

GERMINATION CODES & SEED-STARTING BASICS FOR NATIVE PLANTS



PRAIRIE MOON NURSERY

STARTING FROM SEED

The seeds of many native plants have built-in dormancy mechanisms that protect them from germinating before killing frosts or in times of drought. In the wild, seeds will lie dormant until the proper conditions for growth occur. In cultivation, the successful gardener must become familiar with several simple pre-sowing seed treatment methods which will unlock the dormancy mechanism and stimulate quicker, more consistent germination.

We have developed the following seed germination codes to help you successfully grow the native seed sold by Prairie Moon Nursery. These seed treatment suggestions have been compiled from our own experience, available literature, and feedback from other growers and customers. These are only suggestions and not the definitive source of germination information. If your experience reveals successful methods other than these, please let us know.

Until you are ready to plant or apply pre-sowing treatment, seed should be stored in an open container in a cool, dry place, or in a sealed (airtight) container under refrigeration (33-38°F). Avoid rapid or frequent changes in temperature or humidity and protect against rodents.

Sow seeds shallowly, no deeper than the width of the seed and keep seedlings carefully weeded. **Periodic watering is helpful to establish seedlings. Native perennial plants can be slow-growing. An adequate root system with supporting top growth is the first priority. Full flowering happens once a mature plant is established.**



A

GERMINATION CODE A: SPECIES THAT WILL GERMINATE WITHOUT PRE-TREATMENT

Andropogon gerardii - Big Bluestem
Bouteloua curtipendula - Side-oats Grama
Cephalanthus occidentalis - Buttonbush
Dalea purpurea - Purple Prairie Clover
Echinacea purpurea - Purple Coneflower
Elymus hystrix - Bottlebrush Grass
Eragrostis spectabilis - Purple Love Grass
Helenium autumnale - Sneezeweed
Hypericum prolificum - St. John's Wort
Koeleria macrantha - June Grass

Monarda fistulosa - Wild Bergamot
Monarda punctata - Spotted Bee Balm
Panicum virgatum - Switch Grass
Pycnanthemum spp. - Mountain Mints
Salvia azurea - Blue Sage
Schizachyrium scoparium - Little Bluestem
Sorghastrum nutans - Indian Grass
Sporobolus heterolepis - Prairie Dropseed
many *Symphotrichum spp.* - Asters
Veronicastrum virginicum - Culver's Root

OUTDOOR SOWING FOR ALL GERMINATION CODES

Outdoor sowing between late fall and early spring is a practical and efficient technique that allows seeds to germinate in their natural timeframe. This is especially true when planting many different species.



When outdoor sowing, it is good practice to plant on a weed-free site, clear of vegetation. The requirements for each species vary, but a good rule of thumb is to plant the seed **NO DEEPER** than the width of the seed. Species with very small seeds should be surface-sown, then firmly pressed to make sufficient contact with the soil. Cover with burlap to keep the area from drying out.

If you expect to move the plants once mature, it works best to sow the seed into rows. Mark the rows well and keep weed-free and well thinned.

SEED STARTING MEDIUM

We use fine sand as a medium to artificially stratify seed. We like this sand because, unlike other seed starting medium, the uniform color and fine texture allows you to see your seed. Buy Stratification Sand at:

prairiemoon.com



C

GERMINATION CODE C COLD, MOIST PRE-TREATMENT

COFFEE FILTER METHOD: SUITED FOR CELLS OR CONTAINERS



Using our germination codes, calculate the date to start cold, moist stratification pre-treatment. Rinse or complete a short soak. Pour into a coffee filter, paper towel or fine screen to drain.



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



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.



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.



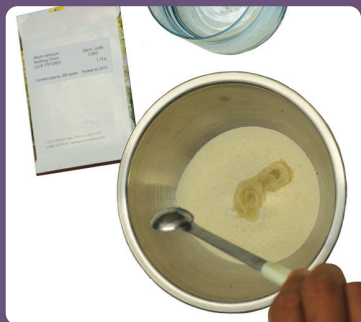
Place the sealed bag in your refrigerator (not freezer) and monitor weekly, or as needed, until it is time to remove for sowing. Replace coffee filter or paper towel often; repeat from step 1. Once seed has completed the recommended stratification period, or if excessive early sprouting occurs, plant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



GERMINATION CODE C COLD, MOIST PRE-TREATMENT

SAND METHOD: SUITED FOR PLANTING IN ROWS

1



Place stratification sand into a bowl. We use a 1/3 cup fine 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 sand 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 past. Keep rows well weeded and thinned.

A Seeds germinate after sowing in a warm location.

B Bring water to a boil; remove from heat. Pour over seed and allow the seed to soak for 24 hours at room temp prior to planting or starting artificial treatment.

C (#) Seeds germinate after sitting out over winter or after a period of cold, moist stratification. Sow seeds outdoors in the fall to over-winter naturally and see germination the following spring, or artificially stratify seeds for the number of days in the parenthesis. **For more detailed instructions on artificial stratification, go to prairiemoon.com and type GERMINATION into the search bar.**

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

E In order to germinate, seeds need a warm, moist period (summer) followed by a cold, moist period (winter). Sow seeds outdoors in spring and expect germination the following spring, one full year later. To artificially mimic this stratification process, mix seeds with damp sand, place in a labeled, sealed plastic bag and store in warm (about 80°F) location for 60–90 days. Then place in refrigerator (33–38°F) for 60–90 days before sowing.

F Seeds have double dormancy and need a cold, moist period (winter) followed by a warm, moist period (summer) followed by a 2nd cold, moist period. Sow seeds outdoors in the fall and expect germination after 2 years. Artificially mimic this stratification process by following instructions for code C for 60-90 days, then store in warm (about 80°F) place for 60-90 days, followed by a 2nd cold, moist period for 60-90 days.

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

H Seeds need scarification: To scarify, lightly rub between two sheets of sandpaper before artificial stratification.

I Legume: Rhizobium Inoculum may be added. 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 amendment is usually not needed. However, in low fertility soils, it may be necessary. Genus-specific strains are available at prairiemoon.com/inoculum

J We remove the hulls from these legume seeds.

K Hemiparasitic species which needs a host plant. Good hosts for many parasitic species include low-growing grasses and sedges.

L Plant fresh seed or keep moist

M Best planted outdoors in the fall.

O Impermeable seed coat. Needs nicking.

? Not sure. Your input would be of interest to us.

NEED MORE DETAILED GERMINATION INSTRUCTIONS?

SEARCH: "GERMINATION" AT PRAIRIEMOON.COM