umbellata (richardsiana)	False Toadflax	
Coreopsis lanceolata	Sand Coreopsis	
Coreopsis palmata	Prairie Coreopsis	25-A
Coreopsis tripteris	Tall Coreopsis	23-
Corylus americana	American Hazelnut	

Cyperus filiculmis	Slender Sand Sedge	18-S
Danthonia spicata	Poverty Oat Grass	5-
Desmodium canadense	Showy Tick Trefoil	4-A
Desmodium illinoense	Ill. Tick Trefoil	12-A
Dodecatheon meadia	Shooting Star	
Echinacea pallida	Pale Purple Coneflower	14-S
Elymus canadensis	Prairie Wild Rye	13-S
Elymus villosus	Silky Wild Rye	
Eragrostis spectabilis	Purple Love Grass	4-
Erechtites hieracifolia	Fireweed	
Erigeron strigosus	Daisy Fleabane	
Eryngium yuccifolium	Rattlesnake Master	5-
Eupatorium altissimum	Tall Boneset	30-
Eupatorium perfoliatum	Boneset	
Euphorbia corollata	Flowering Spurge	13-S
Festuca obtusa (subverticillata)	Nodding Fescue	
Gaura biennis pitcheri (longiflora)	Common Gaura	2-
Gentiana (alba) flavida	Cream Gentian	1-
Gentiana (Gentianopsis) crinita	Fringed Gentian	
Gentiana purberulenta	Prairie Gentian	
Geum triflorum	Prairie Smoke (Long-plumed Purple Avens)	
Gnaphalium obtusifolium	Sweet Everlasting (Old-Field Balsam)	2-
Helianthemum bicknellii	Rockrose (Frostweed)	18-S
Helianthemum canadense	Common Rockrose (Frostweed)	1-S
Helianthus hirsutus	Hispid sunflower	
Helianthus occidentalis	Western Sunflower; Naked S.	8-
Helianthus rigidus (laetiflorus)	Prairie Sunflower	3-
Helianthus tuberosus	Jerusalem Artichoke	
Heliopsis helianthoides	False Sunflower; " Ox-eye "	18-S
Heuchera richardsonii grayana	Rough Heuchera; Alum root	
Hieracium gronovii	Hairy Hawkweed	
Hieracium longipilum	Long-Bearded Hawkweed	
Houstonia (Hedyotis) longifolia (canadense)	Long-Leaved Bluets	11-N
Hypoxis hirsuta	Yellow Star Grass	
Hystrix patula (Elymus hystrix)	Bottlebrush Grass	19-S
Isanthus (Trichostema) brachiatus (m)	False Pennyroyal	
Juncus greenei	Greene's Rush	24-S
Juncus interior	Inland Rush	
Juncus tenuis	Path Rush	
Koeleria cristata (macrantha)	Prairie June Grass	6-
Krigia virginica	Dwarf Dandelion	
Kuhnia (Brickellia) eupatoroides corymbulosa	False Boneset	25-
Lechea stricta	Bushy Pinweed	13-S
Lechea tenuifolia	Slender-Leaved Pinweed	
Lechea villosa (mucronata)	Hairy Pinweed	
Lespedeza capitata --	Round-headed Bush Clover	5-
Liatris aspera	Rough Blazing-star (Rough Gayfeather)	16-
Liatris cylindracea	Dwarf Blazingstar	
Liatris pycnostachya	Tall Gayfeather; Prairie Blazing Star	9-
Linaria canadensis	Blue Toadflax	
Linum sulcatum	Groved Yellow Flax	

Lithospermum canescens	Hoary Puccoon	
Lithospermum incisum	Fringed (Narrow-leaved) Puccoon	
Lobelia inflata	Indian Tobacco	16-
Lobelia spicata	Pale-spike Lobelia	
Lupinus perennis	Wild Lupine	1-
Lysimachia lanceolata	Lance-Leaved Loosestrife	
Lysimachia quadriflora	Narrow-Leaved (Whorled) Loosestrife	
Monarda fistulosa	Wild Bergamot	
Monarda punctata villicualis	Horse Mint	16-
Napaea dioica	Glade Mallow	
Oenothera biennis canescens	Common Evening Primrose	
Oenothera clelandii (rhombipetala)	Sand Evening Primrose	
Onosmodium hispidissimum	Marbleseed	
Opuntia humifusa (compressa)	Prickly Pear Cactus	12-S
Oxalis violacea	Violet Wood-sorrel	
Panicum capillare	Old Witch Grass	
Panicum leibergii	Prairie Panic Grass	
Panicum oligosanthos scribneria	Scribner's Panic Grass	5-
Panicum perlongum	Long-stalked Panic Grass	21-S
Panicum villosissimum	White-Haired Panic Grass	
Panicum virgatum	Prairie Switch Grass	
Parthenium integrifolium	Wild Quinine (Feverfew)	12-S
Paspalum ciliatifolium muhlenbergii	Hairy Lens Grass	11-S
Pedicularis canadensis	Wood Betony	
Penstemon digitalis	Foxglove Beardtongue	
Penstemon hirsutus	Hairy Beard tongue	19-A
Penstemon pallidus	Pale Beard Tongue	27-S
Petalostemum (Dalea) candidum	White Prairie Clover	18-S
Petalostemum (Dalea) purpureum	Purple Prairie Clover	18-S
Phlox maculata	Sweet William Phlox	
Physocarpus opulifolius	Ninebark	27-S
Polemonium reptans	Jacob's Ladder	
Polygala incarnata **	Pink Milkwort	
Polygala polygama obtusata	Purple Milkwort	25-
Polygala sanguinea	Field Milkwort	2-
Polygonum tenue	Slender Knotweed	
Polytaenia nuttallii	Prairie Parsley	
Potentilla arguta	Prairie Cinquefoil	30-A
Prenanthes aspera	Rough White Lettuce	
Prunus americana	Wild Plum	
Pycnanthemum tenuifolium	Narrow-leaved Mountain Mint	3-
Quercus alba	White Oak	
Quercus macrocarpa	Bur Oak	
Quercus velutina	Black Oak	
Ranunculus abortivus	Small-flowered Buttercup	
Ranunculus facicularis	Early Buttercup	
Rhus aromatica	Fragrant sumac	
Rhus glabra	Smooth Sumac	
Rosa carolina	Pasture Rose	2-
Rudbeckia hirta	Black-eyed Susan	12-S
Rudbeckia subtomentosa	Sweet Blackeyed Susan	5-

Ruellia humilis	Wild Petunia	17-0
Salix humilis	Prairie Willow	
Scrophularia lanceolata	Early figwort	20-9
Scrophularia marilandica	Late Figwort	
Scutellaria parvula leonardi	Small Skullcap	
Senecio pauperculus	Balsam Ragwort	
Silene antirrhina	Sleepy Catchfly	
Silene stellata	Starry Campion	
Silphium integrifolium	Rosinweed	17-9
Silphium laciniatum	Compass plant	
Silphium terebinthaceum	Prairie Dock	4-0
Sisyrinchium albidum	Common Blue-eyed Grass	12-0
Solidago (Euthamia) graminifolia nuttallii	Grass-leaved Goldenrod	
Solidago gymnospermoides	Viscid Grass-leaved Goldenrod	
Solidago missouriensis fasciculata	Missouri Goldenrod	30-0
Solidago nemoralis	Gray Goldenrod; Oldfield	23-0
Solidago rigida	Stiff Goldenrod	23-0
Solidago speciosa	Showy Goldenrod	23-0
Sorghastrum nutans	Indian Grass	
Specularia (Triodanis) perfoliata	Venus' Looking Glass	22-0
Spiraea alba	Meadowsweet	
Spiranthes lacera	Slender Ladies Tresses	
Sporobolus heterolepis	Prairie Dropseed	9-0
Stipa spartea	Porcupine Grass	
Talinum rugospermum ***	Sand Fameflower	20-A
Tephrosia virginiana	Goat's Rue	4-9
Teucrium canadense	American Germander (Wood Sage)	
Tradescantia ohiensis	Ohio Spiderwort	20-0
	Early Horse Gentian (Orange-fruited)(Feverwort)(Tinker's Weed)	
Triosteum aurantiacum	Horse Gentian (Feverwort)(Tinker's Weed)	2-0
Triosteum perfoliatum		
Tsuga canadensis	Hemlock	
Verbena stricta	Hoary Vervain	10-0
Verbena urticifolia	Hairy White Vervain	5-0
Veronicastrum virginicum	Culver's Root	28-0
Viburnum prunifolium	Black Haw	
Viola fimbriatula	Sand Violet	
Viola pedata lineariloba	Birdsfoot Violet	
Viola pedatifida	Prairie Violet	
Viola sagittata	Arrow-leaved violet	4-0
Vulpia octoflora tenella	Six-weeks fescue	
Wulfenia bullii *** (Bessey)	Kittentails	
Zizia aptera	Heart-leaved Meadow Parsnip	
Zizia aurea	Golden Alexanders	1-A