

**Customize Options to Suit Site Conditions**

▼ ← Pick an Ecoregion

Mesic (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)



**United States  
Department of  
Agriculture**

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

**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 <sup>2</sup> @ 1 lb. / ac	Pure Stand PLS Rate lbs / ac	% of Mix	Estimated Cost (\$/ac)	Functional Group
*Select Plants <span>Click ↓</span>	Growth Form									
1 Grama, Sideoats	<i>Bouteloua curtipendula</i> Rhizomatous	0.30	1.31	7	\$9	4.4	8.0	6.4%	\$3	Perennial Warm Season Grass
2 Bluestem, Little	<i>Schizachyrium scoparium</i> Bunch	0.45	2.63	5	\$12	5.9	6.0	12.9%	\$5	Perennial Warm Season Grass
3 Dropseed, Sand	<i>Sporobolus cryptandrus</i> Bunch	0.010	1.15	4	\$15	114.8	0.3	5.6%	\$0.15	Perennial Warm Season Grass
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	

27										\$0.00
28										\$0.00
29										\$0.00
30										\$0.00
		Species Richness	lbs / acre PLS	seeds / ft <sup>2</sup> PLS	Average CC	ESTIMATED GRAMINOID COST (\$/AC)		OST (\$/AC)	\$8	
GRAMINOID TOTAL		3	0.76	5.09	5.3					

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 <sup>2</sup> PLS	Coefficient of Conservatism	Estimated Cost (\$/lb)	# Seeds / ft <sup>2</sup> @ 1 lb. / ac	Pure Stand PLS Rate lbs / ac	% of Mix	Estimated Cost (\$/ac)	Functional Group	Monarch Preferred
			Equivalent rate below								
1 Milkweed, Common	<i>Asclepias syriaca</i>	0.14	0.21	0	\$120	1.5	23.8	1.0%	\$17	Perennial Forb	X
Input bloom period ->											
2 Milkweed, Butterfly	<i>Asclepias tuberosa</i>	0.070	0.11	5	\$300	1.6	22.2	0.5%	\$21	Perennial Forb	X
Input bloom period ->											
3 Milkvetch, Canadian	<i>Astragalus canadensis</i>	0.010	0.057	7	\$120	5.7	6.1	0.3%	\$1	Perennial Forb, Legume	
Input bloom period ->											
4 Wild Indigo, Blue	<i>Baptisia australis</i>	0.010	0.0055	0	\$150	0.6	63.5	0.0%	\$2	Perennial Forb, Legume	
Input bloom period ->											
5 Doll's Daisy, White	<i>Boltonia asteroides</i>	0.010	0.59	5	\$166	58.8	0.6	2.9%	\$2	Perennial Forb	X
Input bloom period ->											
6 Partridge Pea	<i>Chamaecrista fasciculata</i>	0.26	0.30	1	\$25	1.1	30.7	1.4%	\$7	Annual Forb, Legume	
Input bloom period ->											
7 Mistflower, Blue	<i>Conoclinium coelestinum</i>	0.0030	0.39	3	\$960	128.6	0.3	1.9%	\$3	Perennial Forb	X
Input bloom period ->											
8 Coreopsis, Lanceleaf tickseed	<i>Coreopsis lanceolata</i>	0.15	1.10	5	\$1,280	7.3	4.8	5.4%	\$192	Perennial Forb	X
Input bloom period ->											
9 Prairie Clover, White	<i>Dalea candida</i>	0.050	0.35	9	\$90	7.0	5.0	1.7%	\$5	Perennial Forb, Legume	X
Input bloom period ->											
10 Prairie Clover, Purple	<i>Dalea purpurea</i>	0.20	1.25	8	\$45	6.2	5.6	6.1%	\$9	Perennial Forb, Legume	X
Input bloom period ->											
11 Bunchflower, Illinois	<i>Desmanthus illinoensis</i>	0.26	0.36	4	\$45	1.4	25.1	1.8%	\$12	Perennial Forb, Legume	
Input bloom period ->											
12 Coneflower, Eastern Purple	<i>Echinacea purpurea</i>	0.25	0.61	6	\$45	2.4	14.4	3.0%	\$11	Perennial Forb	X
Input bloom period ->											
13 Oxeye, Smooth (False Sunflower)	<i>Heliopsis helianthoides</i>	0.10	0.24	4	\$60	2.4	14.7	1.2%	\$6	Perennial Forb	X
Input bloom period ->											
14 Alumroot	<i>Heuchera richardsonii</i>	0.0020	0.51	8	\$900	252.5	0.1	2.5%	\$2	Perennial Forb	
Input bloom period ->											
15 Blazing Star, Dense	<i>Liatris spicata</i>	0.010	0.040	7	\$150	4.0	8.7	0.2%	\$2	Perennial Forb	X
Input bloom period ->											
16 Bergamot, Wild	<i>Monarda fistulosa</i>	0.040	1.10	4	\$150	27.5	1.3	5.4%	\$6	Perennial Forb	X
Input bloom period ->											
17 Goldenrod, Stiff	<i>Oligoneuron rigidum</i>	0.020	0.30	4	\$225	15.1	2.3	1.5%	\$5	Perennial Forb	X
Input bloom period ->											
18 Beardtongue, Foxglove	<i>Penstemon digitalis</i>	0.015	0.72	4	\$150	47.8	0.7	3.5%	\$2	Perennial Forb	
Input bloom period ->											
19 Cinquefoil, Tall	<i>Potentilla arguta</i>	0.0070	0.59	10	\$120	84.5	0.4	2.9%	\$0.84	Perennial Forb	
Input bloom period ->											
20 Mountainmint, Narrowleaf	<i>Pycnanthemum tenuifolium</i>	0.0070	0.97	4	\$450	138.8	0.3	4.8%	\$3	Perennial Forb	X
Input bloom period ->											
21 Mountainmint, Virginia (Common)	<i>Pycnanthemum virginianum</i>	0.0010	0.081	5	\$450	80.8	0.4	0.4%	\$0.45	Perennial Forb	X
Input bloom period ->											
22 Coneflower, Pinnate Prairie (Gray-head)	<i>Ratibida pinnata</i>	0.050	0.72	4	\$60	14.3	2.4	3.5%	\$3	Perennial Forb	
Input bloom period ->											
23 Susan, Black-eyed	<i>Rudbeckia hirta</i>	0.063	2.17	2	\$45	34.4	1.0	10.6%	\$3	Biennial Forb	X
Input bloom period ->											

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>Symphyotrichum laeve</i>	0.0020		8	\$300	18.4	1.9	0.2%	\$0.60	Perennial Forb	X	
	Input bloom period ->	Late		0.037									
27	Aster, Calico	<i>Symphyotrichum lateriflorum</i>	0.0030		2	\$600	91.8	0.4	1.3%	\$2	Perennial Forb	X	
	Input bloom period ->	Late		0.28									
28	Aster, New England	<i>Symphyotrichum novae-angliae</i>	0.0020		4	\$300	24.2	1.4	0.2%	\$0.60	Perennial Forb	X	
	Input bloom period ->	Late		0.048									
29	Spiderwort, Bluejacket (Ohio)	<i>Tradescantia ohiensis</i>	0.0010		3	\$300	2.9	11.9	0.0%	\$0.30	Perennial Forb		
	Input bloom period ->	Early		0.0029									
30	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									
31	Culver's Root	<i>Veronicastrum virginicum</i>	0.0010		6	\$1,200	275	0.1	1.3%	\$1	Perennial Forb	X	
	Input bloom period ->	Mid		0.28									
32	Zizia, Golden (Alexander's)	<i>Zizia aurea</i>	0.070		6	\$120	4	8	1.5%	\$8	Perennial Forb		
	Input bloom period ->	Early		0.31									
33										\$0.00			
	Input bloom period ->												
34										\$0.00			
	Input bloom period ->												
35										\$0.00			
	Input bloom period ->												
36										\$0.00			
	Input bloom period ->												
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 <sup>2</sup> PLS	Average CC	ESTIMATED FORB COST (\$/AC)			COST (\$/AC)	\$335		
FORBS/LEGUMES TOTAL			32	1.89	15.26	4.6							

### CHOOSE YOUR VINE OR Sub-Shrub PLANT SPECIES

Common Name	Scientific Name Flowering Period	Lbs / acre PLS	Seeds / ft <sup>2</sup> PLS	Coefficient of Conservatism	Estimated Cost (\$/lb)	# Seeds / ft <sup>2</sup> @ 1 oz. / ac	Pure Stand PLS Rate lbs / ac	% of Mix	Estimated Cost (\$/ac)	Functional Group	Monarch Preferred		
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						\$0.00			
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 <sup>2</sup> 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 <sup>2</sup> PLS	Average CC	Species Richness	Floristic Quality Index		ESTIMATED GRAND TOTAL COST (\$/AC)
<b>GRAND TOTAL</b>	2.67	20.4	4.7	36	28.3		\$347

Illinois NRCS 420 Wildlife Habitat Planting: Pollinator and Monarch Full Seeding Requirements			
Requirement	Criteria	Mix	Criteria Met
<b>All mixes</b>			
Spring Blooming Forbs & Shrubs, Minimum	3	3	Meets Criteria
Summer Blooming Forbs & Shrubs, Minimum	3	12	Meets Criteria
Fall Blooming Forbs & Shrubs, Minimum	3	4	Meets Criteria
Tall Grass Species in the Mix (Big Bluestem, Indiangrass, or Switchgrass)	Absent	Absent	Meets Criteria
<b>Requirements for sites on &lt; 5% slope</b>			
Grass Seeds/ft <sup>2</sup> , Maximum	5	5.1	Meets Criteria
Forb & Sub-shrub Seeds/ft <sup>2</sup> , Minimum	15	15.4	Meets Criteria
Total Seeds/ft <sup>2</sup> , Minimum	20	20.4	Meets Criteria
<b>Requirements for sites on &gt;=5% slope</b>			
Grass Seeds/ft <sup>2</sup> , Minimum	10	5.1	Does Not Meet Criteria
Forb & Sub-shrub Seeds/ft <sup>2</sup> , Minimum	30	15.4	Does Not Meet Criteria
Total Seeds/ft <sup>2</sup> , Minimum	40	20.4	Does Not Meet Criteria
<b>Additional Requirement for Monarch Plantings</b>			
Milkweed % PLS seeds/ft <sup>2</sup> , Minimum	1.5%	1.5%	Meets Criteria
Monarch preferred Forbs % PLS seeds/ft <sup>2</sup> , Minimum	60.0%	76.8%	Meets Criteria

Illinois NRCS 420 Wildlife Habitat Planting: Pollinator and Monarch Interseeding ½ Rate			
Requirement	Criteria	Mix	Criteria Met
<b>All mixes</b>			
Spring Blooming Forbs & Shrubs, Minimum	3	3.0	Meets Criteria
Summer Blooming Forbs & Shrubs, Minimum	3	14.0	Meets Criteria
Fall Blooming Forbs & Shrubs, Minimum	3	7.0	Meets Criteria
Tall Grass Species in the Mix (Big Bluestem, Indiangrass, or Switchgrass)	Absent	Absent	Meets Criteria
<b>Grass and Forb Interseeding on &lt; 5% slope</b>			
Grass Seeds/ft <sup>2</sup> , Maximum	2.5	5.1	Does Not Meet Criteria
Forb & Sub-shrub Seeds/ft <sup>2</sup> , Minimum	7.5	15.4	Meets Criteria
Total Seeds/ft <sup>2</sup> , Minimum	10.0	20.4	Meets Criteria
<b>Grass and Forb Interseeding on &gt;= 5% slope</b>			
Grass Seeds/ft <sup>2</sup> , Minimum	5	5.1	Does Not Meet Criteria
Forb & Sub-shrub Seeds/ft <sup>2</sup> , Minimum	15.0	15.4	Meets Criteria
Total Seeds/ft <sup>2</sup> , Minimum	20.0	20.4	Meets Criteria
<b>Additional Requirement for Monarch Plantings</b>			
Milkweed % PLS seeds/ft <sup>2</sup> , Minimum	1.5%	1.5%	Meets Criteria
Monarch preferred Forbs % PLS seeds/ft <sup>2</sup> , Min	60.0%	76.8%	Meets Criteria
<b>Forb Only Interseeding on &lt; 5% slope</b>			
Forb & Sub-shrub Seeds/ft <sup>2</sup> , Minimum	7.5	15.4	Meets Criteria
<b>Forb Only Interseeding on &gt;= 5% slope</b>			
Forb & Sub-shrub Seeds/ft <sup>2</sup> , Minimum	15.0	15.4	Meets Criteria