



# The Bee & Butterfly Habitat Fund

## Nebraska Monarch Mixture

Fall 2022

Species	Scientific Name	PLS lbs per acre	Seeds per sq ft	% of Mixture	Bloom Period	Pollinator Value
Big Bluestem, Pawnee	<i>Andropogon gerardii</i>	0.150	0.50	1.47%	--	--
Canada Wildrye	<i>Elymus canadensis</i>	0.200	0.52	1.55%	--	--
Little Bluestem, VNS	<i>Schizachyrium scoparium</i>	0.200	1.11	3.27%	--	--
Plains Oval Sedge, Native Source	<i>Carex brevior</i>	0.060	0.89	2.64%	--	--
Sideoats Grama, Butte	<i>Bouteloua curtipendula</i>	0.300	1.10	3.24%	--	--
Western Wheatgrass, Barton	<i>Elymus smithii</i>	0.400	1.05	3.09%	--	--
Anise Hyssop	<i>Agastache foeniculum</i>	0.035	1.16	3.42%	3	5
Ashy Sunflower, Native Source	<i>Helianthus mollis</i>	0.030	0.14	0.41%	3	5
Blackeyed Susan	<i>Rudbeckia hirta</i>	0.050	1.81	5.35%	2	1
Blacksamson, Native Source	<i>Echinacea angustifolia</i>	0.010	0.06	0.17%	2	5
Blanketflower, ( <i>pulchella</i> )	<i>Gaillardia pulchella</i>	0.250	1.07	3.17%	1	4
Blue Vervain, Native Source	<i>Verbena hastata</i>	0.025	0.86	2.55%	2	5
Bush Morning Glory, Native Source	<i>Ipomoea leptophylla</i>	0.015	0.00	0.00%	2	3
Butterfly Milkweed	<i>Asclepias tuberosa</i>	0.020	0.03	0.10%	2	5
Canada Goldenrod, Native Source	<i>Solidago canadensis</i>	0.004	0.65	1.93%	2	5
Canada Milkvetch	<i>Astragalus canadensis</i>	0.080	0.50	1.47%	2	4
Canada Tick-trefoil	<i>Desmodium canadense</i>	0.050	0.10	0.30%	2	5
Candle Anemone, Native Source	<i>Anemone cylindrica</i>	0.005	0.05	0.14%	2	1
Clasping Coneflower	<i>Rudbeckia amplexicaulis</i> or <i>Dracopis amplexicaulis</i>	0.050	1.84	5.44%	1	2
Common Evening Primrose	<i>Oenothera biennis</i>	0.035	1.11	3.27%	2	4
Common Milkweed, Native Source	<i>Asclepias syriaca</i>	0.040	0.08	0.22%	2	5
Compass Plant	<i>Silphium laciniatum</i>	0.030	0.01	0.02%	2	5
Cup Plant, Native Source	<i>Silphium perfoliatum</i>	0.030	0.04	0.13%	2	5
Deer Vetch, Native Source	<i>Acmispon americanus</i> or <i>Lotus unifoliolatus</i>	0.025	0.04	0.12%	3	4
Dotted Mint	<i>Monarda punctata</i>	0.010	0.34	1.00%	2	4
Entire-leaved Rosinweed, Native Source	<i>Silphium integrifolium</i>	0.025	0.02	0.06%	2	5
False Boneset	<i>Brickellia eupatorioides</i>	0.015	0.18	0.53%	3	3
False or Oxeye Sunflower	<i>Heliopsis helianthoides</i>	0.100	0.24	0.71%	2	5
Four-point Evening Primrose, Native Source	<i>Oenothera rhombipetala</i>	0.015	0.87	2.56%	2	4
Foxglove Beardstongue, Native Source	<i>Penstemon digitalis</i>	0.020	0.18	0.54%	1	5
Golden Alexander	<i>Zizia aurea</i>	0.025	0.10	0.30%	1	5
Grayhead Coneflower	<i>Ratibida pinnata</i>	0.070	0.69	2.03%	2	4
Heath Aster	<i>Symphotrichum ericoides</i>	0.006	0.69	2.06%	3	5
Hoary Vervain, Native Source	<i>Verbena stricta</i>	0.020	0.27	0.80%	2	5
Hoary Vetchling, Native Source	<i>Lathyrus polymorphus</i>	0.008	0.00	0.00%	1	5
Illinois Bundleflower	<i>Desmanthus illinoensis</i>	0.250	0.49	1.44%	2	5
Ironweed	<i>Vernonia fasciculata</i>	0.015	0.13	0.39%	2	5
Lanceleaf Coreopsis	<i>Coreopsis lanceolata</i>	0.200	1.01	3.00%	2	4
Late or Giant Goldenrod, Native Source	<i>Solidago gigantea</i>	0.007	1.22	3.60%	3	5
Lemon Mint or Lemon Bee Balm	<i>Monarda citriodora</i>	0.050	1.65	4.89%	2	3
Maximilian Sunflower	<i>Helianthus maximiliani</i>	0.055	0.25	0.73%	3	5
Missouri Goldenrod, Native Source	<i>Solidago missouriensis</i>	0.006	0.87	2.57%	2	5
New England Aster	<i>Symphotrichum novae-angliae</i>	0.010	0.24	0.72%	3	5
Pale Purple Coneflower	<i>Echinacea pallida</i>	0.050	0.12	0.36%	2	5
Pitcher Sage	<i>Salvia azurea</i>	0.015	0.10	0.31%	3	5
Plains Coreopsis	<i>Coreopsis tinctoria</i>	0.020	1.48	4.38%	2	2
Plains Sunflower, Native Source	<i>Helianthus petiolaris</i>	0.050	0.13	0.39%	3	5
Prairie Cinquefoil	<i>Drymocallis arguta</i>	0.003	0.30	0.90%	2	3
Purple Coneflower	<i>Echinacea purpurea</i>	0.180	0.48	1.41%	2	5
Purple Prairieclover	<i>Dalea purpurea</i>	0.050	0.36	1.08%	2	5
Rough Gayfeather, Native Source	<i>Liatris aspera</i>	0.010	0.06	0.19%	3	5
Rough Purple Gerardia, Native Source	<i>Agalinis aspera</i>	0.005	0.24	0.72%	2	4
Roundhead Lespedeza, Native Source	<i>Lespedeza capitata</i>	0.030	0.12	0.35%	3	4
Sand Milkweed, Native Source	<i>Asclepias arenaria</i>	0.015	0.02	0.05%	2	5
Sawtooth Sunflower, Native Source	<i>Helianthus grosseserratus</i>	0.008	0.12	0.34%	3	5
Sensitive Briar, Native Source	<i>Mimosa nuttallii</i>	0.020	0.02	0.06%	2	3
Shell-leaf Penstemon, Native Source	<i>Penstemon grandiflorus</i>	0.020	0.10	0.29%	1	5
Showy Goldenrod	<i>Solidago speciosa</i>	0.006	0.59	1.75%	3	5
Showy Partridgepea	<i>Chamaecrista fasciculata</i>	0.350	0.52	1.55%	2	5
Slender Beardstongue, Native Source	<i>Penstemon gracilis</i>	0.003	0.74	2.20%	2	5
Smooth Blue Aster	<i>Aster laevis</i>	0.010	0.23	0.69%	3	5
Stiff Goldenrod, Native Source	<i>Solidago rigida</i>	0.010	0.15	0.46%	3	5
Stiff Sunflower, Native Source	<i>Helianthus pauciflorus</i>	0.015	0.25	0.75%	2	4
Sullivant's Milkweed, Native Source	<i>Asclepias sullivantii</i>	0.005	0.01	0.02%	2	5
Swamp Milkweed, Native Source	<i>Asclepias incarnata</i>	0.010	0.04	0.10%	2	5
Tall Boneset, Native Source	<i>Eupatorium altissimum</i>	0.008	0.15	0.43%	3	4
Tube Penstemon, Native Source	<i>Penstemon tubaeformis</i>	0.015	0.44	1.30%	2	5

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Upright Coneflower	<i>Ratibida columnifera</i>	0.060	1.02	3.00%	2	2
Velvety Gaura, Native Source	<i>Oenothera curtiflora</i>	0.010	0.01	0.04%	2	2
Western Yarrow	<i>Achillea millefolium</i>	0.010	0.65	1.94%	1	2
White Prairieclover	<i>Dalea candidum</i>	0.060	0.42	1.24%	2	5
Wild Bergamot	<i>Monarda fistulosa</i>	0.025	0.73	2.16%	2	5
Willow-leaf Sunflower, Native Source	<i>Helianthus salicifolius</i>	0.020	0.03	0.10%	3	5
Rice Hulls - Filler for low planting rate mixtures		3.000	0.00	0.00%	--	--
Grasses Total:		1.310	5.160	15.27%		
Wildflower/Forb/Legume Total:		2.784	28.630	84.73%		
Filler Total:		3.000	0.000	0.00%		
<b>Total Mixture:</b>		<b>7.094</b>	<b>33.791</b>	<b>100.00%</b>		

Bloom Period	Wildflowers Used in Mixture	% PLS Seeding Rate of Mix
1 = April to May	7	11.68%
2 = June to July	42	56.46%
3 = August to October	18	16.59%
<b>Total :</b>	<b>67</b>	

4.33	Pollinator Value (0-5)
<p>The Pollinator value score is determined based on a combination of factors described below. A score greater than 4.0 indicates the mixture is designed for great pollinator value.</p>	

**The Pollinator Value Score is determined based on a combination of factors that include:**

The pollen and/or nectar value of the plant species.  
The ability of the plant species to establish and persist in pollinator seeding mixtures.  
Bee Integrated Program research results of pollinator pollen analysis.  
Unique pollinator biological life histories of the plant species.  
The total bloom period length of the plant species.  
The occurrence in early bloom periods (Bloom Period 1) that are hard to challenging to provide resources for.  
The commercial availability of the species for use in seeding mixtures.  
Value of the plant species pollen and nectar to commercial beekeepers.  
USGS Pollinator Library tool: <https://www.npwrc.usgs.gov/pollinator/home>  
The Ecoregional Revegetation Application tool: <http://www.nativerrevegetation.org/era/>  
Botanical and beekeeping reference materials that list the pollinator value of species.  
Field observations of floral resource use by pollinator species.