

**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



**United States  
Department of  
Agriculture**

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

**Natural Resources Conservation Service**

**CHOOSE A RATE SPECIFICATION:**

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

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

**CHOOSE YOUR GRASSES**

← Input quantity →

Common Name <i>*Select Plants</i>	Scientific Name <i>Growth Form</i>	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
		Equivalent rate below								
1 <b>Bluestem, Little</b>	<i>Schizachyrium scoparium</i>	0.30		5	\$12	5.9	6.0	8.6%	\$4	Perennial Warm Season Grass
	Bunch		1.76							
2 <b>Dropseed, Composite</b>	<i>Sporobolus compositus</i>	0.10		3	\$17	11.0	3.2	5.4%	\$2	Perennial Warm Season Grass
	Bunch		1.10							
3 <b>Dropseed, Sand</b>	<i>Sporobolus cryptandrus</i>	0.0050		4	\$15	114.8	0.3	2.8%	\$0.08	Perennial Warm Season Grass
	Bunch		0.57							
4 <b>Junegrass, Prairie</b>	<i>Koeleria macrantha</i>	0.040		7	\$75	33.6	1.0	6.6%	\$3	Perennial Cool Season Grass
	Bunch		1.35							
5 <b>Gramma, Sideoats</b>	<i>Bouteloua curtipendula</i>	0.070		7	\$9	4.4	8.0	1.5%	\$0.63	Perennial Warm Season Grass
	Rhizomatous		0.31							
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 <sup>2</sup> PLS	Average CC						
GRAMINOID TOTAL	5	0.52	5.08	5.2	ESTIMATED GRAMINOID COST (\$/AC)	COST (\$/AC)	\$9			

**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 Zizia, Golden (Alexander's)	Zizia aurea	0.070		6	\$120	4.4	7.9	1.5%	\$8	Perennial Forb		
	Input bloom period -> Early		0.31									
2 Aster, New England	Symphyotrichum novae-angliae	0.0050		4	\$300	24.2	1.4	0.6%	\$2	Perennial Forb	X	
	Input bloom period -> Late		0.12									
3 Aster, Skyblue	Symphyotrichum oolentangiense	0.0050		7	\$300	23.1	1.5	0.6%	\$2	Perennial Forb	X	
	Input bloom period -> Late		0.12									
4 Aster, Smooth Blue	Symphyotrichum laeve	0.0010		8	\$300	18.4	1.9	0.1%	\$0.30	Perennial Forb	X	
	Input bloom period -> Late		0.018									
5 Beardtongue, Foxglove	Penstemon digitalis	0.010		4	\$150	47.8	0.7	2.4%	\$2	Perennial Forb		
	Input bloom period -> Early		0.48									
6 Bergamot, Wild	Monarda fistulosa	0.020		4	\$150	27.5	1.3	2.7%	\$3	Perennial Forb	X	
	Input bloom period -> Mid		0.55									
7 Blazing Star, Dense	Liatris spicata	0.0020		7	\$150	4.0	8.7	0.0%	\$0.30	Perennial Forb	X	
	Input bloom period -> Mid		0.0081									
8 Boneset, Common	Eupatorium perfoliatum	0.0060		4	\$300	58.8	0.6	1.7%	\$2	Perennial Forb	X	
	Input bloom period -> Late		0.35									
9 Boneset, False	Brickellia eupatorioides	0.010		6	\$600	11.8	3.0	0.6%	\$6	Perennial Forb	X	
	Input bloom period -> Mid		0.12									
10 Cardinal Flower	Lobelia cardinalis	0.0030		6	\$1,200	146.9	0.2	2.2%	\$4	Perennial Forb	X	
	Input bloom period -> Mid		0.44									
11 Cinquefoil, Tall	Potentilla arguta	0.0080		10	\$120	84.5	0.4	3.3%	\$0.96	Perennial Forb		
	Input bloom period -> Late		0.68									
12 Coneflower, Pinnate Prairie (Gray-head)	Ratibida pinnata	0.010		4	\$60	14.3	2.4	0.7%	\$0.60	Perennial Forb		
	Input bloom period -> Mid		0.14									
13 Coneflower, Eastern Purple	Echinacea purpurea	0.10		6	\$45	2.4	14.4	1.2%	\$5	Perennial Forb	X	
	Input bloom period -> Mid		0.24									
14 Coreopsis, Lanceleaf Tickseed	Coreopsis lanceolata	0.15		5	\$1,280	7.3	4.8	5.4%	\$192	Perennial Forb	X	
	Input bloom period -> Mid		1.10									
15 Culver's Root	Veronicastrum virginicum	0.0030		6	\$1,200	275.5	0.1	4.1%	\$4	Perennial Forb	X	
	Input bloom period -> Mid		0.83									
16 Goldenrod, Gray (Field)	Solidago nemoralis	0.0040		3	\$600	110.2	0.3	2.2%	\$2	Perennial Forb	X	
	Input bloom period -> Late		0.44									
17 Goldenrod, Stiff	Oligoneuron rigidum	0.020		4	\$225	15.1	2.3	1.5%	\$5	Perennial Forb	X	
	Input bloom period -> Late		0.30									
18 Bundleflower, Illinois	Desmanthus illinoensis	0.10		4	\$45	1.4	25.1	0.7%	\$5	Perennial Forb		
	Input bloom period -> Mid		0.14									
19 Lobelia, Great Blue	Lobelia siphilitica	0.0020		4	\$600	183.7	0.2	1.8%	\$1	Perennial Forb	X	
	Input bloom period -> Mid		0.37									
20 Lupine, Sundial (Wild)	Lupinus perennis	0.60		8	\$800	0.5	68.1	1.5%	\$480	Perennial Forb, Legume		
	Input bloom period -> Early		0.31									
21 Milkvetch, Canadian	Astragalus canadensis	0.10		7	\$120	5.7	6.1	2.8%	\$12	Perennial Forb, Legume		
	Input bloom period -> Mid		0.57									
22 Milkweed, Butterfly	Asclepias tuberosa	0.050		5	\$300	1.6	22.2	0.4%	\$15	Perennial Forb	X	
	Input bloom period -> Mid		0.079									

23	Milkweed, Common	<i>Asclepias syriaca</i>	0.050		0	\$120	1.5	23.8	0.4%	\$6	Perennial Forb	X	
	Input bloom period ->	Mid		0.073									
24	Mountainmint, Virginia (Common)	<i>Pycnanthemum virginianum</i>	0.0040		5	\$450	80.8	0.4	1.6%	\$2	Perennial Forb	X	
	Input bloom period ->	Late		0.32									
25	Mountainmint, Narrowleaf	<i>Pycnanthemum tenuifolium</i>	0.0020		4	\$450	138.8	0.3	1.4%	\$0.90	Perennial Forb	X	
	Input bloom period ->	Late		0.28									
26	Beebalm, Spotted (Horsemint)	<i>Monarda punctata</i>	0.0030		5	\$225	33.1	1.1	0.5%	\$0.68	Biennial Forb	X	
	Input bloom period ->	Late		0.099									
27	Partridge Pea	<i>Chamaecrista fasciculata</i>	0.20		1	\$25	1.1	30.7	1.1%	\$5	Annual Forb, Legume		
	Input bloom period ->	Late		0.23									
28	Prairie Clover, Purple	<i>Dalea purpurea</i>	0.12		8	\$45	6.2	5.6	3.7%	\$5	Perennial Forb, Legume	X	
	Input bloom period ->	Mid		0.75									
29	Prairie Clover, White	<i>Dalea candida</i>	0.020		9	\$90	7.0	5.0	0.7%	\$2	Perennial Forb, Legume	X	
	Input bloom period ->	Mid		0.14									
30	Seedbox	<i>Ludwigia alternifolia</i>	0.0020		5	\$480	477.5	0.07	4.7%	\$0.96	Perennial Forb		
	Input bloom period ->	Mid		0.96									
31	Senna, American (Wild)	<i>Cassia hebecarpa</i>	0.050		9	\$80	0.5	68	0.1%	\$4	Perennial Forb		
	Input bloom period ->	Mid		0.026									
32	Sneezeweed, Common	<i>Helenium autumnale</i>	0.010		3	\$150	51	0.7	2.5%	\$2	Perennial Forb		
	Input bloom period ->	Late		0.51									
33	Oxeye, Smooth (False Sunflower)	<i>Helianthus helianthoides</i>	0.10		4	\$60	2	15	1.2%	\$6	Perennial Forb	X	
	Input bloom period ->	Late		0.24									
34	Susan, Black-eyed	<i>Rudbeckia hirta</i>	0.063		2	\$45	34	1	10.7%	\$3	Biennial Forb	X	
	Input bloom period ->	Mid		2.17									
35	Susan, Browneyed	<i>Rudbeckia triloba</i>	0.010		3	\$90	13	3	0.6%	\$0.90	Biennial Forb	X	
	Input bloom period ->	Mid		0.13									
36	Coneflower, Sweet	<i>Rudbeckia subtomentosa</i>	0.010		5	\$150	16	2	0.8%	\$2	Perennial Forb	X	
	Input bloom period ->	Mid		0.16									
37	Verbena, Swamp (Blue)	<i>Verbena hastata</i>	0.035		3	\$640	34	1	5.9%	\$22	Perennial Forb	X	
	Input bloom period ->	Late		1.20									
38	Verbena, Hoary	<i>Verbena stricta</i>	0.010		2	\$75	12	3	0.6%	\$0.75	Perennial Forb	X	
	Input bloom period ->	Mid		0.12									
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)	\$812		
FORBS/LEGUMES TOTAL			38	1.97	15.11	5.0							

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	
												Equivalent rate below
1	Leadplant	<i>Amorpha canescens</i>	0.020		8	\$225.00	6	6	0.0%	\$5	Sub-Shrub, Legume	X
	Input bloom period ->	Mid		0.12								
2										\$0.00		
	Input bloom period ->	Mid										
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)	\$5	
VINE & WOODY PLANT TOTAL			1	0.02	0.12	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>	2.50	20.3	5.1	44	33.8		\$825

Illinois NRCS 327 Conservation Cover: 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	9	Meets Criteria
Fall Blooming Forbs & Shrubs, Minimum	3	7	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	15.2	Meets Criteria
Total Seeds/ft <sup>2</sup> , Minimum	20	20.3	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	15.2	Does Not Meet Criteria
Total Seeds/ft <sup>2</sup> , Minimum	40	20.3	Does Not Meet Criteria
<b>Additional Requirement for Monarch Plantings</b>			
Milkweed % PLS seeds/ft <sup>2</sup> , Minimum	1.5%	0.8%	Does Not Meet Criteria
Monarch preferred Forbs % PLS seeds/ft <sup>2</sup> , Minimum	60.0%	71.5%	Meets Criteria

Illinois NRCS 327 Conservation Cover: Pollinator and Monarch Interseeding 1/2 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	11.0	Meets Criteria
Fall Blooming Forbs & Shrubs, Minimum	3	10.0	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	15.2	Meets Criteria
Total Seeds/ft <sup>2</sup> , Minimum	10.0	20.3	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	15.2	Meets Criteria
Total Seeds/ft <sup>2</sup> , Minimum	20.0	20.3	Meets Criteria
<b>Additional Requirement for Monarch Plantings</b>			
Milkweed % PLS seeds/ft <sup>2</sup> , Minimum	1.5%	0.8%	Does Not Meet Criteria
Monarch preferred Forbs % PLS seeds/ft <sup>2</sup> , Min	60.0%	71.5%	Meets Criteria
<b>Forb Only Interseeding on &lt; 5% slope</b>			
Forb & Sub-shrub Seeds/ft <sup>2</sup> , Minimum	7.5	15.2	Meets Criteria
<b>Forb Only Interseeding on &gt;= 5% slope</b>			
Forb & Sub-shrub Seeds/ft <sup>2</sup> , Minimum	15.0	15.2	Meets Criteria