

Iowa Riverside Plant Selection Tool

The purpose of this tool is to provide guidance about native plant species selections for river restoration and stability projects, based on what has been observed as surviving at various elevations along the bank profiles of Iowa rivers. A matrix of native plants with varieties of root depths, and structural characteristics such as matted versus highly fibrous, is a key component in long term stability and success, after a project has been properly designed to consider channel and floodplain characteristics. Many plant communities could be established with this list. When the goal is holding soils in place for initial stability, generally a well-established mix of grasses, forbs, and sedges that are submergence tolerant will usually be the most successful.

Main headings are organized for various design situations such as full sun, shade, and trail edges (low growers). Below each “Main” heading, the planting tool is organized by elevation along the cross section of a typical bank restoration because many restoration projects in Iowa involve shaping banks and low floodplains to more stable conditions. As such, many species names are repeated throughout the list because some thrive under multiple conditions. If it is repeated, the record has an entry in the “Elevation Along Bank” column so the user knows where else it appears in the same design situation headings. Maps are included to show county-level presence based on botanical records, published by the Biota of North America Program at bonap.org, and it is recommended to roughly adhere to the distributions shown. The various other columns provide information specific to the success of each species, such as soil type, germination requirements, root descriptions, and establish.

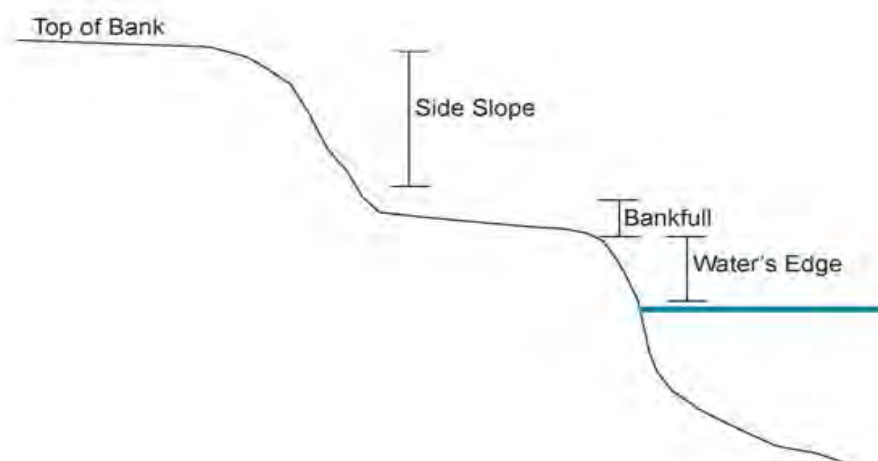
Like all resources involving rivers, this tool is a work in progress. More research based on monitoring reports of germination success, length of survivability, and advise on planting is welcome. If you are monitoring planting projects, please share what you have learned and send information to Nate.Hoogeveen@dnr.iowa.gov.

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Riverside Plant Species for seed mix, plugs, or transplant

*Found at multiple elevations along the bank



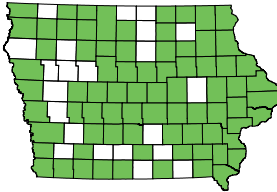
The purpose of this list is to provide guidance about which native species are advisable to plant in river restoration projects, based on what has been observed as surviving at various elevations along the bank profiles of Iowa rivers. More research and monitoring is needed. If you are monitoring survivability in projects, please share what you have learned and send information to Nate.Hoogeveen@dnr.iowa.gov.

Wetland Indicator Descriptions:

- OBL - Obligate Wetland (Almost always occurs in wetlands)
- FACW - Facultative Wetland (Usually occurs in wetlands)
- FAC - Facultative (Equally likely to occur in wetland or non-wetland areas)
- FACU - Facultative Upland (Usually occurs in non-wetlands)
- UPL - Upland Obligate (Almost always occurs in non-wetlands)

Common name		Genus / species	Elevations along the bank	Germination Requirements			Weight/ acre (bulk seed)	Seeds/oz	Region of Iowa (BONAP)
	Comments (Special planting instructions, special values, cautions, or usage instructions.)		Wetland indicator (Midwest)	Sunlight requirements	Soil Type	Habitat			
<i>Erosion Control Mix (used for quick cover of soils after disturbance on all bank elevations to mitigate erosion)</i>								Green indicates there is a botanical record of the species and it is appropriate to plant within that county.	

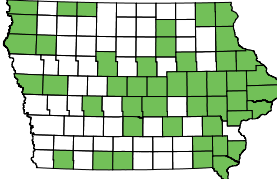
Warm-Season Cover Crop (For early spring to late fall plantings)

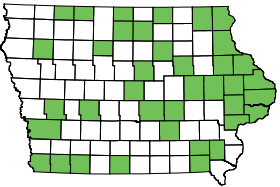
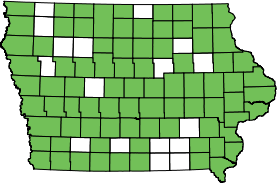
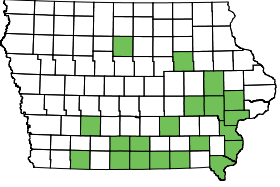
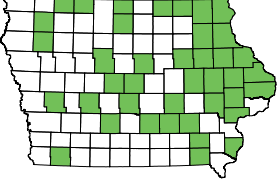
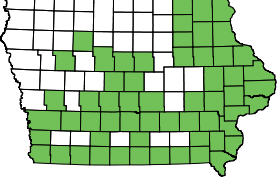
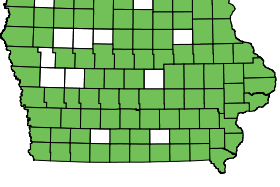
Virginia Wild Rye		<i>Elymus virginicus</i>	all elevations	No seed pretreatment necessary		12lbs/acre *when used in conjunction with Annual Rye Grass	4,200	
	Moist conditions; fibrous root system; great cover crop for erosion control; easily grown from seed; tends to give way to other species over five years		FACW	Full sun to shade	Fertile soil; loam, clay loam, sandy, can survive in a variety of soil types	Bottomland woodlands, riparian areas, riverbanks, streambanks, moist prairies, roadsides, bluffs, moist savannas, disturbed areas		
Annual Rye Grass		<i>Lolium multiflorum</i> <i>(Lolium perenne ssp. multiflorum)</i>	all elevations	No seed pretreatment necessary		12lbs/acre *when used in conjunction with Virginia Wild Rye	N/A	<i>*this is a non-native species</i>
	Moist to average soil conditions; fibrous root system; self-seeding; annual; fast growth rate		N/A	Full to partial sunlight	Can survive in a variety of soil types	Fields, roadsides, waste areas, disturbed soils		

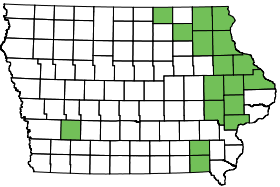
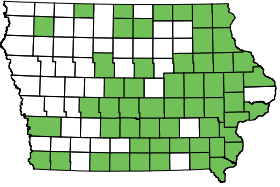
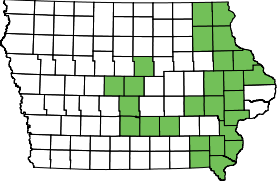
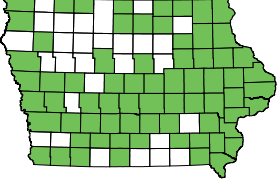
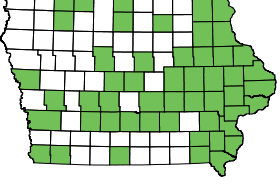
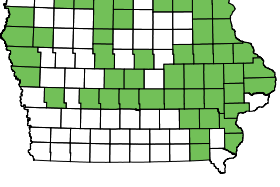
Cool-Season Cover Crop (For late fall to late winter plantings)

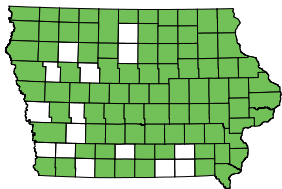
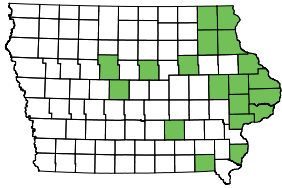
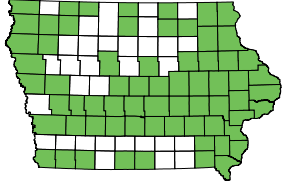
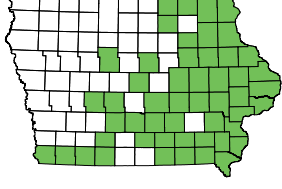
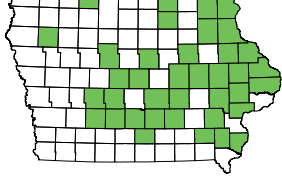
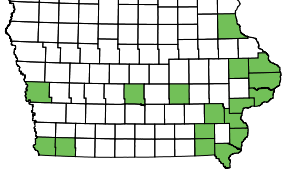
Oats		<i>Avena sativa</i>	all elevations	No seed pretreatment necessary			30-40lbs/acre		<i>*this is a non-native species</i>
	Moist, well-drained conditions; fibrous root system; fast growth rate; winterkill		UPL	Full to partial sunlight	Can survive in a variety of soil types		Roadsides, waste areas, disturbed soils		
Winter Rye; Cereal Rye		<i>Secale cereale</i>	all elevations	No seed pretreatment necessary			50-60 lbs/acre	N/A	<i>*this is a non-native species</i>
	Well-drained conditions; extensive deep root system; fast growth rate		N/A	Full to partial sunlight	Can survive in a variety of soil types		Roadsides, waste areas, disturbed soils		

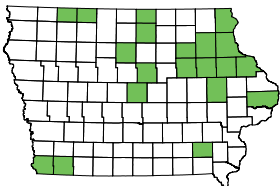
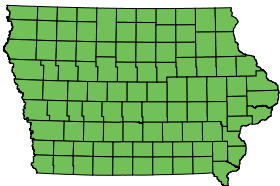
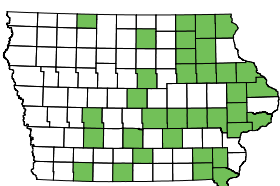
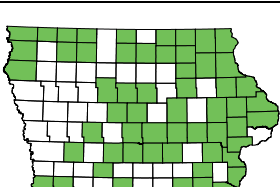
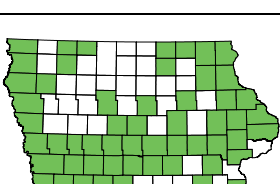
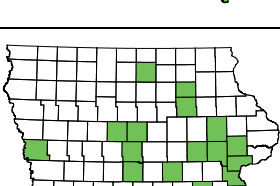
Top of Bank, PART-SHADE (Ecologically an alluvial open forest or woodland) Forbs

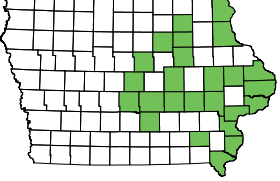
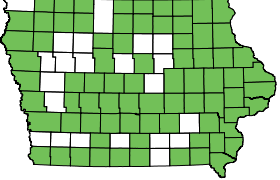
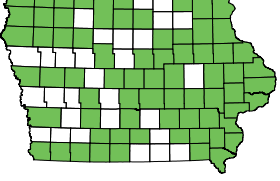
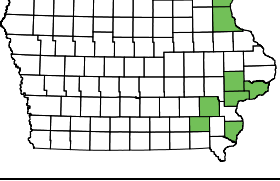
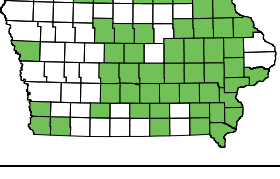
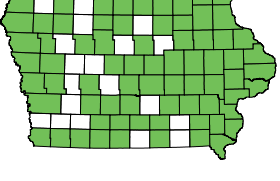
Yellow giant hyssop		<i>Agastache nepetoides</i>			Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.	0.5oz/acre	90,000	
	Moist conditions; fibrous and rhizomatous root system; excellent pollinator		FACU	Partial sunlight	Fertile, loamy soils	Woodland edges, open woodlands, thickets, shady meadows		

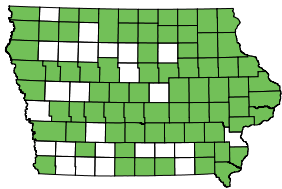
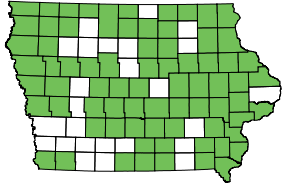
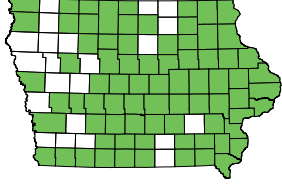
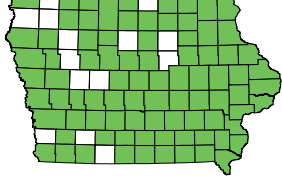
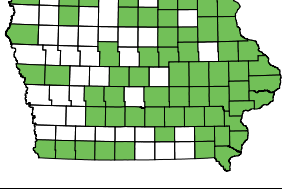
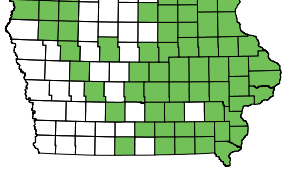
Purple giant hyssop; Giant hyssop	<i>Agastache scrophulariifolia</i>		Cold, moist stratification for a minimum of 30 days or fall planting. Needs light to germinate, surface sow seeds.	0.5oz/acre	93,000	
	Moist conditions; excellent pollinator; rhizomatous, often forms colonies	N/A	Full to partial sunlight	Well-drained, disturbed, moist soils; sand	Disturbed areas, meadows, thickets, upper floodplain woodlands	
*White snakeroot	<i>Ageratina altissima (Eupatorium rugosum)</i>	*top shade, wooded trail	Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.	0.25oz/acre	150,000	
	A synonymous scientific name is <i>Eupatorium rugosum</i> , which is used by many nurseries. Slightly dry to moist conditions; rhizomatous and fibrous root system; can be considered weedy; easily grown from seed	N/A	Partial sunlight	Loam, clay loam	Deciduous woodlands, thickets, woodland edges, bluffs, meadows, disturbed areas	
Swamp agrimony	<i>Agrimonia parviflora</i>		N/A	N/A	N/A	
	Wet to moist conditions; fibrous and rhizomatous root system, often forms colonies	FACW	Full to partial sunlight	Well-drained soils; gravelly, sandy, loamy, silty	Open floodplain woodlands, swamps, moist thickets, ditches, moist prairies	
*Wild leek	<i>Allium tricoccum</i>	*top shade, side slope	Cold, moist stratification for a minimum of 60 days, or fall planning.	1oz/acre	1,400	
	Slightly dry to moist conditions; ovoid bulb with fibrous roots; transplants are generally the most successful propagation type	FACU	Light shade	Fertile, loamy soils	Upland woodlands, floodplain woodlands, wooded slopes	
Green dragon	<i>Arisaema dracontium</i>		Cold, moist stratification for a minimum of 60 days or fall planting.	2oz/acre	600	
	Wet to moist conditions; root system with tubers; propagation through tuber division or seeds most successful;	FACW	Light to partial shade	Well-drained moist soils; loam	Moist deciduous woodlands, shady springs, seeps, floodplain woodlands	
Jack in the pulpit	<i>Arisaema triphyllum</i>		Sow seeds immediately after collection. May need to allow two full years for germination.	*Transplant/plugs most successful	500	
	Moist conditions; root system consists of a corm; propagation through corms most successful	FACW	Partial sunlight	Fertile, rich, soils	Moist woodlands, swamps, marshes	

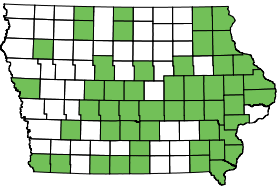
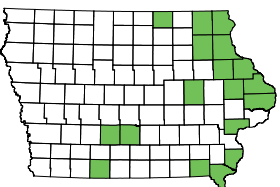
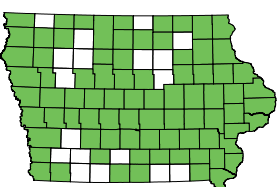
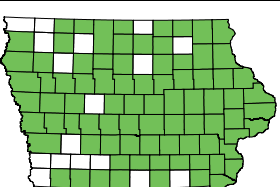
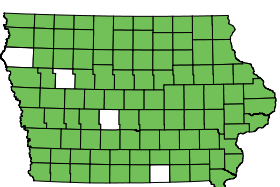
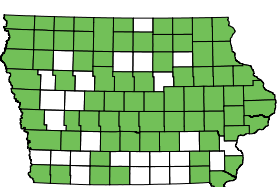
Great Indian plantain	<i>Arnoglossum reniforme</i> (<i>Cacalia muhlenbergii</i>)		Cold, moist stratification for a minimum of 60 days, or fall planning.	3oz/acre	4,000	
	A synonymous older scientific name is <i>Cacalia muhlenbergii</i> ; Slightly dry to moist conditions; rhizomatous root system	N/A	Full to partial sunlight	Moist soils	Floodplain woodlands, roadsides, prairies, woodland edges	
*Wild ginger	<i>Asarum canadense</i>	*top shade, wooded trail, side slope	Sow seeds immediately after collection. May need to allow one full year for germination.	1oz/acre	4,400	
	Slightly dry to moist conditions; shallow rhizomatous root system, often forms colonies; most successful propagation through plugs or root division	FACU	Full to partial shade	Moist soil; Loam, slightly rocky soil	Floodplain and upland woodlands, bluffs, wooded slopes	
*Hairy wood mint	<i>Blephilia hirsuta</i>	*top shade, side slope	Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.	0.5oz/acre	240,000	
	Moist conditions; fibrous and rhizomatous root system, often forms colonies	FACU	Full to partial sunlight	Loamy, rocky soils	Woodland edges, thickets, limestone glades, woody slopes	
*American bellflower; Tall Bellflower	<i>Campanulastrum americanum</i> (<i>Campanula americana</i> , old scientific name)	*top shade, wooded trail	Cold, moist stratification for a minimum of 30 days or fall planting. Needs light to germinate, surface sow seeds.	0.25oz/acre	170,000	
	Moist conditions; low drought tolerance; readily germinates; excellent pollinator; taproot; annual	FAC	Partial shade	Fertile, moist soil; loam	Moist woodlands, disturbed woodland areas, thickets, streambanks	
*Cutleaf toothwort	<i>Cardamine concatenata</i> (<i>Dentaria laciniata</i>)	*top shade, side slope	Cold, moist stratification for a minimum of 60 days or fall planting.	1oz/acre	22,000	
	A synonymous scientific name is <i>Dentaria laciniata</i> ; moist conditions; rhizomatous root system, often form colonies; propagation through transplant/root division most successful	FACU	Partial shade	Well-drained soils	Floodplain woodlands, woody slopes, bluffs	
*Blue cohosh	<i>Caulophyllum thalictroides</i>	*top shade, side slope	Sow seeds outdoors in the fall. May take up to 3-4 years to establish.	*Transplants/plugs most successful	70	
	Moderately moist conditions; rhizomatous and fibrous; long-lived; difficult to germinate through seeds	N/A	Light shade	Well-drained, fertile soils; loam	Moist woodlands, bluffs, woody slopes, undisturbed habitats	

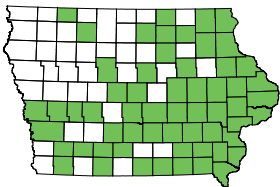
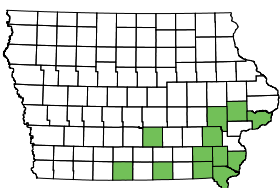
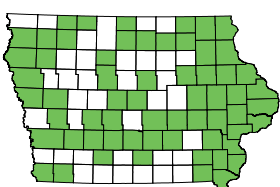
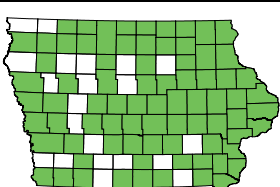
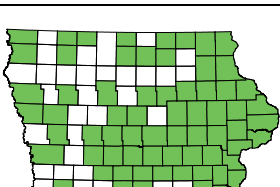
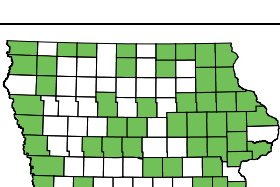
*Canadian Honewort		<i>Cryptotaenia canadensis</i>	*top shade, wooded trail	Cold, moist stratification for a minimum of 60 days or fall planting.		0.5oz/acre	7,000	
	Moist conditions; taproot; self-seeding		FAC	Partial shade	Well-drained, loamy, fertile	Floodplain woodlands, shady bluffs, slightly disturbed areas, woodland edges		
*Squirrel corn		<i>Dicentra canadensis</i>	*top shade, side slope	Sow seeds immediately after collection.		*Transplants/plugs most successful	N/A	
	Moderately moist conditions; root system consists of corms; propagation through transplants/plugs most successful		N/A	Partial shade	Loamy, sandy soils	Deciduous woodlands, woody slopes, shady streambanks, ravines		
*Dutchman’s breeches		<i>Dicentra cucullaria</i>	*top shade, side slope	Sow seeds immediately after collection, or requires cold, moist stratification for a minimum of 60 days.		0.5oz/acre	17,500	
	Moist conditions; root system consists of tubers; excellent pollinator; propagate through seeds or division		N/A	Partial shade	Fertile soils	Deciduous woodlands, ravines, slopes, valleys, streambanks, undisturbed areas		
Wild yam		<i>Dioscorea villosa</i>		Cold, moist stratification for a minimum of 60 days, or fall planning.		1oz/acre	2,800	
	Moist conditions, herbaceous vine with a rhizomatous root system; easily grown from seed		FAC	Full to partial sunlight	sandy loam, loamy, rocky	Savannas, woodland edges, thickets, sandy prairies, bluffs, open woodlands		
*False rue anemone		<i>Enemion biternatum</i> <i>(Isopyrum biternatum)</i>	*top shade, side slope	Likely needs cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre	11,000	
	Another scientific name for False Rue Anemone is <i>Isopyrum biternatum</i> . Fibrous root system, often forms colonies; can be propagated through seeds or root division		FAC	Partial shade	loamy soils, fertile soils	Floodplain woodlands, floodplains, wooded slopes		
Late boneset		<i>Eupatorium serotinum</i>		Likely needs cold, moist stratification for a minimum of 30 days or fall planting.		N/A	N/A	
	Moist conditions; fibrous and rhizomatous root system; excellent pollinator		FAC	Full to partial sunlight	Moist soils; loamy	Meadows, moist prairies, savannas, meadows, plains, swamps, disturbed areas		

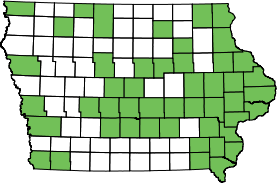
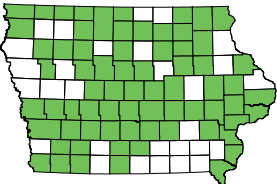
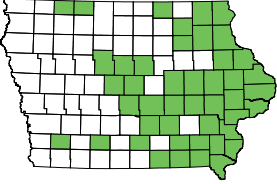
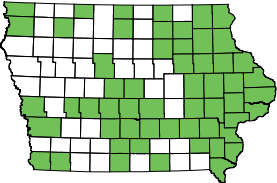
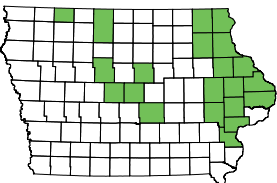
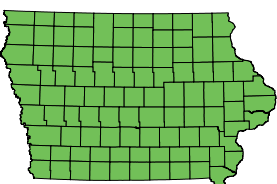
*Yellow avens		<i>Geum aleppicum</i>	*top shade, bankfull	Cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre	20,000	
	Moist to wet conditions		FACW	Partial shade	Moist soils	Low woodlands, fens, shady seeps, thickets, marshes, swamps, bogs		
White avens		<i>Geum canadense</i>		Likely needs cold, moist stratification for a minimum of 30 days or fall/early spring planting.		N/A	N/A	
	Slightly dry to moist conditions; rhizomatous root system with taproot; can become aggressive and be considered weedy		FAC	Partial sunlight	clay loam, loam, sandy loam	Floodplain woodlands, thickets, disturbed areas, woodland edges		
*Giant St. Johnswort		<i>Hypericum ascyron</i> (<i>Hypericum pyramidatum</i>)	*top shade, top sun, bankfull, side slope	Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		1oz/acre	190,000	
	A synonymous scientific name is <i>Hypericum pyramidatum</i> ; moist conditions; rhizomatous root system; excellent pollinator; propagation through seeds or plugs are successful		FAC	Full to partial sunlight	Can survive in a variety of soil types	Open woodlands, riverbanks, moist thickets, wooded slopes, meadows, marshes		
*Spotted touch-me-not; Orange jewelweed		<i>Impatiens capensis</i>	*top shade, shady stream edge, wooded trail, bankfull	Sow seeds immediately after collection.		0.25oz/acre	4,000	
	Wet to moist conditions; annual; taproot; self-seeding; readily germinates from seed; excellent pollinator; shade tolerant; can become aggressive		FACW	Full to partial shade	Moist, fertile, clay, loam, sand	Shady bogs, floodplain woodlands, swamps, shady streambanks, wet ditches, seeps		
*Pale touch-me-not; Yellow jewelweed		<i>Impatiens pallida</i>	*top shade, shady stream edge, wooded trail, bankfull	Sow seeds immediately after collection.		1oz/acre	1,600	
	Wet to moist conditions; taproot; annual; readily germinates from seeds; excellent pollinator; can become aggressive		FACW	Partial shade	Moist soils; loamy, mucky	Swamps, open floodplain woodlands, muddy streambanks, woody edges of marshes		
*Purple rocket		<i>Iodanthus pinnatifidus</i>	*top shade, side slope, wooded trails	N/A		N/A	N/A	
	Moist to wet conditions; taproot; self-seeding; easily grown from seed; excellent pollinator; tolerates seasonal flooding		FACW	Partial sunlight	Fertile, loamy soils	Floodplain woodlands, floodplain slopes, meadows		

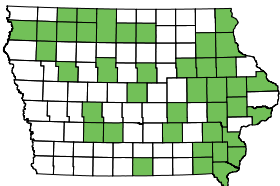
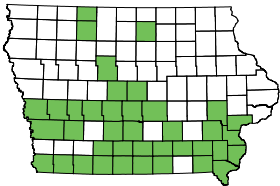
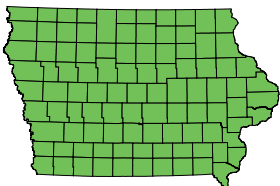
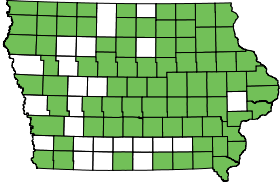
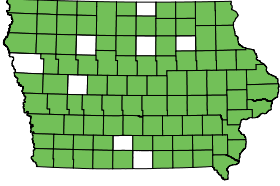
*Cardinal Flower		<i>Lobelia cardinalis</i>	*top shade, bankfull, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		*Transplants/plugs most successful	400,000	
	Wet to moist conditions; propagation through transplants or plugs are usually most successful; longevity sometimes limited; central taproot		OBL	Full sun to light shade	Sandy, loamy, gravelly, clay soils		Wet prairies, marsh edges, open floodplain woodlands, ditches, wet meadows, streambanks, swamps	
*Great Blue Lobelia; Blue Cardinal Flower		<i>Lobelia siphilitica</i>	*top shade, bankfull, shaded stream edge, wooded trail	Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	500,000	
	Wet to moist conditions; can be established without stratification; central taproot		OBL	Full sun to partial sunlight	Fertile soil; loam, sandy loam, clay		Wet prairies, open floodplain woodlands, wet meadows, riverbanks, ditches, swamps	
*Fringed loosestrife		<i>Lysimachia ciliata</i>	*top shade, top sun	Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		1oz/acre	39,000	
	Moist to wet conditions; rhizomatous root system with a taproot; excellent pollinator; propagation through seeds or root division most successful		FACW	Full to partial sunlight	Fertile soils; loam		Floodplain woodlands, swamps, wet thickets, marshes, streambanks, wet prairies, seeps	
Lanceleaf loosestrife		<i>Lysimachia lanceolata</i>		N/A		N/A	N/A	
	Moist conditions; rhizomatous root system with taproot		FAC	Full to partial sunlight	Can survive in a variety of soil types		Moist black soil prairies, thickets, swamps, open floodplain woodlands, limestone glades, meadows	
*Virginia bluebell		<i>Mertensia virginica</i>	*top shade, woodland trails	Best if sown in the fall or immediately after collection. Otherwise requires cold, moist stratification for a minimum of 60 days.		0.5oz/acre	9,700	
	Prefers moist, well-drained conditions; often forms colonies; taproot		FACW	Partial to full shade	Fertile, moist soil; loam, rock		Floodplain woodlands, shady bluffs, riverbanks and streambanks	
*Wild Bergamot; Beebalm		<i>Monarda fistulosa</i>	*top shade and top sun, sunny and woodland trails	No seed pretreatment necessary		0.25oz/acre	70,000	
	Moist, well-drained to partially dry conditions; rhizomatous with deep roots; excellent pollinator; easily grown from seed; can become aggressive; very hardy and thrives in disturbed areas; drought tolerant		FACU	Full to partial sunlight	Can survive in a variety of soil types		Open woodlands, fields, moist meadows, ditches, edges of forests, prairies, savannas, thickets, disturbed areas	

*Sweet cicely		<i>Osmorhiza claytonii</i>	*top shade, side slope	Early fall planting or requires a warm, moist stratification for a minimum of 30 days, followed by a period of cold, moist stratification for a minimum of 60 days.		1oz/acre		2,500	
	Moderately moist conditions; fibrous root system		FACU	Partial shade	Can survive in a variety of soil types		Wooded slopes, woodland edges; deciduous woodlands		
*Anise root		<i>Osmorhiza longistylis</i>	*top shade, side slope	Not fully known, likely needs cold, moist stratification for a minimum of 60 days, or fall planting.		*Transplants/plugs most successful		N/A	
	Moderately moist conditions; rhizomatous root system; propagation through transplants or plugs is most successful; limited local commercial availability		FACU	Partial shade	Fertile loamy soil		Floodplain woodlands; wooded slopes, deciduous woodlands, wooded ravines		
Dotted smartweed		<i>Persicaria punctata</i> (<i>Polygonum punctatum</i>)		Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		1oz/acre		7,800	
	A synonymous scientific name is <i>Polygonum punctatum</i> ; wet to moist conditions; rhizomatous root system; excellent pollinator		OBL	Full to partial sunlight	Mucky, loamy soils		Open floodplain forests, prairie swales, marsh edges, swamps, wet ditches, streambanks, seeps		
*Woodland phlox; Wild blue phlox		<i>Phlox divaricata</i>	*top shade, wooded trail	Cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre		12,500	
	Slightly dry to moderately moist conditions; rhizomatous root system; propagation through seeds or root division most successful		FACU	Partial shade	Can survive in a variety of soil types		Deciduous woodlands, bluffs, seasonal floodplains, streambanks, wooded paths		
*Clearweed		<i>Pilea pumila</i>	*top shade, wooded trails	N/A		N/A		N/A	
	Wet to moist conditions; self-seeding; easily grown from seed; annual		FACW	Partial sunlight	Fertile, loamy soils		Floodplain woodlands, streambanks, seeps, woodland edges		
*Jacob's ladder; Greek valerian		<i>Polemonium reptans</i>	*tops shade, wooded trail	Cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre		18,000	
	Moderately moist to slightly dry conditions; fibrous root system; self-seeding; excellent pollinator		FAC	Partial sunlight	Fertile, loamy soils		Deciduous woodlands, streambanks, fens, moist prairies, woodland edges, wooded paths		

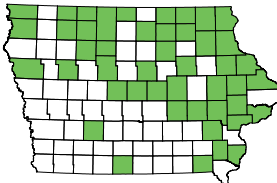
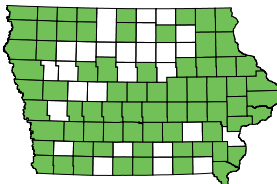
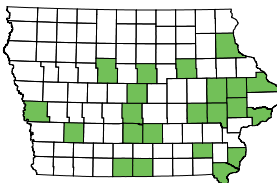
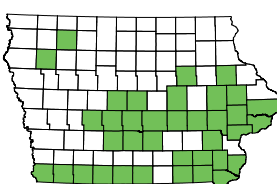
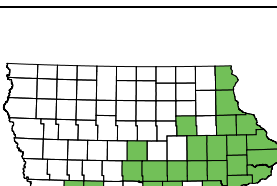
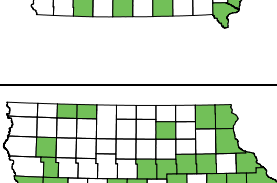
Jumpseed	<i>Polygonum virginianum</i> (<i>Persicaria virginiana</i>)		Cold, moist stratification for a minimum of 60 days, or fall planting.	0.5oz/acre	3,500	
	A synonymous scientific name is <i>Persicaria virginiana</i> ; moist conditions; rhizomatous root system; self-seeding; can become aggressive	FAC	Partial shade	Can survive in a variety of moist soil types	Wooded slopes, ravines, floodplain woodlands	
*Leafcup; whiteflower leafcup	<i>Polymnia canadensis</i>	*top shade, side slope	Cold, moist stratification for a minimum of 60 days or fall planting.	1oz/acre	6,200	
	Slightly dry to moderately moist conditions; fibrous root system;	N/A	Partial shade	Rocky, limestone, loamy	Limestone bluffs, floodplain woodlands, wooded slopes, algific talus slopes, shady ravines, shaded streambanks	
*Kidney leaf buttercup	<i>Ranunculus abortivus</i>	*top shade, wooded trail	N/A	N/A	N/A	
	Moist conditions; fibrous root system; self-seeding; can be considered weedy; easily grown from seed	FACW	Partial sunlight	Fertile soils; clay loam, loam	Woodlands, riverbanks, wooded paths, railroads, ditches, woodland edges, fields, disturbed areas	
Swamp buttercup	<i>Ranunculus septentrionalis</i> (<i>Ranunculus hispidus</i>)		Cold, moist stratification for a minimum of 60 days or fall planting. (<i>Ranunculus hispidus</i>)	0.5oz/acre	12,000 (<i>Ranunculus hispidus</i>)	
	Variable species, some authorities consider swamp buttercup to be a sub-species of <i>Ranunculus hispidus</i> . Fibrous root system; can spread rapidly, propagate through seeds or division	FAC (<i>Ranunculus hispidus</i>)	Partial sunlight	Fertile, loamy soil	Swamps, shady seeps, moist deciduous woodlands, ditches, meadows, riverbanks, pond edges	
						Ranunculus hispidus
*Black-eyed Susan	<i>Rudbeckia hirta</i>	*Top shade & sun, side slope, sunny trail	Cold, moist stratification for a minimum of 30 days or fall planting.	0.5oz/acre	92,000	
	Opportunistic species, does well in disturbed areas; fast maturation; slightly moist to dry conditions; can tolerate above-average rainfall in well-drained conditions; central taproot; biennial	FACU	Full to partial sunlight	Fertile soil; clay loam, sandy loam	Slightly wet to dry prairies, meadows, roadside ditches, savannas, rocky areas, and disturbed sites	
*Tall coneflower; Green-head coneflower; Cutleaf coneflower	<i>Rudbeckia laciniata</i>	*shady stream edge, bankfull, top shade, side slope	Cold, moist stratification for a minimum of 30 days or fall planting. Needs light to germinate, surface sow seeds.	1.5oz/acre	14,000	
	Moist to wet conditions; easily grown from seed; rapid growth rate through rhizomes; flood tolerant; excellent pollinator; can be considered weedy	FACW	Full to partial sunlight, shade	Moist soil; loam	Floodplain woodlands, shady riverbanks, moist meadows, sloughs, lowland thickets and fields	

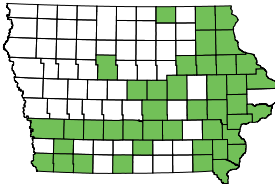
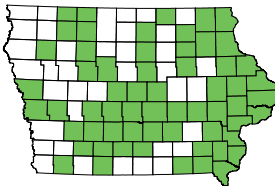
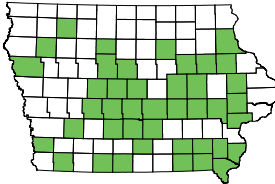
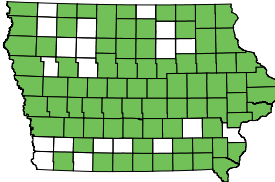
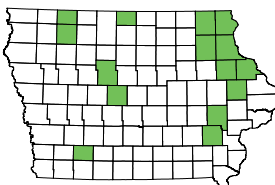
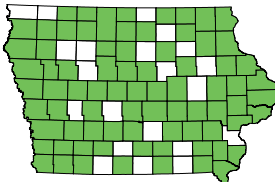
*Brown-eyed Susan		<i>Rudbeckia triloba</i>	*top sun, top shade, woodland trails	Cold, moist stratification for a minimum of 30 days or fall planting.		1oz/acre		34,000	
	Moist conditions; fibrous root system; self-seeding; drought tolerant; biennial		FACU	Full to partial sunlight	Fertile soil; loamy, gravelly, clay, sandy		Prairies, savannas, open forests, riverbanks, streambanks, tickets, roadsides, disturbed areas		
Smooth ruellia; Smooth Wild Petunia		<i>Ruellia strepens</i>		Cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre		6,800	
	Moist conditions; seed propagation most successful		FAC	Partial sunlight	Loamy, rocky soil		Wooded slopes, rocky streambanks, thickets, open woodlands		
Bloodroot		<i>Sanguinaria canadensis</i>		Sow seeds immediately after collection, do not allow seeds to dry out.		1oz/acre		1,700	
	Slightly dry to moderately moist conditions; rhizomatous root system; excellent pollinator; easily grown from seed		FACU	Partial shade	Fertile, loamy, humusy soil		Deciduous upland woods, ravines, floodplain woodlands, bluff edges, shaded riverbanks,		
Common black snakeroot		<i>Sanicula odorata</i> <i>(Sanicula gregaria)</i>		N/A		N/A		N/A	
	Moderately moist conditions; fibrous root system; propagation through seeds most successful; limited commercial availability		FAC	Partial sunlight	Loamy		Floodplain woodlands, thickets, shady seeps, degraded woodland habitats		
False Solomon’s Seal		<i>Smilacina racemosa</i> <i>(Maianthemum racemosum)</i>		Cold, moist stratification for a minimum of 90 days, or fall planting.		1.5oz/acre		400	
	A synonymous scientific name is <i>Maianthemum racemosum</i> ; moderately moist conditions; rhizomatous root system; propagation through seeds or root division most successful		FACU	Partial shade	Loam, sandy loam, rocky-loam		Woodlands, bluffs		
Upright carrion flower		<i>Smilax ecirrhata</i>		Likely needs a period of warm, moist stratification for a minimum of 60 days followed by a period of cold, moist stratification for a minimum of 90 days.		N/A		N/A	
	Moist conditions; self-seeding; easily grown from seed		N/A	Partial sunlight	Loam, clay loam, sandy loam		Upland woodlands, ravines wooded streambanks, thickets, open woodlands		

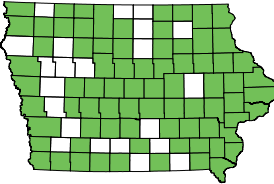
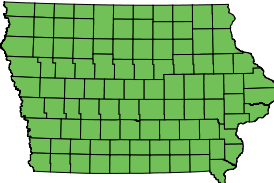
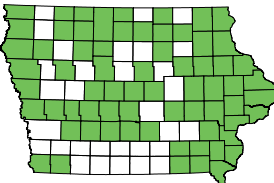
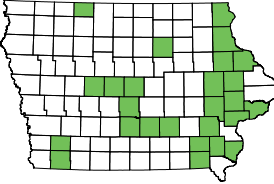
	*Smooth Hedge nettle; Hedge nettle	<i>Stachys tenuifolia</i>	*top shade, water's edge, shaded stream edge	N/A		N/A	N/A	
	Wet conditions; rhizomatous root system with taproot, forms colonies		OBL	Partial sun	Wet soil; clay, loam, sand		Floodplain woodlands, streambanks, thickets, swamps, seeps, ditches, meadows, wet fields, marshes, moist prairies	
	*Panicked aster; Lance leaf aster	<i>Symphotrichum lanceolatum (Aster lanceolatus)</i>	*top shade, top sun	No seed pretreatment necessary		0.5oz/acre	156,000	
	An older synonymous scientific name is <i>Aster lanceolatus</i> , which is used by many nurseries; moist conditions; fibrous and rhizomatous root system; excellent pollinator; can be propagated through seeds or division;		FAC	Full to partial sunlight	Can survive in a variety of soil types		Low prairies; open floodplain woodlands; thickets; seeps; marsh edges; ditches; moist shorelines; disturbed areas	
	Calico aster; Side-flowering aster	<i>Symphotrichum lateriflorum (Aster lateriflorus)</i>		No seed pretreatment necessary.		0.5oz/acre	250,000	
	A synonymous scientific name is <i>Aster lateriflorus</i> Wet to moist conditions; fibrous and rhizomatous root system; excellent pollinator		FACW	Partial sunlight	Can survive in a variety of soil types; clay loam		Floodplain woodlands, loess bluffs, fields, thickets, meadows, swamps, disturbed areas	
	Ontario aster	<i>Symphotrichum ontarionis (Aster ontarionis)</i>	*top shade, wooded trails	Likely requires cold, moist stratification for a minimum of 60 days or fall planting.		N/A	N/A	
	An older synonymous scientific name is <i>Aster ontarionis</i> , which is used by many nurseries. Moist conditions; rhizomatous and fibrous root system		FAC	Partial sunlight	Rich, loamy soils		Floodplain woodlands, open woodlands, wooded streambanks, savannas, meadows	
	Crooked stem aster	<i>Symphotrichum prenanthoides (Aster prenanthoides)</i>		Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		0.5oz/acre	120,000	
	A synonymous scientific name is <i>Aster prenanthoides</i> ; excellent pollinator		FAC	Partial sunlight	Can survive in a variety of soil types; loam		Disturbed areas, woodland edges, wooded ravines	
	*American germander	<i>Teucrium canadense</i>	*top shade, top sun	Cold, moist stratification for a minimum of 60 days or fall planting.		0.125oz/acre	20,000	
	Moist conditions; fibrous and rhizomatous root system, forms colonies; can become aggressive; considered weedy; readily germinates from seeds		FACW	Partial sunlight	Well-drained soils; loamy, sandy, loam clay		Wet prairies, meadows, marshes, ditches, moist woods	

*Meadow parsnip; Hairy-jointed meadow parsnip		<i>Thaspium barbinode</i>	*top shade, side slope	Likely does well with fall planting		N/A		N/A		
	Moderately moist conditions; taproot		FACU	Full to partial sunlight	Can survive in a variety of soil types		Moist prairies, open wooded slopes, sandy savannas, bluffs, lake edges			
Wingstem		<i>Verbesina alternifolia</i> (<i>Actinomeris alternifolia</i> , old scientific name)		Cold, moist stratification for a minimum of 30 days or fall planting.		1 oz/acre		9,000		
	Wingstem used to be classified in the <i>Actinomeris</i> genus, which is still used by many nurseries; moist conditions; rhizomatous, forms colonies; excellent pollinator; readily germinates from seed		FACW	Full to partial sunlight	Fertile soils		Floodplain woodlands, moist prairies, fields, meadows, savannas, shady streambanks, moist deciduous woodlands, ditches			
*Blue Vervain; Swamp Verbena		<i>Verbena hastata</i>	*top shade, top sun, side slope, bankfull, water's edge	Cold, moist stratification for a minimum of 30 days or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre		93,000		
	Collect seeds in late summer to early fall; moist planting conditions; tolerates temporary standing water; most successful propagation by seeds; excellent pollinator; fibrous and rhizomatous root system		FACW	Full to partial sunlight	Fertile loam or wet muck		River-bottom prairies, meadows, roadside ditches, pastures, marshes, and riverbanks			
*Yellow violet		<i>Viola pubescens</i>	*top shade, side slope	Best if sown in the fall. Otherwise, requires cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		1.5oz/acre		8,500		
	Moderately moist conditions; rhizomatous root system; propagation through seeds most successful		FACU	Partial sunlight	Fertile soil, loam, sandy loam		Deciduous woodlands, thickets, floodplain woodlands, sandy woodlands, wooded slopes			
*Common blue violet		<i>Viola sororia</i>	*top shade, wooded trails, sunny trails, side slope	Best if sown in the fall. Otherwise, requires cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		0.5oz/acre		23,000		
	Moderately moist conditions; rhizomatous root system; self-seeding; easily grown from seed; can become aggressive in optimum conditions		FAC	Partial sunlight	Fertile soil; loam, clay loam		Moist black prairies, savannas, wooded slopes along streams, woodland edges, open floodplain woodlands			

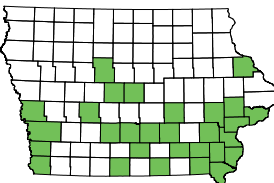
Grasses, Sedges, & Rushes (Top of bank PART-SHADE)

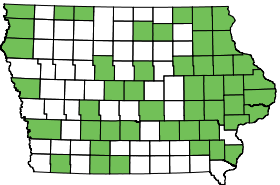
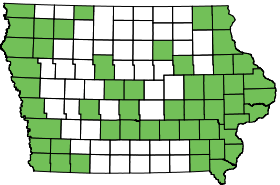
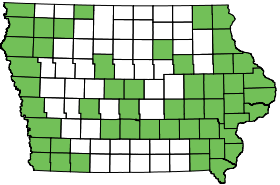
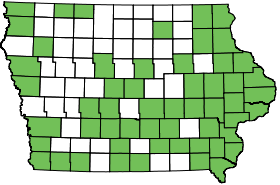
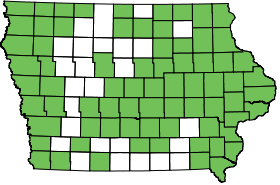
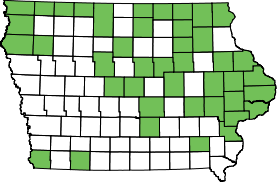
*Earlyleaf brome		<i>Bromus latiglumis</i>	*top shade, side slope	Cold, moist stratification for a minimum of 30 days or fall planting.		1oz/acre	7,600	
	Moist conditions; fibrous root system; propagation through seeds most successful		FACW	Partial shade	Clay, loam, sand	Floodplain woodlands, meadows, fields, wooded slopes, low-land prairies, streambanks,		
Common wood sedge		<i>Carex blanda</i>		Cold, moist stratification for a minimum of 60 days, or fall planning.		1oz/acre	12,500	
	Moderately moist conditions; fibrous and rhizomatous root system; can become aggressive in recently disturbed areas		FAC	Partial sunlight	Can survive in a variety of soil types	Moist woodlands, riverbanks, thickets, meadows, savannas, vacant lots, waste areas, disturbed areas		
*Soft fox sedge		<i>Carex conjuncta</i>	*top shade, bankfull	Likely needs cold, moist stratification for a minimum of 60 days, or fall planning.		1oz/acre	22,000	
	Moist conditions; fibrous and rhizomatous root system		FACW	Partial sunlight	Fertile, loamy soils	Floodplain woodlands, thickets, shady meadows, moist prairies, streambanks		
*Awned Graceful Sedge; Davis’ Sedge		<i>Carex davisii</i>	*top of bank shade, side slope, woodland edge	Not fully known, but cold, moist stratification for a minimum of 60 days or fall planting likely needed. May need light to germinate, surface sow seeds.		1oz/acre	9,000	
	Moist to wet conditions; flood tolerant; fibrous and rhizomatous root system		FAC	Partial sun	Moist soil; loam	Upland and floodplain woodlands, field edges, wooded slopes, riverbanks, moist meadows, slightly disturbed areas		
*Gray’s sedge; Bur sedge		<i>Carex grayi</i>	*stream edge shade, top shade, side slope, woodland trails, bankfull	Fall planting is recommended.		2oz/acre	1,200	
	Wet to moist conditions; tolerant to seasonal flooding; full sun tolerable in wet conditions; fibrous and rhizomatous root system		FACW	Partial shade	Fertile soil; loam, sand, silt	Moist, deciduous woodlands, sandy swamps, shady streambanks, marshes		
Wood gray sedge; inflated narrow-leaf sedge		<i>Carex grisea</i>		Cold, moist stratification for a minimum of 60 days, or fall planning.		1.5oz/acre	9,000	
	Moist conditions; fibrous and rhizomatous root system;		FAC	Full to partial sunlight	Fertile, loamy soils	Moist deciduous woodlands, floodplain woodlands, ditches, woodland edges		

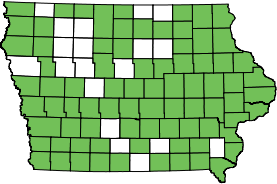
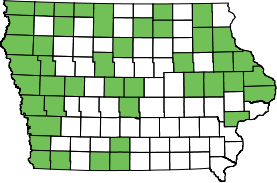
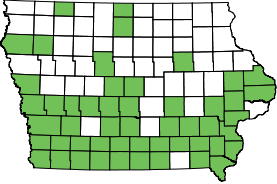
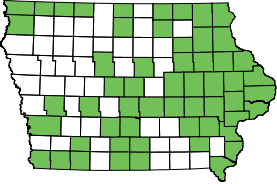
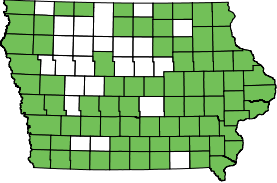
*Greater Straw Sedge; Spreading Oval Sedge		<i>Carex normalis</i>	*top shade, side slope, bankfull, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.25oz/acre	25,000	
	Moist to wet conditions; fibrous and rhizomatous root system; self-seeding		FACW	Full sun to partial shade	Fertile soils	Open woodlands, pond edges, ditches, streambanks, prairies, meadows, fields, disturbed areas		
Woodreed; sweet woodreed		<i>Cinna arundinacea</i>		Cold, moist stratification for a minimum of 60 days or fall planting.		0.5oz/acre	81,000	
	Wet to moist conditions; fibrous and rhizomatous root system		FACW	Partial sunlight	Fertile, loamy soils	Floodplain woodlands, thickets, swamps, moist savannas, seeps, moist ravines		
*Beak grass		<i>Diarrhena obovata</i>	*top shade, side slope	Sow seeds outdoors in the late fall. Otherwise, requires cold, moist stratification for a minimum of 60 days.		2oz/acre	2,500	
	Slightly dry to moderately moist conditions; fibrous and rhizomatous root system, often forms colonies; propagate through seeds or root division		FAC	Partial sunlight	Silt-loam, loam	Wooded slopes, upland woodlands, ravines, shaded limestone bluffs, floodplain woodlands		
*Bottlebrush Grass; Eastern Bottlebrush grass		<i>Elymus hystrix (Hystrix patula)</i>	*woodland trails, top shade	No seed pretreatment necessary		3oz/acre	7,600	
	Highly shade tolerant; moist to slightly dry conditions; a synonymous scientific name is <i>Hystrix patula</i> ; drought tolerant; self-seeding; fibrous root system; forms small colonies		FACU	Filtered sunlight to partial shade	Loamy, rocky soil, clay, can survive in a variety of soil types	Moist deciduous woodlands, rocky upland forests, edges of woodland trails, savannas, rocky glades, shady riverbanks		
*Riverbank Wild Rye		<i>Elymus riparius</i>	*side slope, top shade, bankfull, shaded stream edge	No seed pretreatment necessary		0.5lb/acre	2,900	
	Moist to wet conditions; low drought tolerance; high fire tolerance; self-seeding; great for erosion control; rhizomatous root system		FACW	Partial shade to shade	Loam, sand, clay	Meadows, streambanks, riverbanks, moist prairies, fields		
*Silky Wild Rye; Downy Wild-Rye; Hairy Wildrye		<i>Elymus villosus</i>	*woodland trails, top shade, side slope	No seed pretreatment necessary		0.5lb/acre	5,500	
	Moist to slightly dry conditions; fibrous roots		FACU	Partial Sun	Fertile soil; loam	Woodlands, edges of forests, rocky wooded slopes, savannas, floodplains of rivers and streams		

*Virginia Wild Rye	<i>Elymus virginicus</i>	*top shade, top sun, shaded stream edge, sunny trails, wooded trails	No seed pretreatment necessary		1lb/acre	4,200	
	Moist conditions; fibrous root system; great cover crop for erosion control; easily grown from seed; tends to give way to other species over five years		FACW	Full sun to shade	Fertile soil; loam, clay loam, sandy, can survive in a variety of soil types	Bottomland woodlands, riparian areas, riverbanks, streambanks, moist prairies, roadsides, bluffs, moist savannas, disturbed areas	
*Fowl Manna Grass	<i>Glyceria striata</i>	*top shade, bankfull, water's edge, shady stream	No seed pretreatment necessary. Needs light to germinate, surface sow seeds.		0.5oz/acre	90,000	
	Wet to moist conditions; fibrous root system; self-seeding; can tolerate more sun exposure in wetter conditions		OBL	Partial sunlight to shade	Fertile soil, loam	Swamps, marshes, streambanks, pond edges, bogs, seeps, ditches	
*White Grass	<i>Leersia virginica</i>	*top shade, bankfull, water's edge, shaded stream edge, side slope	No seed pretreatment necessary		N/A	N/A	
	Moist conditions; fibrous and rhizomatous root system; limited local commercial availability		FACW	Partial shade	Fertile soil, loam	Swamps, floodplain woodlands, shady pond edges, streambanks, marshes, moist wooded areas, shaded slopes, disturbed areas	
*Woodland bluegrass	<i>Poa sylvestris</i>	*top shade, wooded trails, side slope	N/A		N/A	N/A	
	Moist conditions; fibrous root system; propagation through seeds only		FAC	Partial sunlight	Fertile, loamy soils	Floodplain woodlands, wooded slopes, wooded ravines	

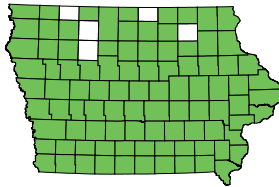
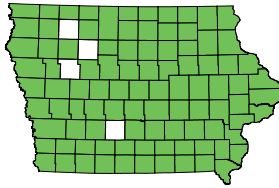
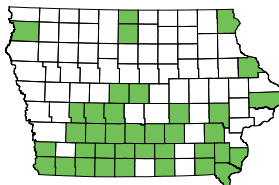
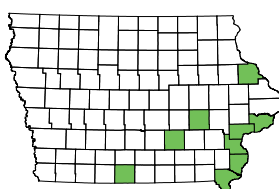
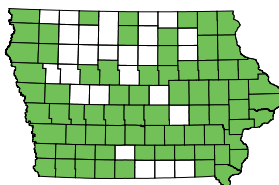
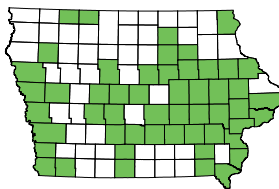
Shrubs & Vines (Top of bank PART-SHADE)

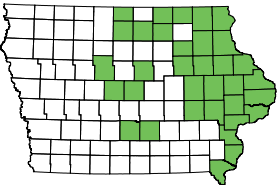
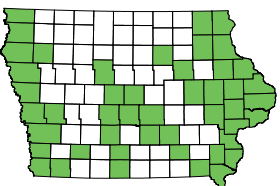
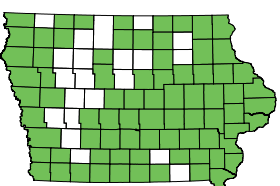
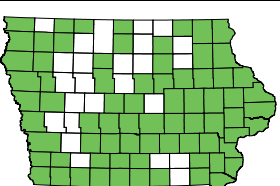
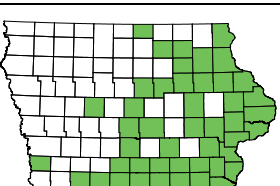
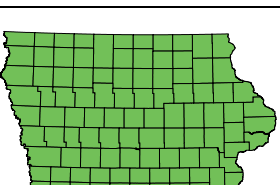
Eastern Redbud; Judas-tree	<i>Cercis canadensis</i>		Acid bath scarification followed by cold, moist stratification for a minimum of 30 days and sown in spring.		N/A	N/A	
	Slightly dry to somewhat moist conditions; deep taproot with wide lateral roots; seed and transplant propagation most successful; excellent pollinator		FACU	Full sun to partial shade	Alkaline soils; loam, clay loam, limestone	Wooded slopes, savannas, limestone glades, limestone bluffs, moist woodlands, riverbanks	

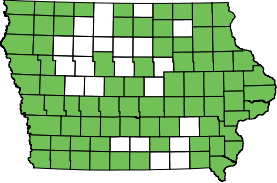
Virgin's bower; Devil's darning needles	<i>Clematis virginiana</i>		Cold, moist stratification for a minimum of 30 days, or fall planting.	.125oz/acre	16,000	
	Moderately moist to moist conditions; self-seeding; can become aggressive; excellent pollinator; easily grown from seed; vine	FAC	Partial sunlight	Fertile, moist soils; silt-loam, loam	Moist floodplain meadows, streambanks, thickets, woodland edges, moist railroads, drainage ditches, fence rows, open floodplain woodlands	
*Rough-leaved Dogwood	<i>Cornus drummondii</i>	*top shade, side slope	Sow seeds immediately after collection. Otherwise scarification and cold, moist stratification for a minimum of 30 days is necessary.	N/A	N/A	
	Slightly dry to moist conditions; woody taproot; adaptable; excellent pollinator; invasive to prairies	FAC	Partial sun	Can survive in a variety of soil types	Marshes, lake edges, streambanks, swamps, open floodplain woodlands	
Gray Dogwood	<i>Cornus racemosa</i>		Sow seeds immediately after collection. Otherwise scarification and cold, moist stratification for a minimum of 30 days is necessary.	N/A	N/A	
	Moist conditions; rhizomatous root system, forms colonies; slow growth rate; propagation by seeds or cuttings	FAC	Full to partial sunlight	Can survive in a variety of soil types	Thickets, riverbanks, open woodlands, savannas, limestone glades, prairies, roadsides	
*Wahoo; Eastern Wahoo; Burningbush	<i>Euonymus atropurpureus</i>	*stream edge shade, top shade, side slope	Not fully known, best propagation may be through plugs or cuttings. Seeds may need both a warm followed by a cold stratification period of 60-90 days.	N/A	N/A	
	Moist conditions; taproot; self-seeding; best propagation may be through plugs or cuttings	FAC	Partial shade	Fertile soil; loam, can survive in a variety of soil types	Floodplain woodlands, streambanks, moist meadows, woodland edges	
*Chokecherry	<i>Prunus virginiana</i>	*top shade wooded trails	Cold, moist stratification for a minimum of 60 days, or fall planting.	N/A	N/A	
	Slightly dry to somewhat moist conditions; deep, spreading, rhizomatous root system; seed or root cutting propagation; excellent pollinator	FACU	Full sun to partial shade	Can survive in a variety of soil types, including acidic soils	Streambanks, bluffs, roadsides, woodlands, thickets, fields, disturbed areas	
*Wild Black Currant	<i>Ribes americanum</i>	*top shade, top sun, bankfull	Scarification and cold, moist stratification for a minimum of 60 days, or fall planting.	N/A	N/A	
	Moist to wet conditions; self-seeding; excellent pollinator, propagate through seeds	FACW	Partial sunlight	Can survive in a variety of soil types	Swamps, meadows, fens, seeps, ravines, shaded streambanks, open floodplain woodlands	

*Elderberry; American Elder	<i>Sambucus nigra canadensis</i> (formerly: <i>Sambucus canadensis</i>)	*top shade, bankfull	Acid bath scarification for 20 minutes followed by cold, moist stratification for a minimum of 60 days.	N/A	N/A	
	Moist conditions; shallow, rhizomatous root system; fast growth rate; <i>Sambucus nigra canadensis</i> was formerly considered a separate species: <i>Sambucus canadensis</i> , this name is still often used; propagate through cuttings or seeds (cuttings may be fastest and easiest way)	N/A	Full to partial sunlight	Fertile soils, slightly acidic soils	Bogs, ditches, wet prairies, open woodlands, thickets, wet meadows, streambanks, railroads, fields	
*Western Snowberry; Wolfberry	<i>Symphoricarpos occidentalis</i>	*top sun, sunny trails	Warm stratification for a minimum of 90 days followed by cold stratification for a minimum of 120 days.	N/A	N/A	
	Moist to slightly dry conditions; rhizomatous root system; stem and root cutting propagation; seed propagation is difficult; excellent pollinator	UPL	Full to partial sun	Can survive in a variety of soil types	Ditches, streambanks, floodplains, open swales, open woodlands, prairies, bluffs; disturbed areas	
Buckbrush; Coralberry	<i>Symphoricarpos orbiculatus</i>	top shade	Can sow outdoors with no pretreatment but plant will not germinate for 2 or more years. Otherwise scarification and three phases of stratification; cold, warm, cold for 60 days are necessary.	1oz/acre	5,600	
	Slightly dry to somewhat moist conditions; branching taproot; seed or cutting propagation; excellent pollinator	FACU	Full sun to partial shade	Sandy, loamy, clay soils	Open woodlands, thickets, limestone glades, streambanks, riverbanks	
*Nannyberry; Sheepberry	<i>Viburnum lentago</i>	*top shade, side slope	Not fully known, fall planting or cold, moist stratification for a minimum of 60 days likely needed.	N/A	N/A	
	Moist conditions; shallow, woody and fibrous root system; seed or cutting propagation (cuttings may be the more successful technique)	FAC	Full sun to partial shade	Can survive in a variety of soil types	Woodlands, roadsides, streambanks, thickets, swamp edges, wooded slopes	
*Prickly-ash	<i>Zanthoxylum americanum</i>	*top shade, side slope	Sow seeds immediately after collection or scarification with an acid bath for 2 hours followed by cold, moist stratification for a minimum of 90 days.	N/A	N/A	
	Slightly dry to somewhat moist conditions; roots have long underground runners, forms colonies; thorny; seed or cutting propagation; painful to walk through, not suitable for trails, parks, or high-use areas	FACU	Full sun to partial shade	Can survive in a variety of soil types	Riverbanks, thickets, woodlands, bluffs, savannas, roadsides streambanks, rocky hillsides	

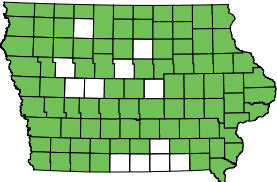
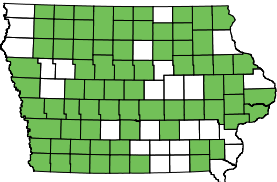
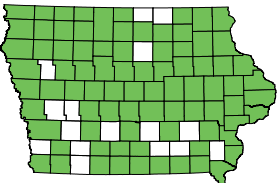
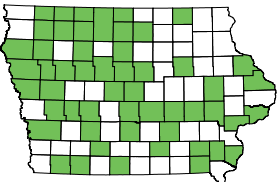
Trees (Top of bank PART-SHADE)

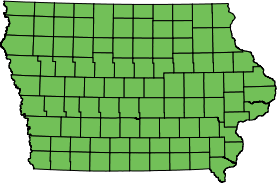
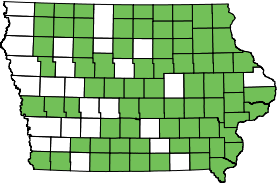
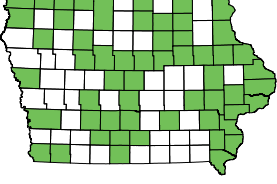
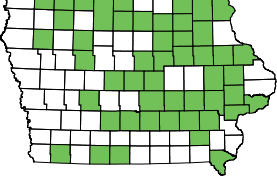
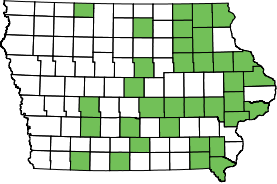
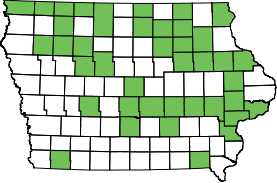
*Boxelder		<i>Acer negundo</i>	*top shade, bankfull	Cold, moist stratification for a minimum of 60 days, or fall planting.		N/A	N/A	
	Moist conditions; shallow, fibrous root system; fast growth rate; short-lived; flood tolerant; easily grown from seed		FAC	Partial shade	Can survive in a variety of soil types	Floodplain woodlands, thickets, streambanks, ditches, roadsides, disturbed areas		
*Silver Maple		<i>Acer saccharinum</i>	*top shade, bankfull	Do not allow seeds to dry out. Immediate planting after seed collection is recommended.		N/A	N/A	
	Moist conditions; fibrous, shallow, spreading root system; extremely rapid growth rate; seed and cutting propagation are successful; susceptible to high winds and ice; shade intolerant		FACW	Full to partial sunlight	Moist, slightly acidic soils, alluvial soils	Floodplain woodlands, riverbanks, lake shores, swamps		
Ohio buckeye; American Buckeye; Stinking Buckeye		<i>Aesculus glabra</i>		Cold, moist stratification for a minimum of 90 days or fall planting.		N/A	N/A	
	Moist conditions; lateral roots and taproot; self-seeding; difficult to transplant; leaves, bark, and fruit are highly toxic when ingested; not suitable for grazing area		FAC	Full sun to shade	Fertile, moist soils; loamy soils	Floodplain woodlands, riverbanks, streambanks, wooded rocky slopes		
*Shell-bark Hickory; Kingnut Hickory		<i>Carya laciniosa</i>	* top shade, bankfull	Cold, moist stratification for a minimum of 90 days or fall planting.		N/A	N/A	
	Moist conditions; deep taproot with smaller lateral roots; self-seeding; difficult to transplant; slow growth rate; fire tolerant		FACW	Full to partial sunlight	Fertile moist soils; loam, silt	Floodplain woodlands, valleys, swamps, savannas		
*Hackberry		<i>Celtis occidentalis</i>	*top shade, side slope	Cold, moist stratification for a minimum of 90 days or fall planting.		N/A	N/A	
	Moist to slightly dry conditions; deep, spreading lateral roots; self-seeding; fast growth rate; seed and cutting propagation are successful		FAC	Full sun to partial shade	Fertile soil, loam	Floodplain woodlands, savannas, moist upland woods		
*Downy Hawthorn		<i>Crataegus mollis</i>	*top shade, top sun	Not fully known, but warm stratification followed by cold stratification likely needed. Plants may not germinate until second spring.		N/A	N/A	
	Moist conditions; woody, branching root system; excellent pollinator; self-seeding		FAC	Full to partial sunlight	Fertile soil, loamy	Forest edges, fields, roadsides, moist savannas, thickets, riverbanks, open floodplain woodlands		

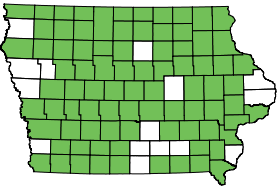
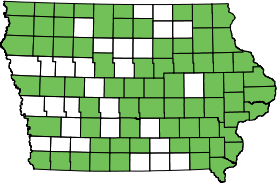
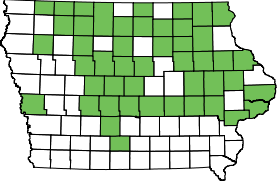
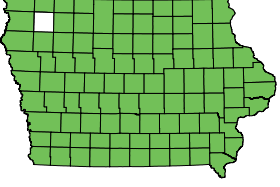
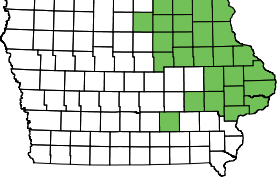
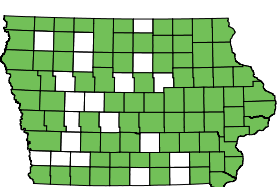
Black ash		<i>Fraxinus nigra</i>		Room temperature, moist stratification for a minimum of 60 days followed by cold, moist stratification for a minimum of 90 days, or fall planting. Make take 2 years for germination.	N/A	N/A	
	Wet conditions; shallow, widespread root system; self-seeding; tolerant of seasonal flooding		FACW	Full to partial sunlight	Loam, sandy loam, clay loam, peat, muck	Swamps, streambanks, seeps, springs, woody bogs, floodplain woodlands, ravines, terraces	
Kentucky Coffeetree		<i>Gymnocladus dioicus</i>		Scarify seeds in an acid bath for 4-6 hours.	N/A	N/A	
	Moist, well-drained conditions; seed or root cutting propagation are successful; sometimes colonies can form from root suckers; many parts of the tree are poisonous		N/A	Full to partial sunlight	Fertile soil; loamy, sandy loam soils	Floodplain woodlands, riverbanks, woodlands, lowland slopes	
Butternut		<i>Juglans cinerea</i>		Cold, moist stratification for a minimum of 90 day, or fall planting.	N/A	N/A	
	Moderately moist to slightly dry conditions; deep and widespread roots, with deep taproot; rapid growth rate; short-lived; mature trees are shade intolerant		FACU	Full sun to light shade	Well-drained, loose soils	Streambanks, coves, slopes, talus rock ledges, floodplain woodlands	
Black walnut		<i>Juglans nigra</i>		Cold, moist stratification for a minimum of 90 days, or fall planting.	N/A	N/A	
	Moist conditions; wide spreading roots with a deep taproot; self-seeding; propagation through seeds most successful;		FACU	Full to partial sunlight	Loam, silty-loam, sandy loam	Floodplain woodlands, valleys, streambanks, bluff or slope bases	
*Swamp White Oak		<i>Quercus bicolor</i>	*top shade, top sun, bankfull	No seed pretreatment necessary. Best results if planted immediately after collection.	N/A	N/A	
	Wet to moist conditions; wide, woody root system with taproot; fast growth rate; best propagation through seeds		FACW	Full sun	Moist acidic soils, can survive in a variety of soil types	Floodplain woodlands, riverbanks, streambanks, pond edges, swamp and lake edges, lowland areas	
*Bur oak		<i>Quercus macrocarpa</i>	* top sun, top shade	No seed pretreatment necessary. Best results if planted immediately after collection.	N/A	N/A	
	Moist conditions; deep taproot with wide horizontal roots; drought tolerant; slow growth rate; seed and cutting (of smaller pole-sized trees) propagation are successful; fire tolerant; older trees are susceptible to bur oak blight (BOB), a fungal disease		FAC	Full to partial sunlight	Can survive in a variety of soil types, prefers alluvial soils	Savannas, streambanks, floodplain woodlands, upland woodlands	

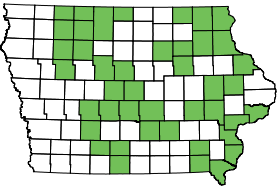
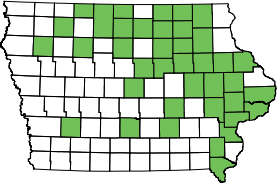
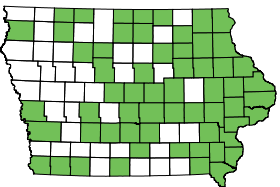
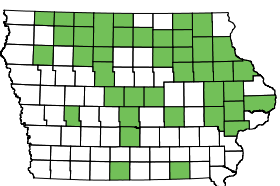
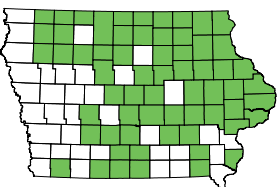
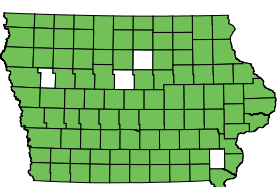
American basswood; American Linden	<i>Tilia americana</i>		Acid bath scarification followed by cold, moist stratification for a minimum of 90 days, or plant immediately after collection. Seeds can remain dormant for up to 3 years.	N/A	N/A	
Slightly dry to somewhat moist conditions; spreading, woody, lateral root system; excellent pollinator; fast growth rate; sprouts abundantly from stumps	FACU	Full sun to partial shade	Fertile soil, loam, sandy loam, silt loam	Upland woodlands, floodplain woodlands, riverbanks, ravines		

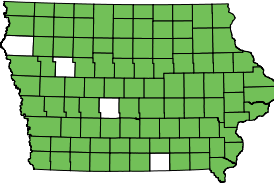
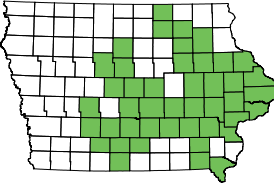
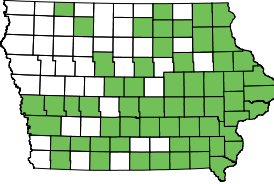
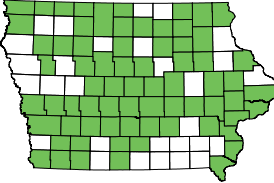
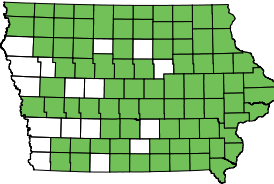
Top of Bank, FULL SUN (Ecologically a wet-mesic prairie)
Forbs

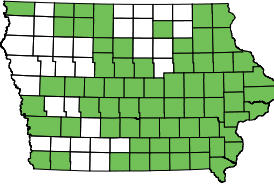
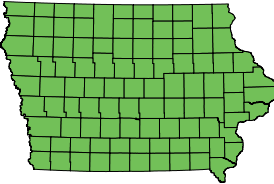
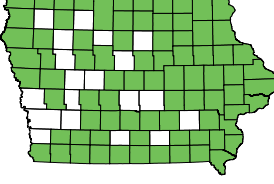
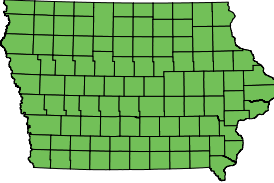
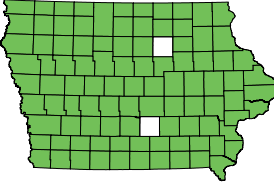
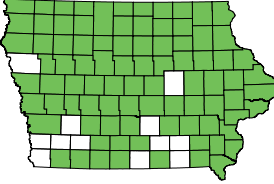
*Canada Anemone; Meadow Anemone	<i>Anemone canadensis</i>	*top sun, bankfull, sunny trail	Can sow outdoors with no pretreatment but plant will not germinate for 2 or more years. Otherwise three phases of stratification; cold, warm, cold for 60 days are necessary.	1oz/acre	8,000	
Moist to wet conditions; rhizomatous root system, often forms colonies; can become aggressive	FACW	Full sun to partial shade	Loamy, gravelly, sandy soils	Meadows, prairies, open floodplain woodlands, streambanks, swamps, ditches		
Prairie Indian Plantain; tuberous indian plantain	<i>Arnoglossum plantagineum (Cacalia plantaginea)</i>		N/A	1.5oz/acre	4,700	
Moist conditions; fibrous root system; self-seeding; indicator of high quality habitat	FAC	Full to partial sunlight	Fertile soils	Remnant prairies, fens, marshes, loess bluffs, meadows along rivers, savannas, thickets, fens, remnant bogs, high quality habitat		
*Swamp Milkweed; Pink Milkweed; Rose Milkweed	<i>Asclepias incarnata</i>	*Top sun, water’s edge, bankfull	Cold, moist stratification for a minimum of 30 days, or fall planting.	1.5oz/acre	4,800	
Wet to moist conditions; rhizomatous root system, can form colonies; excellent pollinator	OBL	Full sun to partial shade	Wet soils; clay	Moist meadows, floodplain woodlands, swamps, riverbanks, prairies, marshes, roadsides, riparian areas		
Sullivant’s Milkweed; Prairie Milkweed	<i>Asclepias sullivantii</i>		Cold, moist stratification for a minimum of 30 days, or fall planting.	1oz/acre	4,500	
Mesic to wet conditions; rhizomatous root system; excellent pollinator	N/A	Full sun	Can survive in a variety of moist soil types; loamy soils	Prairies, moist meadows, ditches, river bottomlands		

*Common Milkweed; Silkweed	<i>Asclepias syriaca</i>	*top sun, side slope, sunny trail	Cold, moist stratification for a minimum of 30 days, or fall planting.	0.5oz/acre	4,000	
	Slightly dry to somewhat moist conditions; rhizomatous root system; seed and rhizome cutting propagation; can spread aggressively; excellent pollinator; can be considered weedy; drought tolerant	FACU	Full sun	Sandy, rocky, clay	Prairies, riverbanks, streambanks, forest edges, roadsides, thickets, railroads, open woodlands, disturbed areas	
Grass-leaved goldenrod; Flat-top goldentop	<i>Euthamia graminifolia</i> (<i>Solidago graminifolia</i>)		Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.	0.25oz/acre	350,000	
	A synonymous scientific name is <i>Solidago graminifolia</i> ; fibrous and rhizomatous root system; moist conditions; easily grown from seed or root division; can become aggressive; excellent pollinator	FACW	Full sun	Can survive in a variety of soil types	Moist prairies, fens, marsh edges, seeps, lake edges, fields, ditches	
Blunt leaf bedstraw; Wild madder	<i>Galium obtusum</i>		Do not allow seeds to dry out. Immediate planting after seed collection is recommended.	N/A	N/A	
	Moist to wet conditions; fibrous root system	FACW	Full to partial sunlight	Wet, moisture-retaining soils.	Moist prairies, floodplain woodlands, moist thickets, prairie swales, fens, seeps, swamps, wet ditches	
*Bottle gentian; Closed Bottle Gentian	<i>Gentiana andrewsii</i>	*top sun, bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	0.25oz/acre	280,000	
	Moist to wet conditions; central taproot; using plugs/transplanting may be most successful propagation technique; germination from seed can be difficult	FACW	Full to partial sunlight	Fertile soil; clay, sandy loam	Riverbanks, open floodplain woodlands, meadows, moist prairies, swamps, thickets	
*Giant St. Johnswort	<i>Hypericum ascyron</i> (<i>Hypericum pyramidatum</i>)	*top shade, top sun, bankfull, side slope	Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.	1oz/acre	190,000	
	A synonymous scientific name is <i>Hypericum pyramidatum</i> ; moist conditions; rhizomatous root system; excellent pollinator; propagation through seeds or plugs are successful	FAC	Full to partial sunlight	Can survive in a variety of soil types	Open woodlands, riverbanks, moist thickets, wooded slopes, meadows, marshes	
Marsh Vetchling; Marsh Pea	<i>Lathyrus palustris</i>		Not fully known, likely needs scarification	2oz/acre	1,800	
	Moist to wet conditions; fibrous and rhizomatous, often forms colonies; vine	FACW	Full to partial sunlight	Loam, sand	Prairie remnants, interdunal swales, marsh edges, streambanks, swamps, moist meadows, fens, wet thickets	

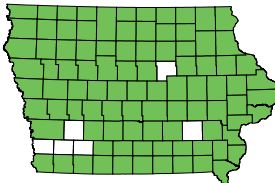
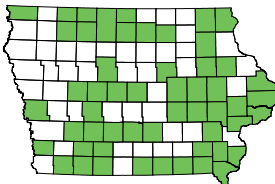
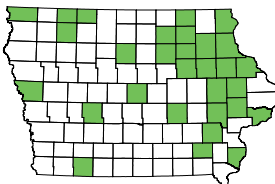
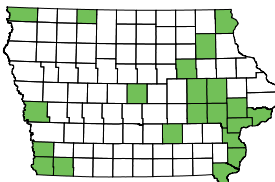
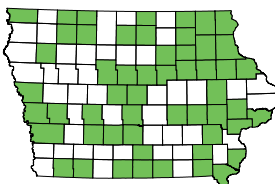
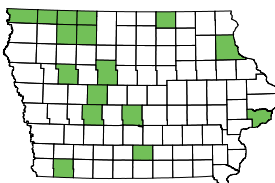
Prairie Blazingstar; Cat-tail gay feather	<i>Liatris pycnostachya</i>		Cold, moist stratification for a minimum of 60 days, or fall planting.	1oz/acre	11,000	
	Moist conditions; root system consists of corms; excellent pollinator; plugs or transplants may be helpful for initial establishment	FAC	Full sun	Moist soils; sandy, rocky	Prairies, meadows, railroads, bluffs, limestone glades, streambanks	
*Fringed loosestrife	<i>Lysimachia ciliata</i>	*top shade, top sun	Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.	1oz/acre	39,000	
	Moist to wet conditions; rhizomatous root system with a taproot; excellent pollinator; propagation through seeds or root division most successful	FACW	Full to partial sunlight	Fertile soils; loam	Floodplain woodlands, swamps, wet thickets, marshes, streambanks, wet prairies, seeps	
Prairie Loosestrife; Four-flower Yellow-loosestrife	<i>Lysimachia quadriflora</i>		Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	0.125oz/acre	90,000	
	Wet conditions; fibrous and rhizomatous root system; can become aggressive; excellent pollinator	OBL	Full sun	Wet soil; clay, loam, sand	Floodplains, marsh edges, wet meadows, wet prairies, swamps, fens, bogs	
*Field mint; Marsh mint; Wild mint	<i>Mentha arvensis</i>	*top sun, bankfull, water's edge	Needs light to germinate, surface sow seeds. No other pretreatment necessary.	0.25oz/acre	300,000	
	Moist conditions; rhizomatous root system, forms colonies; can become aggressive; excellent pollinator; very hardy and thrives in disturbed areas	FACW	Full sun to partial sunlight	Fertile soil	Lake shores, moist prairies, marshes, fens, landfills, disturbed areas, streambanks	
Swamp saxifrage; Eastern swamp pseudosaxifrage	<i>Micranthes pensylvanica</i> (<i>Saxifraga pensylvanica</i>)		Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	0.5oz/acre	400,000	
	A synonymous scientific name is <i>Saxifraga pensylvanica</i> moist to wet conditions; fibrous and rhizomatous root system, often forms colonies	OBL	Full to partial sunlight	Rocky, sandstone	Wet meadows, sandstone ravines, sandstone canyons, swamps, bogs, wet thickets, wet prairies, moist woodlands, seeps, high quality areas	
*Wild Bergamot; Beebalm	<i>Monarda fistulosa</i>	*top shade and top sun, sunny and woodland trails	No seed pretreatment necessary	0.25oz/acre	70,000	
	Moist, well-drained to partially dry conditions; rhizomatous with deep roots; excellent pollinator; easily grown from seed; can become aggressive; very hardy and thrives in disturbed areas; drought tolerant	FACU	Full to partial sunlight	Can survive in a variety of soil types	Open woodlands, fields, moist meadows, ditches, edges of forests, prairies, savannas, thickets, disturbed areas	

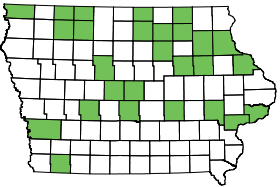
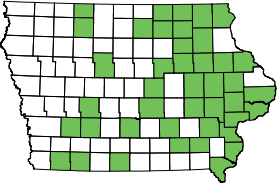
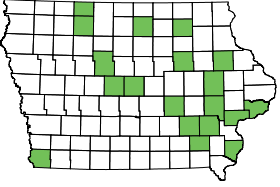
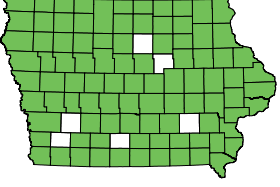
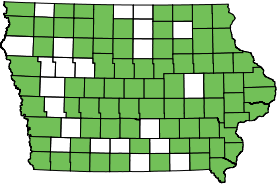
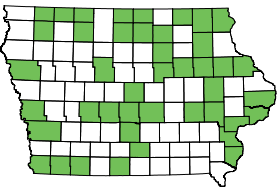
Balsam ragwort; Balsam Groundsel	<i>Packera paupercula</i> (<i>Senecio pauperculus</i>)		N/A	N/A	N/A	
	A synonymous scientific name is <i>Senecio pauperculus</i> ; moist conditions; fibrous root system with rhizomes;	FAC	Full to partial sunlight	Loam, sandy loam, rocky material	Moist prairies, remnant prairies, sandy savannas, fields, wet meadows, open woodlands, streambanks	
Marsh phlox; Wild sweetwilliam	<i>Phlox maculata</i>		Cold, moist stratification for a minimum of 60 days, or fall planting.	2oz/acre	11,000	
	Moist conditions; rhizomatous taproot; excellent pollinator	FACW	Full sun to light shade	Can survive in a variety of soil types	Floodplain woodlands, open woodlands, riverbanks, fens, fields, moist meadows, prairie swales, moist ditches	
*Obedient Plant; False dragonhead; Virginia lions-heart	<i>Physostegia virginiana</i>	*top sun, bankfull, water's edge (problems with germination in the past)	Cold, moist stratification for a minimum of 60 days, or fall planting.	1oz/acre	11,000	
	Moist conditions; rhizomatous root system and taproot; can become aggressive in ideal situations	FACW	Full to partial sunlight	Moist soils; hummus, loam	Prairies, open woodlands, meadows, riverbanks, swamps, thickets, limestone glades, railroads, seeps, lake shores	
*Glaucous white lettuce; Purple Rattlesnake-root	<i>Prenanthes racemosa</i> (<i>Nabalus racemosus</i>)	*top sun, side slope, bankfull	Best if sown in the fall, or immediately after collection. Otherwise requires cold, moist stratification for a minimum of 120 days.	1.5oz/acre	20,000	
	A synonymous scientific name is <i>Nabalus racemosus</i> ; wet conditions; taproot; flood tolerant	FACW	Full sun	Sandy, calcareous, rocky	Wet meadows, lakeside wetlands, moist prairies, streambanks, thickets, fens, seeps	
*Mountain mint; Virginia mountain mint	<i>Pycnanthemum virginianum</i>	*top sun, bankfull, water's edge	No pretreatment necessary. Needs light to germinate, surface sow seeds.	0.125oz/acre	220,000	
	Moist to wet conditions; rhizomatous root system, forms colonies; excellent pollinator	FACW	Full to partial sunlight	Can survive in a variety of soil types	Prairies, meadows, fens, streambanks, thickets, swamps, bluffs, pond edges	
*Yellow coneflower; Gray-head coneflower; Pinnate prairie coneflower	<i>Ratibida pinnata</i>	*side slope, top sun, sunny trail	Cold, moist stratification for a minimum of 30 days, or fall planting.	1oz/acre	30,000	
	Moist to slightly dry conditions, easily grown from seed; drought tolerant; rhizomatous, often forms colonies; excellent pollinator	N/A	Full sun	Loam, clay loam, can survive in a variety of soil types	Dry woodlands, prairies, thickets, railroads, roadsides, forest edges, remnant prairies, disturbed areas	

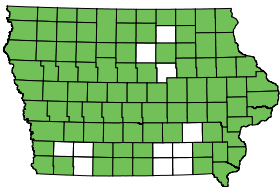
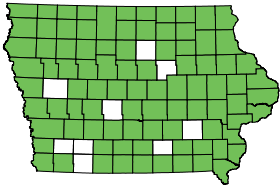
*Black-eyed Susan	<i>Rudbeckia hirta</i>	*Top shade & sun, side slope, sunny trail	Cold, moist stratification for a minimum of 30 days or fall planting.		0.5oz/acre	92,000	
	Opportunistic species, does well in disturbed areas; fast maturation; slightly moist to dry conditions; can tolerate above-average rainfall in well-drained conditions; central taproot; biennial		FACU	Full to partial sunlight	Fertile soil; clay loam, sandy loam	Slightly wet to dry prairies, meadows, roadside ditches, savannas, rocky areas, and disturbed sites	
*Sweet coneflower; Sweet black-eyed susan	<i>Rudbeckia subtomentosa</i>	*side slope, top sun, sunny trail	Cold, moist stratification for a minimum of 30 days, or fall planting.		0.5oz/acre	43,000	
	Moist, well-drained conditions; germinates readily; moderately drought tolerant; rhizomatous		FACU	Full sun to partial sunlight	Loam, sandy loam, clay	Moist prairies, open woods, savannas, thickets, riverbanks, streambanks, roadsides, ditch slopes, disturbed areas	
*Brown-eyed Susan	<i>Rudbeckia triloba</i>	*top sun, top shade, woodland trails	Cold, moist stratification for a minimum of 30 days, or fall planting.		1oz/acre	34,000	
	Moist conditions; fibrous root system; self-seeding; drought tolerant; biennial		FACU	Full to partial sunlight	Fertile soil; loamy, gravelly, clay, sandy	Prairies, savannas, open forests, riverbanks, streambanks, tickets, roadsides, disturbed areas	
*Panicked aster; Lance leaf aster	<i>Symphyotrichum lanceolatum</i> (<i>Aster lanceolatus</i>)	*top shade, top sun	No seed pretreatment necessary		0.5oz/acre	156,000	
	An older synonymous scientific name is <i>Aster lanceolatus</i> , which is used by many nurseries; moist conditions; fibrous and rhizomatous root system; excellent pollinator; can be propagated through seeds or division;		FAC	Full to partial sunlight	Can survive in a variety of soil types	Low prairies; open floodplain woodlands; thickets; seeps; marsh edges; ditches; moist shorelines; disturbed areas	
*New England aster; New England American-Aster	<i>Symphyotrichum novae-angliae</i> (<i>Aster novae-angliae</i>)	*top sun, bankfull, side slope, woodland trail	Cold, moist stratification for a minimum of 60 days, or fall planting.		1oz/acre	66,000	
	A synonymous scientific name is <i>Aster novae-angliae</i> which is used by many nurseries; moist conditions; fibrous and rhizomatous root system; can become aggressive; excellent pollinator		FACW	Full or partial sunlight	Fertile, moist soil; clay, loam	Prairies, meadows, riverbanks, thickets, railroads, roadsides, open woodlands, disturbed areas	

*Willow Aster	<i>Symphytotrichum praealtum (Aster praealtus)</i>	*top sun, sunny trails, wooded trail	Cold, moist stratification for a minimum of 30 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	130,000	
	A synonymous scientific name is <i>Aster praealtus</i> , often used by nurseries; moist conditions; fibrous and rhizomatous root system, often forms colonies; can become aggressive; excellent pollinator		FACW	Full to partial sunlight	Fertile, loamy soils	Moist prairies, fields, ditches, thickets, lakeside and riverside meadows	
*American germander	<i>Teucrium canadense</i>	*top shade, top sun	Cold, moist stratification for a minimum of 60 days or fall planting.		0.125oz/acre	20,000	
	Moist conditions; fibrous and rhizomatous root system, forms colonies; can become aggressive; considered weedy; readily germinates from seeds		FACW	Partial sunlight	Well-drained soils; loamy, sandy, loam clay	Wet prairies, meadows, marshes, ditches, moist woods	
*Purple meadow-rue; Tall meadow-rue	<i>Thalictrum dasycarpum</i>	* top sun, bankfull, side slope	Late fall planting is recommended. Otherwise cold, moist stratification for a minimum of 60 days is required.		1.5oz/acre	11,000	
	Moist to wet conditions; fibrous and rhizomatous root system		FACW	Full sun to partial sunlight	Loamy, sandy, rocky, clay loam soils	Prairies, moist meadows, streambanks, savannas, open woodlands, open floodplain woodlands, swamps	
*Blue Vervain; Swamp Verbena	<i>Verbena hastata</i>	*top shade, top sun, side slope, bankfull, water's edge	Cold, moist stratification for a minimum of 30 days or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre	93,000	
	Collect seeds in late summer to early fall; moist planting conditions; tolerates temporary standing water; most successful propagation by seeds; excellent pollinator; fibrous and rhizomatous root system		FACW	Full to partial sunlight	Fertile loam or wet muck	River-bottom prairies, meadows, roadside ditches, pastures, marshes, and riverbanks	
*Ironweed; Smooth Ironweed; Prairie Ironweed	<i>Vernonia fasciculata</i>	*top sun, side slope	Cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre	24,000	
	Moist conditions; fibrous root system; excellent pollinator		FACW	Full to partial sunlight	Fertile, moist soil	Moist prairies, marshes, field edges, wetlands	
*Golden Alexanders	<i>Zizia aurea</i>	*side slope, top sun	Late fall planting is recommended.		0.5oz/acre	11,000	
	Moist conditions; 1.5-3' tall; fibrous root system; excellent pollinator		FAC	Full to partial sunlight	Moist soils; loamy, sandy	Moist prairies, open woods, meadows, edges of woodland trails, savannas, thickets, fields, bluffs	

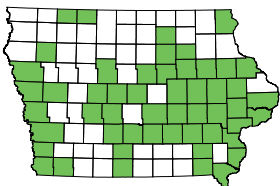
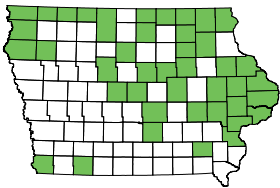
Grasses, Sedges, & Rushes (Top of bank FULL SUN)

*Big bluestem		<i>Andropogon gerardii</i>	*top sun, side slope	Firm soil for seeding is recommended.		1lb/acre	10,000	
	Moist conditions; easily grown from seed; great for erosion control; drought tolerant; rhizomatous with deep main roots; fire tolerant		FAC	Full sun	Fertile soils; clay loam, loamy, sandy	Prairies, savannas, roadsides, limestone glades, meadows		
*Crested Sedge		<i>Carex cristatella</i>	*top sun, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		1oz/acre	58,000	
	Moist to wet conditions; fibrous and rhizomatous root system; self-seeding		FACW	Full to partial sunlight	Loam, silt-loam	Wet prairies, open floodplain woodlands, swamps, wet marshes, sloughs, wet meadows, streambanks, ditches		
*Hayden's sedge; Cloud sedge		<i>Carex haydenii</i>	*top sun, bankfull	Cold, moist stratification for a minimum of 60 days, or fall planting.		1.5oz/acre	38,000	
	Wet conditions; fibrous and rhizomatous root system; tolerates seasonal flooding		OBL	Full sun	Moist, sandy soils	Wet prairies, sandy river floodplains, swamps, marshes, sedge meadows, fens, bogs, sandy ditches		
*Plains Slough Sedge; smoot cone sedge; long-toothed lake sedge		<i>Carex laeviconica</i>	*top sun, side slope, bankfull	Cold, moist stratification for a minimum of 60 days, or fall planting.		1oz/acre	7,500	
	Wet to moist conditions; fibrous and rhizomatous root system, often forms colonies; can become aggressive		OBL	Full to partial sunlight	Can survive in a variety of moist loamy based soils	Sedge swales, marsh edges, prairies, sloughs, open floodplain woodlands, sedge meadows, swamps, riverbanks, ditches		
Woolly sedge		<i>Carex pellita (Carex lanuginosa)</i>		Cold, moist stratification for a minimum of 60 days, or fall planting.		2oz/acre	28,000	
	Moist to wet conditions; fibrous and rhizomatous root system		OBL	Full to partial sunlight	Can survive in a variety of soil types	Moist prairies, sedge meadows, marshes, bogs, swamps, open floodplain woodlands, ditches		
Clustered field sedge; freeway sedge		<i>Carex praegracilis</i>		N/A		1.5oz/acre	37,000	
	Moist to wet conditions; fibrous and rhizomatous root system; tolerates salty/alkaline conditions		FACW	Full sun	Moist alkaline soils	Moist prairies, ditches, roadway medians, meadows, swales, open woodlands, shorelines, ditches,		

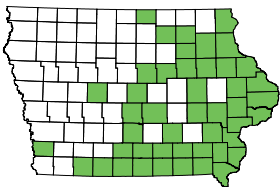
Running marsh sedge; Sartwell's sedge	<i>Carex sartwellii</i>		Cold, moist stratification for a minimum of 60 days, or fall planting.	1oz/acre	41,000	
	Moist conditions; fibrous and rhizomatous root system	FACW	Full sun	Moist, fertile soils	Moist prairies, fens, marshes	
*Pointed Broom Sedge	<i>Carex scoparia</i>	*top sun, bankfull	Cold, moist stratification for a minimum of 60 days, or fall planting.	2oz/acre	84,000	
	Moist to wet conditions; fibrous and rhizomatous root system;	FACW	Full sun	Can survive in a variety of soil types	Wet prairies, marshes, streambanks, ditches, seeps, fens, pond edges, open floodplain woodlands, sedge meadows	
Prairie straw sedge	<i>Carex suberecta</i>		N/A	N/A	N/A	
	Wet to moist conditions; fibrous and rhizomatous root system	OBL	Full to partial sunlight	Calcareous soils	Moist prairies, fens, meadows, seeps, prairie swales, mudflats	
*Canada Wild Rye	<i>Elymus canadensis</i>	*top sun, sunny trail, side slope	No seed pretreatment necessary	0.5 lb/acre	5,200	
	Moist to dry conditions; great for erosion control; rapid establishment; easily grown from seed; moderately drought tolerant; fibrous root system	FACU	Full to partial sun	Can survive in a variety of soil types	Prairies, savannas, bluffs, river streambanks, railroads, open woodlands, sandy shores and dunes, disturbed areas	
*Virginia Wild Rye	<i>Elymus virginicus</i>	*top shade, top sun, shaded stream edge, sunny trails, wooded trails	No seed pretreatment necessary	1lb/acre	4,200	
	Moist conditions; fibrous root system; great cover crop for erosion control; easily grown from seed; tends to give way to other species over five years	FACW	Full sun to shade	Fertile soil; loam, clay loam, sandy, can survive in a variety of soil types	Bottomland woodlands, riparian areas, riverbanks, streambanks, moist prairies, roadsides, bluffs, moist savannas, disturbed areas	
*Dudley's Rush	<i>Juncus dudleyi</i>	*top sun, side slope, bankfull, water's edge, sunny trails	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	0.125oz/acre	3,200,000	
	Moist to wet conditions; fibrous and rhizomatous root system; can spread aggressively	FACW	Full sun	Loam, clay loam, gravel	Streambanks, wet meadows, pond edges, moist prairies, swales, ditches, fens	

*Switchgrass		<i>Panicum virgatum</i>	*top sun, bankfull	No seed pretreatment necessary		1oz/acre	14,000	
	Moist conditions; fibrous and rhizomatous root system; can become aggressive, do not over-plant; fire tolerant		FAC	Full to partial sunlight	Can survive in a variety of soil types		Prairies, fields, savannas, open woodlands, dunes, marsh edges, riverbanks, bluffs, ditches, railroads	
*Indiangrass; Yellow Indian grass		<i>Sorghastrum nutans</i>	*top sun, side slope	No seed pretreatment necessary		1lb/acre	12,000	
	Moist to slightly dry conditions; fibrous and rhizomatous root system, can become aggressive; high drought tolerance; fire tolerant; self-seeding		FACU	Full to partial sunlight	Can survive in a variety of soil types		Prairies, savannas, roadsides, railroads, glades, remnant prairies, open woodlands, ditches	

Shrubs & Vines (If the area is to be managed as a prairie, minimal amounts of woody species should be planted) (Top of bank FULL SUN)

*Downy Hawthorn		<i>Crataegus mollis</i>	*top shade, top sun	Not fully known, but warm stratification followed by cold stratification likely needed. Plants may not germinate until second spring.		N/A		N/A		
	Moist conditions; woody, branching root system; excellent pollinator; self-seeding		FAC	Full to partial sunlight	Fertile soil, loamy		Forest edges, fields, roadsides, moist savannas, thickets, riverbanks, open floodplain woodlands			
*Wild Black Currant		<i>Ribes americanum</i>	*top shade, top sun, bankfull	Scarification and cold, moist stratification for a minimum of 60 days, or fall planting.		N/A		N/A		
	Moist to wet conditions; self-seeding; excellent pollinator, propagate through seeds		FACW	Partial sunlight	Can survive in a variety of soil types		Swamps, meadows, fens, seeps, ravines, shaded streambanks, open floodplain woodlands			

Trees (If the area is to be managed as a prairie, minimal amounts of woody species should be planted) (Top of bank FULL SUN)

*Swamp White Oak		<i>Quercus bicolor</i>	*top shade, top sun, bankfull	No seed pretreatment necessary. Best results if planted immediately after collection.		N/A		N/A		
	Wet to moist conditions; wide, woody root system with taproot; fast growth rate; best propagation through seeds		FACW	Full sun	Moist acidic soils, can survive in a variety of soil types	Floodplain woodlands, riverbanks, streambanks, pond edges, swamp and lake edges, lowland areas				

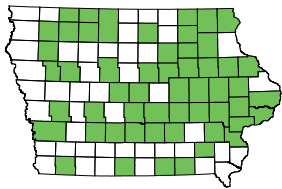
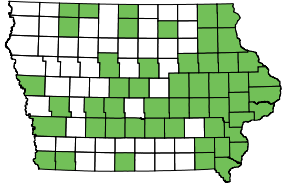
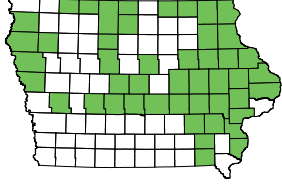
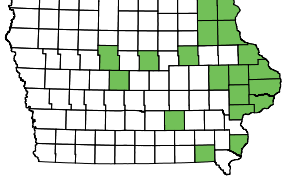
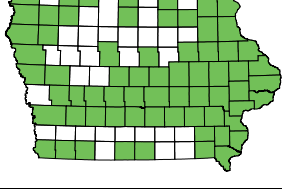
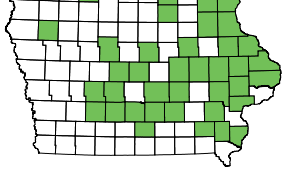
*Bur oak		<i>Quercus macrocarpa</i>	* top sun, top shade	No seed pretreatment necessary. Best results if planted immediately after collection.		N/A		N/A	
	Moist conditions; deep taproot with wide horizontal roots; drought tolerant; slow growth rate; seed and cutting (of smaller pole-sized trees) propagation are successful; fire tolerant; older trees are susceptible to bur oak blight (BOB), a fungal disease		FAC	Full to partial sunlight	Can survive in a variety of soil types, prefers alluvial soils	Savannas, streambanks, floodplain woodlands, upland woodlands			

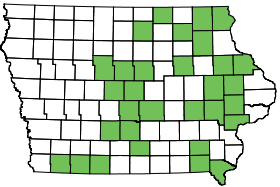
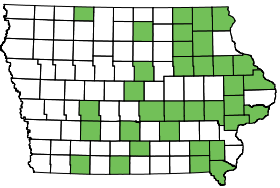
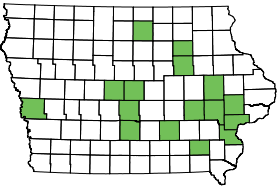
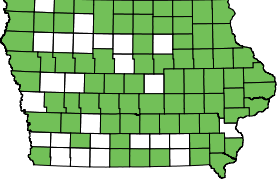
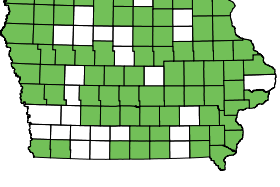
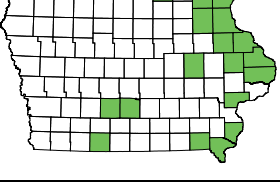
Side Slope (Ecologically a transitional ecotone between top of bank and bankfull zones)

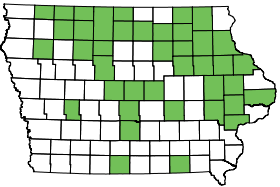
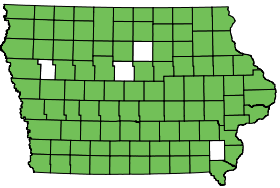
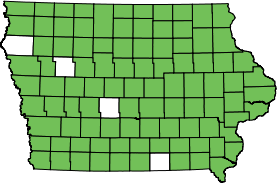
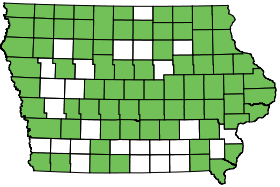
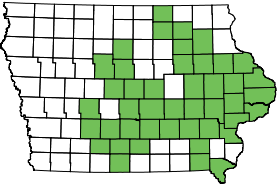
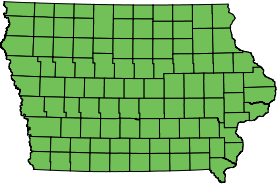
**only forbs and grasses are listed in this section because herbaceous species will hold the soil more effectively than shrubs and trees on a sloped surface.*

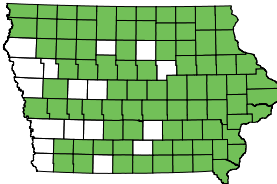
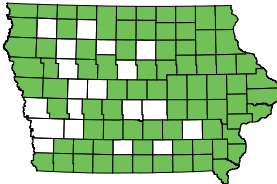
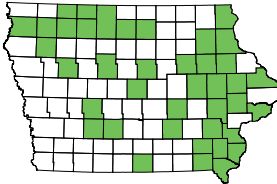
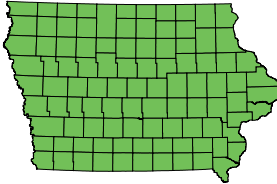
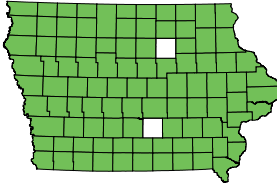
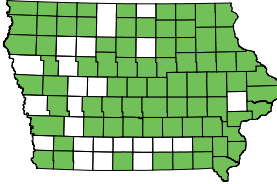
Forbs

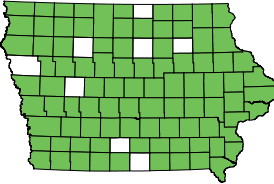
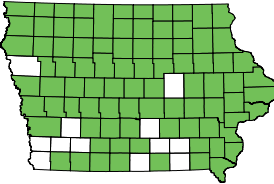
*Wild leek		<i>Allium tricoccum</i>	*top shade, side slope	Cold, moist stratification for a minimum of 60 days, or fall planning.		1oz/acre	1,400	
	Slightly dry to moist conditions; ovoid bulb with fibrous roots; transplants are generally the most successful propagation type		FACU	Light shade	Fertile, loamy soils	Upland woodlands, floodplain woodlands, wooded slopes		
*Wild ginger		<i>Asarum canadense</i>	*top shade, wooded trail, side slope	Sow seeds immediately after collection. May need to allow one full year for germination.		1oz/acre	4,400	
	Slightly dry to moist conditions; shallow rhizomatous root system, often forms colonies; most successful propagation through plugs or root division		FACU	Full to partial shade	Moist soil; Loam, slightly rocky soil	Floodplain and upland woodlands, bluffs, wooded slopes		
*Common Milkweed; Silkweed		<i>Asclepias syriaca</i>	*top sun, side slope, sunny trail	Cold, moist stratification for a minimum of 30 days, or fall planting.		0.5oz/acre	4,000	
	Slightly dry to somewhat moist conditions; rhizomatous root system; seed and rhizome cutting propagation; can spread aggressively; excellent pollinator; can be considered weedy; drought tolerant		FACU	Full sun	Sandy, rocky, clay	Prairies, riverbanks, streambanks, forest edges, roadsides, thickets, railroads, open woodlands, disturbed areas		
*Hairy wood mint		<i>Blephilia hirsuta</i>	*top shade, side slope	Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		0.5oz/acre	240,000	
	Moist conditions; fibrous and rhizomatous root system, often forms colonies		FACU	Full to partial sunlight	Loamy, rocky soils	Woodland edges, thickets, limestone glades, woody slopes		

*Spring Cress		<i>Cardamine bulbosa</i>	*bankfull, side slope	Not fully known, sow outdoors immediately after collection		N/A		N/A		
	Wet to moist conditions; tuberous and fibrous rootstock; can be propagated through seeds or tubers;		OBL	Partial sunlight	Moist fertile soil, loam, sandy loam		Floodplain woodlands, seeps, springs, moist meadows, damp low spots in rocky bluffs, marshes, fens			
*Cutleaf toothwort		<i>Cardamine concatenata (Dentaria laciniata)</i>	*top shade, side slope	Cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre		22,000		
	A synonymous scientific name is <i>Dentaria laciniata</i> ; moist conditions; rhizomatous root system, often form colonies; propagation through transplant/root division most successful		FACU	Partial shade	Well-drained soils		Floodplain woodlands, woody slopes, bluffs			
*Blue cohosh		<i>Caulophyllum thalictroides</i>	*top shade, side slope	Sow seeds outdoors in the fall. May take up to 3-4 years to establish.		*Transplants/plugs most successful		70		
	Moderately moist conditions; rhizomatous and fibrous; long-lived; difficult to germinate through seeds		N/A	Light shade	Well-drained, fertile soils; loam		Moist woodlands, bluffs, woody slopes, undisturbed habitats			
*Squirrel corn		<i>Dicentra canadensis</i>	*top shade, side slope	Sow seeds immediately after collection.		*Transplants/plugs most successful		N/A		
	Moderately moist conditions; root system consists of corms; propagation through transplants/plugs most successful		N/A	Partial shade	Loamy, sandy soils		Deciduous woodlands, woody slopes, shady streambanks, ravines			
*Dutchman's breeches		<i>Dicentra cucullaria</i>	*top shade, side slope	Sow seeds immediately after collection, or requires cold, moist stratification for a minimum of 60 days.		0.5oz/acre		17,500		
	Moist conditions; root system consists of tubers; excellent pollinator; propagate through seeds or division		N/A	Partial shade	Fertile soils		Deciduous woodlands, ravines, slopes, valleys, streambanks, undisturbed areas			
*False rue anemone		<i>Enemion biternatum (Isopyrum biternatum)</i>	*top shade, side slope	Likely needs cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre		11,000		
	Another scientific name for False Rue Anemone is <i>Isopyrum biternatum</i> . Fibrous root system, often forms colonies; can be propagated through seeds or root division		FAC	Partial shade	Fertile loamy soil		Floodplain woodlands, floodplains, wooded slopes			

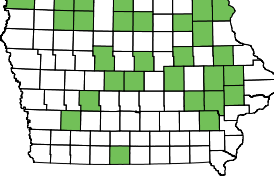
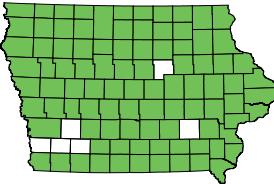
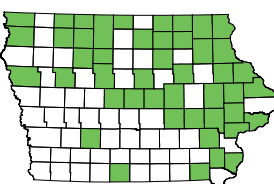
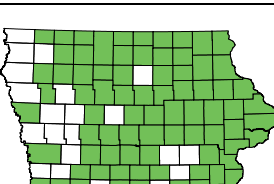
Cream Gentian	<i>Gentiana alba (Gentiana flavida)</i>	*side slope, sunny trails	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		1oz/acre	140,000	
	Slightly dry to somewhat moist conditions; long taproot; a synonymous scientific name is <i>Gentiana flavida</i> ; excellent pollinator; propagation through transplants is most successful		FACU	Full sun to partial shade	Can survive in a variety of soil types	Prairies, oak savannas, rocky bluffs, woodland edges, limestone glades, rocky or wooded slopes	
*Giant St. Johnswort	<i>Hypericum ascyron (Hypericum pyramidatum)</i>	*top shade, top sun, bankfull, side slope	Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		1oz/acre	190,000	
	A synonymous scientific name is <i>Hypericum pyramidatum</i> ; moist conditions; rhizomatous root system; excellent pollinator; propagation through seeds or plugs are successful		FAC	Full to partial sunlight	Can survive in a variety of soil types	Open woodlands, riverbanks, moist thickets, wooded slopes, meadows, marshes	
*Purple rocket	<i>Iodanthus pinnatifidus</i>	*top shade, side slope, wooded trails	N/A		N/A	N/A	
	Moist to wet conditions; taproot; self-seeding; easily grown from seed; excellent pollinator; tolerates seasonal flooding		FACW	Partial sunlight	Fertile, loamy soils	Floodplain woodlands, floodplain slopes, meadows	
*Sweet cicely	<i>Osmorhiza claytonii</i>	*top shade, side slope	Early fall planting or requires a warm, moist stratification for a minimum of 30 days, followed by a period of cold, moist stratification for a minimum of 60 days.		1oz/acre	2,500	
	Moderately moist conditions; fibrous root system		FACU	Partial shade	Can survive in a variety of soil types	Wooded slopes, woodland edges; deciduous woodlands	
*Anise root	<i>Osmorhiza longistylis</i>	*top shade, side slope	Not fully known, likely needs cold, moist stratification for a minimum of 60 days, or fall planting.		*Transplants/plugs most successful	N/A	
	Moderately moist conditions; rhizomatous root system; propagation through transplants or plugs is most successful; limited local commercial availability		FACU	Partial shade	Fertile loamy soil	Floodplain woodlands; wooded slopes, deciduous woodlands, wooded ravines	
*Leafcup; whiteflower leafcup	<i>Polymnia canadensis</i>	*top shade, side slope	Cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre	6,200	
	Slightly dry to moderately moist conditions; fibrous root system;		N/A	Partial shade	Rocky, limestone, loamy	Limestone bluffs, floodplain woodlands, wooded slopes, algific talus slopes, shady ravines, shaded streambanks	

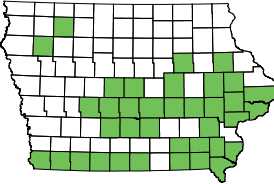
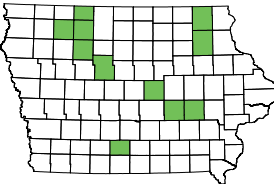
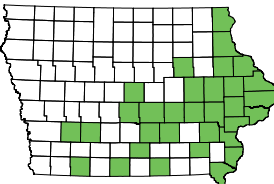
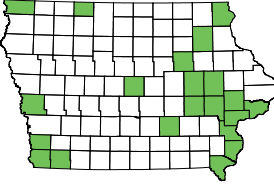
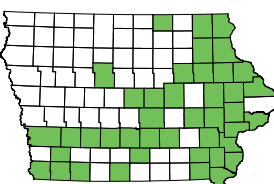
*Glaucous white lettuce; Purple Rattlesnake-root	<i>Prenanthes racemosa</i> (<i>Nabalus racemosus</i>)	*top sun, side slope, bankfull	Best if sown in the fall, or immediately after collection. Otherwise requires cold, moist stratification for a minimum of 120 days.		1.5oz/acre	20,000	
	A synonymous scientific name is <i>Nabalus racemosus</i> ; wet conditions; taproot; flood tolerant		FACW	Full sun	Sandy, calcareous, rocky	Wet meadows, lakeside wetlands, moist prairies, streambanks, thickets, fens, seeps	
*Yellow coneflower; Gray-head coneflower; Pinnate prairie coneflower	<i>Ratibida pinnata</i>	*side slope, top sun, sunny trail	Cold, moist stratification for a minimum of 30 days, or fall planting.		1oz/acre	30,000	
	Moist to slightly dry conditions, easily grown from seed; drought tolerant; rhizomatous, often forms colonies; excellent pollinator		N/A	Full sun	Loam, clay loam, can survive in a variety of soil types	Dry woodlands, prairies, thickets, railroads, roadsides, forest edges, remnant prairies, disturbed areas	
*Black-eyed Susan	<i>Rudbeckia hirta</i>	*Top shade & sun, side slope, sunny trail	Cold, moist stratification for a minimum of 30 days or fall planting.		0.5oz/acre	92,000	
	Opportunistic species, does well in disturbed areas; fast maturation; slightly moist to dry conditions; can tolerate above-average rainfall in well-drained conditions; central taproot; biennial		FACU	Full to partial sunlight	Fertile soil; clay loam, sandy loam	Slightly wet to dry prairies, meadows, roadside ditches, savannas, rocky areas, and disturbed sites	
*Tall coneflower; Green- head coneflower; Cutleaf coneflower	<i>Rudbeckia laciniata</i>	*shady stream edge, bankfull, top shade, side slope	Cold, moist stratification for a minimum of 30 days or fall planting. Needs light to germinate, surface sow seeds.		1.5oz/acre	14,000	
	Moist to wet conditions; easily grown from seed; rapid growth rate through rhizomes; flood tolerant; excellent pollinator; can be considered weedy		FACW	Full to partial sunlight, shade	Moist soil; loam	Floodplain woodlands, shady riverbanks, moist meadows, sloughs, lowland thickets and fields	
*Sweet coneflower; Sweet black-eyed susan	<i>Rudbeckia subtomentosa</i>	*side slope, top sun, sunny trail	Cold, moist stratification for a minimum of 30 days, or fall planting.		0.5oz/acre	43,000	
	Moist, well-drained conditions; germinates readily; moderately drought tolerant; rhizomatous		FACU	Full sun to partial sunlight	Loam, sandy loam, clay	Moist prairies, open woods, savannas, thickets, riverbanks, streambanks, roadsides, ditch slopes, disturbed areas	
*Giant Goldenrod; Tall Goldenrod; Early Goldenrod	<i>Solidago gigantea</i>	*side slope, bankfull, sunny trails, wooded trails	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.05oz/acre	250,000	
	Moist to wet conditions; fibrous and rhizomatous root system; excellent pollinator; can become aggressive		FACW	Full sun to light shade	Moist soils; loam, clay loam, sand-loam	Floodplain woodlands, riverbanks, pond edges, wet prairies, fens, ditches	

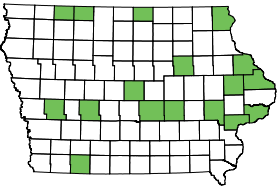
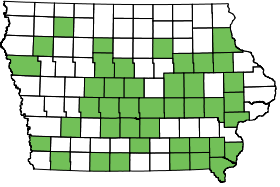
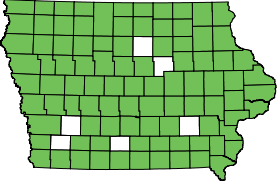
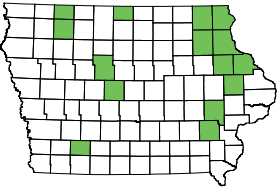
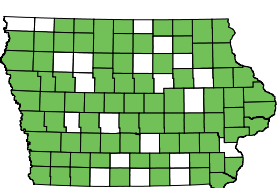
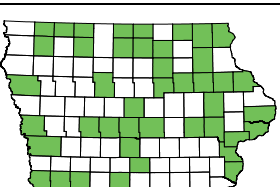
*New England aster; New England American-Aster		<i>Symphytotrichum novae-angliae</i> (<i>Aster novae-angliae</i>)	*top sun, bankfull, side slope, woodland trail	Cold, moist stratification for a minimum of 60 days, or fall planting.		1oz/acre	66,000	
	A synonymous scientific name is <i>Aster novae-angliae</i> which is used by many nurseries; moist conditions; fibrous and rhizomatous root system; can become aggressive; excellent pollinator		FACW	Full or partial sunlight	Fertile, moist soil; clay, loam	Prairies, meadows, riverbanks, thickets, railroads, roadsides, open woodlands, disturbed areas		
*Purple meadow-rue; Tall meadow-rue		<i>Thalictrum dasycarpum</i>	* top sun, bankfull, side slope	Late fall planting is recommended. Otherwise cold, moist stratification for a minimum of 60 days is required.		1.5oz/acre	11,000	
	Moist to wet conditions; fibrous and rhizomatous root system		FACW	Full sun to partial sunlight	Loamy, sandy, rocky, clay loam soils	Prairies, moist meadows, streambanks, savannas, open woodlands, open floodplain woodlands, swamps		
*Meadow parsnip; Hairy-jointed meadow parsnip		<i>Thaspium barbinode</i>	*top shade, side slope	Likely does well with fall planting		N/A	N/A	
	Moderately moist conditions; taproot		FACU	Full to partial sunlight	Can survive in a variety of soil types	Moist prairies, open wooded slopes, sandy savannas, bluffs, lake edges		
*Blue Vervain; Swamp Verbena		<i>Verbena hastata</i>	*top shade, top sun, side slope, bankfull, water's edge	Cold, moist stratification for a minimum of 30 days or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre	93,000	
	Collect seeds in late summer to early fall; moist planting conditions; tolerates temporary standing water; most successful propagation by seeds; excellent pollinator; fibrous and rhizomatous root system		FACW	Full to partial sunlight	Fertile loam or wet muck	River-bottom prairies, meadows, roadside ditches, pastures, marshes, and riverbanks		
*Ironweed; Smooth Ironweed; Prairie Ironweed		<i>Vernonia fasciculata</i>	*top sun, side slope	Cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre	24,000	
	Moist conditions; fibrous root system; excellent pollinator		FACW	Full to partial sunlight	Fertile, moist soil	Moist prairies, marshes, field edges, wetlands		
*Yellow violet		<i>Viola pubescens</i>	*top shade, side slope	Best if sown in the fall. Otherwise, requires cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		1.5oz/acre	8,500	
	Moderately moist conditions; rhizomatous root system; propagation through seeds most successful		FACU	Partial sunlight	Fertile soil, loam, sandy loam	Deciduous woodlands, thickets, floodplain woodlands, sandy woodlands, wooded slopes		

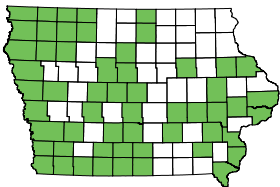
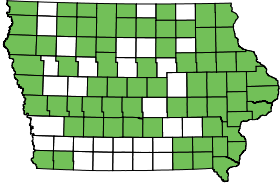
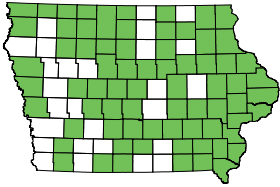
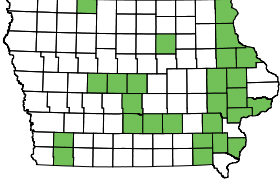
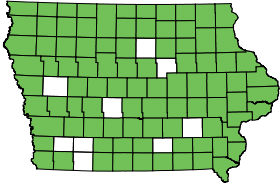
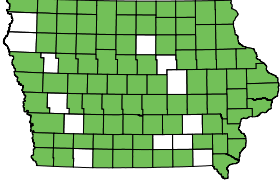
*Common blue violet	<i>Viola sororia</i>	*top shade, wooded trails, sunny trails, side slope	Best if sown in the fall. Otherwise, requires cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		0.5oz/acre	23,000	
	Moderately moist conditions; rhizomatous root system; self-seeding; easily grown from seed; can become aggressive in optimum conditions		FAC	Partial sunlight	Fertile soil; loam, clay loam	Moist black prairies, savannas, wooded slopes along streams, woodland edges, open floodplain woodlands	
*Golden Alexanders	<i>Zizia aurea</i>	*side slope, top sun	Late fall planting is recommended.		0.5oz/acre	11,000	
	Moist conditions; 1.5-3' tall; fibrous root system; excellent pollinator		FAC	Full to partial sunlight	Moist soils; loamy, sandy	Moist prairies, open woods, meadows, edges of woodland trails, savannas, thickets, fields, bluffs	

Grasses, Sedges, & Rushes (Side Slope)

*Shortawn foxtail; Short-Awn Meadow Foxtail	<i>Alopecurus aequalis</i>	*bankfull, water’s edge, side slope	N/A		N/A	N/A	
	Cool wet conditions; fibrous root systems, often forms colonies; limited local commercial availability		OBL	Full to partial sunlight	Wet soil; muck	Wet meadows, pond edges, ditches, swamps, bog edges, prairie swales, riverbanks, disturbed areas	
*Big bluestem	<i>Andropogon gerardii</i>	*top sun, side slope	Firm soil for seeding is recommended.		1lb/acre	10,000	
	Moist conditions; easily grown from seed; great for erosion control; drought tolerant; rhizomatous with deep main roots; fire tolerant		FAC	Full sun	Fertile soils; clay loam, loamy, sandy	Prairies, savannas, roadsides, limestone glades, meadows	
*Earlyleaf brome	<i>Bromus latiglumis</i>	*top shade, side slope	Cold, moist stratification for a minimum of 30 days or fall planting.		1oz/acre	7,600	
	Moist conditions; fibrous root system; propagation through seeds most successful		FACW	Partial shade	Clay, loam, sand	Floodplain woodlands, meadows, fields, wooded slopes, low-land prairies, streambanks,	
*Bluejoint Grass	<i>Calamagrostis canadensis</i>	*bankfull, water’s edge, side slope	Needs light to germinate, surface sow seeds. No other pretreatment necessary.		0.125oz/acre *transplants/plugs more successful	280,000	
	Wet to moist conditions; fibrous and rhizomatous root system, can form colonies; can become aggressive; Plugs/transplants generally more successful than seed propagation, seeds can be fragile; fire tolerant		OBL	Full to partial sunlight	Can survive in a variety of soil types	Swamps, marshes, ditches, meadows, streambanks, lake shores, wet prairies, prairie swales, bogs	

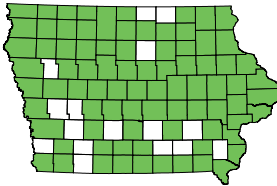
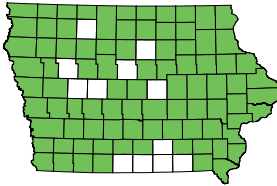
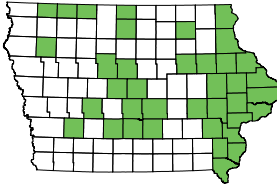
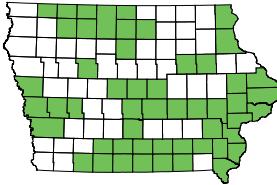
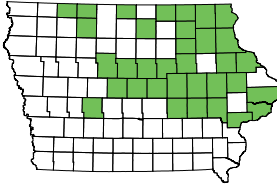
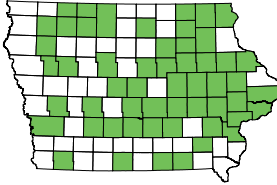
*Awned Graceful Sedge; Davis' Sedge	<i>Carex davisii</i>	*top of bank shade, side slope, woodland edge	Not fully known, but cold, moist stratification for a minimum of 60 days or fall planting likely needed. May need light to germinate, surface sow seeds.	1oz/acre	9,000	
	Moist to wet conditions; flood tolerant; fibrous and rhizomatous root system	FAC	Partial sun	Moist soil; loam	Upland and floodplain woodlands, field edges, wooded slopes, riverbanks, moist meadows, slightly disturbed areas	
*Emory's Sedge	<i>Carex emoryi</i>	* side slope, bankfull, water's edge	Not fully known, but likely needs cold, moist stratification for a minimum of 60 days or fall planting.	Usually must transplant due to limited commercial availability.	N/A	
	Wet conditions; important restoration species for soil retention; fibrous and rhizomatous root system, forms colonies; highly scour tolerant, often found along swift streams	OBL	Full to partial sunlight	Wet soil; muck, clay, sand	Riverbanks and streambanks	
*Gray's sedge; Bur sedge	<i>Carex grayi</i>	*stream edge shade, top shade, side slope, woodland trails, bankfull	Fall planting is recommended.	2oz/acre	1,200	
	Wet to moist conditions; tolerant to seasonal flooding; full sun tolerable in wet conditions; fibrous and rhizomatous root system	FACW	Partial shade	Fertile soil; loam, sand, silt	Moist, deciduous woodlands, sandy swamps, shady streambanks, marshes	
*Plains Slough Sedge; smoot cone sedge; long- toothed lake sedge	<i>Carex laeviconica</i>	*top sun, side slope, bankfull	Cold, moist stratification for a minimum of 60 days, or fall planting.	1oz/acre	7,500	
	Wet to moist conditions; fibrous and rhizomatous root system, often forms colonies; can become aggressive	OBL	Full to partial sunlight	Can survive in a variety of moist loamy based soils	Sedge swales, marsh edges, prairies, sloughs, open floodplain woodlands, sedge meadows, swamps, riverbanks, ditches	
*Greater Straw Sedge; Spreading Oval Sedge	<i>Carex normalis</i>	*top shade, side slope, bankfull, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting.	0.25oz/acre	25,000	
	Moist to wet conditions; fibrous and rhizomatous root system; self-seeding	FACW	Full sun to partial shade	Fertile soils	Open woodlands, pond edges, ditches, streambanks, prairies, meadows, fields, disturbed areas	

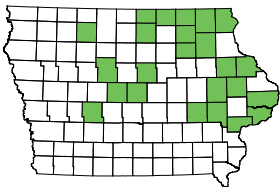
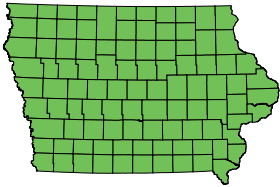
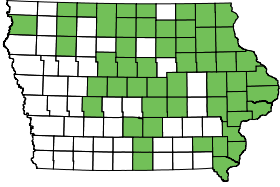
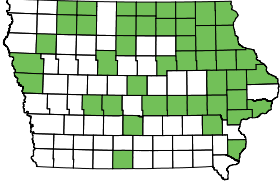
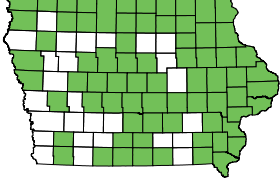
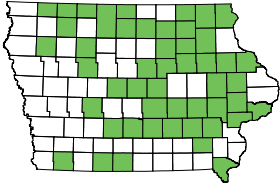
Hairy-fruited sedge; Hairy-fruited lake sedge		<i>Carex trichocarpa</i>	*side slope, bankfull, water’s edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.5oz/acre	18,000	
	Wet to moist conditions, fibrous and rhizomatous root system, forms large colonies; can spread aggressively		OBL	Full to partial sunlight	Fertile soil; silt, loam		Wet prairies, wet thickets, meadows, streambanks, riverbanks, wet ditches, marshes	
*Beak grass		<i>Diarrhena obovata</i>	*top shade, side slope	Sow seeds outdoors in the late fall. Otherwise, requires cold, moist stratification for a minimum of 60 days.		2oz/acre	2,500	
	Slightly dry to moderately moist conditions; fibrous and rhizomatous root system, often forms colonies; propagate through seeds or root division		FAC	Partial sunlight	Silt-loam, loam		Wooded slopes, upland woodlands, ravines, shaded limestone bluffs, floodplain woodlands	
*Canada Wild Rye		<i>Elymus canadensis</i>	*top sun, sunny trail, side slope	No seed pretreatment necessary		0.5 lb/acre	5,200	
	Moist to dry conditions; great for erosion control; rapid establishment; easily grown from seed; moderately drought tolerant; fibrous root system		FACU	Full to partial sun	Can survive in a variety of soil types		Prairies, savannas, bluffs, river streambanks, railroads, open woodlands, sandy shores and dunes, disturbed areas	
*Riverbank Wild Rye		<i>Elymus riparius</i>	*side slope, top shade, bankfull, shaded stream edge	No seed pretreatment necessary		0.5lb/acre	2,900	
	Moist to wet conditions; low drought tolerance; high fire tolerance; self-seeding; great for erosion control; rhizomatous root system		FACW	Partial shade to shade	Loam, sand, clay		Meadows, streambanks, riverbanks, moist prairies, fields	
*Silky Wild Rye; Downy Wild-Rye; Hairy Wildrye		<i>Elymus villosus</i>	*woodland trails, top shade, side slope	No seed pretreatment necessary		0.5lb/acre	5,500	
	Moist to slightly dry conditions; fibrous roots		FACU	Partial Sun	Fertile soil; loam		Woodlands, edges of forests, rocky wooded slopes, savannas, floodplains of rivers and streams	
*Dudley’s Rush		<i>Juncus dudleyi</i>	*top sun, side slope, bankfull, water’s edge, sunny trails	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	3,200,000	
	Moist to wet conditions; fibrous and rhizomatous root system; can spread aggressively		FACW	Full sun	Loam, clay loam, gravel		Streambanks, wet meadows, pond edges, moist prairies, swales, ditches, fens	

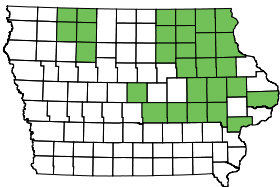
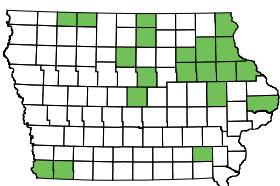
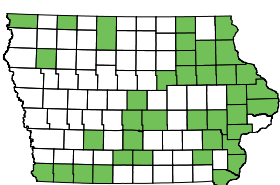
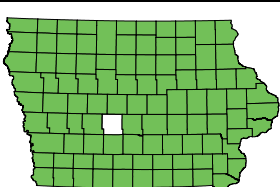
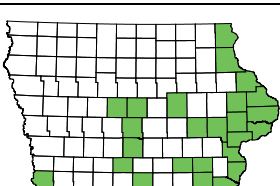
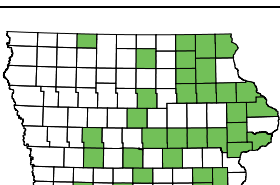
*Torrey’s Rush		<i>Juncus torreyi</i>	*side slope, bankfull, water’s edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	1,600,000	
	Moist to fairly wet conditions; fibrous and rhizomatous root system; can spread aggressively in ideal conditions		FACW	Full sun	Acidic soils; mucky, sandy, clay soils	Prairies, pond edges, streambanks, ditches, swamps, meadows, marshes		
*White Grass		<i>Leersia virginica</i>	*top shade, bankfull, water’s edge, shaded stream edge, side slope	No seed pretreatment necessary		N/A	N/A	
	Moist conditions; fibrous and rhizomatous root system; limited local commercial availability		FACW	Partial shade	Fertile soil, loam	Swamps, floodplain woodlands, shady pond edges, streambanks, marshes, moist wooded areas, shaded slopes, disturbed areas		
*Wirestem muhly; Common satin grass		<i>Muhlenbergia frondosa</i>	*side slope, sunny trails, wooded trails	N/A		N/A	N/A	
	Moist conditions; fibrous and rhizomatous root system, often forms colonies; can become aggressive		FACW	Full to partial sunlight	Can survive in a variety of soil types	Moist woodlands, prairies, prairie swales, bases of bluffs and wooded slopes, marsh edges, riverbanks, ditches, fields, railroads, disturbed areas		
*Woodland bluegrass		<i>Poa sylvestris</i>	*top shade, wooded trails, side slope	N/A		N/A	N/A	
	Moist conditions; fibrous root system; propagation through seeds only		FAC	Partial sunlight	Fertile, loamy soils	Floodplain woodlands, wooded slopes, wooded ravines		
*Indiangrass; Yellow Indian grass		<i>Sorghastrum nutans</i>	*top sun, side slope	No seed pretreatment necessary		1lb/acre	12,000	
	Moist to slightly dry conditions; fibrous and rhizomatous root system, can become aggressive; high drought tolerance; fire tolerant; self-seeding		FACU	Full to partial sunlight	Can survive in a variety of soil types	Prairies, savannas, roadsides, railroads, glades, remnant prairies, open woodlands, ditches		
*Prairie Cordgrass; Freshwater Cordgrass; Sloughgrass		<i>Spartina pectinata</i>	*side slope, bankfull, water’s edge	No seed pretreatment necessary		*Transplants/plugs most successful	6,600	
	Moist to wet conditions; great for erosion control; can help reduce high energy of flowing waters; fibrous and rhizomatous, often forms colonies; can become aggressive; propagation through plugs or dividing the rhizomes is most successful		FACW	Full to partial sunlight	Fertile soil; loamy, sandy	Marshes, swamps, sloughs, pond edges, riverbanks, moist roadsides and railroads, prairies		

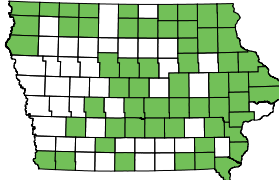
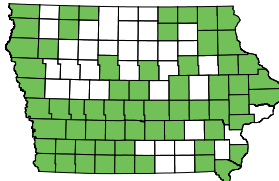
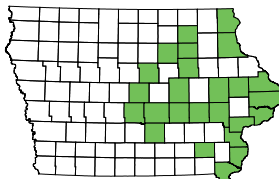
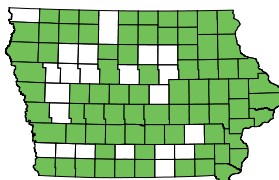
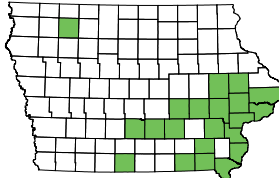
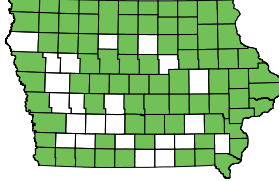
Bankfull Zone (Ecologically a temporarily flooded wetland, either a wet prairie, sedge meadow, or wet forest/woodland)

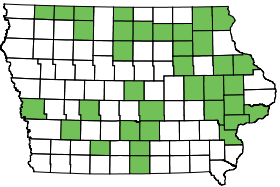
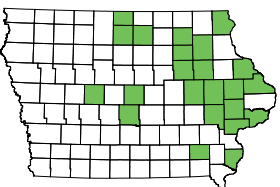
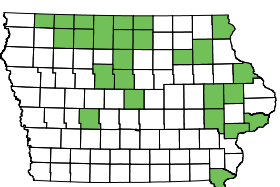
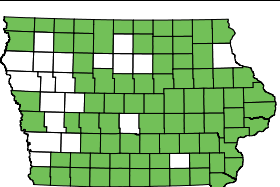
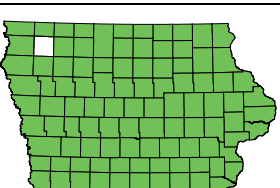
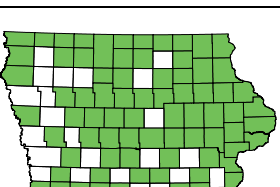
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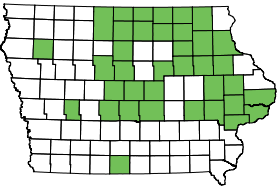
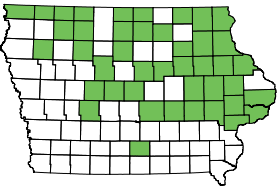
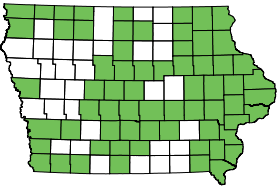
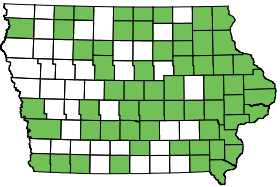
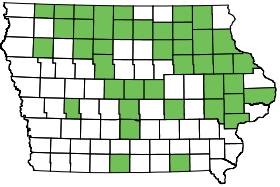
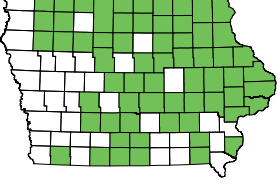
*Swamp Milkweed; Pink Milkweed; Rose Milkweed		<i>Asclepias incarnata</i>	*Top sun, water’s edge, bankfull		Cold, moist stratification for a minimum of 30 days, or fall planting.		1.5oz/acre		4,800			
	Wet to moist conditions; rhizomatous root system, can form colonies; excellent pollinator			OBL		Full sun to partial shade		Wet soils; clay		Moist meadows, floodplain woodlands, swamps, riverbanks, prairies, marshes, roadsides, riparian areas		
*Canada Anemone; Meadow Anemone		<i>Anemone canadensis</i>	*top sun, bankfull, sunny trail		Can sow outdoors with no pretreatment but plant will not germinate for 2 or more years. Otherwise three phases of stratification; cold, warm, cold for 60 days are necessary.			1oz/acre		8,000		
	Moist to wet conditions; rhizomatous root system, often forms colonies; can become aggressive			FACW		Full sun to partial shade		Loamy, gravelly, sandy soils		Meadows, prairies, open floodplain woodlands, streambanks, swamps, ditches		
*False nettle		<i>Boehmeria cylindrica</i>	*bankfull, shaded stream edge, wooded trails		No seed pretreatment necessary			1oz/acre		208,000		
	Moist conditions; dioecius			OBL		Partial sunlight		Fertile, loamy soil		Floodplain woodlands, streambanks, riverbanks, swamps, marshes , fens		
*False Aster; White Doll’s Daisy; Thousand-flowered aster		<i>Boltonia asteroides</i>	*bankfull, water’s edge		Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.			3oz/acre		2,000		
	Wet conditions; rhizomatous root system			OBL		Full sun		Fertile soils; loam, clay		Floodplain woodlands, thickets, prairies, meadows, streambanks, ditches, marshes		
*Marsh Marigold		<i>Caltha palustris</i>	*bankfull, water’s edge		Cold, moist stratification for a minimum of 60 days, or fall planting.			1oz/acre		26,000		
	Wet conditions; fibrous root system; self-seeding			OBL		Full to partial sunlight		Wet soils, muck, mud		Swamps, open floodplain woodlands, streambanks, marshes, ditches, wet meadows		
*Spring Cress		<i>Cardamine bulbosa</i>	*bankfull, side slope		Not fully known, sow outdoors immediately after collection			N/A		N/A		
	Wet to moist conditions; tuberous and fibrous rootstock; can be propagated through seeds or tubers;			OBL		Partial sunlight		Moist fertile soil, loam, sandy loam		Floodplain woodlands, seeps, springs, moist meadows, damp low spots in rocky bluffs, marshes, fens		

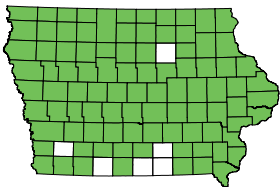
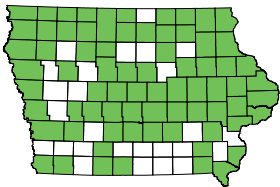
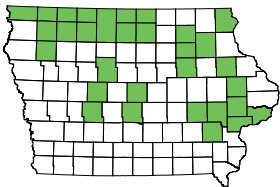
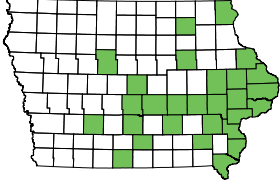
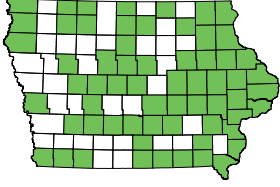
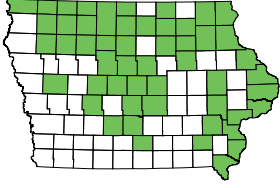
*White Turtlehead		<i>Chelone glabra</i>	*bankfull, water's edge	Fall planting is recommended. Otherwise cold, moist stratification for a minimum of 60 days is required.		0.5oz/acre	92,000	
	Wet conditions; rhizomatous root system with taproot, can form colonies		OBL	Full to partial sunlight	Fertile moist, organic soils	Floodplain woodlands, prairies, meadows, marshes, seeps, streambanks, wet ditches, pond edges, fens		
Water hemlock		<i>Cicuta maculata</i>		Best if sown in the fall, or immediately after collection. Otherwise requires cold, moist stratification for a minimum of 120 days.		1oz/acre	12,000	
	Wet to moist conditions; fleshy root system; self-seeding; TOXIC, all parts of this plant are extremely poisonous		OBL	Full to partial sunlight	Loamy, sandy soils	Swamps, wet prairies, seeps, ditches, marshes, prairie swales, thickets		
*Cinnamon Willow-Herb; Purpleleaf willowherb		<i>Epilobium coloratum</i>	*bankfull, water's edge, stream edge shady	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	250,000	
	Wet to moist conditions; fibrous root system that produces rhizomes; pioneer species		OBL	Full to partial sunlight	Soil that can retain moisture	Wet prairies, marshes, riverbanks, lake shores, swamps, bogs, disturbed areas		
Spotted Joe-pye weed; Joe Pye weed; Spotted Trumpetweed		<i>Eutrochium maculatum</i> (<i>Eupatorium maculatum</i>)		Cold, moist stratification for a minimum of 30 days or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre	95,000	
	A synonymous scientific name is <i>Eupatorium maculatum</i> which is used by many nurseries; fibrous rhizomatous root system, often forms colonies		OBL	Full to partial sunlight	Fertile soil; silt, sandy loam	Marshes, swamps, moist prairies, sandy wetlands, wet thickets		
*Common boneset		<i>Eupatorium perfoliatum</i>	*Water's edge, bankfull	Cold, moist stratification for a minimum of 30 days, or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre	160,000	
	Wet to moist conditions; seed propagation; fibrous, rhizomatous root system, forms colonies; excellent pollinator;		OBL	Full to partial sunlight	Soil that can retain moisture	Wetland habitats, wet prairies, bogs, marshes, seeps, riverbanks, open floodplain woodlands		
*Bottle gentian; Closed Bottle Gentian		<i>Gentiana andrewsii</i>	*top sun, bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre	280,000	
	Moist to wet conditions; central taproot; using plugs/transplanting may be most successful propagation technique; germination from seed can be difficult		FACW	Full to partial sunlight	Fertile soil; clay, sandy loam	Riverbanks, open floodplain woodlands, meadows, moist prairies, swamps, thickets		

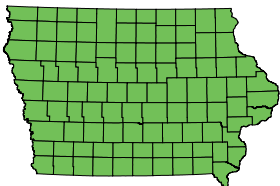
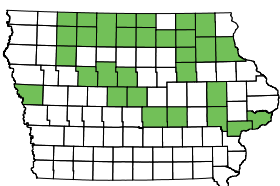
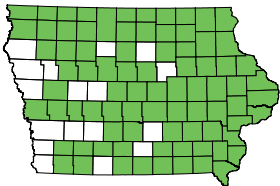
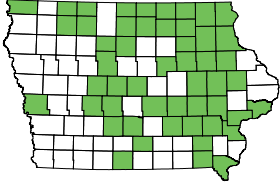
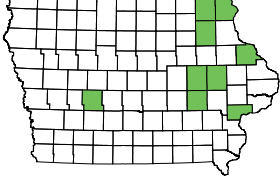
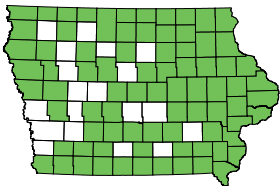
*Fringed gentian; Greater fringed gentian		<i>Gentianopsis crinita</i>	*water's edge, bankfull		Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre		200,000		
	Wet to moist conditions; shallow taproot; self-seeding; rare; biennial		OBL		Full to partial sunlight		Moist soils; sandy, calcareous soils		Wetlands, wet prairies, sandy sloughs, fens, open floodplain woodlands, ditches, meadows, streambanks		
*Yellow avens		<i>Geum aleppicum</i>	*top shade, bankfull		Cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre		20,000		
	Moist to wet conditions		FACW		Partial shade		Moist soils		Low woodlands, fens, shady seeps, thickets, marshes, swamps, bogs		
*Rough Avens		<i>Geum laciniatum</i>	*bankfull, water's edge		N/A		N/A		N/A		
	Moist to wet conditions; taproot with rhizomes		FACW		Partial sunlight		Loam, sandy loam		Marshes, lakeshores, savannas, thickets, moist meadows, woodland edges		
Common Sneezeweed; Autumn sneezeweed		<i>Helenium autumnale</i>			Needs light to germinate, surface sow seeds. No other pretreatment necessary.		0.5oz/acre		130,000		
	Wet to moist conditions; fibrous root system; excellent pollinator; grows readily and can become dominant		FACW		Full to partial sunlight		Moist soil; clay, loam		Moist prairies, meadows, riverbanks, open floodplain woodlands, fens, wet pastures, marshes		
*Halberd-Leaved Rose Mallow; Scarlet Rose Mallow; Rose Mallow		<i>Hibiscus laevis</i>	*bankfull, water's edge		Cold, moist stratification for a minimum of 60 days, or fall planting.		3oz/acre		2,800		
	Wet conditions; central taproot; self-seeding		OBL		Full to partial sunlight		Fertile soil		Marshes, swamps, riverbanks		
*Giant St. Johnswort		<i>Hypericum ascyron</i> (<i>Hypericum pyramidatum</i>)	*top shade, top sun, bankfull, side slope		Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		1oz/acre		190,000		
	A synonymous scientific name is <i>Hypericum pyramidatum</i> ; moist conditions; rhizomatous root system; excellent pollinator; propagation through seeds or plugs are successful		FAC		Full to partial sunlight		Can survive in a variety of soil types		Open woodlands, riverbanks, moist thickets, wooded slopes, meadows, marshes		

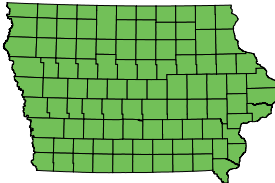
*Spotted touch-me-not; Orange jewelweed		<i>Impatiens capensis</i>	*top shade, shady stream edge, wooded trail, bankfull	Sow seeds immediately after collection.		0.25oz/acre	4,000	
	Wet to moist conditions; annual; taproot; self-seeding; readily germinates from seed; excellent pollinator; shade tolerant; can become aggressive		FACW	Full to partial shade	Moist, fertile soils; clay, loam, sand	Shady bogs, floodplain woodlands, swamps, shady streambanks, wet ditches, seeps		
*Pale touch-me-not; Yellow jewelweed		<i>Impatiens pallida</i>	*top shade, shady stream edge, wooded trail, bankfull	Sow seeds immediately after collection.		1oz/acre	1,600	
	Wet to moist conditions; taproot; annual; readily germinates from seeds; excellent pollinator; can become aggressive		FACW	Partial shade	Moist soils; loamy, mucky	Swamps, open floodplain woodlands, muddy streambanks, woody edges of marshes		
*Cardinal Flower		<i>Lobelia cardinalis</i>	*top shade, bankfull, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		*Transplants/plugs most successful	400,000	
	Wet to moist conditions; propagation through transplants or plugs are usually most successful; longevity sometimes limited; central taproot		OBL	Full sun to light shade	Sandy, loamy, gravelly, clay soils	Wet prairies, marsh edges, open floodplain woodlands, ditches, wet meadows, streambanks, swamps		
*Great Blue Lobelia; Blue Cardinal Flower		<i>Lobelia siphilitica</i>	*top shade, bankfull, shaded stream edge, wooded trail	Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	500,000	
	Wet to moist conditions; can be established without stratification; central taproot		OBL	Full sun to partial sunlight	Fertile soil; loam, sandy loam, clay	Wet prairies, open floodplain woodlands, wet meadows, riverbanks, ditches, swamps		
*Seedbox		<i>Ludwigia alternifolia</i>	*Water's edge, bankfull	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.125oz/acre	1,300,000	
	Wet to moist conditions; fibrous root system		OBL	Full to partial sunlight	Acidic soil; sandy	Swamps, riverbanks, wet prairies, ditches, floodplain woodlands, wetlands		
*Water horehound; American Bugleweed; American water horehound		<i>Lycopus americanus</i>	*bankfull, water's edge, wooded trails	Needs light to germinate, surface sow seeds. No other pretreatment necessary.		0.25oz/acre	130,000	
	Wet to moist conditions; rhizomatous root system, often forms colonies		OBL	Full to partial sunlight	Moist soils; clay, silt, loam	Wetlands, shorelines, riverbanks, marshes, ditches, wet prairies, open floodplain woodlands, wet thickets		

*Northern bugleweed		<i>Lycopus uniflorus</i>	*bankfull, water's edge, wooded trails, sunny trails	N/A		N/A	N/A	
	Wet to moist conditions; tuberous roots with stolons; propagation through tubers is most successful		OBL	Full to partial sunlight	Sandy, loamy, mucky soil		Streambanks, fens, marshes, swamps, lake edges, moist meadows	
Swamp Loosestrife; Swamp Candles		<i>Lysimachia terrestris</i>		N/A		1.5oz/acre *transplants/plugs likely more successful	60,000	
	Wet to moist conditions; rhizomatous root system; propagation through root division/plugs most successful; excellent pollinator		OBL	Full to partial sunlight	Can survive in a variety of soil types		Swamps, marshes, streambanks, moist prairies, bogs, fens	
Tufted loosestrife		<i>Lysimachia thyrsiflora</i>		Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		1oz/acre	82,000	
	Wet to consistently moist conditions; rhizomatous root system; excellent pollinator		OBL	Full to partial sunlight	Peaty, sandy soils		Swamps, ditches, marshes, lake shores, open floodplain woodlands, bogs, wet meadows	
Winged Loosestrife		<i>Lythrum alatum</i>		Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		*Transplants/plugs most successful	3,000,000	
	Wet conditions; rhizomatous root system; excellent pollinator; propagation through transplants or plugs most successful		OBL	Full sun	Moist fertile soils, clay, loam		Wet prairies, fens, marshes, pond edges, streambanks, ditches	
*Field mint; Marsh mint; Wild mint		<i>Mentha arvensis</i>	*top sun, bankfull, water's edge	Needs light to germinate, surface sow seeds. No other pretreatment necessary.		0.25oz/acre	300,000	
	Moist conditions; rhizomatous root system, forms colonies; can become aggressive; excellent pollinator; very hardy and thrives in disturbed areas		FACW	Full sun to partial sunlight	Fertile soil		Lake shores, moist prairies, marshes, fens, landfills, disturbed areas, streambanks	
*Monkey Flower; Allegheny Monkeyflower; Square-stemmed Monkeyflower		<i>Mimulus ringens</i>	*bankfull, water's edge, shaded stream edge	Cold, moist stratification for a minimum of 30 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	2,300,000	
	Wet conditions; rhizomatous root system; self-seeding		OBL	Partial sun	Moist, fertile soils; loam, sand, clay		Open floodplain woodlands, swamps, meadows, pond edges, streambanks, wet ditches, seeps	

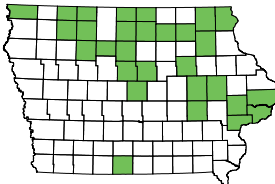
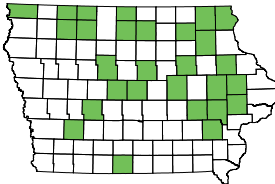
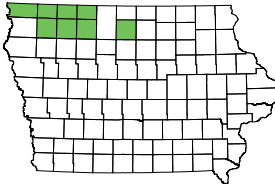
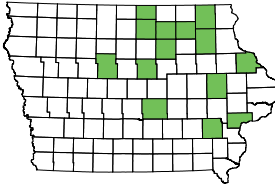
Cowbane	<i>Oxypolis rigidior</i>		N/A	0.5oz/acre	14,600	
	Wet to moist conditions; fleshy roots	OBL	Full sun	Loam, silt, sand	Floodplain woodlands, wet prairies, swamps, marshes, seeps, fens, wet meadow	
Swamp Lousewort	<i>Pedicularis lanceolata</i>		Best if sown in the fall, or immediately after collection. Otherwise requires cold, moist stratification for a minimum of 30 days.	1oz/acre	44,000	
	Wet to moist conditions; fibrous and rhizomatous root system; hemiparasite, most successful propagation when planted on a site that already has established grasses, or plant alongside a grass or sedge species	OBL	Full to partial sunlight	Moist sand	Wet prairies, swamps, seeps, fens, springs, ditches	
*Ditch Stonecrop	<i>Penthorum sedoides</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	1.5oz/acre	1,300,000	
	Wet to consistently moist conditions, rhizomatous root system, forms colonies	OBL	Full to partial sunlight	Wet soils, muck	Marshes, wet prairies, open floodplain woodlands, swamps, streambanks, pond edges, swales, ditches	
*Obedient Plant; False dragonhead; Virginia lions-heart	<i>Physostegia virginiana</i>	*top sun, bankfull, water's edge (problems with germination in the past)	Cold, moist stratification for a minimum of 60 days, or fall planting.	1oz/acre	11,000	
	Moist conditions; rhizomatous root system and taproot; can become aggressive in ideal situations	FACW	Full to partial sunlight	Moist soils; hummus, loam	Prairies, open woodlands, meadows, riverbanks, swamps, thickets, limestone glades, railroads, seeps, lake shores	
*Glaucous white lettuce; Purple Rattlesnake-root	<i>Prenanthes racemosa</i> (<i>Nabalus racemosus</i>)	*top sun, side slope, bankfull	Best if sown in the fall, or immediately after collection. Otherwise requires cold, moist stratification for a minimum of 120 days.	1.5oz/acre	20,000	
	A synonymous scientific name is <i>Nabalus racemosus</i> ; wet conditions; taproot; flood tolerant	FACW	Full sun	Sandy, calcareous, rocky	Wet meadows, lakeside wetlands, moist prairies, streambanks, thickets, fens, seeps	
*Mountain mint; Virginia mountain mint	<i>Pycnanthemum virginianum</i>	*top sun, bankfull, water's edge	No pretreatment necessary. Needs light to germinate, surface sow seeds.	0.125oz/acre	220,000	
	Moist to wet conditions; rhizomatous root system, forms colonies; excellent pollinator	FACW	Full to partial sunlight	Can survive in a variety of soil types	Prairies, meadows, fens, streambanks, thickets, swamps, bluffs, pond edges	

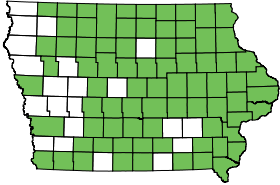
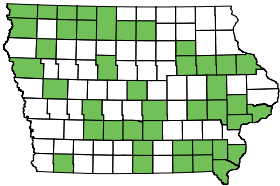
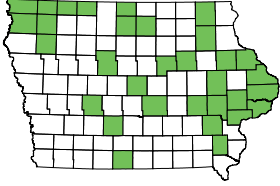
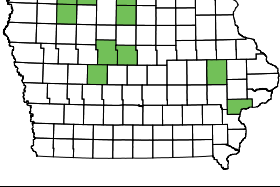
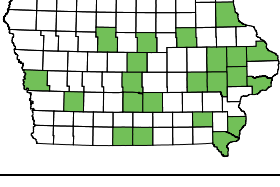
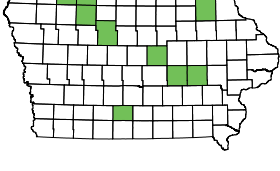
*Marsh Cress		<i>Rorippa palustris</i>	*bankfull, water's edge	Not fully known, sow seeds immediately after collection.		N/A		N/A	
	Wet to moist conditions; taproot; self-seeding; can be considered weedy		OBL	Full to partial sunlight	Loam, clay, silt, mud		Shorelines, muddy pond edges, riverbanks, open floodplain woodlands, wet fields, prairie swales, meadows, ditches		
*Tall coneflower; Green-head coneflower; Cutleaf coneflower		<i>Rudbeckia laciniata</i>	*shady stream edge, bankfull, top shade, side slope	Cold, moist stratification for a minimum of 30 days or fall planting. Needs light to germinate, surface sow seeds.		1.5oz/acre		14,000	
	Moist to wet conditions; easily grown from seed; rapid growth rate through rhizomes; flood tolerant; excellent pollinator; can be considered weedy		FACW	Full to partial sunlight, shade	Moist soil; loam		Floodplain woodlands, shady riverbanks, moist meadows, sloughs, lowland thickets and fields		
Greater water dock		<i>Rumex britannica (Rumex orbiculatus)</i>		Cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre		11,900	
	A older synonymous scientific name is <i>Rumex orbiculatus</i> ; wet to moist conditions; taproot		OBL	Full to partial sunlight	Moist soils		Pond edges, marshes, fens, meadows, seeps, swamps, streambanks, ditches		
Swamp Dock		<i>Rumex verticillatus</i>		N/A		N/A		N/A	
	Wet conditions; taproot		OBL	Full sun to partial shade	Wet soils, muck		Lake edges, marshes, ephemeral streams, swamps, ditches		
*Mad-dog Skullcap		<i>Scutellaria lateriflora</i>	*bankfull, water's edge, shaded stream edge	Cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre		65,000	
	Wet to consistently moist conditions; taproot with rhizomes;		OBL	Full sun to partial shade	Can survive in a variety of soils if there is consistent moisture available		Marshes, moist meadows, swamps, open floodplain woodlands, wet thickets, seeps, bogs		
Water Parsnip		<i>Sium suave</i>		Cold, moist stratification for a minimum of 60 days or fall planting.		0.5oz/acre		50,000	
	Wet, fully saturated conditions; fibrous fleshy root system; grows well in shallow standing water		OBL	Full to partial sunlight	Wet soils, muck, sand		Wet prairies, marshes, swamps, pond edges, ditches, seeps, wet thickets, muddy shores		

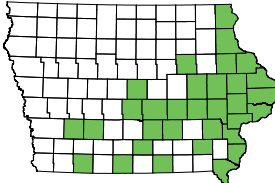
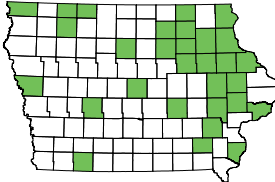
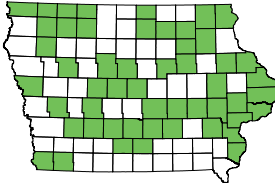
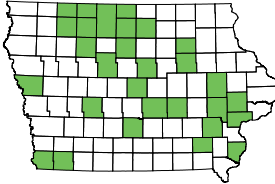
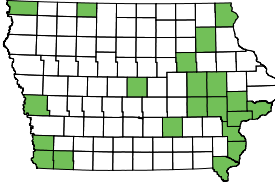
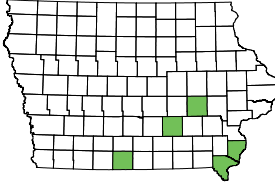
*Giant Goldenrod; Tall Goldenrod; Early Goldenrod		<i>Solidago gigantea</i>	*side slope, bankfull, sunny trails, wooded trails	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.05oz/acre	250,000	
	Moist to wet conditions; fibrous and rhizomatous root system; excellent pollinator; can become aggressive		FACW	Full sun to light shade	Moist soils; loam, clay loam, sand-loam	Floodplain woodlands, riverbanks, pond edges, wet prairies, fens, ditches		
*Riddell’s Goldenrod		<i>Solidago riddellii</i> (<i>Oligoneuron riddellii</i>)	*water’s edge, bankfull	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre	93,000	
	Wet conditions; fibrous root system; excellent pollinator; an alternate scientific name is <i>Oligoneuron riddellii</i>		OBL	Full sun	Calcareous soils	Pond edges, streambanks, meadows, wet prairies, seeps, marshes		
*New England aster; New England American-Aster		<i>Symphytotrichum novae-angliae</i> (<i>Aster novae-angliae</i>)	*top sun, bankfull, side slope, woodland trail	Cold, moist stratification for a minimum of 60 days, or fall planting.		1oz/acre	66,000	
	A synonymous scientific name is <i>Aster novae-angliae</i> , which is used by many nurseries; moist conditions; fibrous and rhizomatous root system; can become aggressive; excellent pollinator		FACW	Full or partial sunlight	Fertile, moist soil; clay, loam	Prairies, meadows, riverbanks, thickets, railroads, roadsides, open woodlands, disturbed areas		
Swamp aster; puplestem aster		<i>Symphytotrichum puniceum</i> (<i>Aster puniceus</i>)		Cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre	80,000	
	A scientific synonym is <i>Aster puniceus</i> , which is often used by nurseries; wet to moist conditions; fibrous and rhizomatous root system; excellent pollinator		OBL	Full to partial sunlight	Fertile, moist soils	Streambanks, sedge meadows, moist thickets, marshes, bog edges, seeps, fens		
*Skunk cabbage		<i>Symplocarpus foetidus</i>	*bankfull, water’s edge, shady stream edge	Seeds should not be allowed to dry out before sowing.		N/A	N/A	
	Wet conditions; self-seeding; limited commercial availability		OBL	Partial sun to shade	Wet, rich soil, muck	Marshes, streambanks, riverbanks, pond edges, muddy wet areas, wet woodlands, seeps, swamps		
*Purple meadow-rue; Tall meadow-rue		<i>Thalictrum dasycarpum</i>	* top sun, bankfull, side slope	Late fall planting is recommended. Otherwise cold, moist stratification for a minimum of 60 days is required.		1.5oz/acre	11,000	
	Moist to wet conditions; fibrous and rhizomatous root system		FACW	Full sun to partial sunlight	Loamy, sandy, rocky, clay loam soils	Prairies, moist meadows, streambanks, savannas, open woodlands, open floodplain woodlands, swamps		

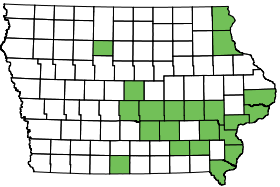
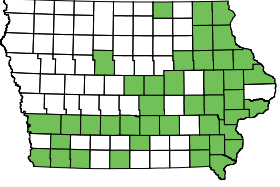
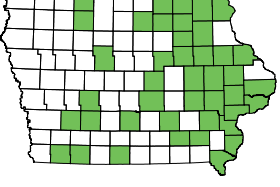
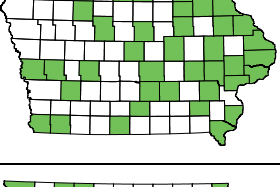
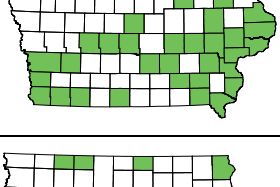
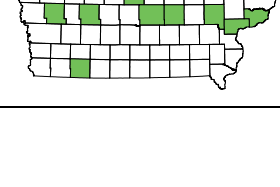
*Blue Vervain; Swamp Verbena		<i>Verbena hastata</i>	*top shade, top sun, side slope, bankfull, water's edge	Cold, moist stratification for a minimum of 30 days or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre	93,000	
	Collect seeds in late summer to early fall; moist planting conditions; tolerates temporary standing water; most successful propagation by seeds; excellent pollinator; fibrous and rhizomatous root system		FACW	Full to partial sunlight	Fertile loam or wet muck	River-bottom prairies, meadows, roadside ditches, pastures, marshes, and riverbanks		

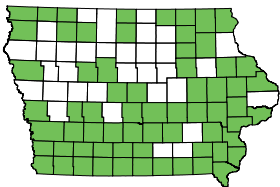
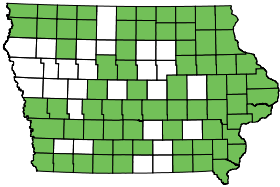
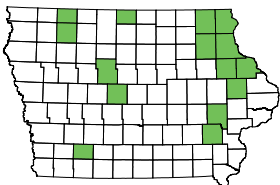
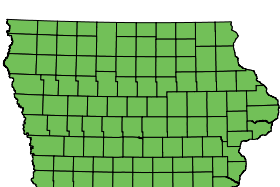
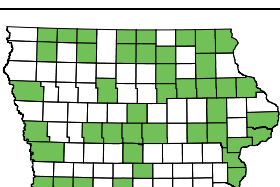
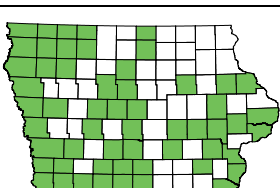
Grasses, Sedges, & Rushes (bankfull)

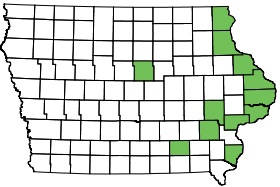
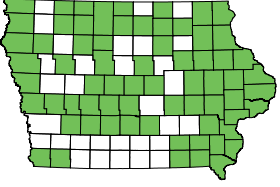
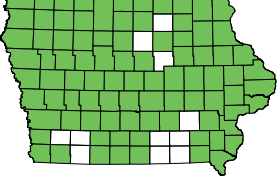
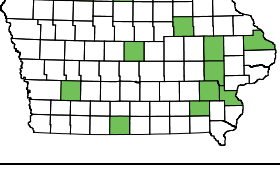
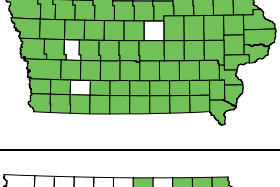
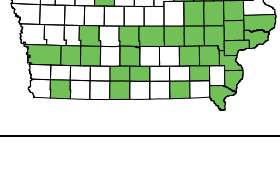
*Sweetflag		<i>Acorus americanus</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		3oz/acre	6,600	
	Wet conditions, standing water; rhizomatous; great for erosion control		OBL	Full to partial sunlight	Wet, silty soils	Bogs, pond and lake shallows, marshes, streambanks		
*Shortawn foxtail; Short-Awn Meadow Foxtail		<i>Alopecurus aequalis</i>	*bankfull, water's edge, side slope	N/A		N/A	N/A	
	Cool wet conditions; fibrous root systems, often forms colonies; limited local commercial availability		OBL	Full to partial sunlight	Wet soil; muck	Wet meadows, pond edges, ditches, swamps, bog edges, prairie swales, riverbanks, disturbed areas		
American slough grass		<i>Beckmannia syzigachne</i>		No seed pretreatment necessary		3oz/acre	50,000	
	Wet conditions; shallow root system; propagation through seed most successful		OBL	Full to partial sunlight	Wet soils	Streambanks, marshes, ditches, wet meadows, swamps		
Fringed Brome		<i>Bromus ciliatus</i>		No seed pretreatment necessary		8oz/acre	10,000	
	Moist to wet conditions; fibrous root system; propagation through seeds most successful		FACW	Partial shade	Loam, silt-loam, sand	Prairie, meadow, marsh, field, swamp, thickets, streambanks, open woodlands		

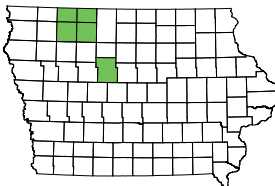
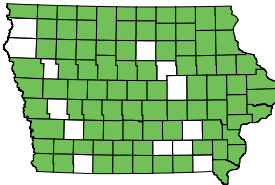
*Bluejoint Grass		<i>Calamagrostis canadensis</i>	*bankfull, water's edge, side slope	Needs light to germinate, surface sow seeds. No other pretreatment necessary.		0.125oz/acre *transplants/plugs more successful	280,000	
	Wet to moist conditions; fibrous and rhizomatous root system, can form colonies; can become aggressive; Plugs/transplants generally more successful than seed propagation, seeds can be fragile; fire tolerant		OBL	Full to partial sunlight	Can survive in a variety of soil types	Swamps, marshes, ditches, meadows, streambanks, lake shores, wet prairies, prairie swales, bogs		
*Yellow headed fox sedge; Yellow Fox Sedge; Yellowfruit Sedge; Small Yellow Fox Sedge		<i>Carex annectens</i>	*water's edge, bankfull, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.25oz/acre	90,000	
	Moist to wet conditions; fibrous and rhizomatous root system; sometimes referred to with the scientific name <i>Carex brachyglossa</i>		FACW	Full sun to partial shade	Can survive in a variety of soil types	Pond edges, fens, ditches, marshes, wet prairies, swamps, seeps, moist disturbed areas		
*Bebb's sedge; Bebb's oval sedge		<i>Carex bebbii</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 30 days, or fall planting.		0.5oz/acre	34,000	
	Wet conditions; fibrous root system		OBL	Full to partial sunlight	Moist soil	Wetlands, swamps, marshes, meadows, fields, riverbanks, lake shores		
*Bottlebrush sedge; Bearded sedge; Bristly sedge; Long-haired sedge		<i>Carex comosa</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.5oz/acre	30,000	
	Wet conditions; fibrous and rhizomatous root system		OBL	Full to partial sunlight	Moist soil, muck, sand	Swamps, bogs, pond edges, ditches, meadows, seeps, marshes		
*Soft fox sedge		<i>Carex conjuncta</i>	*top shade, bankfull	Likely needs cold, moist stratification for a minimum of 60 days, or fall planning.		1oz/acre	22,000	
	Moist conditions; fibrous and rhizomatous root system		FACW	Partial sunlight	Fertile, loamy soils	Floodplain woodlands, thickets, shady meadows, moist prairies, streambanks		
*Emory's Sedge		<i>Carex emoryi</i>	* side slope, bankfull, water's edge	Not fully known, but likely needs cold, moist stratification for a minimum of 60 days or fall planting.		Usually must transplant due to limited commercial availability.	N/A	
	Wet conditions; important restoration species for soil retention; fibrous and rhizomatous root system, forms colonies; highly scour tolerant, often found along swift streams		OBL	Full to partial sunlight	Wet soil; muck, clay, sand	Riverbanks and streambanks		

*Gray’s sedge; Bur sedge		<i>Carex grayi</i>	*stream edge shade, top shade, side slope, woodland trails, bankfull	Fall planting is recommended.		2oz/acre	1,200	
	Wet to moist conditions; tolerant to seasonal flooding; full sun tolerable in wet conditions; fibrous and rhizomatous root system		FACW	Partial shade	Fertile soil; loam, sand, silt	Moist, deciduous woodlands, sandy swamps, shady streambanks, marshes		
*Hayden’s sedge; Cloud sedge		<i>Carex haydenii</i>	*top sun, bankfull	Cold, moist stratification for a minimum of 60 days, or fall planting.		1.5oz/acre	38,000	
	Wet conditions; fibrous and rhizomatous root system; tolerates seasonal flooding		OBL	Full sun	Moist, sandy soils	Wet prairies, sandy river floodplains, swamps, marshes, sedge meadows, fens, bogs, sandy ditches		
*Porcupine sedge; Bottlebrush Sedge		<i>Carex hystericina</i>	*bankfull, water’s edge, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.25oz/acre	30,000	
	Wet to moist conditions; fibrous and rhizomatous root system; part of “bottlebrush” sedge group		OBL	Full sun to partial shade	Wet calcareous soil; loam, sand	Swamps, pond edges, wet prairies, marshes, ditches, seeps, meadows		
Lake Sedge		<i>Carex lacustris</i>		Cold, moist stratification for a minimum of 60 days, or fall planting.		1oz/acre	11,000	
	Wet conditions; fibrous and rhizomatous root system; can spread aggressively		OBL	Full to partial sunlight	Mud, silt, sand	Wet thickets, wet prairies, marshes, swamps, fens, seeps, pond and lake edges		
*Plains Slough Sedge; smoot cone sedge; long-toothed lake sedge		<i>Carex laeviconica</i>	*top sun, side slope, bankfull	Cold, moist stratification for a minimum of 60 days, or fall planting.		1oz/acre	7,500	
	Wet to moist conditions; fibrous and rhizomatous root system, often forms colonies; can become aggressive		OBL	Full to partial sunlight	Can survive in a variety of moist loamy based soils	Sedge swales, marsh edges, prairies, sloughs, open floodplain woodlands, sedge meadows, swamps, riverbanks, ditches		
False hop sedge		<i>Carex lupuliformis</i>		N/A		N/A	N/A	
	Wet to consistently moist conditions; fibrous and rhizomatous root system		OBL	Full sun to partial shade	Muck, sandy-muck	Floodplain woodlands, streambanks, swamps, wet meadows, marshes, ditches		

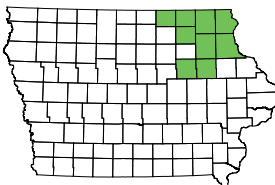
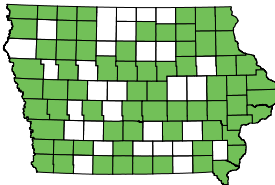
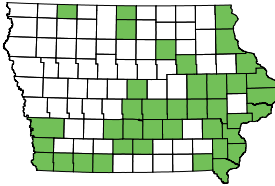
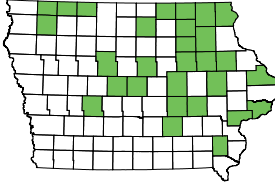
*Muskingum Sedge; Palm Sedge		<i>Carex muskingumensis</i>	*bankfull, water's edge, shaded stream edge	No pretreatment necessary.		1oz/acre	7,500	
	Wet to moist conditions; fibrous and rhizomatous root system		OBL	Full sun to partial shade	Fertile soils; loam		Swamps, riverbanks, meadows, floodplain woodlands	
*Greater Straw Sedge; Spreading Oval Sedge		<i>Carex normalis</i>	*top shade, side slope, bankfull, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.25oz/acre	25,000	
	Moist to wet conditions; fibrous and rhizomatous root system; self-seeding		FACW	Full sun to partial shade	Fertile soils		Open woodlands, pond edges, ditches, streambanks, prairies, meadows, fields, disturbed areas	
*Pointed Broom Sedge		<i>Carex scoparia</i>	*top sun, bankfull	Cold, moist stratification for a minimum of 60 days, or fall planting.		2oz/acre	84,000	
	Moist to wet conditions; fibrous and rhizomatous root system;		FACW	Full sun	Can survive in a variety of soil types		Wet prairies, marshes, streambanks, ditches, seeps, fens, pond edges, open floodplain woodlands, sedge meadows	
*Awl-fruited sedge; Prickly Sedge; Stalk-Grain Sedge		<i>Carex stipata</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.25oz/acre	34,000	
	Wet to moist conditions; fibrous and rhizomatous root system		OBL	Full to partial sunlight	Can survive in a variety of soil types		Wet floodplain woodlands, swamps, wet prairies, seeps, ditches, pond edges	
*Blunt Broom Sedge		<i>Carex tribuloides</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		1oz/acre	120,000	
	Wet to moist conditions; fibrous and rhizomatous root system		OBL	Full sun to partial shade	Can survive in a variety of soil types		Marshes, fens, floodplain woodlands, swamps, moist meadows, wet prairies, seeps, ditches, bogs	
Hairy-fruited sedge; Hairy-fruited lake sedge		<i>Carex trichocarpa</i>	*side slope, bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.5oz/acre	18,000	
	Wet to moist conditions, fibrous and rhizomatous root system, forms large colonies; can spread aggressively		OBL	Full to partial sunlight	Fertile soil; silt, loam		Wet prairies, wet thickets, meadows, streambanks, riverbanks, wet ditches, marshes	

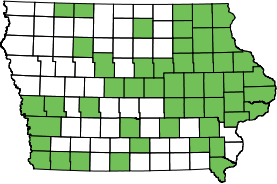
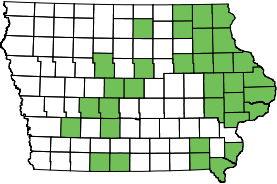
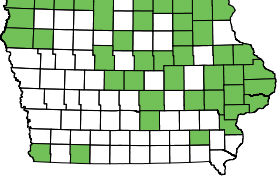
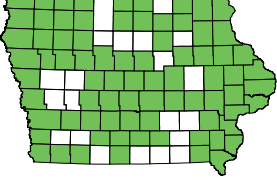
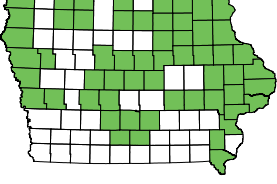
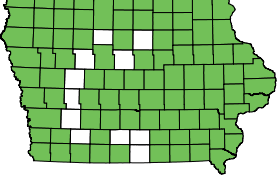
*Blunt Spikerush		<i>Eleocharis obtusa</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		1oz/acre		100,000	
	Wet conditions; fibrous root system; self-seeding; annual		OBL	Full sun	Can survive in a variety of wet soil types		Marshes, seeps, fens, pond and lake shores, streambanks, ditches		
*Common Spikerush; Creeping spikerush		<i>Eleocharis palustris</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		1oz/acre		70,000	
	Wet conditions; strongly rhizomatous; flood tolerant; propagation through plugs or transplants is most successful		OBL	Full sun to partial shade	Silty, sandy, clay soils		Wet meadows, springs, marshes, streambanks, lakeshores, mud flats, bogs, swamps		
*Riverbank Wild Rye		<i>Elymus riparius</i>	*side slope, top shade, bankfull, shaded stream edge	No seed pretreatment necessary		0.5lb/acre		2,900	
	Moist to wet conditions; low drought tolerance; high fire tolerance; self-seeding; great for erosion control; rhizomatous root system		FACW	Partial shade to shade	Loam, sand, clay		Meadows, streambanks, riverbanks, moist prairies, fields		
*Fowl Manna Grass		<i>Glyceria striata</i>	*top shade, bankfull, water's edge, shady stream	No seed pretreatment necessary. Needs light to germinate, surface sow seeds.		0.5oz/acre		90,000	
	Wet to moist conditions; fibrous root system; self-seeding; can tolerate more sun exposure in wetter conditions		OBL	Partial sunlight to shade	Fertile soil, loam		Swamps, marshes, streambanks, pond edges, bogs, seeps, ditches		
*Dudley's Rush		<i>Juncus dudleyi</i>	*top sun, side slope, bankfull, water's edge, sunny trails	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre		3,200,000	
	Moist to wet conditions; fibrous and rhizomatous root system; can spread aggressively		FACW	Full sun	Loam, clay loam, gravel		Streambanks, wet meadows, pond edges, moist prairies, swales, ditches, fens		
*Torrey's Rush		<i>Juncus torreyi</i>	*side slope, bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre		1,600,000	
	Moist to fairly wet conditions; fibrous and rhizomatous root system; can spread aggressively in ideal conditions		FACW	Full sun	Acidic soils; mucky, sandy, clay soils		Prairies, pond edges, streambanks, ditches, swamps, meadows, marshes		

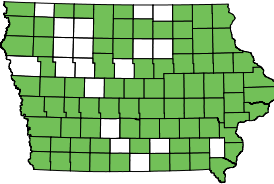
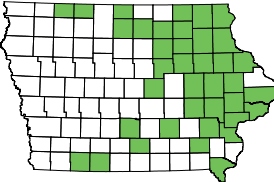
Catchfly grass	<i>Leersia lenticularis</i>		No seed pretreatment necessary.	6oz/acre	5,300	
	Wet conditions; rhizomatous root system	OBL	Partial sunlight	Fertile soils with mud	Floodplain woodlands, marshes, swamps, lakeshore	
*White Grass	<i>Leersia virginica</i>	*top shade, bankfull, water's edge, shaded stream edge, side slope	No seed pretreatment necessary	N/A	N/A	
	Moist conditions; fibrous and rhizomatous root system; limited local commercial availability	FACW	Partial shade	Fertile soil, loam	Swamps, floodplain woodlands, shady pond edges, streambanks, marshes, moist wooded areas, shaded slopes, disturbed areas	
*Switchgrass	<i>Panicum virgatum</i>	*top sun, bankfull	No seed pretreatment necessary	1oz/acre	14,000	
	Moist conditions; fibrous and rhizomatous root system; can become aggressive, do not over-plant; fire tolerant	FAC	Full to partial sunlight	Can survive in a variety of soil types	Prairies, fields, savannas, open woodlands, dunes, marsh edges, riverbanks, bluffs, ditches, railroads	
*Slender Bulrush	<i>Schoenoplectus heterochaetus (Scirpus heterochaetus)</i>	*bankfull, water's edge	N/A	N/A	N/A	
	Wet to moist conditions; rhizomatous; a scientific synonymous name is <i>Scirpus heterochaetus</i> ; limited commercial availability	OBL	Full to partial sunlight	Wet soils	Marshes, lakeshores, streambanks	
*Dark Green Bulrush; Green Bulrush	<i>Scirpus atrovirens</i>	*bankfull, water's edge	Best if sown in the fall, otherwise requires cold, moist stratification for a minimum of 60 days. Need light to germinate, surface sow seeds.	0.5oz/acre	460,000	
	Wet conditions; fibrous and rhizomatous root system, forms colonies; great for erosion control; self-seeding	OBL	Full to partial sunlight	Can survive in a variety of soil types	Wet prairies, open floodplain woodlands, wet meadows, riverbanks, ditches, swamps, seeps, marshes, pond edges, streambanks, bogs	
*Wool grass	<i>Scirpus cyperinus</i>	*bankfull, water's edge	Best if sown in the fall, otherwise requires cold, moist stratification for a minimum of 60 days. Needs light to germinate, surface sow seeds.	0.125oz/acre	1,700,000	
	Wet conditions; fibrous and rhizomatous root system, often forms colonies; best results may be through transplant; great for erosion control; can become aggressive in ideal conditions	OBL	Full to partial sunlight	Sandy, muddy, gravelly, peaty soils	Wet meadows, swamps, marshes, sloughs, ditches, seeps, prairie swales, disturbed sites	

*Whitetop grass; Common river grass		<i>Scolochloa festucacea</i>	*bankfull, water's edge	No seed pretreatment necessary.		2oz/acre	19,000	
	Wet conditions; rhizomatous root system		OBL	Full sun	Wet soils, clay	Sedge meadows, marshes, lakeshores, mudflats along streams, streambanks, prairie potholes		
*Prairie Cordgrass; Freshwater Cordgrass; Sloughgrass		<i>Spartina pectinata</i>	*side slope, bankfull, water's edge	No seed pretreatment necessary		*Transplants/plugs most successful	6,600	
	Moist to wet conditions; great for erosion control; can help reduce high energy of flowing waters; fibrous and rhizomatous, often forms colonies; can become aggressive; propagation through plugs or dividing the rhizomes is most successful		FACW	Full to partial sunlight	Fertile soil; loamy, sandy	Marshes, swamps, sloughs, pond edges, riverbanks, moist roadsides and railroads, prairies		

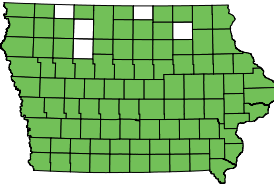
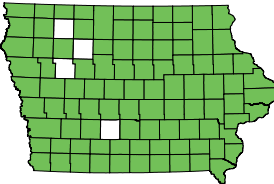
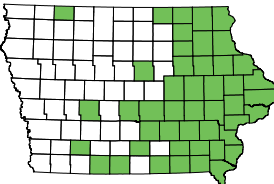
Shrubs & Vines (bankfull)

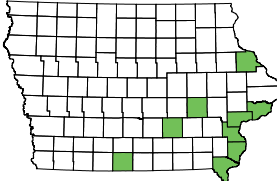
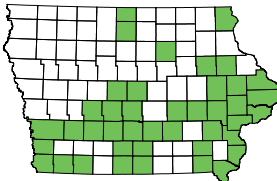
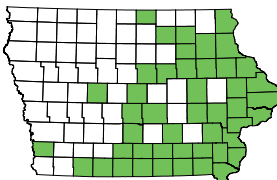
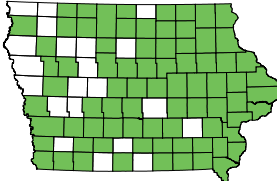
*Speckled alder; Grey Alder; Thin-leafed Alder		<i>Alnus incana</i>	*side slope, bankfull, water’s edge	Cold, moist stratification for a minimum of 90 days, or fall planting.		0.25oz/acre	33,000	
	Moist to wet conditions; flood tolerant; fast growth rate; shallow, rhizomatous, wide root system; seed propagation over cuttings is recommended		FACW	Full to partial sunlight	Can survive in a variety of soil types	Wetlands, swamps, streambanks, floodplain woodlands, lakeshores, roadsides, bogs		
*False Indigo; Indigo Bush		<i>Amorpha fruticosa</i>	*side slope, bankfull,	Scarify the seeds and soak in warm water for up to 12 hours before spring planting		3oz/acre	3,700	
	Wet to moist conditions; branching and woody root system; excellent pollinator		FACW	Full or partial sunlight	Fertile soil; can survive in a variety of soil types	Riverbanks, streambanks, pond edges, open floodplain forests, ditches, wet prairies, swamp edges		
*Common Buttonbush		<i>Cephalanthus occidentalis</i>	*bankfull, water’s edge	No seed pretreatment necessary.		2oz/acre	6,000	
	Wet to moist conditions; branching and woody root system; seed or cutting propagation are successful; excellent pollinator; readily establishes from cuttings in the spring before leaves form		OBL	Full to partial sunlight	Fertile soil; humusy soil	Swamps, bogs, marshes, ditches, floodplain woodlands, wet prairies, seeps, riverbanks		
*Red-osier Dogwood		<i>Cornus stolonifera</i> (<i>Cornus sericea</i>)	*bankfull, water’s edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		N/A	N/A	
	Moist to slightly wet conditions; wide, shallow and woody root system with underground runners; great for erosion control; propagation by seeds or cuttings; may also be referred to as <i>Cornus sericea</i>		FACW	Full to partial sunlight	Can survive in a variety of moist soil types; sandy soils	Meadows, marshes, bogs, swamps, thickets, floodplain woodlands, streambanks		

*Swamp Dogwood; Silky Dogwood; Pale Dogwood;		<i>Cornus obliqua</i>	*bankfull, water's edge, stream edge shade	Cold, moist stratification for a minimum of 60 days, or fall planting.		N/A	N/A	
	Moist to wet conditions; wide, shallow, woody roots; propagation by seeds or cuttings; excellent pollinator		FACW	Full sun to partial shade	Moist soils; sandy		Floodplain woodlands, wet meadows, wet prairies, streambanks, pond edges, swamp edges, fens	
*Common Ninebark; Atlantic Ninebark;		<i>Physocarpus opulifolius</i>	*side slope, bankfull	No seed pretreatment necessary.		0.5oz/acre	34,000	
	Moist to wet conditions; fast growth rate; propagation through seeds or cuttings; easy to grow; can become aggressive		FACW	Full to partial sunlight	Can survive in a variety of soil types, adaptable		Streambanks, forest edges, bluffs, thickets, cliffs, gravel bars	
*Wild Black Currant		<i>Ribes americanum</i>	*top shade, top sun, bankfull	Scarification and cold, moist stratification for a minimum of 60 days, or fall planting.		N/A	N/A	
	Moist to wet conditions; self-seeding; excellent pollinator, propagate through seeds		FACW	Partial sunlight	Can survive in a variety of soil types		Swamps, meadows, fens, seeps, ravines, shaded streambanks, open floodplain woodlands	
*Peach-leaf Willow; Wright Willow, Almond Willow		<i>Salix amygdaloides</i>	*water's edge, bankfull	Sow seeds immediately after collection. Needs moist soils to germinate.		N/A	N/A	
	Moist to wet conditions; woody, shallow root system; self-seeding; fast growth rate; seed and cutting propagation (cuttings may be more successful); excellent pollinator		FACW	Full to partial sunlight	clay loam, loam, sandy, silty soils		Streambanks, pond edges, sloughs, floodplain woodlands, swamps	
*Pussy willow		<i>Salix discolor</i>	*water's edge, bankfull	Sow seeds immediately after collection.		*Cuttings most successful form of propagation	N/A	
	Moist to wet conditions; woody, shallow and extensive root system; fast growth rate; cuttings most successful form of propagation; excellent pollinator; shade intolerant		FACW	Full sun	Moist soils, sandy, alluvial soils		Open floodplain woodlands, marshes, swamps, riverbanks, streambanks, wet prairies, ditches	
*Sandbar Willow		<i>Salix interior</i>	*water's edge, bankfull, stream edge shade	Sow seeds immediately after collection.		*Cuttings most successful form of propagation	N/A	
	Moist to wet conditions; woody root system with long runners; can spread aggressively through underground runners; propagate through cuttings; excellent pollinator		FACW	Full to partial sunlight	Sandy, gravelly soils, alluvial soils		Wet meadows, streambanks, riverbanks, lake shores, ditches, sloughs, swamps, sandbars, gravel bars, marshes	

*Elderberry; American Elder	<i>Sambucus nigra canadensis</i> (formerly: <i>Sambucus canadensis</i>)	*top shade, bankfull	Acid bath scarification for 20 minutes followed by cold, moist stratification for a minimum of 60 days.	N/A	N/A	
	Moist conditions; shallow, rhizomatous root system; fast growth rate; <i>Sambucus nigra canadensis</i> was formerly considered a separate species: <i>Sambucus canadensis</i> , this name is still often used; propagate through cuttings or seeds (cuttings may be fastest and easiest way)	N/A	Full to partial sunlight	Fertile soils, slightly acidic soils	Bogs, ditches, wet prairies, open woodlands, thickets, wet meadows, streambanks, railroads, fields	
Meadowsweet	<i>Spiraea alba</i>		Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	N/A	N/A	
	Moist to wet conditions; woody root system; excellent pollinator	FACW	Full sun	Moist soils	Wet prairies, streambanks, marsh edges, fens, bogs, ditches	

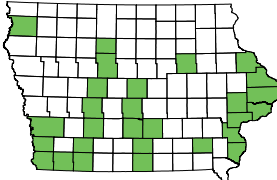
Trees (bankfull)

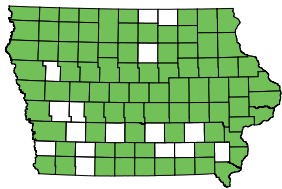
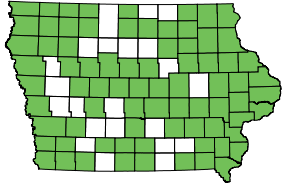
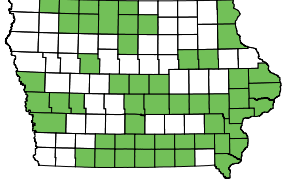
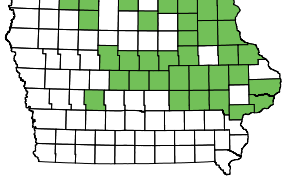
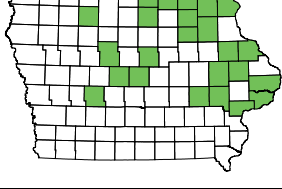
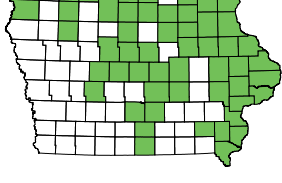
*Boxelder	<i>Acer negundo</i>	*top shade, bankfull	Cold, moist stratification for a minimum of 60 days, or fall planting.	N/A	N/A	
	Moist conditions; shallow, fibrous root system; fast growth rate; short-lived; flood tolerant; easily grown from seed	FAC	Partial shade	Can survive in a variety of soil types	Floodplain woodlands, thickets, streambanks, ditches, roadsides, disturbed areas	
*Silver Maple	<i>Acer saccharinum</i>	*top shade, bankfull	Do not allow seeds to dry out. Immediate planting after seed collection is recommended.	N/A	N/A	
	Moist conditions; fibrous, shallow, spreading root system; extremely rapid growth rate; seed and cutting propagation are successful; susceptible to high winds and ice; shade intolerant	FACW	Full to partial sunlight	Moist, slightly acidic soils, alluvial soils	Floodplain woodlands, riverbanks, lake shores, swamps	
River Birch; Water Birch; Red Birch, Black Birch	<i>Betula nigra</i>		No seed pretreatment necessary. Best results if seeds are sown while still fresh from collection.	N/A	N/A	
	Moist conditions; branching root system; self-seeding; fire tolerant	FACW	Full to partial sunlight	Can survive in a variety of soil types, including acidic soils.	Floodplain woodlands, former strip mines, streambanks, swamps, ditches, ravines	

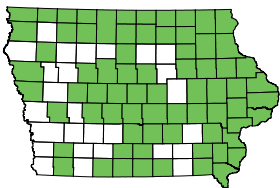
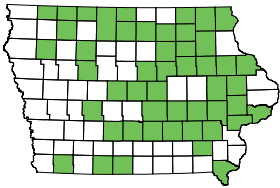
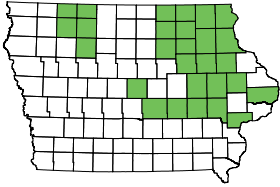
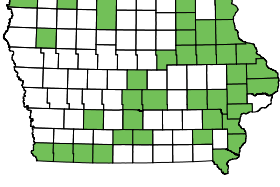
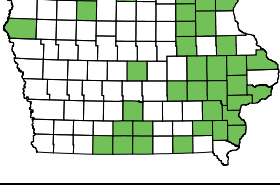
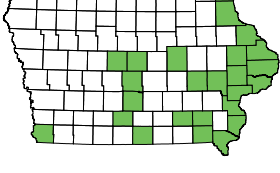
*Shell-bark Hickory; Kingnut Hickory		<i>Carya laciniosa</i>	* top shade, bankfull	Cold, moist stratification for a minimum of 90 days or fall planting.		N/A	N/A	
	Moist conditions; deep taproot with smaller lateral roots; self-seeding; difficult to transplant; slow growth rate; fire tolerant		FACW	Full to partial sunlight	Fertile moist soils; loam, silt	Floodplain woodlands, valleys, swamps, savannas		
*Sycamore; American Sycamore; Eastern Sycamore, Plane tree; Buttonwood		<i>Platanus occidentalis</i>	*side slope, bankfull	No seed pretreatment necessary. Needs light to germinate, surface sow seeds.		N/A	N/A	
	Moist to wet conditions; wide, spreading and woody root system; rapid growth rate; flood tolerant; cuttings form young trees and seed propagation are successful		FACW	Full sun	Can survive in a variety of soil types alluvial soils	Streambanks, lowland slopes, sloughs, floodplain woodlands, shallow swamps		
*Swamp White Oak		<i>Quercus bicolor</i>	*top shade, top sun, bankfull	No seed pretreatment necessary. Best results if planted immediately after collection.		N/A	N/A	
	Wet to moist conditions; wide, woody root system with taproot; fast growth rate; best propagation through seeds		FACW	Full sun	Moist acidic soils, can survive in a variety of soil types	Floodplain woodlands, riverbanks, streambanks, pond edges, swamp and lake edges, lowland areas		
*Black Willow; Swamp Willow		<i>Salix nigra</i>	*side slope, bankfull, water's edge, shaded stream edge, sunny and wooded trails	Not fully known, best results if planted immediately after collection.		N/A	N/A	
	Wet to moist conditions; shallow, wide, lateral root system; most common propagation through cuttings, though seed propagation can be successful as well; fast growth rate; excellent pollinator;		OBL	Full to partial sunlight	Can survive in a variety of soil types	Floodplain woodlands, swamps, riverbanks, lake edges, ditches, sloughs, pond edges, wet disturbed areas		

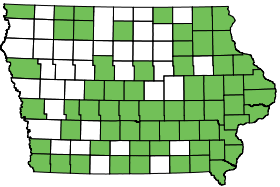
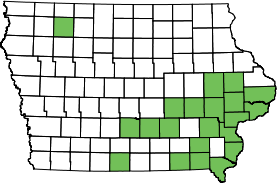
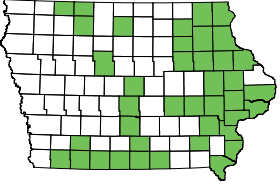
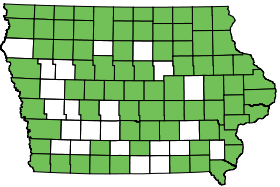
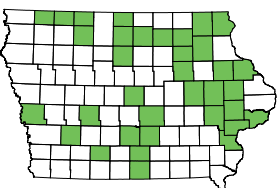
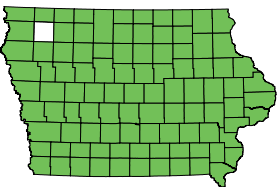
Water’s Edge (Ecologically a wet disturbance habitat)

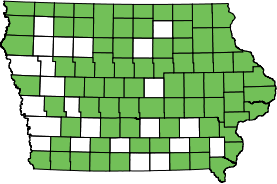
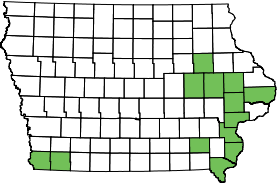
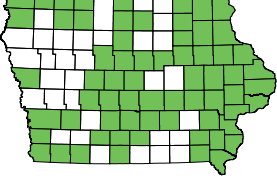
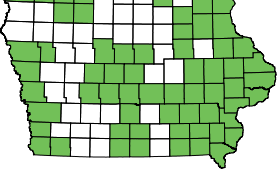
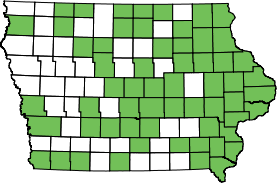
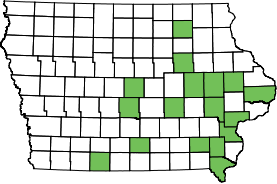
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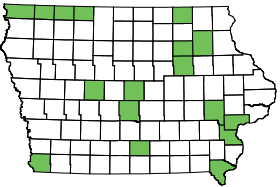
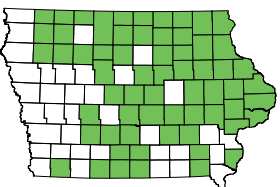
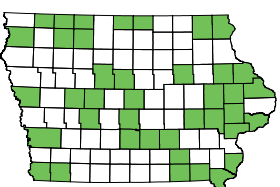
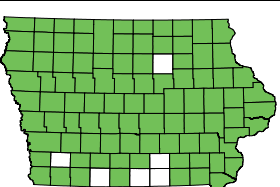
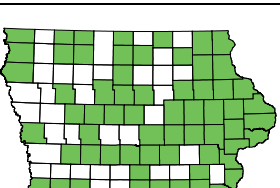
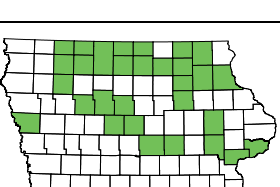
Scarlet Toothcup; Valley redstem	<i>Ammannia coccinea</i>		No seed pretreatment necessary.	0.5oz/acre	1,400,000	
	Wet conditions; shallow root system; self-seeding; easily grown from seed	OBL	Full sun	Mud	Mud flats, streambanks, muddy pond edges, ditches, marsh edges	

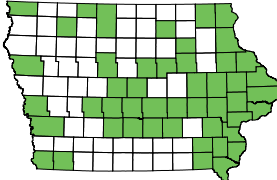
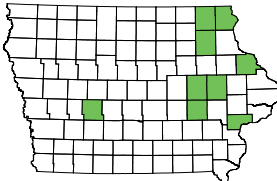
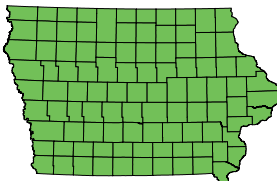
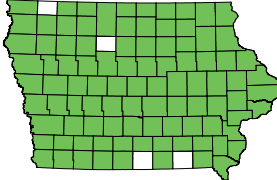
*Swamp Milkweed; Pink Milkweed; Rose Milkweed		<i>Asclepias incarnata</i>	*Top sun, water's edge, bankfull	Cold, moist stratification for a minimum of 30 days, or fall planting.		1.5oz/acre	4,800	
	Wet to moist conditions; rhizomatous root system, can form colonies; excellent pollinator		OBL	Full sun to partial shade	Wet soils; clay	Moist meadows, floodplain woodlands, swamps, riverbanks, prairies, marshes, roadsides, riparian areas		
Nodding Beggartick; Nodding Bur-Marigold; Bur Marigold		<i>Bidens cernua</i>		Cold, moist stratification for a minimum of 60 days, or fall planting.		0.25oz/acre *pervasive, usually not necessary to seed	21,000	
	Wet conditions; pervasive plant, usually not necessary to seed; excellent pollinator; annual		OBL	Full or partial sunlight	Moist soil; loam, sand, clay, muck	Marshes, swamps, bogs, streambanks, wet ditches, wet meadows		
*False Aster; White Doll's Daisy; Thousand-flowered aster		<i>Boltonia asteroides</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		3oz/acre	2,000	
	Wet conditions; rhizomatous root system		OBL	Full sun	Fertile soils; loam, clay	Floodplain woodlands, thickets, prairies, meadows, streambanks, ditches, marshes		
*Marsh Marigold		<i>Caltha palustris</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		1oz/acre	26,000	
	Wet conditions; fibrous root system; self-seeding		OBL	Full to partial sunlight	Wet soils, muck, mud	Swamps, open floodplain woodlands, streambanks, marshes, ditches, wet meadows		
*White Turtlehead		<i>Chelone glabra</i>	*bankfull, water's edge	Fall planting is recommended. Otherwise cold, moist stratification for a minimum of 60 days is required.		0.5oz/acre	92,000	
	Wet conditions; rhizomatous root system with taproot, can form colonies		OBL	Full to partial sunlight	Fertile moist, organic soils	Floodplain woodlands, prairies, meadows, marshes, seeps, streambanks, wet ditches, pond edges, fens		
*Cinnamon Willow-Herb; Purpleleaf willowherb		<i>Epilobium coloratum</i>	*bankfull, water's edge, stream edge shady	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	250,000	
	Wet to moist conditions; fibrous root system that produces rhizomes; pioneer species		OBL	Full to partial sunlight	Soil that can retain moisture	Wet prairies, marshes, riverbanks, lake shores, swamps, bogs, disturbed areas		

*Common boneset		<i>Eupatorium perfoliatum</i>	*Water’s edge, bankfull		Cold, moist stratification for a minimum of 30 days, or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre		160,000			
	Wet to moist conditions; seed propagation; fibrous, rhizomatous root system, forms colonies; excellent pollinator;			OBL	Full to partial sunlight	Soil that can retain moisture		Wetland habitats, wet prairies, bogs, marshes, seeps, riverbanks, open floodplain woodlands				
*Bottle gentian; Closed Bottle Gentian		<i>Gentiana andrewsii</i>	*top sun, bankfull, water’s edge		Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre		280,000			
	Moist to wet conditions; central taproot; using plugs/transplanting may be most successful propagation technique; germination from seed can be difficult			FACW	Full to partial sunlight	Fertile soil; clay, sandy loam		Riverbanks, open floodplain woodlands, meadows, moist prairies, swamps, thickets				
*Fringed gentian; Greater fringed gentian		<i>Gentianopsis crinita</i>	*water’s edge, bankfull		Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre		200,000			
	Wet to moist conditions; shallow taproot; self-seeding; rare; biennial			OBL	Full to partial sunlight	Moist soils; sandy, calcareous soils		Wetlands, wet prairies, sandy sloughs, fens, open floodplain woodlands, ditches, meadows, streambanks				
*Rough Avens		<i>Geum laciniatum</i>	*bankfull, water’s edge		N/A			N/A		N/A		
	Moist to wet conditions; taproot with rhizomes			FACW	Partial sunlight	Loam, sandy loam		Marshes, lakeshores, savannas, thickets, moist meadows, woodland edges				
Hedge Hyssop		<i>Gratiola neglecta</i>			N/A			N/A		N/A		
	Wet to moist conditions; taproot; self-seeding; easily grown from seed			OBL	Full to partial sunlight	Mud, sand		Floodplain woodlands, wet meadows, streambanks, muddy disturbed areas				
*Halberd-Leaved Rose Mallow; Scarlet Rose Mallow; Rose Mallow		<i>Hibiscus laevis</i>	*bankfull, water’s edge		Cold, moist stratification for a minimum of 60 days, or fall planting.			3oz/acre		2,800		
	Wet conditions; central taproot; self-seeding			OBL	Full to partial sunlight	Fertile soil		Marshes, swamps, riverbanks				

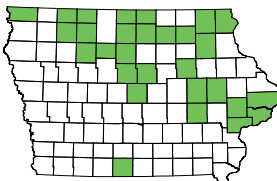
False Pimpernel	<i>Lindernia dubia</i>		N/A	N/A	N/A	
	Wet to moist conditions; taproot; self-seeding	OBL	Full to partial sunlight	Muddy, gravelly, sandy soils	Streambanks, shallow pools, pond edges, seeps, river sandbars, open floodplain woodlands, ditches	
*Seedbox	<i>Ludwigia alternifolia</i>	*Water's edge, bankfull	Cold, moist stratification for a minimum of 60 days, or fall planting.	0.125oz/acre	1,300,000	
	Wet to moist conditions; fibrous root system	OBL	Full to partial sunlight	Acidic soil,, sandy	Swamps, riverbanks, wet prairies, ditches, floodplain woodlands, wetlands	
False Loosestrife	<i>Ludwigia polycarpa</i>		N/A	N/A	N/A	
	Wet conditions; stoloniferous root system	OBL	Full sun	Wet soils, sand, loam	Marshes, wet prairies, fens, shallow water, pond edges, streambanks, sloughs, wet meadows, open swamp woodlands	
*Water horehound; American Bugleweed; American water horehound	<i>Lycopus americanus</i>	*bankfull, water's edge, wooded trails	Needs light to germinate, surface sow seeds. No other pretreatment necessary.	0.25oz/acre	130,000	
	Wet to moist conditions; rhizomatous root system, often forms colonies	OBL	Full to partial sunlight	Moist soils; clay, silt, loam	Wetlands, shorelines, riverbanks, marshes, ditches, wet prairies, open floodplain woodlands, wet thickets	
*Northern bugleweed	<i>Lycopus uniflorus</i>	*bankfull, water's edge, wooded trails, sunny trails	N/A	N/A	N/A	
	Wet to moist conditions; tuberous roots with stolons; propagation through tubers is most successful	OBL	Full to partial sunlight	Sandy, loamy, mucky soil	Streambanks, fens, marshes, swamps, lake edges, moist meadows	
*Field mint; Marsh mint; Wild mint	<i>Mentha arvensis</i>	*top sun, bankfull, water's edge	Needs light to germinate, surface sow seeds. No other pretreatment necessary.	0.25oz/acre	300,000	
	Moist conditions; rhizomatous root system, forms colonies; can become aggressive; excellent pollinator; very hardy and thrives in disturbed areas	FACW	Full sun to partial sunlight	Fertile soil	Lake shores, moist prairies, marshes, fens, landfills, disturbed areas, streambanks	

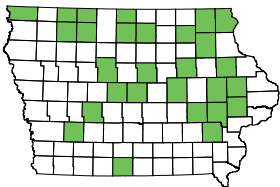
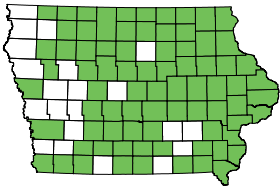
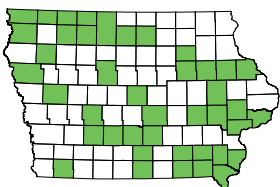
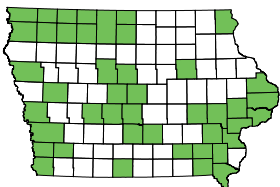
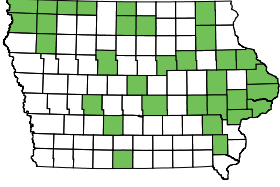
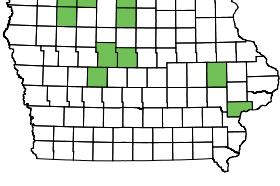
*Monkey Flower; Allegheny Monkeyflower; Square-stemmed Monkeyflower	<i>Mimulus ringens</i>	*bankfull, water’s edge, shaded stream edge	Cold, moist stratification for a minimum of 30 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	2,300,000	
	Wet conditions; rhizomatous root system; self-seeding		OBL	Partial sun	Moist, fertile soils; loam, sand, clay	Open floodplain woodlands, swamps, meadows, pond edges, streambanks, wet ditches, seeps	
*Mousetail; Tiny mousetail	<i>Myosurus minimus</i>	*water’s edge, sunny trails, wooded trails	N/A		N/A	N/A	
	Moist to slightly dry conditions; fibrous root system; self-seeding; found in exposed soil with little vegetation		FACW	Full to partial sunlight	Loam, sandy loam, gravelly loam, clay loam	Eroded streambanks, pond and lake shores, pastures, barren woodland areas, disturbed areas	
*Ditch Stonecrop	<i>Penthorum sedoides</i>	*bankfull, water’s edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		1.5oz/acre	1,300,000	
	Wet to consistently moist conditions, rhizomatous root system, forms colonies		OBL	Full to partial sunlight	Wet soils, muck	Marshes, wet prairies, open floodplain woodlands, swamps, streambanks, pond edges, swales, ditches	
Fogfruit	<i>Phyla lanceolata</i>		Sow outdoors immediately after collection		N/A	N/A	
	Wet to moist conditions; rhizomatous root system, forms dense colonies; can become aggressive		OBL	Full to partial sunlight	Fertile soil, mud	Prairies, seeps, ditches, floodplain woodlands, marshes, pond edges, streambanks	
*Obedient Plant; False dragonhead; Virginia lions-heart	<i>Physostegia virginiana</i>	*top sun, bankfull, water’s edge (problems with germination in the past)	Cold, moist stratification for a minimum of 60 days, or fall planting.		1oz/acre	11,000	
	Moist conditions; rhizomatous root system and taproot; can become aggressive in ideal situations		FACW	Full to partial sunlight	Moist soils; hummus, loam	Prairies, open woodlands, meadows, riverbanks, swamps, thickets, limestone glades, railroads, seeps, lake shores	
*Pickerel weed	<i>Pontederia cordata</i>	*water’s edge, heavy shade	Likely needs cold, wet stratification for a minimum of 30 days followed by spring planting. Do not let seeds dry out.		N/A	N/A	
	Wet conditions; fibrous and rhizomatous root system; propagation through seeds or rhizomes is most successful		OBL	Full to partial sunlight	Wet soils, muck, mud	Marshes, pond edges, swamps, slow-moving streams	

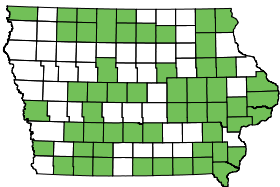
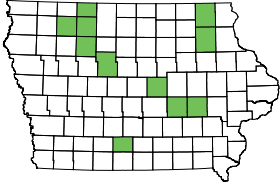
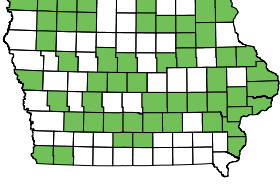
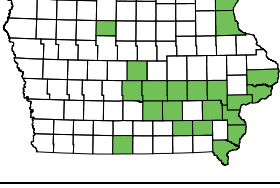
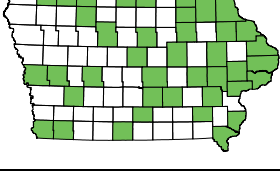
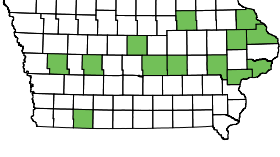
Brook cinquefoil	<i>Potentilla rivalis</i>		Likely needs cold, moist stratification for a minimum of 60-90 days, or fall planting.	N/A	N/A	
	Moist to wet conditions; fibrous root system	FACW	Full to partial sunlight	Sandy, gravelly soils	Streambanks, lakeshores, moist meadows, marshes, open floodplain woodlands	
*Mountain mint; Virginia mountain mint	<i>Pycnanthemum virginianum</i>	*top sun, bankfull, water's edge	No pretreatment necessary. Needs light to germinate, surface sow seeds.	0.125oz/acre	220,000	
	Moist to wet conditions; rhizomatous root system, forms colonies; excellent pollinator	FACW	Full to partial sunlight	Can survive in a variety of soil types	Prairies, meadows, fens, streambanks, thickets, swamps, bluffs, pond edges	
*Cursed Crowfoot; Annual buttercup	<i>Ranunculus sceleratus</i>	*water's edge, wooded trails	Cold, moist stratification for a minimum of 30 days, or fall planting.	1oz/acre	145,000	
	Wet to moist conditions; fibrous root system; self-seeding; annual	OBL	Full to partial sunlight	Moist, fertile soils, clay loam, clay, mud	Marshes, seeps, streambanks, river sandbars, pond edges, wet meadows, ditches	
*Marsh Cress	<i>Rorippa palustris</i>	*bankfull, water's edge	Not fully known, sow seeds immediately after collection.	N/A	N/A	
	Wet to moist conditions; taproot; self-seeding; can be considered weedy	OBL	Full to partial sunlight	Loam, clay, silt, mud	Shorelines, muddy pond edges, riverbanks, open floodplain woodlands, wet fields, prairie swales, meadows, ditches	
*Mad-dog Skullcap	<i>Scutellaria lateriflora</i>	*bankfull, water's edge, shaded stream edge	Cold, moist stratification for a minimum of 60 days or fall planting.	1oz/acre	65,000	
	Wet to consistently moist conditions; taproot with rhizomes;	OBL	Full sun to partial shade	Can survive in a variety of soils if there is consistent moisture available	Marshes, moist meadows, swamps, open floodplain woodlands, wet thickets, seeps, bogs	
*Riddell's Goldenrod	<i>Solidago riddellii</i> (<i>Oligoneuron riddellii</i>)	*water's edge, bankfull	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	0.25oz/acre	93,000	
	Wet conditions; fibrous root system; excellent pollinator; an alternate scientific name is <i>Oligoneuron riddellii</i>	OBL	Full sun	Calcareous soils	Pond edges, streambanks, meadows, wet prairies, seeps, marshes	

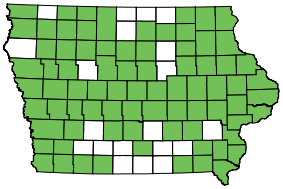
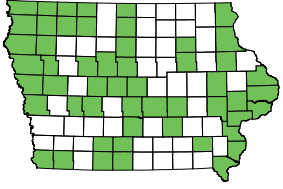
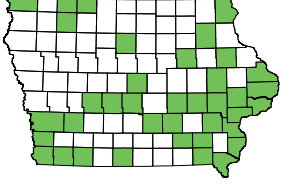
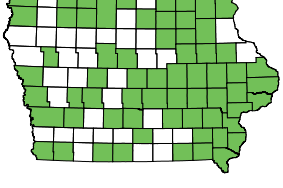
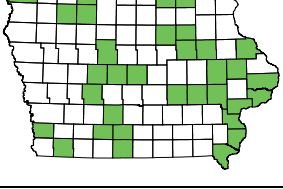
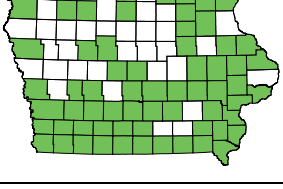
*Smooth Hedge-nettle; Hedge nettle		<i>Stachys tenuifolia</i>	*top shade, water's edge, shaded stream edge	N/A		N/A		N/A		
	Wet conditions; rhizomatous root system with taproot, forms colonies			OBL	Partial sun	Wet soil; clay, loam, sand		Floodplain woodlands, streambanks, thickets, swamps, seeps, ditches, meadows, wet fields, marshes, moist prairies		
*Skunk cabbage		<i>Symplocarpus foetidus</i>	*bankfull, water's edge, shady stream edge	Seeds should not be allowed to dry out before sowing.		N/A		N/A		
	Wet conditions; self-seeding; limited commercial availability			OBL	Partial sun to shade	Wet, rich soil, muck		Marshes, streambanks, riverbanks, pond edges, muddy wet areas, wet woodlands, seeps, swamps		
*Blue Vervain; Swamp Verbena		<i>Verbena hastata</i>	*top shade, top sun, side slope, bankfull, water's edge	Cold, moist stratification for a minimum of 30 days or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre		93,000		
	Collect seeds in late summer to early fall; moist planting conditions; tolerates temporary standing water; most successful propagation by seeds; excellent pollinator; fibrous and rhizomatous root system			FACW	Full to partial sunlight	Fertile loam or wet muck		River-bottom prairies, meadows, roadside ditches, pastures, marshes, and riverbanks		
White Vervain		<i>Verbena urticifolia</i>		Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		2oz/acre		47,000		
	Moderately dry to moist conditions; self-seeding; annual; easily grown from seed			FAC	Partial sunlight	Loam, clay loam, silt-loam		Open woodlands, thickets, meadows, streambanks, disturbed areas		

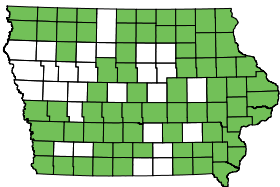
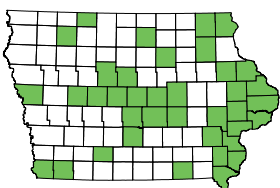
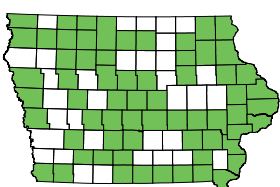
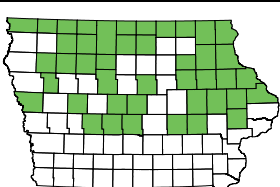
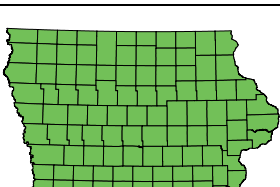
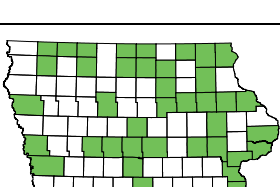
Grasses, Sedges, & Rushes (Water’s Edge)

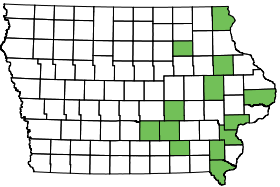
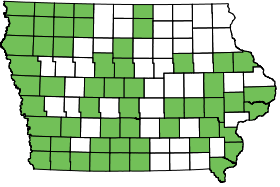
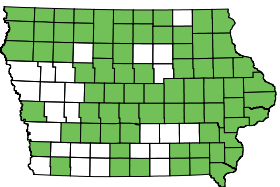
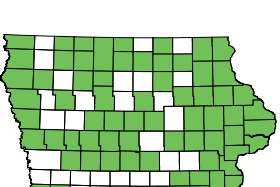
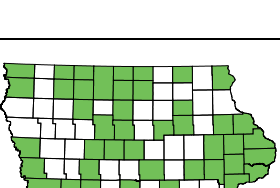
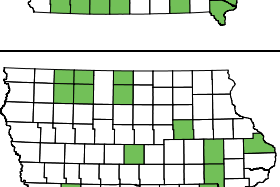
*Sweetflag		<i>Acorus americanus</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		3oz/acre	6,600	
	Wet conditions, standing water; rhizomatous; great for erosion control		OBL	Full to partial sunlight	Wet, silty soils	Bogs, pond and lake shallows, marshes, streambanks		

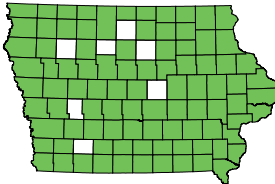
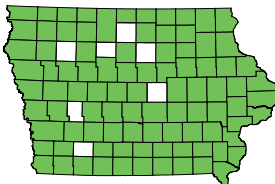
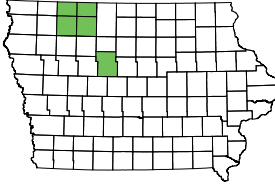
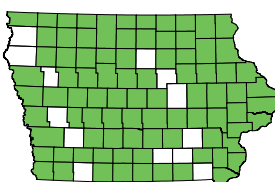
*Shortawn foxtail; Short-Awn Meadow Foxtail		<i>Alopecurus aequalis</i>	*bankfull, water's edge, side slope	N/A		N/A		N/A		
	Cool wet conditions; fibrous root systems, often forms colonies; limited local commercial availability			OBL	Full to partial sunlight	Wet soil; muck		Wet meadows, pond edges, ditches, swamps, bog edges, prairie swales, riverbanks, disturbed areas		
*Bluejoint Grass		<i>Calamagrostis canadensis</i>	*bankfull, water's edge, side slope	Needs light to germinate, surface sow seeds. No other pretreatment necessary.		0.125oz/acre *transplants/plugs more successful		280,000		
	Wet to moist conditions; fibrous and rhizomatous root system, can form colonies; can become aggressive; Plugs/transplants generally more successful than seed propagation, seeds can be fragile; fire tolerant			OBL	Full to partial sunlight	Can survive in a variety of soil types		Swamps, marshes, ditches, meadows, streambanks, lake shores, wet prairies, prairie swales, bogs		
*Yellow headed fox sedge; Yellow Fox Sedge; Yellowfruit Sedge; Small Yellow Fox Sedge		<i>Carex annectens</i>	*water's edge, bankfull, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.25oz/acre		90,000		
	Moist to wet conditions; fibrous and rhizomatous root system; sometimes referred to with the scientific name <i>Carex brachyglossa</i>			FACW	Full sun to partial shade	Can survive in a variety of soil types		Pond edges, fens, ditches, marshes, wet prairies, swamps, seeps, moist disturbed areas		
*Wheat Sedge; Hairy-leaved Lake Sedge; Awned Sedge		<i>Carex atherodes</i>	*water's edge, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.5oz/acre		29,000		
	Wet conditions; rhizomatous root system, forms colonies			OBL	Full sun to partial shade	Moist soil; clay		Marshes, wet meadows, wet ditches, streambanks, riverbanks, swamps, open floodplain woodlands		
*Bebb's sedge; Bebb's oval sedge		<i>Carex bebbii</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 30 days, or fall planting.		0.5oz/acre		34,000		
	Wet conditions; fibrous root system			OBL	Full to partial sunlight	Moist soil		Wetlands, swamps, marshes, meadows, fields, riverbanks, lake shores		
*Bottlebrush sedge; Bearded sedge; Bristly sedge; Long-haired sedge		<i>Carex comosa</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.5oz/acre		30,000		
	Wet conditions; fibrous and rhizomatous root system			OBL	Full to partial sunlight	Moist soil, muck, sand		Swamps, bogs, pond edges, ditches, meadows, seeps, marshes		

*Crested Sedge		<i>Carex cristatella</i>	*top sun, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		1oz/acre	58,000	
	Moist to wet conditions; fibrous and rhizomatous root system; self-seeding		FACW	Full to partial sunlight	Loam, silt-loam	Wet prairies, open floodplain woodlands, swamps, wet marshes, sloughs, wet meadows, streambanks, ditches		
*Emory's Sedge		<i>Carex emoryi</i>	* side slope, bankfull, water's edge	Not fully known, but likely needs cold, moist stratification for a minimum of 60 days or fall planting.		Usually must transplant due to limited commercial availability.	N/A	
	Wet conditions; important restoration species for soil retention; fibrous and rhizomatous root system, forms colonies; highly scour tolerant, often found along swift streams		OBL	Full to partial sunlight	Wet soil; muck, clay, sand	Riverbanks and streambanks		
*Porcupine sedge; Bottlebrush Sedge		<i>Carex hystericina</i>	*bankfull, water's edge, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.25oz/acre	30,000	
	Wet to moist conditions; fibrous and rhizomatous root system; part of "bottlebrush" sedge group		OBL	Full sun to partial shade	Wet calcareous soil; loam, sand	Swamps, pond edges, wet prairies, marshes, ditches, seeps, meadows		
*Muskingum Sedge; Palm Sedge		<i>Carex muskingumensis</i>	*bankfull, water's edge, shaded stream edge	No pretreatment necessary.		1oz/acre	7,500	
	Wet to moist conditions; fibrous and rhizomatous root system		OBL	Full sun to partial shade	Fertile soils; loam	Swamps, riverbanks, meadows, floodplain woodlands		
*Awl-fruited sedge; Prickly Sedge; Stalk-Grain Sedge		<i>Carex stipata</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.25oz/acre	34,000	
	Wet to moist conditions; fibrous and rhizomatous root system		OBL	Full to partial sunlight	Can survive in a variety of soil types	Wet floodplain woodlands, swamps, wet prairies, seeps, ditches, pond edges		
Hairy-fruited sedge; Hairy-fruited lake sedge		<i>Carex trichocarpa</i>	*side slope, bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.5oz/acre	18,000	
	Wet to moist conditions, fibrous and rhizomatous root system, forms large colonies; can spread aggressively		OBL	Full to partial sunlight	Fertile soil; silt loam	Wet prairies, wet thickets, meadows, streambanks, riverbanks, wet ditches, marshes		

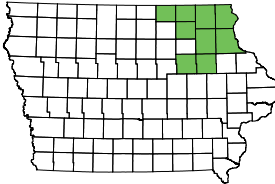
Yellow Nut Sedge	<i>Cyperus esculentus</i>		N/A	N/A	N/A	
	Wet to moist conditions; fibrous and rhizomatous root system with tubers; can spread aggressively; can be considered weedy	FACW	Full to partial sunlight	Fertile loam, sand, silt, mud	Marshes, shorelines, prairie swales, meadows, ditches, disturbed areas	
Rusty Flat Sedge; Fragrant flatsedge	<i>Cyperus odoratus</i>		N/A	N/A	N/A	
	Wet conditions; fibrous root system;	FACW	Full sun	Moist, muddy, sandy soils	Streambanks, marshy shores, wet clearings, mudflats, ditches	
*Blunt Broom Sedge	<i>Carex tribuloides</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	1oz/acre	120,000	
	Wet to moist conditions; fibrous and rhizomatous root system	OBL	Full sun to partial shade	Can survive in a variety of soil types	Marshes, fens, floodplain woodlands, swamps, moist meadows, wet prairies, seeps, ditches, bogs	
Straw-colored flatsedge	<i>Cyperus strigosus</i>		N/A	N/A	N/A	
	Moist to wet condition; fibrous and rhizomatous root system;	FACW	Full sun	Sandy, muddy, gravelly soils	Marshes, wet prairies, streambanks, prairie swales, seeps, meadows, pond edges, ditches	
Flat-stemmed spike rush	<i>Eleocharis compressa</i>		Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	0.125oz/acre	85,000	
	Moist to wet conditions; fibrous and rhizomatous root system, can form dense colonies; can establish through root cuttings and plugs	FACW	Full sun	Can survive in a variety of soil types	Wet prairies, meadows, pond edges, streambanks, ditches, lakeshores, wetlands	
*Blunt Spikerush	<i>Eleocharis obtusa</i>	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	1oz/acre	100,000	
	Wet conditions; fibrous root system; self-seeding; annual	OBL	Full sun	Can survive in a variety of wet soil types	Marshes, seeps, fens, pond and lake shores, streambanks, ditches	

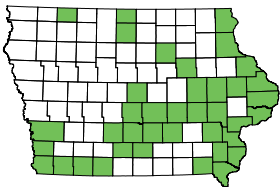
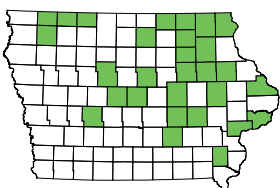
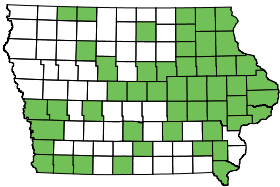
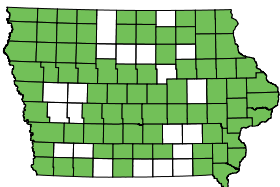
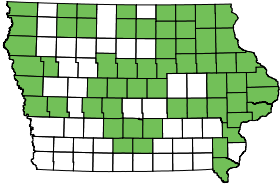
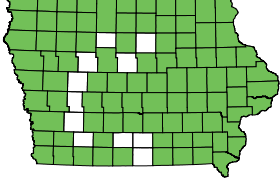
*Common Spikerush; Creeping spikerush		<i>Eleocharis palustris</i>	*bankfull, water’s edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		1oz/acre		70,000		
	Wet conditions; strongly rhizomatous; flood tolerant; propagation through plugs or transplants is most successful		OBL	Full sun to partial shade	Silty, sandy, clay soils		Wet meadows, springs, marshes, streambanks, lakeshores, mud flats, bogs, swamps			
Frank’s Lovegrass; Sandbar love grass		<i>Eragrostis frankii</i>			Likely does not require any seed pretreatment. Needs light to germinate, surface sow seeds.		N/A		N/A	
	Moist to wet conditions; fibrous root system; limited commercial availability;		FACW		Full sun	Moist soils, sand, mud		Streambanks, riverbanks, ditches, sandbars, mud flats in streams		
Pony grass; Creeping love grass		<i>Eragrostis hypnoides</i>			Do not allow seeds to dry out.		N/A		N/A	
	Wet to moist conditions; fibrous root system; self- seeding; can spread aggressively; easily grown from seed; limited commercial availability		OBL		Full to partial sunlight	Can survive in a variety of soil types		Streambanks, mudflats, sloughs, pond edges		
American mannagrass; Tall manna grass, Reed meadowgrass		<i>Glyceria grandis</i>			Needs light to germinate, surface sow seeds. No other pretreatment necessary.		0.5oz/acre		70,000	
	Wet conditions; fibrous, rhizomatous root system, can form colonies		OBL		Full sun	Wet soil		Marshes, ditches, lakeshores, riverbanks, streambanks		
*Fowl Manna Grass		<i>Glyceria striata</i>	*top shade, bankfull, water’s edge, shady stream		No seed pretreatment necessary. Needs light to germinate, surface sow seeds.		0.5oz/acre		90,000	
	Wet to moist conditions; fibrous root system; self- seeding; can tolerate more sun exposure in wetter conditions		OBL		Partial sunlight to shade	Fertile soil, loam		Swamps, marshes, streambanks, pond edges, bogs, seeps, ditches		
*Dudley’s Rush		<i>Juncus dudleyi</i>	*top sun, side slope, bankfull, water’s edge, sunny trails		Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre		3,200,000	
	Moist to wet conditions; fibrous and rhizomatous root system; can spread aggressively		FACW		Full sun	Loam, clay loam, gravel		Streambanks, wet meadows, pond edges, moist prairies, swales, ditches, fens		

Common Rush; Lamp Rush; Soft Rush	<i>Juncus effusus</i>		Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	0.125oz/acre	1,000,000	
	Wet conditions; deep fibrous and rhizomatous root systems, forms colonies; great for erosion control; self-seeding	OBL	Full sun	Mucky, sandy, gravelly, silty soil	Marshes, ditches, swamps, seeps, sloughs, pond edges, riverbanks	
*Torrey's Rush	<i>Juncus torreyi</i>	*side slope, bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	0.125oz/acre	1,600,000	
	Moist to fairly wet conditions; fibrous and rhizomatous root system; can spread aggressively in ideal conditions	FACW	Full sun	Acidic soils; mucky, sandy, clay soils	Prairies, pond edges, streambanks, ditches, swamps, meadows, marshes	
*Rice Cut Grass; Cut Grass	<i>Leersia oryzoides</i>	*water's edge, shaded stream edge	Best if sown in the fall, otherwise requires cold, moist stratification for a minimum of 90 days	0.25oz/acre	34,000	
	Wet to moist conditions; leaves have sharp edges that can cut skin and should not be planted in public use areas; fibrous and rhizomatous root system, forms dense colonies	OBL	Full to partial sunlight	Wet fertile soil, muck, acidic soil	Swamps, marshes, riverbanks, pond edges, ditches, disturbed wetland areas, streambanks	
*White Grass	<i>Leersia virginica</i>	*top shade, bankfull, water's edge, shaded stream edge, side slope	No seed pretreatment necessary	N/A	N/A	
	Moist conditions; fibrous and rhizomatous root system; limited local commercial availability	FACW	Partial shade	Fertile soil, loam	Swamps, floodplain woodlands, shady pond edges, streambanks, marshes, moist wooded areas, shaded slopes, disturbed areas	
River Bulrush; River Club-Rush	<i>Schoenoplectus fluviatilis</i> (<i>Scirpus fluviatilis</i>)		Best if sown in the fall, otherwise requires cold, moist stratification for a minimum of 90 days. Need light to germinate, surface sow seeds.	1oz/acre	4,300	
	Wet conditions; a synonymous scientific name is <i>Scirpus fluviatilis</i> which is used by many nurseries; rhizomatous root system, forms dense colonies; can become aggressive	OBL	Full sun	Wet soils, clay, loam, sand	Marshes, lake shores, riverbanks, streambanks, pond edges	
*Slender Bulrush	<i>Schoenoplectus heterochaetus</i> (<i>Scirpus heterochaetus</i>)	*bankfull, water's edge	N/A	N/A	N/A	
	Wet to moist conditions; rhizomatous; a scientific synonymous name is <i>Scirpus heterochaetus</i> ; limited commercial availability	OBL	Full to partial sunlight	Wet soils	Marshes, lakeshores, streambanks	

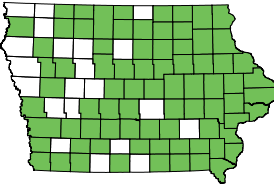
*Dark Green Bulrush; Green Bulrush		<i>Scirpus atrovirens</i>	*bankfull, water’s edge	Best if sown in the fall, otherwise requires cold, moist stratification for a minimum of 60 days. Need light to germinate, surface sow seeds.		0.5oz/acre	460,000	
	Wet conditions; fibrous and rhizomatous root system, forms colonies; great for erosion control; self-seeding			OBL	Full to partial sunlight	Can survive in a variety of soil types		
*Wool grass		<i>Scirpus cyperinus</i>	*bankfull, water’s edge	Best if sown in the fall, otherwise requires cold, moist stratification for a minimum of 60 days. Needs light to germinate, surface sow seeds.		0.125oz/acre	1,700,000	
	Wet conditions; fibrous and rhizomatous root system, often forms colonies; best results may be through transplant; great for erosion control; can become aggressive in ideal conditions			OBL	Full to partial sunlight	Sandy, muddy, gravelly, peaty soils		
*Whitetop grass; Common river grass		<i>Scolochloa festucacea</i>	*bankfull, water’s edge	No seed pretreatment necessary.		2oz/acre	19,000	
	Wet conditions; rhizomatous root system			OBL	Full sun	Wet soils, clay		
*Prairie Cordgrass; Freshwater Cordgrass; Sloughgrass		<i>Spartina pectinata</i>	*side slope, bankfull, water’s edge	No seed pretreatment necessary		*Transplants/plugs most successful	6,600	
	Moist to wet conditions; great for erosion control; can help reduce high energy of flowing waters; fibrous and rhizomatous, often forms colonies; can become aggressive; propagation through plugs or dividing the rhizomes is most successful			FACW	Full to partial sunlight	Fertile soil; loamy, sandy		

Shrubs & Vines (Water’s Edge)

*Speckled alder; Grey Alder; Thin-leaved Alder		<i>Alnus incana</i>	*side slope, bankfull, water's edge	Cold, moist stratification for a minimum of 90 days, or fall planting.		0.25oz/acre	33,000	
	Moist to wet conditions; flood tolerant; fast growth rate; shallow, rhizomatous, wide root system; seed propagation over cuttings is recommended		FACW	Full to partial sunlight	Can survive in a variety of soil types	Wetlands, swamps, streambanks, floodplain woodlands, lakeshores, roadsides, bogs		

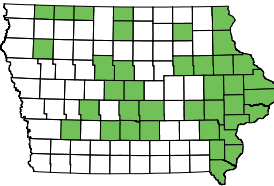
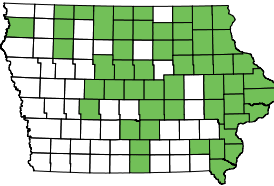
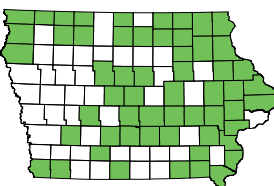
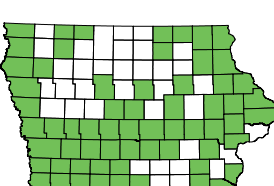
*Common Buttonbush		<i>Cephalanthus occidentalis</i>	*bankfull, water's edge	No seed pretreatment necessary.		2oz/acre	6,000	
	Wet to moist conditions; branching and woody root system; seed or cutting propagation are successful; excellent pollinator; readily establishes from cuttings in the spring before leaves form		OBL	Full to partial sunlight	Fertile soil; humusy soil	Swamps, bogs, marshes, ditches, floodplain woodlands, wet prairies, seeps, riverbanks		
*Red-osier Dogwood		<i>Cornus stolonifera</i> (<i>Cornus sericea</i>)	*bankfull, water's edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		N/A	N/A	
	Moist to slightly wet conditions; wide, shallow and woody root system with underground runners; great for erosion control; propagation by seeds or cuttings; may also be referred to as <i>Cornus sericea</i>		FACW	Full to partial sunlight	Can survive in a variety of moist soil types; sandy soils	Meadows, marshes, bogs, swamps, thickets, floodplain woodlands, streambanks		
*Swamp Dogwood; Silky Dogwood; Pale Dogwood		<i>Cornus obliqua</i>	*bankfull, water's edge, stream edge shade	Cold, moist stratification for a minimum of 60 days, or fall planting.		N/A	N/A	
	Moist to wet conditions; wide, shallow, woody roots; propagation by seeds or cuttings; excellent pollinator		FACW	Full sun to partial shade	Moist soils; sandy	Floodplain woodlands, wet meadows, wet prairies, streambanks, pond edges, swamp edges, fens		
*Peach-leaf Willow; Wright Willow, Almond Willow		<i>Salix amygdaloides</i>	*water's edge, bankfull	Sow seeds immediately after collection. Needs moist soils to germinate.		N/A	N/A	
	Moist to wet conditions; woody, shallow root system; self-seeding; fast growth rate; seed and cutting propagation (cuttings may be more successful); excellent pollinator		FACW	Full to partial sunlight	clay loam, loam, sandy, silty soils	Streambanks, pond edges, sloughs, floodplain woodlands, swamps		
*Pussy willow		<i>Salix discolor</i>	*water's edge, bankfull	Sow seeds immediately after collection.		*Cuttings most successful form of propagation	N/A	
	Moist to wet conditions; woody, shallow and extensive root system; fast growth rate; cuttings most successful form of propagation; excellent pollinator; shade intolerant		FACW	Full sun	Moist soils, sandy, alluvial soils	Open floodplain woodlands, marshes, swamps, riverbanks, streambanks, wet prairies, ditches		
*Sandbar Willow		<i>Salix interior</i>	*water's edge, bankfull, stream edge shade	Sow seeds immediately after collection.		*Cuttings most successful form of propagation	N/A	
	Moist to wet conditions; woody root system with long runners; can spread aggressively through underground runners; propagate through cuttings; excellent pollinator		FACW	Full to partial sunlight	Sandy, gravelly soils, alluvial soils	Wet meadows, streambanks, riverbanks, lake shores, ditches, sloughs, swamps, sandbars, gravel bars, marshes		

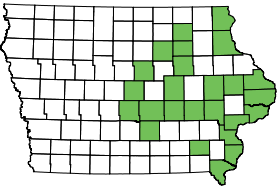
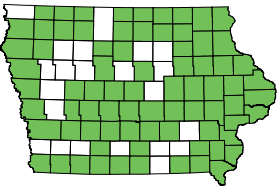
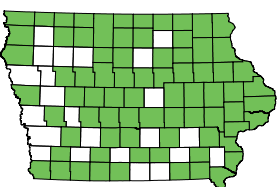
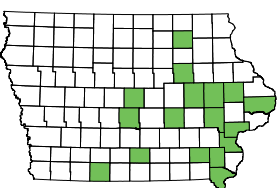
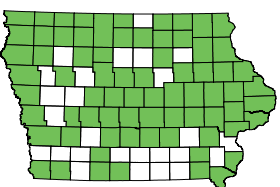
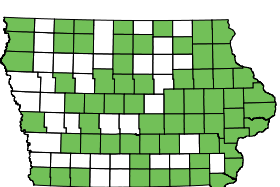
Trees (Water’s Edge)

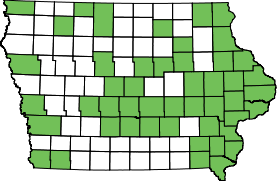
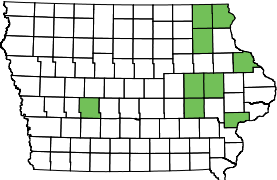
	*Black Willow; Swamp Willow	<i>Salix nigra</i>	*side slope, bankfull, water’s edge, shaded stream edge, sunny and wooded trails	Not fully known, best results if planted immediately after collection.		N/A	N/A	
	Wet to moist conditions; shallow, wide, lateral root system; most common propagation through cuttings, though seed propagation can be successful as well; fast growth rate; excellent pollinator;		OBL	Full to partial sunlight	Can survive in a variety of soil types		Floodplain woodlands, swamps, riverbanks, lake edges, ditches, sloughs, pond edges, wet disturbed areas	

Stream-edge planting menu for heavy shade canopy in 1-2 year flood zone (Bankfull and Water’s Edge Zones)

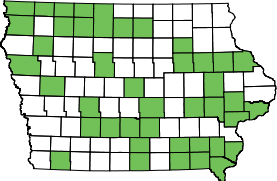
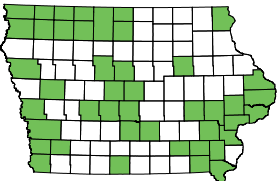
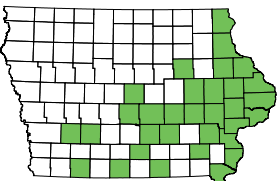
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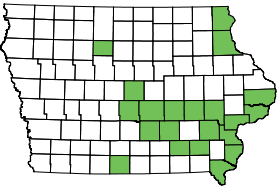
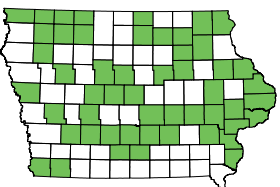
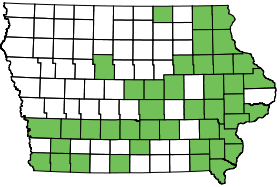
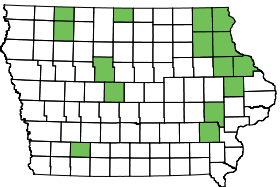
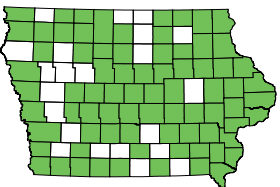
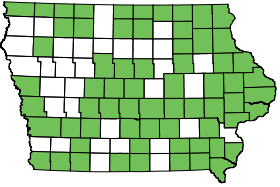
	*False nettle	<i>Boehmeria cylindrica</i>	*bankfull, shaded stream edge, wooded trails	No seed pretreatment necessary		1oz/acre	208,000	
	Moist conditions; dioecius		OBL	Partial sunlight	Fertile, loamy soil		Floodplain woodlands, streambanks, riverbanks, swamps, marshes , fens	
	*Cinnamon Willow-Herb; Purpleleaf willowherb	<i>Epilobium coloratum</i>	*bankfull, water’s edge, stream edge shady	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	250,000	
	Wet to moist conditions; fibrous root system that produces rhizomes; pioneer species		OBL	Full to partial sunlight	Soil that can retain moisture		Wet prairies, marshes, riverbanks, lake shores, swamps, bogs, disturbed areas	
	*Spotted touch-me-not; Orange jewelweed	<i>Impatiens capensis</i>	*top shade, shady stream edge, wooded trail, bankfull	Sow seeds immediately after collection.		0.25oz/acre	4,000	
	Wet to moist conditions; annual; taproot; self-seeding; readily germinates from seed; excellent pollinator; shade tolerant; can become aggressive		FACW	Full to partial shade	Moist, fertile, clay, loam, sand		Shady bogs, floodplain woodlands, swamps, shady streambanks, wet ditches, seeps	
	*Pale touch-me-not; Yellow jewelweed	<i>Impatiens pallida</i>	*top shade, shady stream edge, wooded trail, bankfull	Sow seeds immediately after collection.		1oz/acre	1,600	
	Wet to moist conditions; taproot; annual; readily germinates from seeds; excellent pollinator; can become aggressive		FACW	Partial shade	Moist soils; loamy, mucky		Swamps, open floodplain woodlands, muddy streambanks, woody edges of marshes	

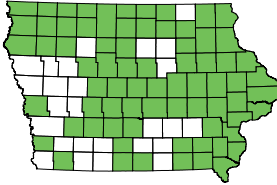
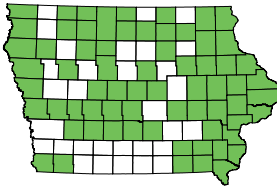
*Cardinal Flower	<i>Lobelia cardinalis</i>	*bankfull, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	*Transplants/plugs most successful	400,000	
	Wet to moist conditions; propagation through transplants or plugs are usually most successful; longevity sometimes limited; central taproot	OBL	Full sun to light shade	Sandy, loamy, gravelly, clay soils	Wet prairies, marsh edges, open floodplain woodlands, ditches, wet meadows, streambanks, swamps	
*Great Blue Lobelia; Blue Cardinal Flower	<i>Lobelia siphilitica</i>	*top shade, bankfull, shaded stream edge, wooded trail	Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.	0.125oz/acre	500,000	
	Wet to moist conditions; can be established without stratification; central taproot	OBL	Full sun to partial sunlight	Fertile soil; loam, sandy loam, clay	Wet prairies, open floodplain woodlands, wet meadows, riverbanks, ditches, swamps	
*Monkey Flower; Allegheny Monkeyflower; Square-stemmed Monkeyflower	<i>Mimulus ringens</i>	*bankfull, water's edge, shaded stream edge	Cold, moist stratification for a minimum of 30 days, or fall planting. Needs light to germinate, surface sow seeds.	0.125oz/acre	2,300,000	
	Wet conditions; rhizomatous root system; self-seeding	OBL	Partial sun	Moist, fertile soils; loam, sand, clay	Open floodplain woodlands, swamps, meadows, pond edges, streambanks, wet ditches, seeps	
*Pickerel weed	<i>Pontederia cordata</i>	*water's edge, heavy shade	Likely needs cold, wet stratification for a minimum of 30 days followed by spring planting. Do not let seeds dry out.	N/A	N/A	
	Wet conditions; fibrous and rhizomatous root system; propagation through seeds or rhizomes is most successful	OBL	Full to partial sunlight	Wet soils, muck, mud	Marshes, pond edges, swamps, slow-moving streams	
*Tall coneflower; Green-head coneflower; Cutleaf coneflower	<i>Rudbeckia laciniata</i>	*shady stream edge, bankfull, top shade, side slope	Cold, moist stratification for a minimum of 30 days or fall planting. Needs light to germinate, surface sow seeds.	1.5oz/acre	14,000	
	Moist to wet conditions; easily grown from seed; rapid growth rate through rhizomes; flood tolerant; excellent pollinator; can be considered weedy	FACW	Full to partial sunlight, shade	Moist soil; loam	Floodplain woodlands, shady riverbanks, moist meadows, sloughs, lowland thickets and fields	
*Mad-dog Skullcap	<i>Scutellaria lateriflora</i>	*bankfull, water's edge, shaded stream edge	Cold, moist stratification for a minimum of 60 days or fall planting.	1oz/acre	65,000	
	Wet to consistently moist conditions; taproot with rhizomes;	OBL	Full sun to partial shade	Can survive in a variety of soils if there is consistent moisture available	Marshes, moist meadows, swamps, open floodplain woodlands, wet thickets, seeps, bogs	

*Smooth Hedge nettle; Hedge nettle	<i>Stachys tenuifolia</i>	*top shade, water's edge, shaded stream edge	N/A		N/A	N/A	
	Wet conditions; rhizomatous root system with taproot, forms colonies		OBL	Partial sun	Wet soil; clay, loam, sand	Floodplain woodlands, streambanks, thickets, swamps, seeps, ditches, meadows, wet fields, marshes, moist prairies	
*Skunk cabbage	<i>Symplocarpus foetidus</i>	*bankfull, water's edge, shady stream edge	Seeds should not be allowed to dry out before sowing.		N/A	N/A	
	Wet conditions; self-seeding; limited commercial availability		OBL	Partial sun to shade	Wet, rich soil, muck	Marshes, streambanks, riverbanks, pond edges, muddy wet areas, wet woodlands, seeps, swamps	

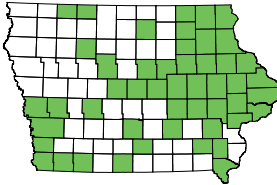
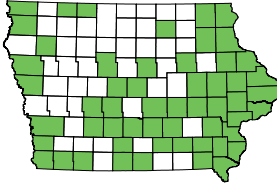
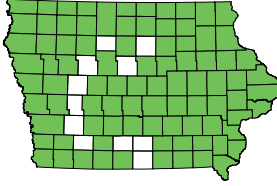
Grasses, Sedges, & Rushes (Shaded stream edge)

*Yellow headed fox sedge; Yellow Fox Sedge; Yellowfruit Sedge; Small Yellow Fox Sedge	<i>Carex annectens</i>	*water's edge, bankfull, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.25oz/acre	90,000	
	Moist to wet conditions; fibrous and rhizomatous root system; sometimes referred to with the scientific name <i>Carex brachyglossa</i>		FACW	Full sun to partial shade	Can survive in a variety of soil types	Pond edges, fens, ditches, marshes, wet prairies, swamps, seeps, moist disturbed areas	
*Wheat Sedge; Hairy-leaved Lake Sedge; Awned Sedge	<i>Carex atherodes</i>	*water's edge, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.5oz/acre	29,000	
	Wet conditions; rhizomatous root system, forms colonies		OBL	Full sun to partial shade	Moist soil; clay	Marshes, wet meadows, wet ditches, streambanks, riverbanks, swamps, open floodplain woodlands	
*Gray's sedge; Bur sedge	<i>Carex grayi</i>	*stream edge shade, top shade, side slope, woodland trails, bankfull	Fall planting is recommended.		2oz/acre	1,200	
	Wet to moist conditions; tolerant to seasonal flooding; full sun tolerable in wet conditions; fibrous and rhizomatous root system		FACW	Partial shade	Fertile soil; loam, sand, silt	Moist, deciduous woodlands, sandy swamps, shady streambanks, marshes	

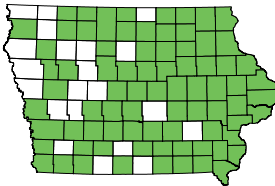
*Muskingum Sedge; Palm Sedge	<i>Carex muskingumensis</i>	*bankfull, water's edge, shaded stream edge	No pretreatment necessary.		1oz/acre	7,500	
	Wet to moist conditions; fibrous and rhizomatous root system		OBL	Full sun to partial shade	Fertile soils; loam	Swamps, riverbanks, meadows, floodplain woodlands	
*Porcupine sedge; Bottlebrush Sedge	<i>Carex hystericina</i>	*bankfull, water's edge, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.25oz/acre	30,000	
	Wet to moist conditions; fibrous and rhizomatous root system; part of "bottlebrush" sedge group		OBL	Full sun to partial shade	Wet calcareous soil; loam, sand	Swamps, pond edges, wet prairies, marshes, ditches, seeps, meadows	
*Greater Straw Sedge; Spreading Oval Sedge	<i>Carex normalis</i>	*top shade, side slope, bankfull, shaded stream edge	Cold, moist stratification for a minimum of 60 days, or fall planting.		0.25oz/acre	25,000	
	Moist to wet conditions; fibrous and rhizomatous root system; self-seeding		FACW	Full sun to partial shade	Fertile soils	Open woodlands, pond edges, ditches, streambanks, prairies, meadows, fields, disturbed areas	
*Riverbank Wild Rye	<i>Elymus riparius</i>	*side slope, top shade, bankfull, shaded stream edge	No seed pretreatment necessary		0.5lb/acre	2,900	
	Moist to wet conditions; low drought tolerance; high fire tolerance; self-seeding; great for erosion control; rhizomatous root system		FACW	Partial shade to shade	Loam, sand, clay	Meadows, streambanks, riverbanks, moist prairies, fields	
*Virginia Wild Rye	<i>Elymus virginicus</i>	*top shade, top sun, shaded stream edge, sunny trails, wooded trails	No seed pretreatment necessary		1lb/acre	4,200	
	Moist conditions; fibrous root system; great cover crop for erosion control; easily grown from seed; tends to give way to other species over five years		FACW	Full sun to shade	Fertile soil; loam, clay loam, sandy, can survive in a variety of soil types	Bottomland woodlands, riparian areas, riverbanks, streambanks, moist prairies, roadsides, bluffs, moist savannas, disturbed areas	
*Fowl Manna Grass	<i>Glyceria striata</i>	*water's edge, shady stream	No seed pretreatment necessary. Needs light to germinate, surface sow seeds.		0.5oz/acre	90,000	
	Wet to moist conditions; fibrous root system; self-seeding; can tolerate more sun exposure in wetter conditions		OBL	Partial sunlight to shade	Fertile soil, loam	Swamps, marshes, streambanks, pond edges, bogs, seeps, ditches	

*Rice Cut Grass; Cut Grass		<i>Leersia oryzoides</i>	*water's edge, shaded stream edge	Best if sown in the fall, otherwise requires cold, moist stratification for a minimum of 90 days		0.25oz/acre	34,000	
	Wet to moist conditions; leaves have sharp edges that can cut skin and should not be planted in public use areas; fibrous and rhizomatous root system, forms dense colonies		OBL	Full to partial sunlight	Wet fertile soil, muck, acidic soil	Swamps, marshes, riverbanks, pond edges, ditches, disturbed wetland areas, streambanks		
*White Grass		<i>Leersia virginica</i>	*top shade, bankfull, water's edge, shaded stream edge, side slope	No seed pretreatment necessary		N/A	N/A	
	Moist conditions; fibrous and rhizomatous root system; limited local commercial availability		FACW	Partial shade	Fertile soil, loam	Swamps, floodplain woodlands, shady pond edges, streambanks, marshes, moist wooded areas, shaded slopes, disturbed areas		

Shrubs & Vines (Shaded stream edge)

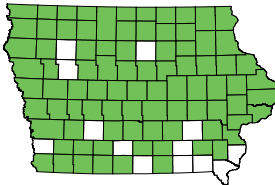
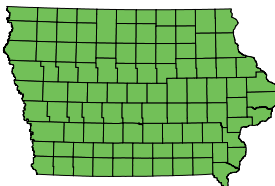
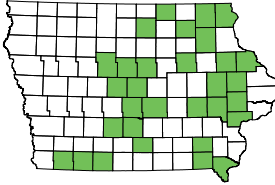
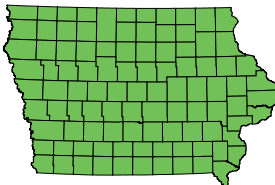
*Swamp Dogwood; Silky Dogwood; Pale Dogwood;		<i>Cornus obliqua</i>	*bankfull, water's edge, stream edge shade	Cold, moist stratification for a minimum of 60 days, or fall planting.		N/A		N/A		
	Moist to wet conditions; wide, shallow, woody roots; propagation by seeds or cuttings; excellent pollinator		FACW	Full sun to partial shade	Moist soils; sandy		Floodplain woodlands, wet meadows, wet prairies, streambanks, pond edges, swamp edges, fens			
*Wahoo; Eastern Wahoo; Burningbush		<i>Euonymus atropurpureus</i>	*stream edge shade, top shade, side slope	Not fully known, best propagation may be through plugs or cuttings. Seeds may need both a warm followed by a cold stratification period of 60-90 days.		N/A		N/A		
	Moist conditions; taproot; self-seeding; best propagation may be through plugs or cuttings		FAC	Partial shade	Fertile soil; loam, can survive in a variety of soil types		Floodplain woodlands, streambanks, moist meadows, woodland edges			
*Sandbar Willow		<i>Salix interior</i>	*water's edge, bankfull, stream edge shade	Sow seeds immediately after collection.		*Cuttings most successful form of propagation		N/A		
	Moist to wet conditions; woody root system with long runners; can spread aggressively through underground runners; propagate through cuttings; excellent pollinator		FACW	Full to partial sunlight	Sandy, gravelly soils, alluvial soils		Wet meadows, streambanks, riverbanks, lake shores, ditches, sloughs, swamps, sandbars, gravel bars, marshes			

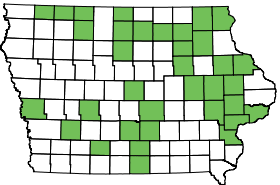
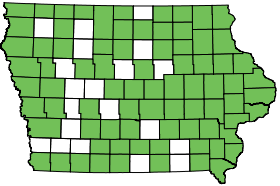
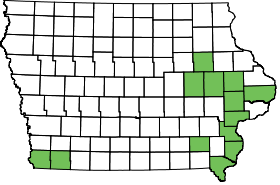
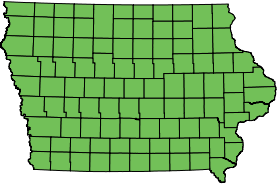
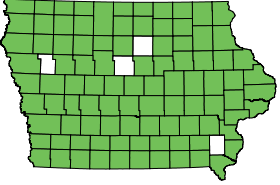
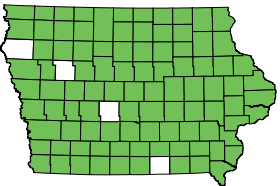
Trees (Shaded stream edge)

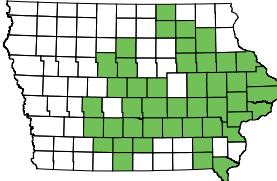
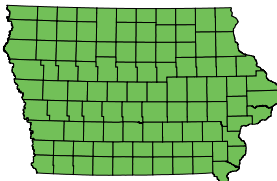
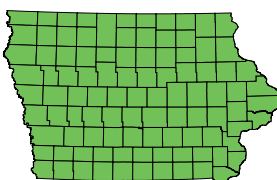
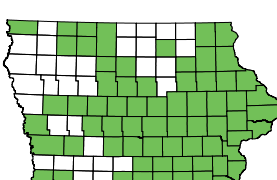
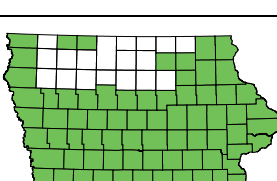
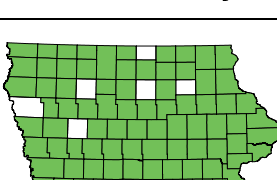
*Black Willow; Swamp Willow		<i>Salix nigra</i>	*side slope, bankfull, water's edge, shaded stream edge, sunny and wooded trails	Not fully known, best results if planted immediately after collection.		N/A	N/A	
	Wet to moist conditions; shallow, wide, lateral root system; most common propagation through cuttings, though seed propagation can be successful as well; fast growth rate; excellent pollinator;	OBL	Full to partial sunlight	Can survive in a variety of soil types		Floodplain woodlands, swamps, riverbanks, lake edges, ditches, sloughs, pond edges, wet disturbed areas		

Along trail edges (Sunny Uplands)

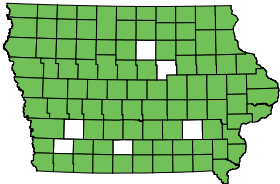
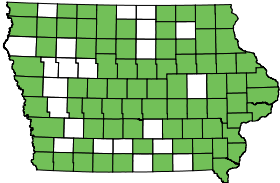
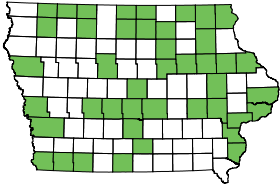
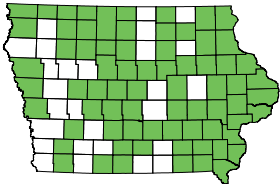
Forbs

Prairie sage; white sagebrush		<i>Artemisia ludoviciana gnaphalodes (Artemisia ludoviciana)</i>			Cold, moist stratification for a minimum of 30 days, or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre		250,000			
	Dry to slightly moist conditions; the scientific name <i>Artemisia ludoviciana</i> is used by many nurseries; rhizomatous root system, forms dense colonies; can become aggressive			UPL		Full sun	Can survive in a variety of soil types		Prairies, roadsides, pastures, open woodlands			
*Common Milkweed; Silkweed		<i>Asclepias syriaca</i>		*top sun, side slope, sunny trail		Cold, moist stratification for a minimum of 30 days, or fall planting.		0.5oz/acre		4,000		
	Slightly dry to somewhat moist conditions; rhizomatous root system; seed and rhizome cutting propagation; can spread aggressively; excellent pollinator; can be considered weedy; drought tolerant			FACU		Full sun	Sandy, rocky, clay		Prairies, riverbanks, streambanks, forest edges, roadsides, thickets, railroads, open woodlands, disturbed areas			
Cream Gentian		<i>Gentiana alba (Gentiana flavida)</i>		*side slope, sunny trails		Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		1oz/acre		140,000		
	Slightly dry to somewhat moist conditions; long taproot; a synonymous scientific name is <i>Gentiana flavida</i> ; excellent pollinator; propagation through transplants is most successful			FACU		Full sun to partial shade	Can survive in a variety of soil types		Prairies, oak savannas, rocky bluffs, woodland edges, limestone glades, rocky or wooded slopes			
Ox-eye		<i>Heliopsis helianthoides</i>			Cold, moist stratification for a minimum of 30 days, or fall planting.		16oz/acre (1lb)		6,300			
	Moist to moderately moist conditions; fibrous root system; easily grown from seed; excellent pollinator			FACU		Full to partial sunlight	Can survive in a variety of soil types		Prairies, open woodlands, thickets, limestone glades, savannas, streambanks, prairie remnants, woodland edges			

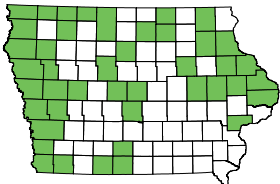
*Northern bugleweed		<i>Lycopus uniflorus</i>	*bankfull, water's edge, wooded trails, sunny trails	N/A		N/A	N/A	
	Wet to moist conditions; tuberous roots with stolons; propagation through tubers is most successful		OBL	Full to partial sunlight	Sandy, loamy, mucky soil		Streambanks, fens, marshes, swamps, lake edges, moist meadows	
*Wild Bergamot; Beebalm		<i>Monarda fistulosa</i>	*top shade and top sun, sunny and woodland trails	No seed pretreatment necessary		0.25oz/acre	70,000	
	Moist, well-drained to partially dry conditions; rhizomatous with deep roots; excellent pollinator; easily grown from seed; can become aggressive; very hardy and thrives in disturbed areas; drought tolerant		FACU	Full to partial sunlight	Can survive in a variety of soil types		Open woodlands, fields, moist meadows, ditches, edges of forests, prairies, savannas, thickets, disturbed areas	
*Mousetail; Tiny mousetail		<i>Myosurus minimus</i>	*water's edge, sunny trails, wooded trails	N/A		N/A	N/A	
	Moist to slightly dry conditions; fibrous root system; self-seeding; found in exposed soil with little vegetation		FACW	Full to partial sunlight	Loam, sandy loam, gravelly loam, clay loam		Eroded streambanks, pond and lake shores, pastures, barren woodland areas, disturbed areas	
*Norwegian cinquefoil		<i>Potentilla norvegica</i>	*sunny trails, wooded trails	N/A		N/A	N/A	
	Moist to slightly dry conditions; taproot; self-seeding; excellent pollinator; easily grown from seed		FAC	Full to partial sunlight	Loamy soils		Weedy meadows, pastures, parking lot edges, streambanks, sloughs, marshes, disturbed/waste areas	
*Yellow coneflower; Gray-head coneflower; Pinnate prairie coneflower		<i>Ratibida pinnata</i>	*side slope, top sun, sunny trail	Cold, moist stratification for a minimum of 30 days, or fall planting.		1oz/acre	30,000	
	Moist to slightly dry conditions, easily grown from seed; drought tolerant; rhizomatous, often forms colonies; excellent pollinator		N/A	Full sun	Loam, clay loam, can survive in a variety of soil types		Dry woodlands, prairies, thickets, railroads, roadsides, forest edges, remnant prairies, disturbed areas	
*Black-eyed Susan		<i>Rudbeckia hirta</i>	*Top shade & sun, side slope, sunny trail	Cold, moist stratification for a minimum of 30 days or fall planting.		0.5oz/acre	92,000	
	Opportunistic species, does well in disturbed areas; fast maturation; slightly moist to dry conditions; can tolerate above-average rainfall in well-drained conditions; central taproot; biennial		FACU	Full to partial sunlight	Fertile soil; clay loam, sandy loam		Slightly wet to dry prairies, meadows, roadside ditches, savannas, rocky areas, and disturbed sites	

*Sweet coneflower; Sweet black-eyed susan		<i>Rudbeckia subtomentosa</i>	*side slope, top sun, sunny trail	Cold, moist stratification for a minimum of 30 days, or fall planting.		0.5oz/acre	43,000	
	Moist, well-drained conditions; germinates readily; moderately drought tolerant; rhizomatous		FACU	Full sun to partial sunlight	Loam, sandy loam, clay	Moist prairies, open woods, savannas, thickets, riverbanks, streambanks, roadsides, ditch slopes, disturbed areas		
*Giant Goldenrod; Tall Goldenrod; Early Goldenrod		<i>Solidago gigantea</i>	*side slope, bankfull, sunny trails, wooded trails	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.05oz/acre	250,000	
	Moist to wet conditions; fibrous and rhizomatous root system; excellent pollinator; can become aggressive		FACW	Full sun to light shade	Moist soils; loam, clay loam, sand-loam	Floodplain woodlands, riverbanks, pond edges, wet prairies, fens, ditches		
Heath aster		<i>Symphyotrichum ericoides (Aster ericoides)</i>		Needs light to germinate, surface sow seeds. No other pretreatment necessary.		0.5oz/acre	200,000	
	Normal to dry conditions; rhizomatous root system; excellent pollinator; a synonymous scientific name is <i>Aster ericoides</i> , often used by nurseries		FACU	Full sun	Gravelly, loamy, clay soils	Prairies, savannas, open and dry rocky woodlands, pastures, limestone glades, railroads, roadsides		
*Willow Aster		<i>Symphyotrichum praealtum (Aster praealtus)</i>	*top sun, sunny trails, wooded trail	Cold, moist stratification for a minimum of 30 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	130,000	
	A synonymous scientific name is <i>Aster praealtus</i> , often used by nurseries; moist conditions; fibrous and rhizomatous root system, often forms colonies; can become aggressive; excellent pollinator		FACW	Full to partial sunlight	Fertile, loamy soils	Moist prairies, fields, ditches, thickets, lakeside and riverside meadows		
*Smooth speedwell; Neckweed		<i>Veronica peregrina</i>	*sunny trails, wooded trails	N/A		N/A	N/A	
	Moist to wet conditions; fibrous root system with taproot; easily grown from seed		FACW	Full sun to partial shade	Moist soils	Roadsides, lawns, fens, meadows, waste areas		
*Common blue violet		<i>Viola sororia</i>	*top shade, wooded trails, sunny trails, side slope	Best if sown in the fall. Otherwise, requires cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		0.5oz/acre	23,000	
	Moderately moist conditions; rhizomatous root system; self-seeding; easily grown from seed; can become aggressive in optimum conditions		FAC	Partial sunlight	Fertile soil; loam, clay loam	Moist black prairies, savannas, wooded slopes along streams, woodland edges, open floodplain woodlands		

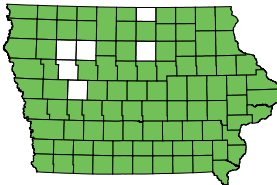
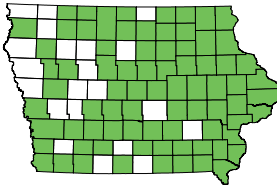
Grasses, Sedges & Rushes (Sunny Trails)

*Canada Wild Rye	<i>Elymus canadensis</i>	*top sun, sunny trail, side slope	No seed pretreatment necessary		0.5 lb/acre	5,200	
	Moist to dry conditions; great for erosion control; rapid establishment; easily grown from seed; moderately drought tolerant; fibrous root system	FACU	Full to partial sun	Can survive in a variety of soil types		Prairies, savannas, bluffs, river streambanks, railroads, open woodlands, sandy shores and dunes, disturbed areas	
*Virginia Wild Rye	<i>Elymus virginicus</i>	*top shade, top sun, shaded stream edge, sunny trails, wooded trails	No seed pretreatment necessary		1lb/acre	4,200	
	Moist conditions; fibrous root system; great cover crop for erosion control; easily grown from seed; tends to give way to other species over five years	FACW	Full sun to shade	Fertile soil; loam, clay loam, sandy, can survive in a variety of soil types		Bottomland woodlands, riparian areas, riverbanks, streambanks, moist prairies, roadsides, bluffs, moist savannas, disturbed areas	
*Dudley’s Rush	<i>Juncus dudleyi</i>	*top sun, side slope, bankfull, water’s edge, sunny trails	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	3,200,000	
	Moist to wet conditions; fibrous and rhizomatous root system; can spread aggressively	FACW	Full sun	Loam, clay loam, gravel		Streambanks, wet meadows, pond edges, moist prairies, swales, ditches, fens	
*Wirestem muhly; Common satin grass	<i>Muhlenbergia frondosa</i>	*side slope, sunny trails, wooded trails	N/A		N/A	N/A	
	Moist conditions; fibrous and rhizomatous root system, often forms colonies; can become aggressive	FACW	Full to partial sunlight	Can survive in a variety of soil types		Moist woodlands, prairies, prairie swales, bases of bluffs and wooded slopes, marsh edges, riverbanks, ditches, fields, railroads, disturbed areas	

Shrubs & Vines (Sunny Trails)

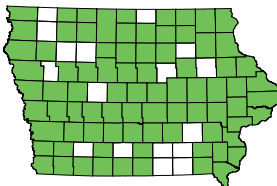
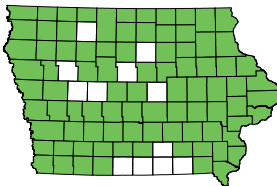
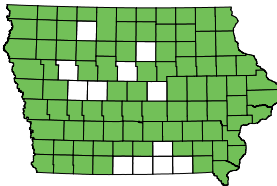
Western Snowberry; Wolfberry	<i>Symphoricarpos occidentalis</i>	sunny trails	Warm stratification for a minimum of 90 days followed by cold stratification for a minimum of 120 days.		N/A	N/A	
	Moist to slightly dry conditions; rhizomatous root system; stem and root cutting propagation; seed propagation is difficult; excellent pollinator	UPL	Full to partial sun	Can survive in a variety of soil types		Ditches, streambanks, floodplains, open swales, open woodlands, prairies, bluffs; disturbed areas	

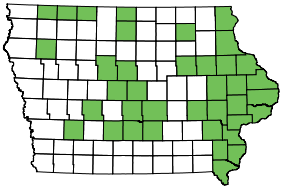
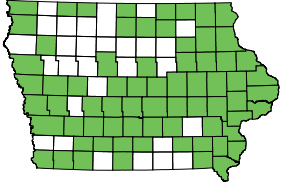
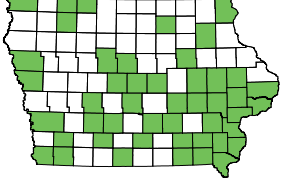
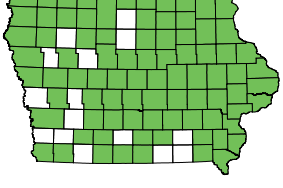
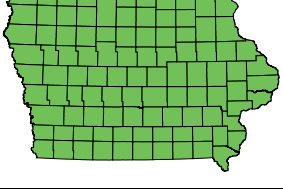
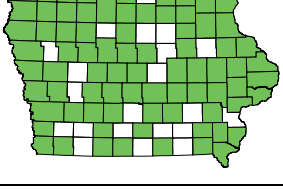
Trees (Sunny Trails)

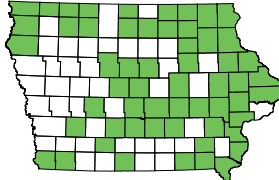
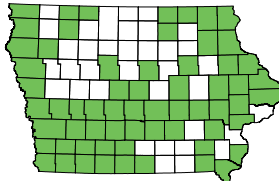
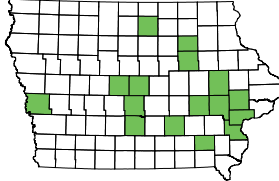
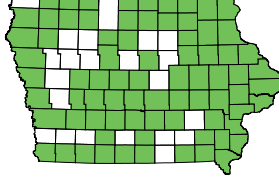
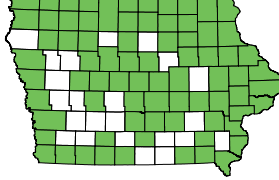
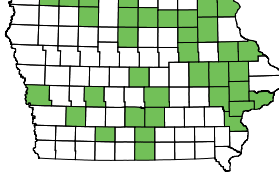
Black Cherry; Wild Black Cherry; Rum Cherry		<i>Prunus serotina</i>	sunny trails	Cold, moist stratification for a minimum of 90 days or fall planting.		N/A		N/A	
	Slightly dry to moist conditions; taproot; shade intolerant; self-seeding; excellent pollinator; seed and cutting propagation are successful		FACU	Full sun	Can survive in a variety of soil types, loam		Woodlands, savannas, powerline clearances, limestone glades, roadsides, tickets, disturbed areas		
*Black Willow; Swamp Willow		<i>Salix nigra</i>	*side slope, bankfull, water's edge, shaded stream edge, sunny and wooded trails	Not fully known, best results if planted immediately after collection.		N/A		N/A	
	Wet to moist conditions; shallow, wide, lateral root system; most common propagation through cuttings, though seed propagation can be successful as well; fast growth rate; excellent pollinator;		OBL	Full to partial sunlight	Can survive in a variety of soil types		Floodplain woodlands, swamps, riverbanks, lake edges, ditches, sloughs, pond edges, wet disturbed areas		

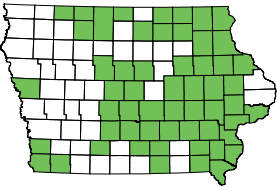
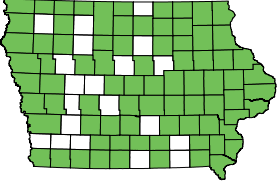
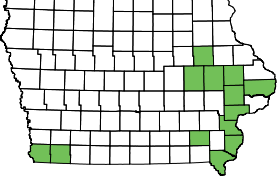
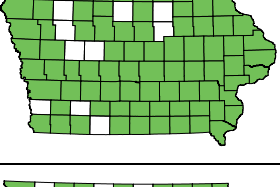
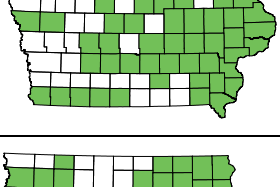
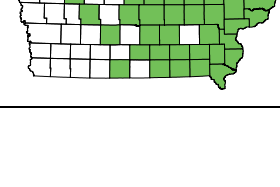
Along trail edges (Woodlands)

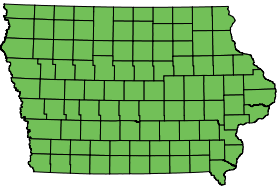
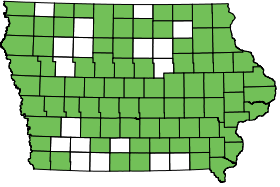
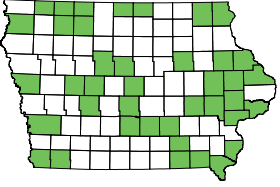
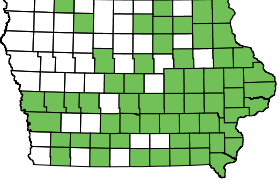
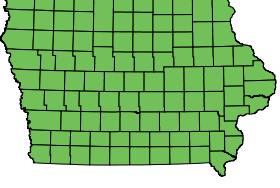
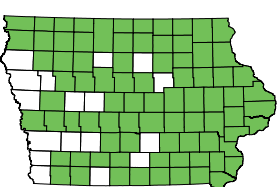
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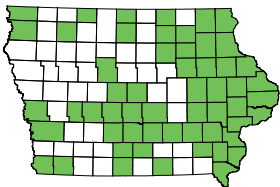
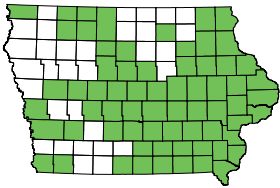
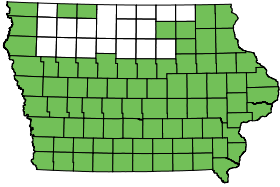
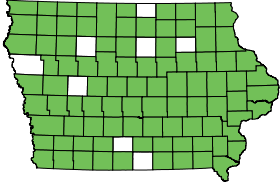
*White snakeroot		<i>Ageratina altissima</i> (<i>Eupatorium rugosum</i>)	*top shade, wooded trail	Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		0.25oz/acre		150,000	
	A synonymous scientific name is <i>Eupatorium rugosum</i> , which is used by many nurseries. Slightly dry to moist conditions; rhizomatous and fibrous root system; can be considered weedy; easily grown from seed		N/A	Partial sunlight	Loam, clay loam		Deciduous woodlands, thickets, woodland edges, bluffs, meadows, disturbed areas		
*Canada Anemone; Meadow Anemone		<i>Anemone canadensis</i>	*top sun, bankfull, sunny trail	Can sow outdoors with no pretreatment but plant will not germinate for 2 or more years. Otherwise three phases of stratification; cold, warm, cold for 60 days are necessary.		1oz/acre		8,000	
	Moist to wet conditions; rhizomatous root system, often forms colonies; can become aggressive		FACW	Full sun to partial shade	Loamy, gravelly, sandy soils		Meadows, prairies, open floodplain woodlands, streambanks, swamps, ditches		
*Wild ginger		<i>Asarum canadense</i>	*top shade, wooded trail, side slope	Sow seeds immediately after collection. May need to allow one full year for germination.		1oz/acre		4,400	
	Slightly dry to moist conditions; shallow rhizomatous root system, often forms colonies; most successful propagation through plugs or root division		FACU	Full to partial shade	Moist soil; Loam, slightly rocky soil		Floodplain and upland woodlands, bluffs, wooded slopes		

*False nettle	<i>Boehmeria cylindrica</i>	*bankfull, shaded stream edge, wooded trails	No seed pretreatment necessary		1oz/acre	208,000	
	Moist conditions; dioecius		OBL	Partial sunlight	Fertile, loamy soil	Floodplain woodlands, streambanks, riverbanks, swamps, marshes , fens	
*American bellflower; Tall Bellflower	<i>Campanulastrum americanum (Campanula americana, old scientific name)</i>	*top shade, wooded trail	Cold, moist stratification for a minimum of 30 days or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	170,000	
	Moist conditions; low drought tolerance; readily germinates; excellent pollinator; taproot; annual		FAC	Partial shade	Fertile, moist soil; loam	Moist woodlands, disturbed woodland areas, thickets, streambanks	
Chevril	<i>Chaerophyllum procumbens</i>		N/A		N/A	N/A	
	Moist conditions; taproot; self-seeding; can be considered weedy; annual		FACW	Partial sunlight	Fertile loam	Open lowland woodlands, woodland edges, railroads, roadsides, thickets, glades	
*Canadian Honewort	<i>Cryptotaenia canadensis</i>	*top shade, wooded trail	Cold, moist stratification for a minimum of 60 days or fall planting.		0.5oz/acre	7,000	
	Moist conditions; taproot; self-seeding		FAC	Partial shade	Well-drained, loamy, fertile	Floodplain woodlands, shady bluffs, slightly disturbed areas, woodland edges	
Waterpod; Aunt Lucy	<i>Ellisia nyctelea</i>		N/A		N/A	N/A	
	Moist to moderately moist conditions; taproot		FAC	Partial shade	Fertile loam	Deciduous woodlands, thickets, streambanks, fields, waste places, disturbed areas	
Fleabane	<i>Erigeron philadelphicus</i>		Sow seeds immediately after collection		N/A	N/A	
	Moist conditions; fibrous root system; self-seeding; can be considered weedy; excellent pollinator		FACW	Full to partial sunlight	Can survive in a variety of moist, well-drained soil types	Prairies, streambanks, marsh edges, ditches, fields, pond and lake margins, moist meadows, floodplain woodlands, moist disturbed areas	

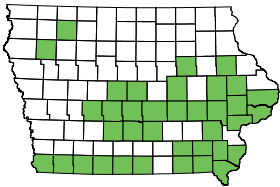
*Spotted touch-me-not; Orange jewelweed		<i>Impatiens capensis</i>	*top shade, shady stream edge, wooded trail, bankfull	Sow seeds immediately after collection.		0.25oz/acre	4,000	
	Wet to moist conditions; annual; taproot; self-seeding; readily germinates from seed; excellent pollinator; shade tolerant; can become aggressive		FACW	Full to partial shade	Moist, fertile, clay, loam, sand		Shady bogs, floodplain woodlands, swamps, shady streambanks, wet ditches, seeps	
*Pale touch-me-not; Yellow jewelweed		<i>Impatiens pallida</i>	*top shade, shady stream edge, wooded trail, bankfull	Sow seeds immediately after collection.		1oz/acre	1,600	
	Wet to moist conditions; taproot; annual; readily germinates from seeds; excellent pollinator; can become aggressive		FACW	Partial shade	Moist soils; loamy, mucky		Swamps, open floodplain woodlands, muddy streambanks, woody edges of marshes	
*Purple rocket		<i>Iodanthus pinnatifidus</i>	*top shade, side slope, wooded trails	N/A		N/A	N/A	
	Moist to wet conditions; taproot; self-seeding; easily grown from seed; excellent pollinator; tolerates seasonal flooding		FACW	Partial sunlight	Fertile, loamy soils		Floodplain woodlands, floodplain slopes, meadows	
*Great Blue Lobelia; Blue Cardinal Flower		<i>Lobelia siphilitica</i>	*top shade, bankfull, shaded stream edge, wooded trail	Cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	500,000	
	Wet to moist conditions; can be established without stratification; central taproot		OBL	Full sun to partial sunlight	Fertile soil; loam, sandy loam, clay		Wet prairies, open floodplain woodlands, wet meadows, riverbanks, ditches, swamps	
*Water horehound; American Bugleweed; American water horehound		<i>Lycopus americanus</i>	*bankfull, water's edge, wooded trails	Needs light to germinate, surface sow seeds. No other pretreatment necessary.		0.25oz/acre	130,000	
	Wet to moist conditions; rhizomatous root system, often forms colonies		OBL	Full to partial sunlight	Moist soils; clay, silt, loam		Wetlands, shorelines, riverbanks, marshes, ditches, wet prairies, open floodplain woodlands, wet thickets	
*Northern bugleweed		<i>Lycopus uniflorus</i>	*bankfull, water's edge, wooded trails, sunny trails	N/A		N/A	N/A	
	Wet to moist conditions; tuberous roots with stolons; propagation through tubers is most successful		OBL	Full to partial sunlight	Sandy, loamy, mucky soil		Streambanks, fens, marshes, swamps, lake edges, moist meadows	

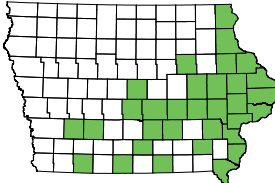
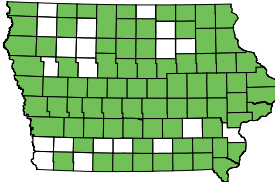
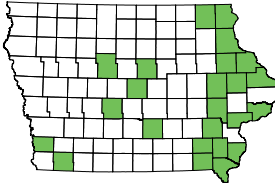
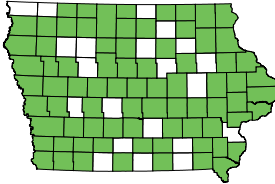
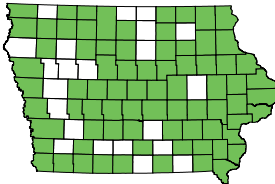
*Virginia bluebell	<i>Mertensia virginica</i>	*top shade, woodland trails	Best if sown in the fall or immediately after collection. Otherwise requires cold, moist stratification for a minimum of 60 days.		0.5oz/acre	9,700	
	Prefers moist, well-drained conditions; often forms colonies; taproot	FACW	Partial to full shade	Fertile, moist soil; loam, rock		Floodplain woodlands, shady bluffs, riverbanks and streambanks	
*Wild Bergamot; Beebalm	<i>Monarda fistulosa</i>	*top shade and top sun, sunny and woodland trails	No seed pretreatment necessary		0.25oz/acre	70,000	
	Moist, well-drained to partially dry conditions; rhizomatous with deep roots; excellent pollinator; easily grown from seed; can become aggressive; very hardy and thrives in disturbed areas; drought tolerant	FACU	Full to partial sunlight	Can survive in a variety of soil types		Open woodlands, fields, moist meadows, ditches, edges of forests, prairies, savannas, thickets, disturbed areas	
*Mousetail; Tiny mousetail	<i>Myosurus minimus</i>	*water's edge, sunny trails, wooded trails	N/A		N/A	N/A	
	Moist to slightly dry conditions; fibrous root system; self-seeding; found in exposed soil with little vegetation	FACW	Full to partial sunlight	Loam, sandy loam, gravelly loam, clay loam		Eroded streambanks, pond and lake shores, pastures, barren woodland areas, disturbed areas	
*Woodland phlox; Wild blue phlox	<i>Phlox divaricata</i>	*top shade, wooded trail	Cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre	12,500	
	Slightly dry to moderately moist conditions; rhizomatous root system; propagation through seeds or root division most successful	FACU	Partial shade	Can survive in a variety of soil types		Deciduous woodlands, bluffs, seasonal floodplains, streambanks, wooded paths	
*Clearweed	<i>Pilea pumila</i>	*top shade, wooded trails	N/A		N/A	N/A	
	Wet to moist conditions; self-seeding; easily grown from seed; annual	FACW	Partial sunlight	Fertile, loamy soils		Floodplain woodlands, streambanks, seeps, woodland edges	
*Jacob's ladder; greek valerian	<i>Polemonium reptans</i>	*tops shade, wooded trail	Cold, moist stratification for a minimum of 60 days or fall planting.		1oz/acre	18,000	
	Moderately moist to slightly dry conditions; fibrous root system; self-seeding; excellent pollinator	FAC	Partial sunlight	Fertile, loamy soils		Deciduous woodlands, streambanks, fens, moist prairies, woodland edges, wooded paths	

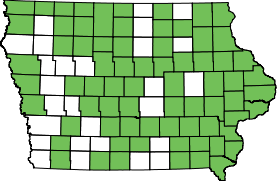
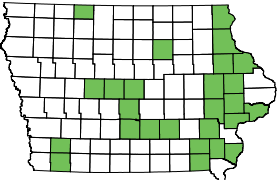
*Norwegian cinquefoil	<i>Potentilla norvegica</i>	*sunny trails, wooded trails	N/A		N/A	N/A	
	Moist to slightly dry conditions; taproot; self-seeding; excellent pollinator; easily grown from seed	FAC	Full to partial sunlight	Loamy soils		Weedy meadows, pastures, parking lot edges, streambanks, sloughs, marshes, disturbed/waste areas	
*Kidney leaf buttercup	<i>Ranunculus abortivus</i>	*top shade, wooded trail	N/A		N/A	N/A	
	Moist conditions; fibrous root system; self-seeding; can be considered weedy; easily grown from seed	FACW	Partial sunlight	Fertile soils; clay loam, loam		Woodlands, riverbanks, wooded paths, railroads, ditches, woodland edges, fields, disturbed areas	
*Cursed Crowfoot; Annual buttercup	<i>Ranunculus sceleratus</i>	*water's edge, wooded trails	Cold, moist stratification for a minimum of 30 days, or fall planting.		1oz/acre	145,000	
	Wet to moist conditions; fibrous root system; self-seeding; annual	OBL	Full to partial sunlight	Moist, fertile soils, clay loam, clay, mud		Marshes, seeps, streambanks, river sandbars, pond edges, wet meadows, ditches	
*Brown-eyed Susan	<i>Rudbeckia triloba</i>	*top sun, top shade, woodland trails	Cold, moist stratification for a minimum of 30 days or fall planting.		1oz/acre	34,000	
	Moist conditions; fibrous root system; self-seeding; drought tolerant; biennial	FACU	Full to partial sunlight	Fertile soil; loamy, gravelly, clay, sandy		Prairies, savannas, open forests, riverbanks, streambanks, tickets, roadsides, disturbed areas	
*Giant Goldenrod; Tall Goldenrod; Early Goldenrod	<i>Solidago gigantea</i>	*side slope, bankfull, sunny trails, wooded trails	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.05oz/acre	250,000	
	Moist to wet conditions; fibrous and rhizomatous root system; excellent pollinator; can become aggressive	FACW	Full sun to light shade	Moist soils; loam, clay loam, sand-loam		Floodplain woodlands, riverbanks, pond edges, wet prairies, fens, ditches	
*New England aster; New England American-Aster	<i>Symphyotrichum novae-angliae</i> (<i>Aster novae-angliae</i>)	*top sun, bankfull, side slope, woodland trail	Cold, moist stratification for a minimum of 60 days, or fall planting.		1oz/acre	66,000	
	A synonymous scientific name is <i>Aster novae-angliae</i> which is used by many nurseries; moist conditions; fibrous and rhizomatous root system; can become aggressive; excellent pollinator	FACW	Full or partial sunlight	Fertile, moist soil; clay, loam		Prairies, meadows, riverbanks, thickets, railroads, roadsides, open woodlands, disturbed areas	

Ontario aster		<i>Symphyotrichum ontarionis</i> (<i>Aster ontarionis</i>)	*top shade, wooded trails	Likely requires cold, moist stratification for a minimum of 60 days or fall planting.		N/A		N/A		
	An older synonymous scientific name is <i>Aster ontarionis</i> , which is used by many nurseries. Moist conditions; rhizomatous and fibrous root system		FAC	Partial sunlight	Rich, loamy soils		Floodplain woodlands, open woodlands, wooded streambanks, savannas, meadows			
*Willow Aster		<i>Symphyotrichum praealtum</i> (<i>Aster praealtus</i>)	*top sun, sunny trails, wooded trail	Cold, moist stratification for a minimum of 30 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre		130,000		
	A synonymous scientific name is <i>Aster praealtus</i> , often used by nurseries; moist conditions; fibrous and rhizomatous root system, often forms colonies; can become aggressive; excellent pollinator		FACW	Full to partial sunlight	Fertile, loamy soils		Moist prairies, fields, ditches, thickets, lakeside and riverside meadows			
*Smooth speedwell; Neckweed		<i>Veronica peregrina</i>	*sunny trails, wooded trails	N/A		N/A		N/A		
	Moist to wet conditions; fibrous root system with taproot; easily grown from seed		FACW	Full sun to partial shade	Moist soils		Roadsides, lawns, fens, meadows, waste areas			
*Common blue violet		<i>Viola sororia</i>	*top shade, wooded trails, sunny trails, side slope	Best if sown in the fall. Otherwise, requires cold, moist stratification for a minimum of 60 days or fall planting. Needs light to germinate, surface sow seeds.		0.5oz/acre		23,000		
	Moderately moist conditions; rhizomatous root system; self-seeding; easily grown from seed; can become aggressive in optimum conditions		FAC	Partial sunlight	Fertile soil; loam, clay loam		Moist black prairies, savannas, wooded slopes along streams, woodland edges, open floodplain woodlands			

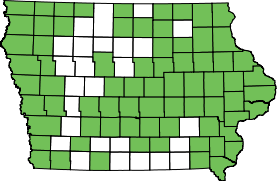
Grasses, Sedges, & Rushes (Wooded Trails)

*Awned Graceful Sedge; Davis' Sedge		<i>Carex davisii</i>	*top of bank shade, side slope, woodland edge	Not fully known, but cold, moist stratification for a minimum of 60 days or fall planting likely needed. May need light to germinate, surface sow seeds.		1oz/acre	9,000	
	Moist to wet conditions; flood tolerant; fibrous and rhizomatous root system		FAC	Partial sun	Moist soil; loam	Upland and floodplain woodlands, field edges, wooded slopes, riverbanks, moist meadows, slightly disturbed areas		

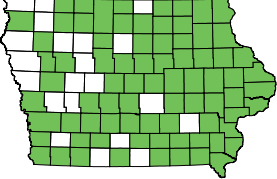
*Gray's sedge; Bur sedge		<i>Carex grayi</i>	*stream edge shade, top shade, side slope, woodland trails, bankfull	Fall planting is recommended.		2oz/acre	1,200	
	Wet to moist conditions; tolerant to seasonal flooding; full sun tolerable in wet conditions; fibrous and rhizomatous root system		FACW	Partial shade	Fertile soil; loam, sand, silt	Moist, deciduous woodlands, sandy swamps, shady streambanks, marshes		
*Bottlebrush Grass; Eastern Bottlebrush grass		<i>Elymus hystrix (Hystrix patula)</i>	*woodland trails, top shade	No seed pretreatment necessary		3oz/acre	7,600	
	Highly shade tolerant; moist to slightly dry conditions; a synonymous scientific name is <i>Hystrix patula</i> ; drought tolerant; self-seeding; fibrous root system; forms small colonies		FACU	Filtered sunlight to partial shade	Loamy, rocky soil, clay, can survive in a variety of soil types	Moist deciduous woodlands, rocky upland forests, edges of woodland trails, savannas, rocky glades, shady riverbanks		
James' Sedge		<i>Carex jamesii</i>		N/A		3oz/acre	12,500	
	Moderately moist conditions; fibrous and rhizomatous root system; self-seeding		N/A	Partial shade	Fertile loam	Woodland slopes, floodplain woodlands, along woodland paths		
*Silky Wild Rye; Downy Wild-Rye; Hairy Wildrye;		<i>Elymus villosus</i>	*woodland trails, top shade, side slope	No seed pretreatment necessary		0.5lb/acre	5,500	
	Moist to slightly dry conditions; fibrous roots		FACU	Partial Sun	Fertile soil; loam	Woodlands, edges of forests, rocky wooded slopes, savannas, floodplains of rivers and streams		
*Virginia Wild Rye		<i>Elymus virginicus</i>	*top shade, top sun, shaded stream edge, sunny trails, wooded trails	No seed pretreatment necessary		1lb/acre	4,200	
	Moist conditions; fibrous root system; great cover crop for erosion control; easily grown from seed; tends to give way to other species over five years		FACW	Full sun to shade	Fertile soil; loam, clay loam, sandy, can survive in a variety of soil types	Bottomland woodlands, riparian areas, riverbanks, streambanks, moist prairies, roadsides, bluffs, moist savannas, disturbed areas		

*Wirestem muhly; Common satin grass	<i>Muhlenbergia frondosa</i>	*side slope, sunny trails, wooded trails	N/A		N/A	N/A	
	Moist conditions; fibrous and rhizomatous root system, often forms colonies; can become aggressive		FACW	Full to partial sunlight	Can survive in a variety of soil types	Moist woodlands, prairies, prairie swales, bases of bluffs and wooded slopes, marsh edges, riverbanks, ditches, fields, railroads, disturbed areas	
*Woodland bluegrass	<i>Poa sylvestris</i>	*top shade, wooded trails, side slope	N/A		N/A	N/A	
	Moist conditions; fibrous root system; propagation through seeds only		FAC	Partial sunlight	Fertile, loamy soils	Floodplain woodlands, wooded slopes, wooded ravines	

Shrubs & Vines (Wooded Trails)

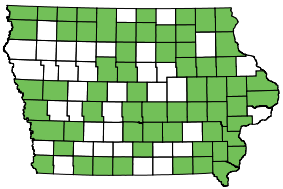
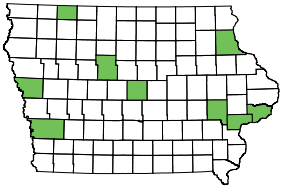
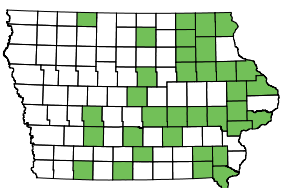
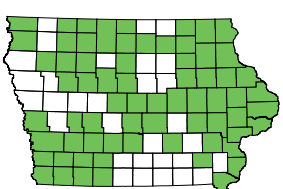
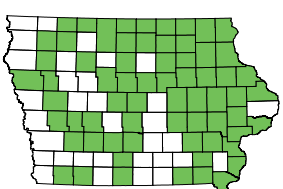
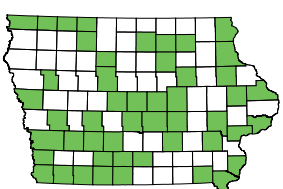
*Chokecherry	<i>Prunus virginiana</i>	*top shade wooded trails	Cold, moist stratification for a minimum of 60 days, or fall planting.		N/A	N/A	
	Slightly dry to somewhat moist conditions; deep, spreading, rhizomatous root system; seed or root cutting propagation; excellent pollinator		FACU	Full sun to partial shade	Can survive in a variety of soil types, including acidic soils	Streambanks, bluffs, roadsides, woodlands, thickets, fields, disturbed areas	

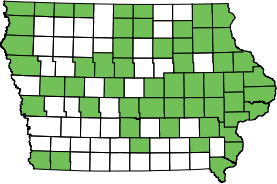
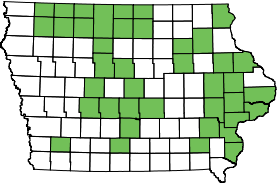
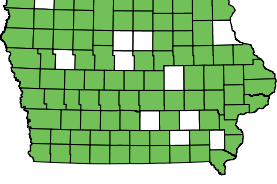
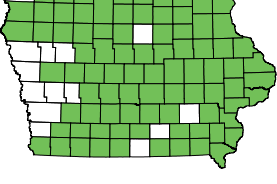
Trees (Wooded Trails)

*Black Willow; Swamp Willow	<i>Salix nigra</i>	*side slope, bankfull, water’s edge, shaded stream edge, sunny and wooded trails	Not fully known, best results if planted immediately after collection.		N/A	N/A	
	Wet to moist conditions; shallow, wide, lateral root system; most common propagation through cuttings, though seed propagation can be successful as well; fast growth rate; excellent pollinator;		OBL	Full to partial sunlight	Can survive in a variety of soil types	Floodplain woodlands, swamps, riverbanks, lake edges, ditches, sloughs, pond edges, wet disturbed areas	

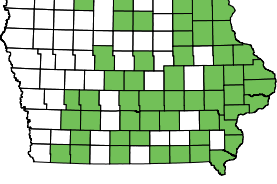
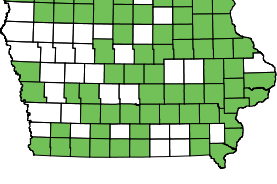
Scour Intolerant (Plant unlikely scour tolerant, not recommended along most river settings but certain areas shielded from scour/high energy waters may be appropriate for planting)

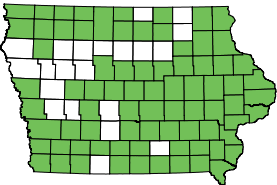
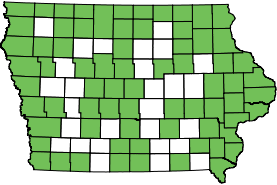
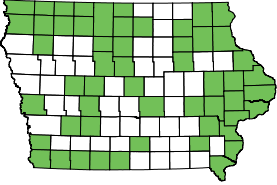
Forbs

American water plantain		<i>Alisma subcordatum</i>	(bankfull)	Cold, moist stratification for a minimum of 30 days, or fall planting.		2oz/acre	60,000	
	Wet conditions; fibrous root system with corms; self-seeding; can propagate through seeds or plugs/transplant; likely not able to tolerate heavy sour		OBL	Full sun	Wet soils, mud, silt		Marshes, slow streams, ponds, lake edges, ditches, seeps	
Large-flowered water plantian		<i>Alisma triviale</i>	(bankfull)	Cold, moist stratification for a minimum of 30 days, or fall planting.		2oz/acre	66,000	
	Wet conditions; fibrous and rhizomatous root system; likely not able to tolerate heavy scour		OBL	Full sun	Wet soils, mud		Marshes, ditches, shallow pond edges, lake edges, sloughs, slow-moving streams	
Great St. Johnswort		<i>Hypericum ascyron</i> (<i>Hypericum pyramidatum</i>)	(water's edge)	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.		0.125oz/acre	190,000	
	Moist conditions; a synonymous scientific name is <i>Hypericum pyramidatum</i> which is used by many nurseries; rhizomatous root system, often forms colonies; excellent pollinator		FAC	Full to partial sunlight	Can survive in a variety of soil types		Open woodlands, riverbanks, streambanks, meadows, moist prairies, thickets	
Blue Flag iris		<i>Iris virginica shrevei</i>	(water's edge)	Fall planting is recommended.		2oz/acre	1,000	
	Wet to moist conditions; fibrous and rhizomatous root system, often forms colonies; do not let seeds dry out; <i>Iris virginica shrevei</i> is the northern variation of <i>Iris virginica</i>		OBL	Full to partial sunlight	Fertile soils		Moist savannas, meadows, riverbanks, swamp edges, ditches, marshes, wet prairies, open floodplain woodlands, pond edges	
Michigan lily		<i>Lilium michiganense</i>	(bankfull)	Can sow outdoors with no pretreatment but plant will not germinate for a full year. Otherwise, a period of warm, moist stratification for 60 days followed by cold, moist stratification for 60 days are necessary.		*Plugs or transplants recommended	10,000	
	Moist to wet conditions; fibrous root system with a bulb; transplants or plugs may be easier to propagate		FACW	Full to partial sunlight	Fertile, moist soils; loamy, sand-loam soils		Bogs, wet prairies, open woodlands, savannas, meadows, swamps, fens	
Short Beak Arrowhead		<i>Sagittaria brevirostra</i>	(bankfull)	N/A		N/A	N/A	
	Wet, soggy conditions; stolons; grows well in shallow standing water; likely cannot tolerate heavy scour		OBL	Full sun	Wet soils, mud		Marshes, sloughs, pond edges, muddy streambanks, swamps, shallow water	

Common arrowhead; Broadleaf arrowhead; Duck-potato	<i>Sagittaria latifolia</i>	(bankfull)	May take 2 years to germinate. Requires cold, moist stratification, followed by warm, moist stratification, again followed by cold, moist stratification.	1.5oz/acre	61,000	
	Wet, fully saturated conditions; fibrous, tuberous roots; self-seeding; grows well in shallow standing water; can be propagated through seeds or plugs/transplant; cannot tolerate heavy scour	OBL	Full to partial sunlight	Wet soils, shallow water, muddy shores	Swamps, bogs, swales, seeps, marshes, pond edges, ditches, slow-moving streambanks	
Marsh Skullcap	<i>Scutellaria galericulata</i>	(bankfull, water's edge, heavy shade)	Cold, moist stratification for a minimum of 60 days or fall planting.	N/A	N/A	
	Wet conditions; fibrous root system with stolons, often forms colonies; may not be able to tolerate heavy scour	OBL	Full sun to partial shade	Wet soils, sand, muck, peaty soils	Mashes, thickets, meadows, lakeshores, slow-moving streams, bogs, swamps, ditches	
Cup Plant	<i>Silphium perfoliatum</i>	(bankfull, side slope, top of bank full sun)	Cold, moist stratification for a minimum of 60 days, or fall planting.	2oz/acre	1,400	
	Moist conditions; central taproot; rhizomatous, often forms colonies; excellent pollinator; most successful propagation through seeds	FACW	Full or partial sunlight	Moist soil; clay, loam, sand	Prairies, meadows, riverbanks, streambanks, ditches, edges of wet forests, lake shores, fens, seeps	
Culver's root	<i>Veronicastrum virginicum</i>	Top of bank only	Cold, moist stratification for a minimum of 90 days, or fall planting. Needs light to germinate, surface sow seeds.	0.125oz/acre	800,000	
	Moist to wet conditions; central taproot with some rhizomes, excellent pollinator	FAC	Full to partial sunlight	Fertile soil, loam, can tolerate some sand or clay	Moist prairies, open woods, thickets, savannas, wet meadows near rivers, riverbanks	

Grasses, Sedges, & Rushes (Scour Intolerant)

Hop Sedge	<i>Carex lupulina</i>	(bankfull, shaded stream edge)	Cold, moist stratification for a minimum of 60 days or fall planting.	3oz/acre	3,300	
	Wet to moist conditions; fibrous and rhizomatous root system; may not be able to tolerate heavy scour	OBL	Full to partial sunlight	Loam, clay loam, silt- loam, sand-loam	Wet meadows, pond and lake edges, swamps, open floodplain woodlands, prairie swales, marshes	
Tussock sedge; Upright Sedge; Uptight Sedge	<i>Carex stricta</i>	(bankfull, water's edge)	Cold, moist stratification for a minimum of 60 days, or fall planting.	0.125oz/acre	53,000	
	Wet conditions; fibrous and rhizomatous root system; can spread aggressively	OBL	Full sun	Muck, sand	Wet meadows, bogs, marshes, floodplain woodlands, fens, wet prairies	

Fox Sedge; Brown Fox Sedge; Comon Fox Sedge	<i>Carex vulpinoidea</i>	(bankfull and water's edge)	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	1oz/acre	100,000	
	Wet to moist conditions; fibrous rhizomatous root system, forms colonies; can become aggressive;	FACW	Full to partial sunlight	Loam, silt, clay, gravel	Open floodplain forests, swamps, wet prairies, streambanks, ditches, pond edges, seeps, disturbed areas	
Soft-stem bulrush; Soft-Stem Club-Rush; Great Bulrush	<i>Schoenoplectus tabernaemontani</i> (<i>Scirpus validus</i>)	(bankfull, water's edge)	Cold, moist stratification for a minimum of 60 days, or fall planting. Needs light to germinate, surface sow seeds.	1oz/acre	31,000	
	Wet, poorly-drained conditions; fibrous and rhizomatous root system, forms dense colonies; can spread aggressively; fire tolerant; a synonymous scientific name is <i>Scirpus validus</i> which is used by many nurseries; can establish through root cuttings and plugs	OBL	Full to partial sunlight	Wet soil; sand, muck, mud	Wet prairies, marshes, pond and lake edges, swamps, sloughs, ditches, swales	
*Giant bur reed	<i>Sparganium eurycarpum</i>	*bankfull, Water's edge	Sow seeds immediately after collection, seeds should not be allowed to dry out before sowing.	16oz/acre (1lb)	500	
	Wet to moist conditions; fibrous and rhizomatous; likely not able to handle heavy scour	OBL	Full to partial sunlight	Muddy, sandy, gravelly soils	Marshes, swamps, gens, pond edges, slow-moving streams	

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