Sleeping Beauties

How to Germinate Dormant Seeds

Kelly Schultz
Wild Seeds

Variability

The timing & method of a seed’s dispersal dictates what natural cues must take place before germination will occur

- October is a terrible time to be a seedling
- And yet…most seeds ripen in fall
- Dormancy protects these seeds
Wild Seeds

When seeds are ripe, it’s a good time to sow
If you are sowing in the field:

If you are sowing in pots:

( in general )
If you are sowing in the field:
Sow by January (in northern IL); sow woodies by November

If you are sowing in pots:
1. Ziplocks: mix with damp sand, store in the refrigerator
2. Sow in pots, store outside by January
Warm-moist, Cold-moist Stratification

- Early-ripening species (mid-June)
- Berries (maybe)
- W ~ 70°F

If you are sowing in the field:
Sow asap

If you are sowing in pots:
1. Ziplocks: mix with damp sand, store on the counter, then move to the refrigerator. Watch for mold!
2. Sow in pots, store outside asap
Warm-moist, Cold-moist Stratification

- Recalcitrant
- Hydrophilic
- Use Fresh Seed
- Sow immediately or refrigerate/freeze
- Low Viability?

If you are sowing in the field:
Sow asap. Or seal in plastic & store in refrigerator/freezer

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If you are sowing in the field:
Sow asap & be patient.

If you are sowing in pots:
Sow asap & be patient. Don’t give up!
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http://wisplants.uwsp.edu
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Double Dormant

http://wisplants.uwsp.edu
If you are sowing in the field:
Remove pulp, wear down seed coat, rinse seeds; sow in fall/winter

If you are sowing in pots:
Remove pulp, wear down seed coat, rinse seeds; sow in fall/winter
Remove Pulp

- 2 layers of protection:
  1. Hard seed coat
  2. Chemical inhibitor

- Clean seeds with a blender & rinse

- Purchased seeds do not require special treatments

- C or W/C* or DD

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- Remove pulp
- Wear down seed coat
- Rinse seeds
- Sow in fall/winter

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- Clean seeds with a blender & rinse
- Purchased seeds do not require special treatments

William Cullina: Growing & Propagating Wildflowers
If you are sowing in the field:
DO NOT SCARIFY. Mix seeds with inoculant & a little water; sow in fall/winter

If you are sowing in pots:
Scarify, stratify for 10 days. Inoculant can be added when stratifying or when sowing.

Scarification & Inoculant
- Scarification = to scar, cut, or wear down the seed coat
- Legumes: sandpaper (20-30 sec)
- In the wild, occurs through freeze/thaw cycles or microbes
- Short strat
- Test: soak scarified seeds in water
- Inoculant: N-fixation, overall plant health
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If you are sowing in the field:
Heat up water (170-210˚F); remove from heat, add seeds & let sit for 24 hours. Sow promptly after HW (in fall/winter)

If you are sowing in pots:
Heat up water (170-210˚F); remove from heat, add seeds & let sit for 24 hours. Strat for 90 days
If you are sowing in the field:
Sow with a broadcaster; do not drill, do not bury

If you are sowing in pots:
Sow on top of the soil

Requires light to germinate

General Rule: sow seeds as deep as they are wide
1. Tiny seeds
2. Fluffy seeds
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1. Tiny seeds
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Requires darkness to germinate

General Rule: sow seeds as deep as they are wide
- *some* of the bigger seeds (1/4”)

If you are sowing in the field:
Broadcast or bury seeds

If you are sowing in pots:
Put a light layer of soil on top of the seeds
If you are sowing in the field:
- For spring germination, sow in spring or fall.
- Caution: warm-season germination → warm-season dominance?

If you are sowing in pots:
- Sow anytime

A: No Pretreatment Necessary
- Sow like those veggie seed packets
- Common grasses
- Sometimes common prairie flowers
- BUT Stratification will not hurt
If you are sowing in the field:

If you are sowing in pots:
Resources

William Cullina
New England Wildflower Society
Resources

Begin With a Seed:
The Riveredge Guide
to Growing Wisconsin Prairie Plants

Riveredge Nature Center, WI
- Latin Name
- Common Name
- 3References (guide books)
- Flower color
- Height (low, high, height range)
- Flower Period
- Sun exposure
- Moisture
- Germination codes
- Harvest dates
- Special soil types
- Comments
- Attracts butterflies, hummingbirds
- Clay tolerant
- Shade tolerant
- Deer resistant
- Endangered or Threatened
Resources

Jim Steffen’s chapter
Resources

http://www.nativeplantnetwork.org/Network
Commercial Native Seed Nurseries
Thank You!
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www.lcfpd.org/nursery

Lake County Forest Preserves
www.LCFPD.org