

## Seed Germination Codes and Instructions

The seeds of many native plants have built-in dormancy mechanisms which 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 plant seed sold in this 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 in either a sealed (airtight) container under refrigeration (33–40°F) or in an open container in a cool, dry place. Avoid rapid or frequent temperature changes and protect against rodents. Sow seeds shallowly and keep seedlings carefully weeded. Periodic watering will help to establish seedlings. If seed does not germinate the 1<sup>st</sup> year, don't give up; germination may occur the 2nd year or even later.

### **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, 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 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 the first season will help prevent drying. If sowing seeds in containers, water from the bottom as necessary.

### **E:** Seeds need a warm, moist period followed by a cold, moist period

Mix seeds with sterile media. Place mixture in a sealed plastic bag in a warm place (about 80°F) 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 warm (about 80 degrees F) place for 60-90 days followed by a 2nd cold period in the refrigerator. Another method is to 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 plantings, Prairie Moon scarifies these seeds before shipping. Seeds for fall or frost plantings are not scarified to prevent premature germination and winter kill. Please let us know if scarification is needed in fall or 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 species-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.

**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: Hairy or Blue Grama, Common Oak (Pennsylvania) Sedge, Little Bluestem 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.

**M: Seed is best planted outdoors in the fall****O: Seed needs nicking**

Nick seed coat with a knife, soak in water overnight. Plant.

**S: Fern spore sowing**

Sow fern spores on sterile peat under glass in indirect light. Water with distilled water. Refer to other reference material on growing ferns. Or, direct sow spores on soil surface.

**? : Not sure**

Your input would be of interest to us.

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