General Seed Star	ting Instructions	
Scientific Name	Common Name	Seed Starting Instructions
Abelmoschus esculentus	Okra	Start indoors 3-4 weeks before lst frost or outdoors when soil temps reach about 65 degrees. Seeds benefit from overnight soaking prior to planting. Sow seeds 1/2" to 1" deep in rows 3' apart.
Abelmoschus manihot	Sunset Hibiscus	Start indoors 2 weeks before last frost, sowing 1/4 " deep. Germinates in under 30 days. Transplant after all danger of frost. It also self sows.
		To start seed indoors, scatter seeds on the soil's surface, press firmly into the soil, and mist gently with water. They need light to germinate. You can also direct sow yarrow seeds in the fall or early
Actaga racomoca	Yarrow, Common  Black Cohosh	spring.  Seeds must be treated to a cycle of warm (70 deg) for about 2 weeks, then cold (40 deg) for about 3 months. This can be achieved when seeds are sown outside as soon as they are mature.  Alternately, seeds can be sown in flats or containers and treated with the same regimen. Plant 1/4" deep in prepared seedbed. Some seed may not germinate until the second spring.
Actaea racemosa  Agapanthus africanus	Nile Lily	Start seed indoors and cover lightly since they need light to germinate. Seed does not germinate well; soaking seed may speed germination. Transplant to garden after frost. Plants started from seed may need 2-3 years to bloom.
Agastache foeniculum	Anise Hyssop	Surface sow in fall or start indoors 6-8 weeks before last frost after cold stratifying to improve germination.
Alcea rosea	Hollyhock	Direct sow 1/4-1/2" deep in fall, or start indoors in late winter or early spring. Or direct sow outdoors in early summer. Plant 1/4" deep but needs light to germinate. Soaking seed overnight aids germination.
Allium cristophii	Star of Persia	Plant seeds in early spring about 1/4" deep and keep moist. Stratification improves germination. Will bloom starting the second season.
Allium fistulosum	Welsh Onion	Plant 1/4" to 1/2" apart and 1/2" deep. When grown as an annual, sow seeds in early spring for summer use. Takes about 65 days from seed to harvest.
Allium schoenoprasum	Chives	Start Indoors several weeks before last frost or direct sow after all danger of frost. Sow 1/4in deep and 2in apart. Thin to 4-6in in all directions.
Allium tuberosum	Garlic Chives	Direct sow in late fall, 1/4" deep or in early spring when the soil has warmed.
Andropogon gerardii	Big Bluestem	Stratify seeds for one month. Sow at 1/4 to 1/2 inch depth and keep consistently moist. Can take 4 weeks to germinate.
Anethum graveolens	Dill	Direct sow ¼" deep in full sun after last frost. Germinates in 10 to 21 days.
Anthemis tinctoria	Chamomile, Golden	To sow, cover soil lightly. Sow indoors 8 weeks before setting out. Can direct sow after the last frost.
Aquilegia canadensis	Columbine, Wild	Direct sow just below soil surface in fall. Can also be started indoors or planted in early spring but will require cold moist stratification.
Artemisia dracunculus	Tarragon, Russian	Start indoors 6-8 weeks before the last frost, need light to germinate. Sow thinly on the surface of potting soil or a well-draining seed-starting mix. Germination usually occurs within 2-4 weeks; thin as needed and transplant outdoors after the last frost.
Aruncus dioicus	Goatsbeard or Goat's Beard	Both male and female plants are required for seeds to set. Plant seeds when freshly harvested.  Older seeds need to be stored at 40 degrees for 4 weeks before sowing. Germination will take 2 to 3 weeks at 70 to 75 degrees. Needs light to germinate.
Asclepias incarnata	Milkweed, Swamp	Plant seeds directly into the soil in the fall or start your seeds indoors, 4-8 weeks before the average date of last frost.
Asclepias syriaca	Milkweed, Common	Plant seeds directly into the soil in the fall or start your seeds indoors, 4-8 weeks before the average date of last frost. Cold stratification for 30 days required for indoor sowing.

General Seed Starting	g Instructions	
Scientific Name	Common Name	Seed Starting Instructions
Asclepias tuberosa	Butterfly Weed	Direct sow in the Fall or start indoors (after cold stratification) 4-8 weeks before average date of last frost.
Baptisia australis	False Indigo, Blue	For spring sowing, soak the seeds in water for 24-36 hours first (starting with hot water). If you sow Baptisia australis seed in pots, start with 4-inch pots so the seedlings can develop good roots before needing to be transplanted.
Beta vulgaris	Swiss Chard	Direct sow 1/2" deep in mid-spring and thin to 12" apart when 1-2" tall. Can also be started inside and transplanted. Weeding early in the season is important for plant development.
Bouteloua curtipendula	Sideoats Grama Grass	Sow seed when soil temperatures have warmed to about 70 degrees. May self-seed.
Calendula officinalis	Pot Marigold	Direct sow 2 weeks before last frost. Cover with 1/4-1/2 inch soil. For earlier spring bloom can start indoors 6-8 weeks before last frost or direct sow in the fall.
Calycanthus floridus	Sweet Shrub	Sweet shrub seeds can be sown in springtime (March or April) in a shady area of the garden or woods edge. Use rich, well-drained loamy soil. Plant seeds 1/4 inch deep and keep soil moist. Stratification for best seed germination.
Capsicum annum 'California Wonder'	Bell Pepper	Sow seeds 8-10 weeks before last frost in sterile seed mix. Transplant to garden when soil temps are 65 or greater, generally between mid- to late May in this area.
Celosia plumosa	Plume Pampas	Surface sow indoors 6-8 weeks before last frost and pot up to larger container when first true leaves appear. Harden off and transplant outside when danger of frost has passed. Can also direct seed 1/8" deep after last frost
Contauros mentans	Mountain Dluot	Direct sow 1/2" deep in spring when temperature is about 65 degrees, or start indoors about 1 month before frost. Takes 15-30 days to germinate. Transplant to garden when they are 4-6 inches
Centaurea montana	Mountain Bluet	tall, about 2-3 feet between plants.  No special seed treatment necessary. Collect seeds in late summer or early fall before the heads
Cephalanthus occidentalis	Buttonbush or Honeyballs	dry and fall apart.  Direct sow 1/4 inch deep in the fall, or start indoors after 60 days of cold moist stratification. Keep
Chasmanthium latifolium	River Oats	the soil moist but not soggy, at about 70°F until the seeds germinate. Transplant when 2-3 inches tall. Will self-seed.
Cleome hassleriana	Spider Flower	Direct sow or start indoors 6-8 weeks before last frost after cold stratification. Press into surface of planting medium; needs light to germinate.
Clitoria ternatea	Blue Pea or Butterfly Pea	Start seed indoors about 4 to 6 weeks before last frost, or sow seeds directly outside once soil is warm in the spring.
Conoclinium coelestinum	Mistflower or Hardy Ageratum	Seeds must be sown in fall or cold stratified for 3 weeks to 3 months.
Consolida ajacis	Rocket Larkspur	Direct sow in moist, fertile soil 1/4" deep just after last frost and thin to 12". Germinates in 20-30 days. If starting indoors, cold stratify for 2 weeks beginning 8-10 weeks before last frost. It often reseeds in the garden.
Coreopsis lanceolata	Tickseed, Lanceleaf	Plant seeds directly in the ground just after ground thaws. The seeds may germinate easier after 30 days of cold stratification to break their dormancy. Seed depth can be from soil surface up to 1/8 of an inch. Requires medium amounts of water and good drainage soil.
Coreopsis tinctoria	Tickseed, Plains	Seeds may be sown indoors 6-8 weeks before last spring frost date. Set plants out after last frost or plant seed directly after last frost.
Coreopsis tripteris	Tickseed, Tall or Golden Crown	Start indoors 6-8 weeks before last frost or direct sow in the fall. Requires cold, moist stratification to germinate. Germinate in 10-15 days.

General Seed Star	ting Instructions	
Scientific Name	Common Name	Seed Starting Instructions
Coriandrum sativum	Cilantro	Direct sow beginning after last frost thru summer in succession every few weeks. For best success, gently crush outer seed capsule and soak for 24-48 hours before planting.
Cosmos bipinnatus	Cosmos	Direct sow 1/8" deep or broadcast and gently rake into the soil. Can also be sown indoors 4 weeks before last frost then transplanted to the garden. Thin plants 9-12" apart.
Cosmos sulphureus	Cosmos	Direct sow 1/8" deep or broadcast and gently rake into the soil. Can also be sown indoors 4 weeks before last frost then transplanted to the garden. Thin plants 9-12" apart.
Cucumis melo 'Trifecta'	Muskmelon	Sow seeds 1/2 inch deep, 2-3 seeds per pot. Germinate at 85-90 degrees, then maintain 75 degrees. Do not over-water. Harden off before transplanting.
Cucumis sativus	Cucumber	Plant directly in the garden after all danger of frost, 1" deep and either 3'-4' apart or use vertical support.
Digitalis lutea	Foxglove, Straw	Sow seeds directly on ground once soil is warm or start indoors about 4 weeks before last frost. Do not cover; seeds need light to germinate. Seeds will usually germinate in 2 to 4 weeks at 68 degrees.
Dracopis amplexicaulis	Coneflower, Clasping	Surface sow seed directly on ground once soil is warm, or start indoors 4-6 weeks before last frost. Needs light to germinate. Sprouts 10-30 days.
Echinacea purpurea	Coneflower, Eastern Purple	Plant 1/2" deep. Direct sow in fall or start indoors in spring. Alternatively, can be winter sown directly outdoors. Keep moist until germination occurs in 10-20 days. Grow best with some cold stratification.
Elymus hystrix	Bottle Brush Grass	Sow seeds directly in the garden in the fall or early spring, at a depth of approximately 1/4 inch. Make sure the soil remains consistently moist during germination and initial establishment. The seeds will germinate and establish themselves over time.
Eragrostis spectabilis	Purple Lovegrass	Direct sow by spreading seed on exposed earth in early fall. They require light for germination, and cold stratification will improve germination rate. Provide either some sand, vermiculite, or some form of sediment to keep them from blowing away in the wind. Water lightly for a couple of weeks.
Eruca vesicaria	Arugula	Sow ¼" deep and thin to 2 inches between plants. Start several weeks before the last frost and again in late summer for a fall crop.
Eryngium planum	Sea Holly	Plant in fall or start indoors 10-16 weeks before last frost after cold, moist stratification. Cover with 1/8-1/4" fine soil or sand. Bottom water or mist. Transplant outside after last frost.
Eryngium yuccifolium	Rattlesnake Master	Collect seed in fall when the seed heads have turned brown. Tap the seed out, air-dry, and cold-moist stratify with the chaff in sand, in sealed, refrigerated containers for two months, or direct sow seeds in spring.
Eupatorium hyssopifolium	Hyssopleaf Thoroughwort	Requires 8 weeks of cold stratification. Good candidate for winter sowing. Light required for germination so surface sow or cover lightly.
Eupatorium serotinum	Late Boneset	Sow seeds directly on the ground 3 weeks before last frost. Needs light for germination. Requires stratification.
Eurybia divaricata	White Wood Aster	Moisten the soil lightly. Direct sow by scattering several seeds at intervals of 15 to 18 inches. Cover with 1/8" of fine soil.
Eutrochium fistulosum	Joe Pye Weed, Hollow	Seeds may be direct-sown in autumn or planted in flats that will receive 6-8 weeks of chilling; or seed may be stratified in the refrigerator and planted in flats or outside in spring.
Eutrochium maculatum	Joe Pye Weed	To direct sow in the fall, scatter seeds across the bed and lightly rake them in. Keep the soil moist until the ground freezes. Start seeds indoors in early spring after 30 days of cold stratification.

General Seed Star	rting Instructions	
Scientific Name	Common Name	Seed Starting Instructions
Eutrochium purpureum	Joe Pye Weed, Sweetscented	Seeds can be started indoors after cold moist stratification, or sown directly into the garden in the fall. Plant seeds at a depth of around 1/4 inch in a well-draining soil mix. Keep the soil consistently moist during germination and initial establishment.  Direct sow after frost. Scatter the seeds at a rate of one pound per 500 square feet of garden
Fagopyrum esculentum	Buckwheat	space, then rake them in and water again, or plant roughly half an inch deep and three to four inches apart.
Gaillardia spp. Helianthus angustifolius	Blanket Flower Sunflower, Swamp or Narrow Leaf Sunflower	Plant seed in the fall by direct sowing and lightly raking in, or indoors 4-6 weeks before last frost.  Seed can be directly surface sown in late fall or winter or in the spring after cold stratification for 30 days
Helianthus annuus	Common Sunflower	Start indoors 4 weeks before last frost, or sow directly outside after frost.
Hibiscus coccineus	Texas Hibiscus	Start seeds indoors 8-12 weeks at 70 degrees, before last frost date, or direct sow when soil has warmed. Scarify and soak seed in warm water for about an hour. Surface sow. Transplant seedlings to 1 gallon pots, then harden off and plant outdoors after last frost. May self-sow.
Hibiscus moscheutos	Rosemallow	Before planting, soak seed in warm water until they sink. Start seed indoor 8 to 10 weeks before last frost, or direct sow in late fall, 1/4" deep.
Iris Domestica	Blackberry Lily	After cold treatment, sow the seed ½" deep in warm soil (indoors in pots 6-8 weeks before planting outside or in the garden after the danger of frost has passed). Keep the seedbed evenly moist and germination should occur in 1-2 weeks. Will self-seed.
Lablab purpureus	Hyacinth Bean	Start indoors 6-8 weeks before last frost date, or direct sow after last frost, planting 1"-2" deep, 6" apart. Germination is aided by soaking beans overnight.
Lactuca sativa	Lettuce	Direct sow in early spring 1/4 inch deep and thin to 12 inches apart.
Leonotis leonurus	Lion's Tail or Lion's Ear	Start indoors and transplant after frost. Can be direct sown the previous fall for next year's bloom. Self-sows readily.
Levisticum officinale	Lovage	Seeds can be started inside 6 to 8 weeks before last frost, or directly outdoors. Lovage can self-seed if the flowers are not cut.
Lobelia cardinalis	Cardinal Flower	To start indoors, surface sow on moist soil and cover the container with clear plastic. Seeds need light to germinate. Refrigerate for 3 months, checking periodically to make sure the soil is still moist. Remove from your refrigerator 8 to 10 weeks before last frost. Germination should occur within 2 weeks. Will self-seed.
Lobelia siphilitica	Blue Cardinal Flower	Winter sow outdoors, leaving uncovered in full shade through the winter. Check for water as needed. Indoors, sow in pots, cover with plastic, refrigerate for 3-4 weeks, then bring into 70°F in late winter. Cover with a humidity dome or add a light sprinkling of vermiculite to retain humidity until germination occurs. May self-seed.
Lychnis coronaria	Rose Campion	Start indoors approximately 8 to 10 weeks before the last spring frost after three weeks of refrigeration to break dormacy. Will self-seed.
Mirabilis jalapa	Four O'clock	Direct sow after frost, or start indoors 6-8 weeks earlier, pressing lightly into the soil since they need light to germinate. Tubers may be dug and stored over winter. Will self-seed.
Moluccella laevis	Bells of Ireland	Directly sow seeds outdoors 2-3 weeks before the last frost date, barely covering seed. May self-sow. Germination improved with cold stratification.
Monarda fistulosa	Wild Bergamot	Start seeds indoors on surface of planting medium and germination will take place in 1-2 weeks; transplant when 3-4" high. Seed can also be direct sown in early spring.

Scientific Name	Common Name	Seed Starting Instructions
Nicotiana sylvestris	Flowering Tobacco	Surface sow the seeds after last frost by lightly pressing into the top of the soil. Barely cover the seed as this plant needs about 12 hours of sunlight to germinate. You can also start the seeds in doors 6-8 weeks before the last frost. Germination occurs between 1 ½ and 3 weeks.
Nigella damascena	Love-in-a-Mist	Begin sowing as soon as soil can be worked, in early spring. Plant 1/8" deep and water well. For continuous bloom, make successive plantings every three weeks. Seed may be started indoors 6 t 8 weeks before frost, but they do not transplant well.
Ocimum basilicum 'Napoletano'	Basil, Large Leaf	Plant basil seeds at 1/4 inch depth in well-drained, fertile soil. Indoor seeds should be started 6-8 weeks before the last frost and transplanted into the garden after the danger of frost has passed.
Oenothera biennis	Evening Primrose	Direct sow on cool soil in late fall after a hard frost to early spring. Needs light to germinate. If sowing indoors, seed will need stratification. Water from bottom as needed.
Panicum virgatum	Switchgrass	Easily started from seed; can also be direct sown outside in moist soil.
Penstemon calycosus	Beardtongue, Long-sepal	Direct sow in late fall sowing just below soil surface. If planted in spring or started indoors, requires cold stratification.
Penstemon digitalis	Beardtongue, Foxglove	Direct sow in late fall sowing just below soil surface. If planted in spring or started indoors, requires cold stratification.
Petroselinum crispum var. neapolitanum	Parsley, Italian	Start indoors 6-8 weeks before last spring frost date planting 1/4" deep, or direct sow after last fros date. Soaking in warm water 24-36 hours can improve germination.
Phaseolus vulgaris	Bean, Pole	Plant 1" deep, 6" apart, or 3-4 around each pole or leg of tripod. Save some seeds to fill in gaps. Plant only after soil has warmed up to at least 60°F. Bean seeds will rot in cold, damp soil.
Phaseolus vulgaris	Bean, Bush	Direct sow 1" deep, 2-4" apart, after the last frost date. Thin to 2-4" for mature spacing.
Platycodon grandiflorus	Balloon Flower	Start balloon flower seeds indoors 8 weeks before the last frost date or direct sow after last frost. Barely cover the seeds with soil.
Pycnanthemum muticum	Mountain Mint, Blunt	Start either indoors or via winter sowing. The tiny seed needs to be surface sown and kept moist.
Pycnanthemum tenuifolium	Mountain Mint, Narrowleaf	Start indoors six weeks before the last frost or outside once the soil is warm. Needs light to germinate.
Pycnanthemum virginianum	Mountain Mint, Virginia or Common	Start indoors six weeks before the last frost or outside once the soil is warm. Needs light to germinate.
Raphanus sativus	Radish Mix	Direct sow 1/4" to 1/2" deep. Resow every 2 weeks in early spring or late summer.
Ratibida pinnata	Coneflower, Pinnate or Gray- headed	Seeds require 30 days of cold stratification or direct sowing in the fall. Planting depth is surface or very light covering.
Rudbeckia hirta	Coneflower, Black-eyed	Direct sow in fall on soil surface. If started indoors or planted in spring will require cold stratification.
Rudbeckia maxima	Coneflower, Large	Direct sow barely covering in fall. Cold stratification aids in germinaton if sown in spring or indoors. Will self-seed.
Rudbeckia triloba	Brown-eyed Susan	Can be started indoors 6-8 weeks before last frost or direct sown after last frost. Requires dry stratification to germinate. Germination usually takes 2-3 weeks.
Salvia coccinea 'Lady in Red'	Sage, Scarlet	Direct sow after frost or start indoors 6-8 weeks earlier planting seeds just below surface. Germinates in 2-3 weeks.
Salvia farinacea	Sage, Mealy Cup	Start indoors about 9 weeks before transplanting outdoors. Cover seeds lightly as they need light to germinate.
Scutellaria incana	Downy Skullcap	Sow seeds shallowly in late fall-early winter. If grown indoors requires 60 days of cold stratification. Germinates 2 weeks to 6 months.

General Seed Starting	Instructions	
Scientific Name	Common Name	Seed Starting Instructions
Senna marilandica	Maryland Senna	Surface sow outdoors in winter. If propagating in the spring or indoors, the seeds require scarification prior to stratification.
Solanum lycopersicum 'San Marzano'	Tomato, plum	Start seed indoors 6 to 8 weeks before last frost. Will germinate in 1 to 2 weeks with consistent moisture and soil temperatures of 75 to 90 degrees.
Solidago caesia	Goldenrod, Woodland	Direct sow on soil surface in fall or spring, or start indoors 6-8 weeks before the last frost. Benefits from 60 days cold stratification if grown indoors or in spring.
Solidago rigida	Goldenrod, Stiff	Direct sow 1/4" deep in the fall after the first frost or in late spring. Indoors start 6-8 weeks before planting date. While stratification is not mandatory for these seeds, it can enhance germination.
Solidago rugosa 'Fireworks'	Goldenrod, Rough	Sow outdoors shallowly in late fall and keep moist in protected area. If sown indoors requires 60 days cold stratification.
Sorghastrum nutans	Indiangrass	Cold stratify seeds for a few months. When soil temperature reaches 50 degrees, plant seeds 1/4" deep and water well.
Spinacia oleracea 'Bloomsdale'	Spinach	Sow in early spring and late summer in well-worked soil. For baby leaf, sow 3–5 seeds per inch in rows at least 2" apart. For bunching and full size, sow 10 seeds per foot, 1/2" deep in rows 12–18" apart.
Stokesia laevis 'Mary Gregory'	Stokes Aster	Direct sow outside in fall or early spring. Indoors start the seeds six to eight weeks before the last spring frost date, barely covering the seeds with soil, since the seeds need light to germinate.
Symphyotrichum lateriflorum	Calico Aster	Seeds can be directly sown 1/8 inch deep after all chance of frost has passed, or started indoors and hardened off once germinated and planted outdoors after last frost. Will self-seed.
Symphyotrichum oblongifolium	Aromatic Aster	Direct sow, barely covering seed that will germinate in warm soil. Also a good candidate for winter sowing technique but stratification not required.
Tagetes erecta	Marigold, African	Direct sow soon after last frost 1/4 " deep. Or start 4-6 weeks indoors beforehand and transplant after danger of frost has passed spacing 10-12" apart.
Tagetes lucida	Mexican Tarragon	Sow indoors in March (6 to 8 weeks before last frost) or direct sow 2 weeks after frost. Takes about 2 weeks to germinate.
Tagetes patula	Marigold, French	Direct sow after danger of frost ¼" deep in sunny location. Germinate in about a week at 70-75 degrees. Can be started indoors for earlier bloom about 10 weeks before outdoor planting.
Tanacetum parthenium	Feverfew	Direct sow on surface of soil in late spring or early summer. If sowing indoors begin 6-8 weeks before last frost and transplant after danger of frost has passed.
Teucrium canadense	Germander	Start indoors after stratification or direct sow in fall barely covering with soil.
Thermopsis villosa	Carolina Lupine	Sow outdoors 1/4" deep in fall or winter. Seed sown indoors requires scarification and soaking to germinate.
		Direct sow two weeks after last frost or when night temperatures reach 60s. Can also be started indoors 6-8 weeks before last frost. Plant seeds on surface or 1/8" deep and keep warm.
Tithonia rotundifolia	Mexican Torch Sunflower	Germinates in 5-10 days. Thin or transplant to 2 feet apart.
Tragopogon porrifolius	Oyster Plant, Common Salsify	Direct sow late fall or early spring, 1/2" deep. Germinates in 8 to 10 days. Thin to 2' apart.
Verbascum hybridum 'Southern Charm'	Mullein	Can be sown indoors before frost or outdoors directly after frost. Will self-seed.
Verbena bonariensis	Vervain, Purpletop or Tall	Start indoors 6-8 weeks before last frost, needs darkness to germinate. Cold stratification may help.
Verbena hastata	Vervain, Blue	Sow seeds 1/8 inch deep and transplant to the garden when seedlings are strong.
Verbena urticifolia	Vervain, White	Direct sow on the soil surface in fall. If started indoors or in the spring needs stratification.

General Seed Starting Instructions		
Scientific Name	Common Name	Seed Starting Instructions
.,		Direct sow on the soil surface in fall. If started indoors or in the spring, it needs two months of
Vernonia fasciculata	Prairie Ironweed	cold/moist stratification.
		Direct sow in late fall, pressing the seed into the surface of the soil. Requires stratification if grown
Veronicastrum virginicum	Culver's Root	inside or in spring.
		Plant 1/2-1" deep after danger of frost. Soaking overnight and using soil inoculant can speed
Vigna unguiculata ssp. sesquipedalis	Bean, Chinese Red Noodle	germination. Thin to 6 inches apart. Requires sturdy support.
		Start indoors 4-6 wks before last frost or direct sow after last frost. Plant 1/4 " deep. Germinate in 5-
Zinnia elegans	Zinnia, Common	10 days.
	·	Direct sow in fall or cold stratify for 2-3 months and then direct sow on soil surface. Does best in
Zizia aurea	Golden Alexanders	cool soil.