

Utility Meadow - Wet (sedge meadow) Statewide Seed Mix

Scientific Name	Common Name	Rate: PLS lb/acre	Rate: Seeds/sqft	Height (in.)	Successional Stage	Hydro- logic Zone	Pollinator Value	Bloom Time (month)	Notes - Forage & Wildlife Value, Regional Suitability (E.S. = Ecological Section)	Forage Value and Plant Info Links
G <i>Andropogon gerardii</i>	big bluestem	2	7.35	36-96	L	M - D	Nests	8,9	High quality forage species	<a href="http://plants.usda.gov/plantguide/pdf/pg_ange.pdf">http://plants.usda.gov/plantguide/pdf/pg_ange.pdf</a> <a href="http://extension.missouri.edu/p/M181-15">http://extension.missouri.edu/p/M181-15</a>
G <i>Bromus ciliatus</i>	fringed brome	2	8.1	24-48	M	S	None	7,8	Rare or not native across much of southern MN; palatable to wildlife and livestock	<a href="http://www.fs.fed.us/database/feis/plants/graminoid/brocl/all.html">http://www.fs.fed.us/database/feis/plants/graminoid/brocl/all.html</a>
G <i>Calamagrostis canadensis</i>	bluejoint	0.06	6.4	24-60	L	S	None	6,7,8	Not appropriate for NW MN; replace with <i>C. stricta</i> (limited commercial availability; obtain via combine-harvest); or remove and increase seed rates of other grasses Provides forage for wildlife; forage value for cattle ranges from poor to good; fair palatability	<a href="http://plants.usda.gov/factsheet/pdf/fs_caca4.pdf">http://plants.usda.gov/factsheet/pdf/fs_caca4.pdf</a> <a href="http://www.fs.fed.us/database/feis/plants/graminoid/calcan/all.html">http://www.fs.fed.us/database/feis/plants/graminoid/calcan/all.html</a> J. Messen, pers. comm.
G <i>Carex stipata</i>	awl-fruited sedge	0.25	3.1	36	L	S	None	6,7	Low forage value for livestock; medium for wildlife;	<a href="http://plants.usda.gov/java/charProfile?symbol=CAST5">http://plants.usda.gov/java/charProfile?symbol=CAST5</a>
G <i>Elymus trachycaulus</i>	slender wheatgrass	1	2.53	24	M	MZ, D	None	6,7	palatable; grazed by wildlife & livestock	<a href="http://plants.usda.gov/plantguide/pdf/pg_ehr7.pdf">http://plants.usda.gov/plantguide/pdf/pg_ehr7.pdf</a> <a href="http://www.fs.fed.us/database/feis/plants/graminoid/elytra/all.html">http://www.fs.fed.us/database/feis/plants/graminoid/elytra/all.html</a>
G <i>Elymus virginicus</i>	Virginia wild rye	1.5	2.31	48	M	S - MZ	None	7,8	Palatable, productive and nutritious forage for livestock and wildlife	<a href="http://plant-materials.nrcs.usda.gov/pubs/tpmctf0758.pdf">http://plant-materials.nrcs.usda.gov/pubs/tpmctf0758.pdf</a>
G <i>Panicum virgatum</i>	switchgrass	0.38	1.93	24-84	M	M, MZ	None	7,8,9	Productive, high quality hay; biofuels; value to wildlife as well	<a href="http://plants.usda.gov/factsheet/pdf/fs_pavi2.pdf">http://plants.usda.gov/factsheet/pdf/fs_pavi2.pdf</a> <a href="http://www.uwex.edu/ces/forage/pubs/switchgrass.pdf">http://www.uwex.edu/ces/forage/pubs/switchgrass.pdf</a> <a href="http://extension.missouri.edu/p/M181-23">http://extension.missouri.edu/p/M181-23</a>
G <i>Poa palustris</i>	fowl bluegrass	1.06	50.7	24	M	S, M	None	6,7,8,9	Serves as nurse crop; low palatability; may substitute equivalent amount of seeds with more palatable species as budget allows	<a href="http://plants.usda.gov/java/charProfile?symbol=POPA2">http://plants.usda.gov/java/charProfile?symbol=POPA2</a> Jacobson 2005
G <i>Scirpus atrovirens</i>	dark green bulrush	0.19	31.7	60	E	S	None	6,7,8	Serves as nurse crop	Jacobson 2005
G <i>Scirpus cyperinus</i>	woolgrass	0.06	39	60	E	S	Nests	8,9,10	Historically rare in most of E.S. 9 and 4; medium palatability for livestock	<a href="http://plants.usda.gov/java/charProfile?symbol=SCCY">http://plants.usda.gov/java/charProfile?symbol=SCCY</a>
G <i>Sorghastrum nutans</i>	Indian grass	0.12	0.55	36-96	L	M	Nests	8,9	High to fair forage value; wildlife value	<a href="http://plants.usda.gov/factsheet/pdf/fs_sonu2.pdf">http://plants.usda.gov/factsheet/pdf/fs_sonu2.pdf</a>
G <i>Spartina pectinata</i>	prairie cordgrass	0.38	0.91	48-120	L	S	None	7,8,9	Forage quality variable; most palatable in spring; prevents erosion (soil stabilization); mowing and haying an option when soil moisture conditions allow; provides wildlife cover	<a href="http://www.fs.fed.us/database/feis/plants/graminoid/spapec/all.html">http://www.fs.fed.us/database/feis/plants/graminoid/spapec/all.html</a>
<b>Graminoids subtotal: 12</b>										
F <i>Anemone canadensis</i>	Canada anemone	0.07	0.2	12-24	L	S	Low	5,6,7	Low palatability	<a href="http://www.illinoiswildflowers.info/prairie/plants/mdw_anemone.html">http://www.illinoiswildflowers.info/prairie/plants/mdw_anemone.html</a>
F <i>Asclepias incarnata</i>	swamp milkweed	0.11	0.2	21-48	L	S	High	6,7	Low palatability but high wildlife/pollinator value	<a href="http://plants.usda.gov/java/charProfile?symbol=ASIN">http://plants.usda.gov/java/charProfile?symbol=ASIN</a>
A <i>Bidens frondosa</i>	leafy beggarticks	0.11	0.2	36	E	M	Medium	8,9,10	Low palatability	<a href="http://plants.usda.gov/java/charProfile?symbol=BIFR">http://plants.usda.gov/java/charProfile?symbol=BIFR</a>
A <i>Aster umbellatus</i>	flat-topped aster	0.06	1.5	40-72	L	S, M	Medium	8,9	Rare in E.S. 9, associated with groundwater seepage; Livestock and wildlife browse on leaves; pollinator value	<a href="http://www.illinoiswildflowers.info/wetland/plants/ftp_aster.html">http://www.illinoiswildflowers.info/wetland/plants/ftp_aster.html</a>
A <i>Eutrochium maculatum</i>	spotted Joe pye weed	0.06	2.19	20-78	L	S	High	7,8,9	Food/nectar source for butterflies and birds; livestock may eat leaves, but not a preferred forage species	<a href="http://www.plant-materials.nrcs.usda.gov/pubs/mdpmctf8331.pdf">http://www.plant-materials.nrcs.usda.gov/pubs/mdpmctf8331.pdf</a>
A <i>Helenium autumnale</i>	autumn sneezeweed	0.13	5.97	24-36	M	S	High	8,9,10	May be poisonous to livestock; consider replacing with <i>Symphotrichum puniceum</i> or removing and increasing seeding rates of other forbs	<a href="http://www.npwrc.usgs.gov/resource/plants/floranw/species/helautu.htm">http://www.npwrc.usgs.gov/resource/plants/floranw/species/helautu.htm</a>
F <i>Physostegia virginiana</i>	obedient plant	0.07	0.3	48	M	M	High	8,9	Likely low palatability but high pollinator value	<a href="http://www.illinoiswildflowers.info/prairie/plants/obed_plants.htm">http://www.illinoiswildflowers.info/prairie/plants/obed_plants.htm</a>
A <i>Rudbeckia laciniata</i>	tall coneflower	0.07	0.37	48-72	M	M	High	8,9	High palatability for livestock and wildlife; note: may be toxic to sheep	<a href="http://plants.usda.gov/java/charProfile?symbol=RULA3">http://plants.usda.gov/java/charProfile?symbol=RULA3</a> <a href="http://aces.nmsu.edu/pubs/_circulars/CR-636.pdf">http://aces.nmsu.edu/pubs/_circulars/CR-636.pdf</a>
A <i>Aster novae-angliae</i>	New England aster	0.07	1.56	36-54	L	S	Very High	9,10	Uncertain, but likely limited to moderate forage value; high pollinator value	<a href="http://plants.usda.gov/factsheet/pdf/fs_syno2.pdf">http://plants.usda.gov/factsheet/pdf/fs_syno2.pdf</a> <a href="http://www.illinoiswildflowers.info/prairie/plants/ne_aster.htm">http://www.illinoiswildflowers.info/prairie/plants/ne_aster.htm</a>
F <i>Verbena hastata</i>	blue vervain	0.05	1.85	24-72	M	S - MZ	Medium	7,8,9	Uncertain, but likely limited to moderate forage value; seeds and nectar are food source for birds, pollinators	<a href="https://plants.usda.gov/factsheet/pdf/fs_veha2.pdf">https://plants.usda.gov/factsheet/pdf/fs_veha2.pdf</a> <a href="http://www.illinoiswildflowers.info/wetland/plants/bl_vervain.htm">http://www.illinoiswildflowers.info/wetland/plants/bl_vervain.htm</a>
F <i>Zizia aurea</i>	golden alexanders	0.2	0.79	12-36	M	M, MZ	Low	4,5,6	Likely low palatability but pollinator/insect value	<a href="http://plants.usda.gov/factsheet/pdf/fs_ziaa.pdf">http://plants.usda.gov/factsheet/pdf/fs_ziaa.pdf</a> <a href="http://www.illinoiswildflowers.info/prairie/plants/gld_alexander.htm">http://www.illinoiswildflowers.info/prairie/plants/gld_alexander.htm</a>
<b>Forbs subtotal: 11</b>										
<p><b>Guild:</b> G = grasses and grasslike species F = forbs (flowering plants) A = flowering plants in the Aster family (Asteraceae) L = nitrogen fixing plants in the legume family (Fabaceae)</p> <p><b>Total Species Richness: 16</b>      <b>Total Seeding Rate:</b> 10 lbs/acre      169.7 Seeds/sqft</p> <p><b>Total Cost/Acre: \$569</b>      (Opt.) Cover Crop - 25 lbs/acre      11.14 Seeds/sqft</p> <p>Seed mix cost estimate based on 2013 pricing</p> <p><b>PLS:</b> Pure live seed (% pure * % viable / 100) (See, for example: <a href="https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/lapmctn9045.pdf">https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/lapmctn9045.pdf</a>)</p> <p><b>Successional stage:</b> E = early M = mid L = late</p> <p><b>Hydrologic zone:</b> E = emergent S = saturated M = moist MZ = mesic D = dry</p> <p><b>Source:</b> State Seed Mix 33-261 with additions/substitutions selected from the Native Seed Mix Design Worksheet and other sources. For more information, see: <a href="http://nature.org/MNPrairieRestorationGuides">nature.org/MNPrairieRestorationGuides</a>.</p>										