

GERMINATION CODES AND SEED-STARTING BASICS FOR NATIVE PLANTS

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. But 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.



An adequate root system with supporting top growth is the first priority. Full flowering happens once a mature plant is established.

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 under refrigeration (33–40°F) or in a cool, dry place. 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 POPULAR NATIVE WILDFLOWERS & GRASSES THAT WILL GERMINATE WITHOUT PRE-TREATMENT

Allium canadense - Wild Garlic
Andropogon gerardii - Big Bluestem
Bouteloua curtipendula - Side-oats Grama
Dalea purpurea - Purple Prairie Clover
Desmodium canadense - Showy Tick Trefoil
Echinacea purpurea - Purple Coneflower
Elymus hystrix - Bottlebrush Grass
Eragrostis spectabilis - Purple Love Grass
Helenium autumnale - Sneezeweed
Hypericum prolificum - Shrubby St. John's Wort
Koeleria macrantha - June Grass
Mirabilis nyctaginea - Wild Four O'Clock
Monarda fistulosa - Wild Bergamot
Monarda punctata - Spotted Bee Balm

Oenothera biennis - Common Evening Primrose
Oenothera pilosella - Prairie Sundrops
Opuntia humifusa - Eastern Prickly Pear Cactus
Panicum virgatum - Switch Grass
Pycnanthemum pilosum - Hairy Mountain Mint
Salvia azurea - Blue Sage
Schizachyrium scoparium - Little Bluestem
Sorghastrum nutans - Indian Grass
Spartina pectinata - Cord Grass
Sporobolus heterolepis - Prairie Dropseed
Symphotrichum laeve - Smooth Blue Aster
Symphotrichum oblongifolium - Aromatic Aster
Veronicastrum virginicum - Culver's Root



PRAIRIE MOON NURSERY
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GERMINATION CODES AND INSTRUCTIONS

A **NO PRE-TREATMENT NECESSARY** other than cold, dry storage (also called dry-cold stratification). Seed purchased from Prairie Moon has been stored under these conditions.

B **HOT WATER TREATMENT:** Bring water to a boil, remove from heat, pour over seeds, and soak at room temperature for 24 hours prior to planting.

C **STRATIFICATION NEEDED:** PLEASE NOTE: You do not need to stratify if you are **broadcasting or using a seed drill outdoors in fall or winter.** Do not use this method if you are planting a seed mix and cannot keep the site moist. Seeds germinate after pre-treatment of cold, moist stratification. Approximate number of days needed is indicated in the parentheses, next to germination code C (i.e. C (60) = 60 days of cold, moist conditions needed). ***See code C stratification recommendations on pg. 5 & 6.**

D **SURFACE SOW:** Seeds are very small or need light to naturally break dormancy and germinate.

E **SEEDS NEED A WARM, MOIST PERIOD FOLLOWED BY A COLD, MOIST PERIOD.** Mix seeds with sterile medium, place mixture in a labeled, sealed plastic bag and store

in warm (about 80°F) place for 60–90 days. Then place in refrigerator (33–38°F) for 60–90 days before sowing. Or, sow outdoors and allow one full year for germination.

F **SEEDS NEED A COLD, MOIST PERIOD FOLLOWED BY A WARM, MOIST PERIOD FOLLOWED BY A 2nd COLD, MOIST PERIOD.** Seeds germinate after alternating, cold moist, warm moist, cold moist stratification treatments. Start by following instructions for code C, then store in warm (70 to 80°F) place followed by a 2nd cold period. Or sow outdoors and allow 2 years or longer to germinate.

G **SEEDS GERMINATE MOST SUCCESSFULLY IN COOL SOIL.** Sow seeds in late fall (after hard frost) or early spring.

H **SEEDS NEED SCARIFICATION:** For spring planting, Prairie Moon scarifies quantities of 1oz or less before shipping. Seeds for fall or frost planting are not scarified to prevent premature germination and winter kill.

I **LEGUME, RHIZOBIUM INOCULUM.** We include free species-specific inoculum with legume-seed orders of one ounce or less. Add inoculant to dampened seed and mix thoroughly at time of stratification (code C) or outdoor seeding. Inoculum aids in the fixation of atmospheric nitrogen and improves the long-term health of native plant communities.

J **WE REMOVE THE HULLS FROM THESE LEGUME SEEDS.** This gives more seeds per pound and greatly improves germination. If you have unhulled seed from another source, treat as in Code H.

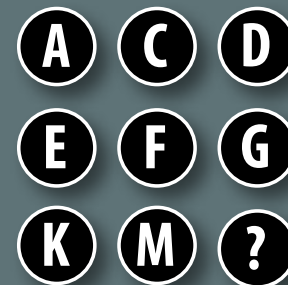
K **HEMIPARASITIC SPECIES,** which needs a host plant. Good hosts for many parasitic species include low-growing grasses and sedges. With a knife make a 2" deep cut at the base of the host plant. Sow seed in the cut, making sure seed is not more than 1/8" deep.

L **PLANT FRESH SEED OR KEEP MOIST.** Refrigerate until planting or starting other treatment.

M **BEST PLANTED OUTDOORS IN THE FALL.**

? **UNSURE:** Your input would be of interest to us.

OUTDOOR SOWING FOR ALL GERMINATION CODES



Outdoor sowing late-fall through early-spring is a practical and efficient technique. This is especially true for beginners or 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 send one cup of sand which can be used to stratify up to ½ oz of seed (slightly more or less depending on seed size). We like this sand because, unlike other seed starting medium, the uniform color and fine texture allows you to see your seed. (includes s/h)

Seed Stratification Sand..... \$7.00

C GERMINATION CODE C COLD, MOIST PRE-TREATMENT

SAND METHOD: SUITED FOR ROW-TYPE PLANTINGS



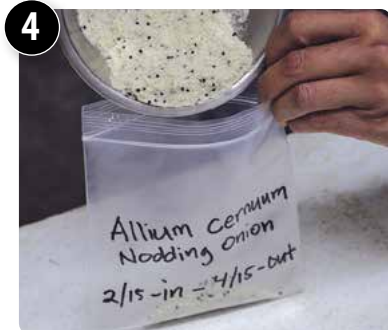
1 PLACE STRATIFICATION SAND INTO A BOWL. We use a 1/3 cup fine stratification sand to 1/8 oz seed ratio (slightly more or less depending on seed size).



2 ADD WATER. 1 to 2 teaspoons of water is all we needed for 1/3 cup of sand. Mix only enough water to allow medium to form into a ball.



3 ADD YOUR SEED TO THE STRATIFICATION SAND AND MIX TOGETHER



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. Our package label will indicate the number of artificial stratification days required in the parentheses, next to the germination code i.e. C (60) = 60 days of cold, moist conditions needed.



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.

C GERMINATION CODE C COLD, MOIST PRE-TREATMENT

PAPER TOWEL OR COFFEE FILTER METHOD: SUITED FOR CELLS, CONTAINERS, OR FLATS



1 USE A CALENDAR AND OUR GERMINATION CODES TO CALCULATE AN APPROPRIATE DATE TO START THE COLD-MOIST STRATIFICATION PRE-TREATMENT. Record the start and finish dates on a plastic bag. Rinse or complete a short soak of the seed. Pour into a coffee filter, paper towel 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 MAINTAIN EVEN MOISTURE. Do not allow the stratification medium to completely dry out or stay wet for long enough to rot.



5 PLACE THE SEALED BAG IN YOUR REFRIGERATOR (NOT FREEZER) and monitor weekly, or as needed. 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 in seed starting trays or outdoors, if threat of below-freezing temps are past.