

Customize Options to Suit Site Conditions

▼ ← Pick an Ecoregion

Xeric (dry) Mesic (medium) Hydric (wet)

Prairie Savanna Wetland Woodland

Long Term Program Short Term Program

Monarch Preferred Species
 Forage and Biomass (512) Planting

CHOOSE A RATE SPECIFICATION:

lbs/acre PLS (check a mix) Seeds/ft2 PLS (design a mix)

To override default cost, enter your cost in the applicable cell.



United States Department of Agriculture

Natural Resources Conservation Service

Criteria Revision Update 5/26/2020
Species Information Update 8/26/2021

CHOOSE YOUR GRASSES

↔ Input quantity ↔

Common Name	Scientific Name	Lbs / acre PLS	Seeds / ft2 PLS	Coefficient of Conservatism	Estimated Cost (\$/lb)	# Seeds / ft ² @ 1 lb. / ac	Pure Stand PLS Rate lbs / ac	% of Mix	Estimated Cost (\$/ac)	Functional Group
*Select Plants	Growth Form	Equivalent rate below								
1 Grama, Sideoats	<i>Bouteloua curtipendula</i>	0.28		7	\$9	4.4	8.0	5.9%	\$3	Perennial Warm Season Grass
	Rhizomatous		1.22							
2 Bluestem, Little	<i>Schizachyrium scoparium</i>	0.45		5	\$12	5.9	6.0	12.8%	\$5	Perennial Warm Season Grass
	Bunch		2.63							
3 Lovegrass, Sand	<i>Eragrostis trichodes</i>	0.033		5	\$75	35.6	1.0	5.7%	\$2	Perennial Warm Season Grass
	Bunch		1.17							
4									\$0.00	
5									\$0.00	
6									\$0.00	
7									\$0.00	
8									\$0.00	
9									\$0.00	
10									\$0.00	
11									\$0.00	
12									\$0.00	
13									\$0.00	
14									\$0.00	
15									\$0.00	
16									\$0.00	
17									\$0.00	
18									\$0.00	
19									\$0.00	
20									\$0.00	
21									\$0.00	
22									\$0.00	
23									\$0.00	
24									\$0.00	
25									\$0.00	

25										\$0.00	
27										\$0.00	
28										\$0.00	
29										\$0.00	
30										\$0.00	

	Species Richness	lbs / acre PLS	seeds / ft ² PLS	Average CC	ESTIMATED GRAMINOID COST (\$/AC)	OST (\$/AC)	\$10
GRAMINOID TOTAL	3	0.76	5.03	5.7			

CHOOSE YOUR FORBS/LEGUMES ↩ Input quantity ↪

	Common Name <small>*Select Plants</small>	Scientific Name <small>*Select Bloom Period below Scientific Name</small>	Lbs / acre PLS	Seeds / ft ² PLS	Coefficient of Conservatism	Estimated Cost (\$/lb)	# Seeds / ft ² @ 1 lb. / ac	Pure Stand PLS Rate lbs / ac	% of Mix	Estimated Cost (\$/ac)	Functional Group	Monarch Preferred
			Equivalent rate below									
1	Milkweed, Common <small>Input bloom period -> Mid</small>	<i>Asclepias syriaca</i>	0.031	0.046	0	\$120	1.5	23.8	0.2%	\$4	Perennial Forb	X
2	Milkweed, Butterfly <small>Input bloom period -> Mid</small>	<i>Asclepias tuberosa</i>	0.020	0.032	5	\$300	1.6	22.2	0.2%	\$6	Perennial Forb	X
3	Milkvetch, Canadian <small>Input bloom period -> Mid</small>	<i>Astragalus canadensis</i>	0.010	0.057	7	\$120	5.7	6.1	0.3%	\$1	Perennial Forb, Legume	
4	Wild Indigo, Blue <small>Input bloom period -> Early</small>	<i>Baptisia australis</i>	0.010	0.0055	0	\$150	0.6	63.5	0.0%	\$2	Perennial Forb, Legume	
5	Doll's Daisy, White <small>Input bloom period -> Mid</small>	<i>Boltonia asteroides</i>	0.010	0.59	5	\$166	58.8	0.6	2.8%	\$2	Perennial Forb	X
6	Partridge Pea <small>Input bloom period -> Late</small>	<i>Chamaecrista fasciculata</i>	0.26	0.30	1	\$25	1.1	30.7	1.4%	\$7	Annual Forb, Legume	
7	Zizia, Golden (Alexander's) <small>Input bloom period -> Early</small>	<i>Zizia aurea</i>	0.070	0.31	6	\$120	4.4	7.9	1.5%	\$8	Perennial Forb	
8	Coreopsis, Lanceleaf tickseed <small>Input bloom period -> Mid</small>	<i>Coreopsis lanceolata</i>	0.15	1.10	5	\$1,280	7.3	4.8	5.3%	\$192	Perennial Forb	X
9	Prairie Clover, White <small>Input bloom period -> Mid</small>	<i>Dalea candida</i>	0.050	0.35	9	\$90	7.0	5.0	1.7%	\$5	Perennial Forb, Legume	X
10	Prairie Clover, Purple <small>Input bloom period -> Mid</small>	<i>Dalea purpurea</i>	0.20	1.25	8	\$45	6.2	5.6	6.0%	\$9	Perennial Forb, Legume	X
11	Bundflower, Illinois <small>Input bloom period -> Mid</small>	<i>Desmanthus illinoensis</i>	0.26	0.36	4	\$45	1.4	25.1	1.8%	\$12	Perennial Forb, Legume	
12	Coneflower, Eastern Purple <small>Input bloom period -> Mid</small>	<i>Echinacea purpurea</i>	0.25	0.61	6	\$45	2.4	14.4	2.9%	\$11	Perennial Forb	X
13	Oxeye, Smooth (False Sunflower) <small>Input bloom period -> Late</small>	<i>Heliopsis helianthoides</i>	0.10	0.24	4	\$60	2.4	14.7	1.2%	\$6	Perennial Forb	X
14	Alumroot <small>Input bloom period -> Early</small>	<i>Heuchera richardsonii</i>	0.0020	0.51	8	\$900	252.5	0.1	2.4%	\$2	Perennial Forb	
15	Blazing Star, Dense <small>Input bloom period -> Mid</small>	<i>Liatris spicata</i>	0.020	0.081	7	\$150	4.0	8.7	0.4%	\$3	Perennial Forb	X
16	Bergamot, Wild <small>Input bloom period -> Mid</small>	<i>Monarda fistulosa</i>	0.040	1.10	4	\$150	27.5	1.3	5.3%	\$6	Perennial Forb	X
17	Goldenrod, Stiff <small>Input bloom period -> Late</small>	<i>Oligoneuron rigidum</i>	0.020	0.30	4	\$225	15.1	2.3	1.5%	\$5	Perennial Forb	X
18	Beardtongue, Foxglove <small>Input bloom period -> Early</small>	<i>Penstemon digitalis</i>	0.015	0.72	4	\$150	47.8	0.7	3.5%	\$2	Perennial Forb	
19	Cinquefoil, Tall <small>Input bloom period -> Mid</small>	<i>Potentilla arguta</i>	0.0070	0.59	10	\$120	84.5	0.4	2.9%	\$0.84	Perennial Forb	
20	Mountainmint, Narrowleaf <small>Input bloom period -> Late</small>	<i>Pycnanthemum tenuifolium</i>	0.0070	0.97	4	\$450	138.8	0.3	4.7%	\$3	Perennial Forb	X
21	Mountainmint, Virginia (Common) <small>Input bloom period -> Late</small>	<i>Pycnanthemum virginianum</i>	0.010	0.81	5	\$450	80.8	0.4	3.9%	\$5	Perennial Forb	X
22	Coneflower, Pinnate Prairie (Gray-head) <small>Input bloom period -> Mid</small>	<i>Ratibida pinnata</i>	0.050	0.72	4	\$60	14.3	2.4	3.5%	\$3	Perennial Forb	

23	Susan, Black-eyed	<i>Rudbeckia hirta</i>	0.063		2	\$45	34.4	1.0	10.5%	\$3	Biennial Forb	X	
	Input bloom period ->	Mid		2.17									
24	Susan, Browneyed	<i>Rudbeckia triloba</i>	0.050		3	\$90	12.9	2.7	3.1%	\$5	Biennial Forb	X	
	Input bloom period ->	Late		0.64									
25	Goldenrod, Gray (Field)	<i>Solidago nemoralis</i>	0.0050		3	\$600	110.2	0.3	2.7%	\$3	Perennial Forb	X	
	Input bloom period ->	Late		0.55									
26	Aster, Smooth Blue	<i>Symphotrichum laeve</i>	0.010		8	\$300	18.4	1.9	0.9%	\$3	Perennial Forb	X	
	Input bloom period ->	Late		0.18									
27	Aster, Calico	<i>Symphotrichum lateriflorum</i>	0.0030		2	\$600	91.8	0.4	1.3%	\$2	Perennial Forb	X	
	Input bloom period ->	Late		0.28									
28	Spiderwort, Bluejacket (Ohio)	<i>Tradescantia ohiensis</i>	0.010		3	\$300	2.9	11.9	0.1%	\$3	Perennial Forb		
	Input bloom period ->	Early		0.029									
29	Verbena, Hoary	<i>Verbena stricta</i>	0.030		2	\$75	12.3	2.9	1.8%	\$2	Perennial Forb	X	
	Input bloom period ->	Mid		0.37									
30	Culver's Root	<i>Veronicastrum virginicum</i>	0.0010		6	\$1,200	275.5	0.1	1.3%	\$1	Perennial Forb	X	
	Input bloom period ->	Mid		0.28									
31										\$0.00			
	Input bloom period ->												
32										\$0.00			
	Input bloom period ->												
33										\$0.00			
	Input bloom period ->												
34										\$0.00			
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37										\$0.00			
	Input bloom period ->												
38										\$0.00			
	Input bloom period ->												
39										\$0.00			
	Input bloom period ->												
40										\$0.00			
	Input bloom period ->												
			Species Richness	lbs / acre PLS	seeds / ft ² PLS	Average CC	ESTIMATED FORB COST (\$/AC)			COST (\$/AC)	\$314		
FORBS/LEGUMES TOTAL			30	1.76	15.53	4.6							

CHOOSE YOUR VINE OR Sub-Shrub PLANT SPECIES													
	Common Name	Scientific Name	Lbs / acre PLS	Seeds / ft ² PLS	Coefficient of Conservatism	Estimated Cost (\$/lb)	# Seeds / ft ² @ 1 oz. / ac	Pure Stand PLS Rate lbs / ac	% of Mix	Estimated Cost (\$/ac)	Functional Group	Monarch Preferred	
													Flowering Period
1	Leadplant	<i>Amorpha canescens</i>	0.015		8	\$225.00	6	6	0.0%	\$3	Sub-Shrub, Legume	X	
	Input bloom period ->	Mid		0.094									
2										\$0.00			
	Input bloom period ->												
3										\$0.00			
	Input bloom period ->												
4										\$0.00			
	Input bloom period ->												
5										\$0.00			
	Input bloom period ->												
			Species Richness	Lbs / acre PLS	seeds / ft ² PLS	Average CC	ESTIMATED VINE & WOODY COST (\$/AC)			COST (\$/AC)	\$3		
VINE & WOODY PLANT TOTAL			1	0.02	0.09	8.0							

	lbs / acre PLS	seeds / ft ² PLS	Average CC	Species Richness	Floristic Quality Index		ESTIMATED GRAND TOTAL COST (\$/AC)
GRAND TOTAL	2.54	20.7	4.8	34	28.1		\$328

Illinois NRCS 420 Wildlife Habitat Planting: Pollinator and Monarch Full Seeding Requirements			
Requirement	Criteria	Mix	Criteria Met
All mixes			
Spring Blooming Forbs & Shrubs, Minimum	3	3	Meets Criteria
Summer Blooming Forbs & Shrubs, Minimum	3	11	Meets Criteria
Fall Blooming Forbs & Shrubs, Minimum	3	5	Meets Criteria
Tall Grass Species in the Mix (Big Bluestem, Indiangrass, or Switchgrass)	Absent	Absent	Meets Criteria
Requirements for sites on < 5% slope			
Grass Seeds/ft ² , Maximum	5	5.0	Meets Criteria
Forb & Sub-shrub Seeds/ft ² , Minimum	15	15.6	Meets Criteria
Total Seeds/ft ² , Minimum	20	20.7	Meets Criteria
Requirements for sites on >=5% slope			
Grass Seeds/ft ² , Minimum	10	5.0	Does Not Meet Criteria
Forb & Sub-shrub Seeds/ft ² , Minimum	30	15.6	Does Not Meet Criteria
Total Seeds/ft ² , Minimum	40	20.7	Does Not Meet Criteria
Additional Requirement for Monarch Plantings			
Milkweed % PLS seeds/ft ² , Minimum	1.5%	0.4%	Does Not Meet Criteria
Monarch preferred Forbs % PLS seeds/ft ² , Minimum	60.0%	77.0%	Meets Criteria

Illinois NRCS 420 Wildlife Habitat Planting: Pollinator and Monarch Interseeding 1/2 Rate			
Requirement	Criteria	Mix	Criteria Met
All mixes			
Spring Blooming Forbs & Shrubs, Minimum	3	3.0	Meets Criteria
Summer Blooming Forbs & Shrubs, Minimum	3	12.0	Meets Criteria
Fall Blooming Forbs & Shrubs, Minimum	3	9.0	Meets Criteria
Tall Grass Species in the Mix (Big Bluestem, Indiangrass, or Switchgrass)	Absent	Absent	Meets Criteria
Grass and Forb Interseeding on < 5% slope			
Grass Seeds/ft ² , Maximum	2.5	5.0	Does Not Meet Criteria
Forb & Sub-shrub Seeds/ft ² , Minimum	7.5	15.6	Meets Criteria
Total Seeds/ft ² , Minimum	10.0	20.7	Meets Criteria
Grass and Forb Interseeding on >= 5% slope			
Grass Seeds/ft ² , Minimum	5	5.0	Does Not Meet Criteria
Forb & Sub-shrub Seeds/ft ² , Minimum	15.0	15.6	Meets Criteria
Total Seeds/ft ² , Minimum	20.0	20.7	Meets Criteria
Additional Requirement for Monarch Plantings			
Milkweed % PLS seeds/ft ² , Minimum	1.5%	0.4%	Does Not Meet Criteria
Monarch preferred Forbs % PLS seeds/ft ² , Min	60.0%	77.0%	Meets Criteria
Forb Only Interseeding on < 5% slope			
Forb & Sub-shrub Seeds/ft ² , Minimum	7.5	15.6	Meets Criteria
Forb Only Interseeding on >= 5% slope			
Forb & Sub-shrub Seeds/ft ² , Minimum	15.0	15.6	Meets Criteria