

SAND

GERMINATION CODES AND INSTRUCTIONS

see back or visit: <http://www.prairiemoon.com/How-to-Germinate-Native-Seeds.html>

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.

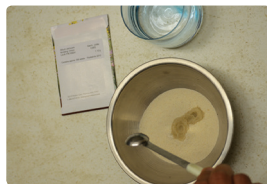
We have developed the following seed germination codes to help you successfully grow the native seed sold in our catalog. These seed treatment suggestions have been compiled from our own experience, available literature, and feedback from other growers and customers. These are only suggestions and not 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 and keep seedlings carefully weeded. Periodic watering is helpful to establish seedlings. If seed does not germinate the first year, don't give up; germination may occur the second year or even later.

STEP-BY-STEP TUTORIAL FOR GERM CODE C: ARTIFICIAL STRATIFICATION USING SAND



1. **GATHER SUPPLIES.** Place a small amount of stratifying medium into a bowl. We are using ~1/3 cup silica sand (p.45) with ~1/8 oz seed.



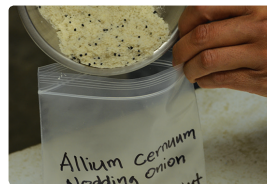
2. **ADD WATER.** 1 to 2 teaspoons is all we needed for this amount of sand.



3. **MIX ONLY ENOUGH WATER TO ALLOW MEDIUM TO FORM INTO A BALL.**



4. **ADD YOUR SEED.** Our package label will indicate the suggested number of days for artificial stratification.



5. **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.



TRAYS

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ONE POPULAR METHOD FOR GERM CODE C: ARTIFICIAL STRATIFICATION FOR SEEDING TRAYS



1. Using a calendar and 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.



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. A dry paper towel added to your labeled resealable bag will help to maintain even moisture while pulling excessive moisture away. Do not allow the stratification medium to completely dry out or stay soggy enough to rot.



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 has completed the recommended stratification period, or if excessive early sprouting occurs, plant immediately.



GERMINATION CODES

a: Seed should germinate upon sowing in a warm location. 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 in a warm place for 24 hours before planting.

C: (Number of stratifying days) Seeds germinate after a period of cold, moist stratification. *Please note: You do not need to stratify if you are fall planting or using a seed drill. Also, do not use this method if you are planting a seed mix and cannot keep the site moist.* Mix seeds with equal amounts or more of damp sand, vermiculite, or other sterile media (moist—but not so wet that water will squeeze out of a handful). We use silica sand (purchased at a building supply center) for small quantities. For large quantities we use coarse grade vermiculite. Place mixture in a labeled, sealed plastic bag and store in a refrigerator (33–38°F). Stratify for the # days indicated in parentheses. If two months (C(60)) of this cold storage before planting is normally required to break the dormancy of these seeds, one month may work for many species if time is a constraint. Some seeds may sprout in the storage bag if moist stratified too long. If sprouting occurs, plant immediately. Another method of breaking dormancy for species requiring moist stratification is to sow seeds outdoors in the fall so they may overwinter.

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. 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 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 followed by a cold, moist period. Mix seeds with sterile media, 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 for 60-90 days, then store in a warm (about 80 degrees F) place for 60-90 days, followed by a 2nd cold period in the refrigerator. Or sow outdoors and allow 2 year 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 these seeds before shipping. Seeds for fall or frost planting are not scarified to prevent premature ger-

mination and winter kill. Please let us know if scarification is needed in fall for greenhouse production or other reasons. Scarify by rubbing seed between two sheets of medium grit sandpaper. Lightly abrade seed coat without crushing seeds. Scarify before stratifying (Code C) if needed.

i: Legume, Rhizobium Inoculum. Prairie Moon includes genus-specific inoculum with legume seed free of charge when available. Inoculum aids in the fixation of atmospheric nitrogen and improves the long-term health of native plant communities. Inoculum will keep refrigerated for approximately 1 year. Add inoculant to dampened seed and mix thoroughly at time of stratification (Code C) or if direct seeding, as close to planting time as possible. Protect inoculated seed from sunlight or drying winds; cover as quickly as possible with a light coating of soil or mulch. Inoculum can also be mixed with potting soil for planting in pots or flats, or directly into transplanting hole.

k: Parasitic species which needs a host plant. Good hosts (for many parasitic species) include low-growing grasses and sedges: Hairy Grama, Blue Grama, Common Oak (Pennsylvania) Sedge, Little Blue Stem, and June Grass. 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. If host is transplanted at sowing time, the cut is not needed because damaged roots will be available for attachment by the parasite. You may also try sowing parasitic and host species seeds together at the same time. To add parasitic species to existing sites, scatter seed on soil surface (rake in if seed is large) in late fall.

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