

Herbaceous Perennials (Plants shown in Going Native Brochure)

Name	Seed Germination Code
Bee Balm <i>Monarda didyma</i>	A
Black-eyed Susan <i>Rudbeckia hirta</i>	C(30)
Blazing Star <i>Liatris spicata</i>	C(60)
Butterfly Weed <i>Asclepias tuberosa</i>	C(30)
Cardinal Flower <i>Lobelia cardinalis</i>	C(60) D
Columbine <i>Aquilegia canadensis</i>	C(60) M
Common Boneset <i>Eupatorium perfoliatum</i>	C(30) D
False Sunflower <i>Heliopsis helianthoides</i>	C(30)
Foamflower <i>Tiarella cordifolia</i>	L M
Foxglove Beardtongue <i>Penstemon digitalis</i>	C(30)
Great Blue Lobelia <i>Lobelia siphilitica</i>	C(60) D
Hollow Joe-Pye Weed <i>Eutrochium fistulosum</i>	C(60)
Mistflower <i>Conoclinium coelestinum</i>	C(60) D
New England Aster <i>Symphyotrichum novae-angliae</i>	C(60)
Pink Tickseed <i>Coreopsis rosea</i>	C(30)
Purple Coneflower <i>Echinacea purpurea</i>	A
Rosemallow <i>Hibiscus moscheutos</i>	C(60)
Seaside Goldenrod <i>Solidago sempervirens</i>	C(60) D
Sneezeweed <i>Helenium autumnale</i>	A D

Swamp Milkweed <i>Asclepias incarnata</i>	C(30)
White Turtlehead <i>Chelone glabra</i>	C(90) M
Wild Bergamont <i>Monarda fistulosa</i>	A

Grasses

America Beachgrass <i>Ammophila breviligulata</i>	M
Coastal Panicgrass <i>Panicum amarum</i>	M
Little Bluesteam <i>Schizachryium scoparium</i>	A
Priarie Cordgrass <i>Spartina pectinata</i>	A
Saltmeadow Cordgrass <i>Spartina patenens</i>	Difficult M
Switchgrass <i>Panicum virgatum</i>	A

Seed Germination Code Based on Prairie Moon Nursery

A: No pre-treatment is necessary:

Seed should germinate upon sowing in a warm location. Germination code A species can be found **here**.

B: Hot water treatment: This hot water treatment helps break open the hard seed coat. This may happen naturally with freeze/thaw cycles, but better germination can be expected if hot water treatment is done before fall planting outside, or artificial cold-moist stratification in a fridge (Germination Code C).

1. Bring water to a boil, remove from heat, and pour over seeds.
2. *Soak the seeds at room temperature for 24 hours.*
3. *Filter through a coffee filter and fine mesh strainer.*
- 4-5. *Proceed with germination code C instructions (below).*

C (# of stratifying days): Cold, moist stratification needed:

To naturally stratify seed, surface sow outdoors late fall on a bare (weed-free), compact site and allow seed to overwinter. If you are new to perennial seed starting, this would be the preferred method. To artificially stratify seed, place seed and seed starting medium in a labeled, sealed plastic bag and store in a refrigerator (33-40°F). Seed starting medium could be a damp paper towel, coffee filter, **sand**, vermiculite, or other horticultural-use medium.

Mixing equal parts sand and seed, or slightly more sand than seed. Whatever stratifying medium you choose, be sure to moisten the mixture slowly to a damp, but not wet, consistency. You should not be able to squeeze any excess water out of the medium.

Stratify for the number of days indicated in parentheses. If two months stratification is required, C(60), one month may work for many species if time is a constraint. Some seeds may sprout in the storage bag. If this occurs with more than a few seeds, plant immediately.

1. Using our germination codes, calculate the date to start cold, moist stratification pre-treatment. Briefly give your seeds a soak in a container, and pour contents over a coffee filter, paper towel, and/or fine screen to drain.

2. *Arrange seed in a single layer and allow all excess water to drain off.*

3. *Fold seed loosely into the coffee filter or paper towel to allow for weekly spot checks. The seed and paper should be damp but not wet.*

4. *Add a dry paper towel to your labeled resealable bag to help to maintain even moisture while pulling excessive moisture away. Do not allow the stratification medium to completely dry out or stay soggy.*

5. *Place the sealed bag in your refrigerator (not freezer) and monitor weekly, or as needed, until it is time to remove for sowing. Replace coffee filter or paper towel often; repeat from step 1. Once seed had completed the recommended stratification period, or if excessive early sprouting occurs, plant immediately.*

Artificial Stratification with Sand

1. *Place stratification sand into a bowl. We use a 1/3 cup fine **stratification sand** to 1/8 oz seed ratio (slightly more or less depending on seed size).*

Add water. We used 1 to 2 teaspoons of water per 1/3 cup of sand.

2. *Mix only enough water to allow medium to form into a ball.*

3. *Add your seed to the stratification sand and mix together. Our package label will indicate the suggested number of days for artificial stratification i.e. C (60) = 60 days of cold, moist conditions needed.*

4. *Refrigerate the seed mixture in a sealed plastic bag marked with start and finish dates. Check periodically so that the mixture does not dry out. If premature sprouting occurs, plant immediately.*

5. *Once cold, moist stratification is complete, sow the seed into rows when the threat of below-freezing temps has passed. Keep rows well weeded and thinned.*

D: Seeds are very small or need light to naturally break dormancy and germinate:

Seed requiring this treatment should be surface-sown. No soil cover, or just a dusting of soil, should be applied. If grown in outdoor beds, sow stratified (if required) seed on a level surface. Cover with a single layer of burlap or cotton sheet to help retain moisture at the soil surface. Remove cover after germination. Do not let soil dry out until seedlings are established. Shading with a window screen set 12" above the soil during the first season will also help prevent drying. If sowing seeds in containers, water from the bottom as necessary.

E: In order to germinate, seeds need a warm, moist period (summer) followed by a cold,

moist period (winter): Sow outdoors in spring and allow one full year for germination. To artificially start this stratification process, mix seeds with horticultural-use medium, place mixture

in a labeled, sealed, plastic bag and store in a warm place (about 80°F) for 60–90 days. Then place in your refrigerator (33–40°F) for 60–90 days before sowing.

F: Seeds need cold, moist period (winter) followed by a warm, moist period (summer)

followed by a 2nd cold, moist period: Sow outdoors and allow 2 years or longer to germinate. To artificially start this stratification process, follow the instructions for Germination Code C for 60-90 days, then store in a warm (about 80°F) place for 60-90 days, followed by a 2nd cold period in the refrigerator.

G: Seeds germinate most successfully in cool soil: Sow seeds in late fall (after hard frost) or early spring.

H: Seeds need scarification: These species require weakening of the seed coat in order to come out of dormancy. Scarify by rubbing seed between two sheets of medium-grit sandpaper. The goal is to abrade seed coats – stop if seeds are being crushed. Scarification should be done before stratification (Germination Code C) if needed. Fall or winter sown seed should not be scarified to prevent the chance of premature germination and winter kill.

I: Legume (member of the pea family): Most legume species harbor beneficial bacteria called rhizobia on their roots. Genus-specific strains of this bacterium called inoculum can aid in the fixation of atmospheric nitrogen and improve long-term health of native plant communities. Inoculum is naturally occurring in most soils and additional amendments are not needed.

J: Remove the hulls from legume seeds: greatly improves germination.

K: Hemiparasitic species which requires a host plant: Good hosts for many hemiparasitic species include low-growing grasses and sedges like Blue Grama, Pennsylvania Sedge, Little Bluestem, and June Grass. With a knife, make a small cut at the base of the host plant. Sow seed in the cut, making sure seed is not more than 1/8” deep. If host is transplanted at sowing time, the cut is not needed because damaged roots will be available for attachment by the hemiparasite. You may also try sowing hemiparasitic and host species seeds together at the same time.

L: Plant fresh seed or keep moist: Refrigerate until planting or starting other treatment.

M: Best Planted outdoors in the fall: Artificial stratification may not work well.

O: Impermeable seed coat: Nick seed coat with knife, and soak in water overnight before planting.