								Seedli	ngs and T	ransplants						
Tree	Availability	Native?	Height	Spread	Average Lifespan	Light Required	Water Use	Soil Moisture	Soil Quality	Soil Type	Soil Chemistry	Maintenance	Growth Rate	Uses	Common Pests and Problems	Resistance to Challenges
Arborvitae Thuja standishii x Thuja plicata	Transplant Only	No	40-60'	12-18'	40-60	Full sun to partial shade	Medium	Well drained	Moist, fertile	Varied	Variable	Low	Rapid	Landscaping and hedges, winter wildlife food source.	Bagworm, rot, scale amy occur.	Deer, drought, insects, wind
Balsam Fir Abies balsamea	Transplant Only	Yes	50-70'	15-25'	200	Full sun to partial shade	Medium	Well drained	Rich	Loams, sand	Acidic	Medium	Medium	Chrismas trees and pulpwood	Balsam wooly adelgid, anthracnose, root rot, windthrow, fire	Deer
Black Spruce Picea mariana	Seedling Only	Yes	30-40'	8-12'	200-300	Full sun	Medium	Well drained, moist	Rich or Average	Varied	Acidic	Low	Slow	Pulpwood, Christmas trees, firewood	Heat and fire, Eastern dwarf- misteltoe, spruce budworm	Cold, disease, pests
Blue Spruce Picea pungens	Both	No	30-60'	10-20'	600+	Full sun	Medium	Well drained	Rich, moist	Clay, loam, high organic matter	Acidic	Low	Slow	Landscaping, Christmas trees	Gall adelgids, spruce spider mites, needlecast, tip blight, cankers, fungal infections, ppor site conditions	Rabbits, deer, drought, air pollution
Douglas Fir Pseudotsuga menziesii	Both	Yes	40-80'	12-20'	500-1000+	Full sun	Medium to wet	Well drained	Rich	Sandy- loams, loams	Acidic to Neutral	High	Medium	Chrismas trees, construction, wood veneer, firewood, posts, erosion control, windbreaks, wildlife food source	Douglas-fir beetle, Douglas- fir tussock moth, heart and root rot, heavy wildlife browsing on young stands	Cold
Norway Spruce Abies pinagene	Both	No	40'-60'	25'-30	200	Full sun	Medium	Well drained, moist	Rich	Sandy	Acidic	Low	Rapid	Screens and windbreaks, park trees, rick gardens	Aphids, bagworms, budworms, red spider mites, cytospora canker, wood decay and rust	Dryish soils, deer, pollution

								Seedlin	ngs and T	ransplants	;					
Tree	Availability	Native?	Height	Spread	Average	Light	Water	Soil	Soil	Soil Type	Soil	Maintenance	Growth Rate	Uses	Common Pests	Resistance to
Red Cedar Juniperus virginiana	Seedling Only	Yes	30-65'	8-25'	Lifespan 450	Requirement Full sun to partial shade	Use Low	Moisture Well drained, moist	Quality Wide Range	Sandy, loamy, rocky	Chemistry Acidic to Alkaline	Low	Medium	Windbreaks, wildlife food and cover, screen planting	and Problems Cedar apple rust	Challenges Very drought resistant
Red Pine Pinus resinosa	Both	Yes	50-80'	20-25'	200-400	Full sun	Medium	Well drained	Wide Range	Sand loams	Acidic	Low	Medium	Lumber and construction, windbreaks, wildlife food and cover. Inner bark treats ulcers and inflamation	Heat, urban pollution, needle cast, needle blight, bark canker, root rots, rusts, budworm	Deer, drought
White Cedar Chamaecyparis thyoides	Both	Yes	60-80'	30-40'	200-1000	Full sun to partial shade	Medium to wet	Well drained, moist	Rich	Sandy, peaty soil	Acidic	Low	Medium	Winter wildlife food source, coastal and wetland buffers	None	Wet soils, winds, erosion, decay
White Pine Pinus strobus	Both	Yes	50-80'	20-40'	200-450	Full sun to partial shade	Medium	Well drained	Rich	Loamy silt and sand, high organic matter	Acidic	Low	Rapid	Timber, Christmas trees, landscaping, wildlife, erosion control, windbreaks	White pine weevil, white pine blister rust, pales weevil, canker red ring rot, root rot, wood decay, snow, ice, wind	Deer, rabbits
White Spruce Picea glauca	Both	Yes	40-60'	10-20'	250-300	Full sun, light shade	Medium	Well drained, moist	Wide Range	Moist loam, tolerant of many soils	Neutral	Low	Medium	Pulpwood, lumber, wildlife food source and cover, soil stabilization, fire wood, medicine	Fire, overharvesting by wildlife, spruce budworm, frost, pollution, salt spray, needle and stem rust, canker, trunk and root rot	Insects, disease, wind, heat, cold, drought, crowding

										Deciduou	s Trees						
Tree	Native?	Age	Stock Size	Height	Spread	Average Lifespan	Light Requirement	Water Use	Soil Moisture	Soil Quality	Soil Type	Soil Chemistry	Maintenance	Growth Rate	Uses	Common Pests and Problems	Resistance to Challenges
Black Cherry Prunus serotina	Yes	1-0	12-18"	60-80'	30-60'	80-100	Full sun	Medium	Well drained	High organic matter	Loamy silt	Acidic to Alkaline	Low	Rapid	Furniture wood. Fruits: eaten raw, made into wines and jellies, and important wildlife food source	Girdling, fire, eastern tent caterpillar, cherry scallop shell moth, black knot	Deer, fire. Allelopathic
Black Walnut Juglans nigra	Yes		1-2'	50-75'	50-70'	150	Full sun to partial shade	High	Moist	Rich	Sandy and clay loams	Acidic to Neutral	Medium	Medium	Landscaping, furniture, other wood uses. Nuts valuable food source	Thousand canker disease and walnut caterpillar	Cold, heat, drought, rabbits. Allelopathic and poisonous to humans
Chinese Chestnut Castanea mollissima	No	1-0	12-18"	40-60'	40-60'	150	Full sun	Medium	Moist, well drained	Medium	Loams	Acidic to Neutral	Medium	Rapid	Shade tree, roasted chestnuts	Leaf spot,anthracnose, twig and stem cankers, weevils	Deer, heat, humidity. Resistant to chestnut blight
Hazelnut (Filbert) Corylus americana	Yes	1-0	12-18"	9-12'	8-13'	30	Full Sun	Medium	Moist to dry, well drained soil	Medium	Variable	Acidic to Neutral	Low	Medium	High value wildlife food source, essential oils, ornamental. Eat raw or ground into make flour	Girdling, mildew, repeated fire, Eastern filbert blight, leaf spots, blight, crown gall	Partial shade, desisease resilience
Mountain Ash Sorbus americana	Yes	2-0	6-12"	15-30'	15-25'	400	Full sun to partial shade	Medium	Moist, well drained	High organic matter	Loams and limestone soils	Acidic	Medium	Slow	Shade tree, landscaping, windbreaks, valuable wildlife food source, medicinal fruit	Dry soil, heat, humidity, bacterila fireblight, scab, cankers, crown gall, powdery mildew, borers, aphids, sawfly, scale urban pollution,	Shade. Poisonous seeds
Pawpaw Asimina triloba	Yes	2-0	12-18" 3-4'	15-30'	15-30'	80	Full sun to full shade	Medium	Moist, well drained	Rich	Sands, sandy loam and clay	Acidic	Low	Medium	Fruit for human and wildlife. Twigs have insectidical properties. Exclusive food source for Zebra swallowtail	Peduncle borer, zebra swallowtail larvae	Black walnut, deer, fire, humidity, insect pests
Redbud Cercis canadensis	Yes	1-0	1-2'	15-30'	20-35'	Under 75	Partial shade/shade	Low	Moist, well drained	High organic matter	Variable	Acidic to Alkaline	Low	Medium	Landscaping, windbreaks, valuable pollinator and wildlife food source, medicinal bark and roots	Leaf anthracnose, Botryosphaeria canker, verticillium wilt, borers, redbud leaffolder, grape leaffolders, Japaense weevil	Shade, fire, clay soils, deer, black walnut
Red Maple Acer rubrum	Yes	2-0	12-18"	40-70'	30-50'	80-100	Full sun to partial shade	High	Well drained, wet	High organic matter	Variable	Acidic to Neutral	Low	Rapid	Erosion control, wildlife habitat	Asian longhorn beetle Manganese chlorosis, aphids, verticillium wilt, canker, fungal spot, root rot, borers, scale, caterpillar, wind , ice	Fire, heat, cold, urban pollution, wet soil, deer, walnut, compaction

										Deciduou	s Trees						
Tree	Native?	Age	Stock Size	Height	Spread	Average Lifespan	Light Requirement	Water Needs	Soil Moisture	Soil Quality	Soil Type	Soil Chemistry	Maintenance	Growth Rate	Vulnerabilities	Common Pests and Problems	Resistance to Challenges
Red Mulberry <i>Morus rubra</i>	Yes	1-0	12-18"	25-60'	35-40'	75-100	Full sun to partial shade	Medium	Well drained, moist	Rich, High Organic Matter	Sand, sandy loam, clay loam, clay	Acidic to Neutral	Medium	Rapid	Weather and insect resistant wood, edible fruits, medicinal leaves and sap, wildlife food source	Borers, whiteflies, scale, mites, mealybugs. Can be weedt and messy	Pests, deer, drought, fire, pollution
Red Oak Quercus rubra	Yes	1-0	1-2' 3-4'	50-70'	50-75'	200-300	Full sun	Dry to medium	Well drained, moist	Fertile	Sandy to loamy	Acidic	Low	Rapid	Hardwood lumber, furniture, wildlife food and habitat. Shade, landscaping	Oak wilt, chlrosis, spongy moth	Fire, deer, drought, dry and acidic soil, pollution, black walnut
Silver Maple Acer saccharinum	Yes	1-0	1-2'	50-80'	40-60'	130	Full sun to partial shade	Medium	Moist	Poor	Variable	Acidic	Medium	Medium	Ornamental, soil rehabilitation, syrup, lumber, pollinator and wildlife food source	lce damage, gray mold spot, root and trunk rot	Compaction, drought, heat, dry soil, pollution, poor soil, wet soil
Sugar Maple Acer saccharum	Yes	2-0	12-18"	50-120'	30-60'	500	Full sun to shade	Medium	Well drained, dry to moist	Rich	Variable	Acidic to Neutral	Medium	Slow	Syrup, ornamental, lumber, wildlife food source	Salt, heat, drought, air pollution, soil compaction, verticillium wilt,	Deer
Swamp White Oak Quercus bicolor	Yes	2-0	12-18"	50-60'	50-60'	300-350	Full sun	High	Poorly drained, moist	High mineral content	Fine loams or clays	Acidic	Low	Medium	Lumber, landscaping, widlife habitat and food source. Leaves repel insects	Fire, oak decline, anthracnse, chlorosis	Spring flooding, drought, heat, black walnut, deer, poor soil
White Birch Betula papyrifera	Yes	1-0	1-2'	50-75'	25-45'	140-200	Full sun to partial shade	Medium	Well drained, moist	Fertile	Rocky or sandy	Acidic	High	Rapid	Pulpwood, medicinal uses, landscaping, erosion control	Drought, shade, compacted soils, heat, pollution, Bronze birch borer, aphids, leaf miner, birch skeletonizer	High pH, poor soil, wet soil, deer
White Oak Quercus alba	Yes	2-0	12-18"	50-135'	50-80'	600	Full sun to partial shade	Medium	Well drained, moist	Fertile	Loams and sands	Acidic to Neutral	Medium	Slow	Landscaping, revegetation, timber, wildlife food source	Wet soil, compaction, high pH, scale, oak skeletonizers, leaf miners, aphids, orange striped oakworm, buck moth, lace bug. Toxic to horses	Drought, dry soil, black walnut, air pollution
Crimson Maple Acer platanoides	No		7'	35-45'	25-30'	150-250	Full sun to partial shade	Medium	Well drained, moist	Variable	Clay, loam, sand	Acidic to alkaline	Low	Medium	Shade and landscaping	Girdling roots, leaf scorch, frost, sun scald verticillium wilt. Can crack driveways and pavement	Drought, air pollution

									Shrubs	6						
Shrub	Native?	Stock Size	Height	Spread	Average Lifespan	Light Requirement	Water Use	Soil Moisture	Soil Quality	Soil Type	Soil Chemistry	Maintenance	Growth Rate	Uses	Common Pests and Problems	Resistance to Challenges
Buttonbush Cephalanthus occidentalis	Yes	12-18"	5-12'	4-8'	Up to 50	Full sun to partial shade	High	Moist to wet	Organically Rich	Variable	Acidic to neutral	Low	Medium	Wetland establishment and restoration, wildlife food source	No significant problems. May be poisonous to livestock	Heat, soil compaction, erosion, wet soil, deer
Dogwood, Flowering Cornus florida	Yes	12-18"	15-30'	15-30'	80	Full sun to full shade	Medium	Well drained, moist	Organically Rich	Sandy, sandy loam, loams	Acidic to neutral	Low	Medium	Ornamental, wildlife food source	Leafhoppers, dogwood borer, sawfly scale	Deer, black walnut, heat, compaction, fire, storm damage, wind, shade
Dogwood, Red Osier Cornus sericea	Yes	1-2'	6-9'	6-9'	20-30	Full sun to partial shade	High	Wet to moist	Organically Rich	Variable	Acidic to neutral	Medium	Rapid	Stream bank protection, windbreaks, ornamental, wildlife resources	leaf miners, borers, scale, bagworms	Heavy clay soils, deer, erosion, wind, dry or wet soil
Dogwood, Silky Cornus amomum	Yes	1-2'	6-12'	6-12'	20-30	Full sun to deep shade	High	Well drained, wet	Organically Rich	Variable	Acidic	Medium	Medium	Windbreaks, wildlife habitat, slope stabilization, borders, ornamental	Scale, borers, leaf miner. May form thickets	Disease, erosion, deer, wet soil, black walnut, drought, soil compaction
Elderberry Sambucus canadensis	Yes	12-18"	5-12'	6-12'	60	Partial shade	Medium	Well drained, medium to wet	Organically Rich	Variable	Acidic to neutral	Medium	Medium	Landscaping, ornamental, wildlife food source, erosion control, fruit useful for pies, jams and wine.	Borers, spider mites, aphids. High winds, heavy snow and ice. May be poisonous to livestock	Pests, disease, Erosion, clay soil, wet soil
Highbush Cranberry Viburnum trilobum	Yes	10-16"	8-12'	8-12'	30	Full sun to partial shade	High	well drained wet to moist	Average	Loams	Acidic	Low	Medium	fruit used for jams, jellies and syrups. Wildlife food source	Stem borers, powdery mildew, thrips. May become weedy	Flood, disease, insects

									Shrubs	5						
Shrub	Native?	Stock Size	Height	Spread	Average Lifespan	Light Requirement	Water Use	Soil Moisture	Soil Quality	Soil Type	Soil Chemistry	Maintenance	Growth Rate	Uses	Common Pests and Problems	Resistance to Challenges
Common Lilac Syringa vulgaris	No	10-18"	8-16'	6-12'	50	Full sun	Medium	well drained	Fertile	Loam, Loamy clay	Neutral to alkaline	Low	Medium	Windbreaks, dyes and essential oils. Chew leaves for sore mouth	Powdery mildew, fungal leaf diseases, bacterial blight	Cold, clay soils, rabbits, deer
Nannyberry Viburnum lentago	Yes	12-18"	14-16'	6-12'	40	Full sun to partial shade	Medium	well drained, moist	Average	Loam to clay loam	Neutral	Low	Medium	Landscaping, windbreaks, wildlife food source	Powdery mildew	Air pollution, disease, insects, deer
Serviceberry Amelanchier arborea	Yes	12-18"	15-25'	15-25'	30-40	Full sun to partial shade	Medium	well drained	Average	Variable	Acidic	Low	Slow	Pulpwood, tool handles, ornamentals, wildlife food and habitat	Fire, spongy moth, leaf miner, cedar apple rust,	Fire, deer, erosion, dry soils
Winterberry Ilex verticillata	Yes	12-18"	3-15'	3-12'	15-20	Full sun to partial shade	Medium	well drained, moist	Average	Variable	Acidic	Low	Slow	Landscaping, wildlife food source	Holly leaf-miner, Japanese wax scale, southern red mite, chlorosis. May be weedy	Heat, drought, soil compaction, deer, fire, salt
Witch Hazel Hamamelis virginiana	Yes	12-18"	15-30'	15-20'	40	Full sun to partial shade	Medium	well drained, moist	Organically Rich	Variable	Acidic	Low	Medium	Drought	Drought, sawfly, leaf miner, borers, scale	Heavy clay, erosion, deer, pests

							Appl	es					
Tree	Rootstock	Mature Height	Spacing	Fertility	Soil Type	Bloom Time	Ripens/ Harvest	Years to Bear	Taste	Texture	Chill Hours	Common Pests and Problems	Resistance to Challenges
Early Fuji	EMLA 7	12-16'	14-20'	Cross Pollinated	Loamy	April to May	September	2-5	Sweet	Average	300-400	Codling moth, aphids, apple maggots, apple scab, powdery mildew	Fire blight, collar rot, drought
Cortland	EMLA 111	15-20'	18-25'	Cross Pollinated	Loamy	April	August to September	2-5	Tart, juicy	Crisp, soft	1000	Cedar-apple rust, fireblight, powdery mildew, apple scab	Cold, brown rot, blossom blight, fruit rot
Gibson Golden Delicious	EMLA 7	12-16'	14-20'	Partially Self-pollinating	Variable	Early Season	September to October	2-5	Sweet, spicy	Crisp	700-800	Necrotic leaf blight, bitter rot, fireblight, cedar-apple rust, powdery mildew	Russet, collar rot
Granny Smith	EMLA 7	12-16'	14-20'	Self-pollinating; pollinator assisted	Loamy	April	September to November	2-5	Sweet, sharp	Crunchy	400	Fireblight, powdery mildew, scab, codling moth	Heat, drought, cedar- apple rust, alternaria
Honey Crisp	EMLA 111	15-20'	18-25'	Cross Pollinated	Sandy loam	Mid-Spring	Early September	2-3	Juicy, sweet	Crisp	800-1000	Cedar-apple rust, bitter pit, bitter rot, powdery mildew, deer, codling moth	Fireblight, cold, apple scab
Manchurian Crabapple	EMLA 7	12-16'	6-10'	Cross pollinates with surrounding apple trees	Heavy loam	April	Late September	N/A	N/A	N/A	N/A	Cedar-apple rust, fireblight, apple scab, anthracnose, webworms, apple maggot	Cold, drought, air pollution. Don't eat fruit
Nova Spy	EMLA 111	15-20'	18-25'	Cross pollinated	Loamy	Late	October	3-5	Sweet, tart	Firm	1000	Rust	Cold, disease, fireblight, apple scab
Red McIntosh	EMLA 111	15-20'	18-25'	Cross pollinated	Loamy	Early to mid season	August to September	2-5	Tart	Crisp	900	Apple scab, fireblight, black rot	Cold, cedar-apple rust
Scarlet Spur II Red Delicious	EMLA 111	15-20'	18-25'	Cross pollinated	Sand, loam, clay	Mid-season	Late September	2-5	Sweet	Firm, soft	700-800	Deer, apple scab, fire rust, canker	Powdery mildew, juniper rust
Wolf River	EMLA 111	15-20'	18-25'	Cross pollinated	Loamy	May	September to October	2-4	Tart, juicy	Soft	1000	Fireblight, codling moth, aphids	Cold, scab, canker, powdery mildew

							Other Frui	t Trees					
Tree	Rootstock	Mature Height	Spacing	Fertility	Soil Type	Bloom Time	Ripens/ Harvest	Years to Bear	Taste	Texture	Chill Hours	Pests/Diseases	Resistance to Challenges
Balaton Cherry	Mazzard	18-25'	20-28'	Partially self fertile	Loamy	Spring	June to July	3-5	Tangy	Firm	600-800	Brown rot, cherry leaf spot	Cracks
Lapins Cherry	Mazzard	18-25'	20-28'	Self-pollinating	Variable	Mid Spring	Early to Late Summer	4-7	Sweet	Firm	400-500	Leaf spot, bacterial canker, brown rot, birds, powdery mildew, aphids, saw flies, scale	Frost, bacterial cankers, cracks
Rainier Cherry	Mazzard	18-25'	20-28'	Cross pollinated	Variable	Mid Spring	Late May to Early June	4-7	Sweet, low acid	Average	700-800	Powdery mildew, bacterial canker, blossom wilt, aphids, caterpillars, silver leaf	Cracks
Bartlett Pear	OHxF 97	18-25'	12-18'	Partially self fertile	Loamy	Early spring	Late August	4-6	Sweet	Buttery	800	Aphids, caterpillars, codling moth, pear blister mite, pear midge, scab, rust, blossom wilt, fireblight	Disease
Clapp's Favorite Pear	OHxF 97	18-25'	12-18'	Cross pollinated	Loamy	April	Late August to September	4-6	Sweet	Crisp, fine grained	Unknown	Aphids, fireblight, caterpillars, codling moth, pear blister mite, pear midge, rust, blossom wilt, cherry slugworm	Clay soil
Loring Peach	Seed	12-13'	12-18'	Self-pollinating	Loamy	Mid Spring	July-August	2-4	Sweet, juicy	Firm	700-950	Brown rot, plum curculio, peach scab, stink bugs, peach tree borer, Japanese beetle, scale	Bacterial leaf spot
Red Haven Peach	Seed	12-13'	12-18'	Self-pollinating	Loamy	Late Spring	Late July to Early August	2-4	Sweet	Firm	800-900	Peach leaf curl, bacterial canker	Bacterial leaf spot
Summer Beaut Nectarine	Bailey	15-20'	12-20'	Self-pollinating	Loamy	Spring	Late Summer	2-4	Sweet	Firm	800	Phytophthora, crown gall, dagger nematode, root knot nematode, ring nematode, oak root fungus, bacterial leaf spot	Verticillium, root lesion nematode, cankers
Stanley Prune	KRYMSK 86	18-20'	16-22'	Self-pollinating	Loam, sand	Mid-Spring	Late summer to Early Fall	3-4	Sweet	Firm	800	Verticillium, ring and lesion nematodes, plum aphids, cankers	Cold, drought, water logging, Phytophthora, lesion nematodes

								Produce							
Crop	Cultivar	Quantity	Height	Spread	Light Requirement	Pollination	Soil Moisture	Soil Type	Soil Chemistry	When to Plant	Harvest Date	Years to Bear	Pests	Diseases	Resistance to Challenges
Asparagus	Jersey Giant	bunch	3-4'	1-2'	Full sun	Hybrid plant	Well drained	Average	6.8-7.2	Spring	May-June	2-3	cutworms, asparagus aphids and beetles, thrips, mites, whitefly, garden symphylan	Crown/spear rot, fusarium wilt, purple spot, rust	Disease
Blueberry	Bluecrop	1 pack with Earliblue	4-6'	3-4'	Full sun	w/Earliblue	Well drained	Peaty loam	4.5-5.5	Fall/Spring	July	2-3	scale, stem borer, leafroller, mites, aphids, thrip, beetles, fruit fly	anthracnose, Phomopsis stem canker, mummy berry	Stem gall
Blueberry	Earliblue	1 pack with Bluecrop	4-6'	4-6'	Full sun	w/Bluecrop	Well drained	Peaty loam	4.5-5.5	Fall/Spring	June	2-3	plum curculio	red ringspot, plum curculio	Stem gall
Grape	Concord	1	8-10'	10-12'	Full sun	Self-pollinating	Well drained	Loamy	5.5-7.0	Early Fall or Spring	Late September	2-4	Leafhoppers, scale, mealybugs, cutworms, borers, phylloxera, tortrix, thrips, mites	Downy /Powdery mildew, root/bunch rot, Eutypa dieback, cane spot	walnut toxicity
Grape	Niagara	2	4-6'	8-10'	Full sun	Self-pollinating	Well drained	Loamy	5.5-7.0	Early Fall or Spring	Mid to Late September	2-4	Same as concord	Same as concord	walnut toxicity
Raspberries	Heritage	10	4-5'	3-4'	Full sun	Self-pollinating	Well drained	Loamy	6.0-6.8	Spring or Fall	July and September	1-2	Ccane borers, crown borers	Anthracnose, botrytis, root rot, fungal diseases, fungal diseaes	wildlife
Strawberry	Seascape	10	6"-1'	2-3'	Full sun	Self-pollinating	Well drained	Sandy or Loamy	6.5-6.8	Spring	Summer to first frost	1	Black root rot, botrytis, powdery mildew, red stele, verticillium wilt	Aphids, lygus bugs, slugs, spittlebugs, strawberry crown borer	Heat, disease

								Flowers							
Cultivar	Plant Type	Native?	Life Cycle	Height	Spread	Light Requirement	Water Use	Soil Moisture	Soil Quality	Soil Chemistry	Bloom Time	Growth Rate	Pests	Diseases	Resistance to Challenges
Achillea 'Firefly Red Pop'	Yarrow	Yes	Perennial	2'	2'	Full sun	Low	Well drained	Poor to Average	5.5-6.2	Early to late summer	Rapid	Aphids, spider mites, thrips, root nematode, slug, garden beetles	Botrytis, crown gall, powdery mildew, rhizoctonia, root rot	Drought
Asclepias tuberosa	Butterfly Weed	Yes	Perennial	2'	2'	Full sun	High	Well drained, wet	All	5.8-6.2	Early to late summer	Medium	Crown root, web blight root, leaf spot, rust, cucumber mosaic virus	Thrips, oleander aphids	Drought, cold
Echinops 'Blue Glow'	Globe Thistle	No	Perennial	3-4'	2'	Full sun	Low	Well drained	Poor	5.5-6.2	Early to late summer	Medium	None	Powdery mildew, root rot	Deer, rabbits
Hibiscus root	Swamp Mallow	No	Perennial	2-6'	2-5'	Full sun/Partial Shade	Medium	Moist, well drained	All	5.5-6.2	Midsummer to early fall	Rapid	Japanese beetles, sawflies, whiteflies, aphids, scale, deer	Leaf spot, blight, rust	Deer
Leucanthemum 'Whoops-a- Daisy'	Shasta Daisy	No	Perennial	1-4'	22"	Full sun/Partial Shade	Low	Well drained	Average to Fertile	5.8-6.2	Early to mid- summer	Medium	Aphids, spider mites, thrips, whiteflies	Leaf spot	Deer, drought
Liatris spicata bulbs	Marsh Blazing- star	No	Perennial	2-4'	0.75' - 1.5'	Full sun	Medium	Moist sands	All	5.8-6.5	Late summer	Slow	Thrips, mites, caterpillars	Botrytis, leaf spot, rust, verticillium	Heat, humidity, poor soil, deer
Monarda 'Cherry Pops' SUGAR BUZZ	Bee Balm	Yes	Perennial	2-4'	2-3'	Full sun/Partial Shade	Medium	Moist, well drained	Average to Fertile	5.8-6.4	Mid to late summer	Medium	Aphids, spider mites, thrips, whiteflies	Powdery mildew, leaf spot, crown rot, rust	Deer, rabbits, powdery mildew