Cultural Guide Key

Comments:
(=landscaping, **=landscaping but aggressive)*

Soil
W=Wet · **WM**=Wet Mesic · **M**=Mesic (Medium) **DM**=Dry Mesic · **D**=Dry

Sun
P (Prairie): Full sun to 20% shade
S (Savanna): 20% to 70% shade
W (Woodland): 70% to 100% shade

CULTURAL GUIDE

Comments	Germ Code	Ht	Color	Wet. Code	Soil W·WM·M·DM·D	Sun P·S·W	Bloom A·M·J·J·A·S·O
Rhizomatous	C(60)	2'	Grn	OBL	■ ■	■	M J J

Comments

Annual	Completes its life cycle during one season.
Biennial	Grows vegetatively during the first year, completes its life cycle during the second.
Calcareous	Needs alkaline soil with a pH of 7 to 8.
Acidic	Needs acid soil with a pH of 4 to 6.
Hemiparasitic	Requires a "host" plant species.
Sand	Species which usually require very sandy soils.
Weedy	Caution! Extremely aggressive! May not harmonize well with natural ecosystems.
Cool	Actively grows during the spring and fall when soil temperatures are cool.
Warm	Actively grows during the summer when soil temperatures are warm.
Aggressive	May not be suited for small landscape plantings.
Rhizomatous	Spreading root system.
*	Highly recommended for home landscaping.
**	Recommended for home landscaping, but be careful of those species labeled aggressive or rhizomatous.
New!	New in seed or plant for 2010.
EZ	Attention beginners! Easy to grow.
	All native plants will attract butterflies, birds and pollinating insects, but these species seem to be especially liked by our winged friends.
12	Quick reference for photos

Germ Code (See Opposite Page)

Ht

Approximate average plant height is given with standard foot (') and inch (") abbreviations. Height is for mature full-grown plants in flower. Actual height will vary considerably due to competition, sun exposure, soil conditions, and weather. In young native plantings (less than 10 years) heights will be taller than in older plantings when competition reduces height.

(Bloom) Color

Blu	*Blue*	Org	*Orange*	Red	*Red*
Crm	*Cream*	Pnk	*Pink*	Wht	*White*
Grn	*Green*	Pur	*Purple*	Yel	*Yellow*

Wet(land) Code

National Wetland Categories for Region 3 (North Central) United States Fish & Wildlife Service

OBL	*Obligate Wetland*	Occurs almost always in wetlands under natural conditions. *Estimated >99% probability*
FACW	*Faculative Wetland*	Usually occurs in wetlands, but occationally found in non-wetlands. *Estimated 67%–99% probability*
FAC	*Faculative*	Equally likely to occur in wetlands or nonwetlands. *Estimated 34%–66% probability*
FACU	*Faculative Upland*	Occasionally occurs in wetlands, but usually occurs in non-wetlands. *Estimated 1%–33% probability*
UPL	*Upland*	Occurs almost never in wetlands under natural conditions. *Estimated <1% probability*
+		A positive sign indicates a frequency toward the higher end of the category *(more frequently in wetlands)*
–		A negative sign indicates a frequency toward the lower end of the category *(less frequently found in wetlands)*

Soil (Moisture)

W	*Wet*	Soggy or marshy most of the year.
WM	*Wet Mesic*	Excessively wet in winter, spring, and after heavy rain, but often dries in summer.
M	*Mesic*	Medium. Water soaks in with no run-off.
DM	*Dry Mesic*	Well drained. Water is removed from soil readily, but not rapidly
D	*Dry*	Excessively drained.

Sun (Exposure)

P	*Prairie*	Plants normally grow in full sun. Should do well with up to 20% shade.
S	*Savanna*	Partially shaded (20% to 70% shade). Sun reaches ground level at woodland edges or through openings between trees. Prairie species will often grow in larger openings, with shade-tolerant species growing under trees.
W	*Woodland*	70% to 100% shade.

Bloom (Time)

A	M	J	J	A	S	O
April	May	June	July	August	September	October

Germination 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 available literature, our own experience, 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 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.

Germ(ination) Codes:

A **No pre-treatment necessary** other than cold, dry storage *(also called dry cold stratification)*

Seed should germinate upon sowing in a warm location.

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**

Seeds requiring this treatment should be surface sown - no soil cover or just a dusting of soil should be applied. If grown in outdoor garden 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 soil the first year 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**

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 the refrigerator for another 60-90 days before sowing. Another method is to 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°F) place for 60-90 days followed by a 2nd cold, moist 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**

Seed purchased from Prairie Moon that we believe will be spring planted has been scarified. Seed we believe will be fall or frost planted has not to prevent the chance of premature germination and winter kill. If you are ordering seed in the fall for greenhouse production please let us know and we will scarify. To scarify, rub seed between 2 sheets of medium grit sandpaper. The goal is to abrade seed coats - stop if seeds are being crushed. Scarification should be done before stratification (code C), if needed.

I **Legume, Rhizobium Inoculum**

Prairie Moon includes species-specific inoculum with legume seed free of charge when available (*See p.70 for information*). 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, Little Bluestem, June Grass, Common Oak Sedge. With a knife, make a 2" deep cut at the base of the host plant. Sow seeds in the cut, making sure it is not more than 1/8" deep. If the host is transplanted at sowing time, the cut is not needed; damaged roots will be available for attachment by the hemiparasite. You may also try sowing seeds of the host and parasitic species together. To add hemiparasitic 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 **Best planted outdoors in the fall**

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.