

Winter Sowing



Winter Sowing is an easy germination method that starts many seedlings for just pennies. During winter, seeds are sown into mini-greenhouses that you make yourself from recyclables. After sowing, the mini-greenhouse is placed outside to wait for the end of winter. The seeds will begin to germinate at their own right time when weather warms.

Seed selection:

Take a look at a seed catalogue, most will have some sort of notation about a

seed's germination requirements, or you'll pick up a few clue-in phrases. Look for these terms:

Needs Pre-chilling (freeze seeds, refrigerate seeds, stratify for x amount of day or weeks), needs stratification, will colonize, self sows, sow outdoors in early Autumn, sow outdoors in early Spring while nights are still cool, sow outdoors in early Spring while frosts may still occur, hardy seeds, seedlings can withstand frost, can be direct sown early, wildflower, weed (such as butterflyweed, Joe Pye weed).

Look for Common Names indicating a natural environment: plains, prairie, desert, mountain/alpine, swamp, field.

Look for names that might indicate an origin in a temperate climate: Siberian, polar, alpine, Orientale, Canadensis, Andean.

Here are a couple of links to winter sowing on the web.

<http://www.wintersown.org/>

<http://faq.gardenweb.com/faq/wtrsow/>

Ready, set, go.....

1. To make a flat you take the container (of course it's clean, washed in hot soapy water) and a paring knife. Stab a few slits in the bottom, this is for drainage. Now fill with soil to about a half inch from the top. Give it a real good drink and let it drain. After the pan has drained, sow your seeds and pat them down. Cover them with more soil to the correct depth if necessary. I like growing plants with tiny, tiny seeds, they're really just

the very most easy to sow. Sprinkle them on top of the soil, pat them down, and that's that.

2. Get some freezer tape, or any tape that you know will work well after being frozen. Pull off a piece and stick it to the bottom of the flat. Write the variety name on it with a laundry marker (or a sharpie). You can do this before or after sowing, if you do it afterwards make sure you wipe the bottom of the flat well as freezer tape doesn't really adhere to a damp surface. Label the tape before sticking it the bottom of the flat. The label is on the bottom because the sun can't bleach it down there.

3. Now you need to put the lid on BUT FIRST.....and this is the very most important step.....take the knife and poke several slits in the clear plastic lid. This is for air transpiration. Think about it, you're making a little mini greenhouse. If you don't vent the air that is heated by the sun you'll cook your flat and the seeds won't germinate. You've baked them to death. Okay, put the lid on securely by folding down the foil rim or taping the top of the container to the bottom. The seeds are sown. Put it outside somewhere it will be safe for the winter....out of the sun, & where the containers are protected from the wind.

Now you just wait it out. When the weather warms, the flats will freeze and thaw repeatedly as winter gives way to spring. This action of freezing and thawing out helps loosen the seed coat.

Amazingly, just when winter is about to break, and you're still getting nightly freezes, the first of your flats will begin to germinate. When I saw this I thought that the seedlings were goners, but they thrived. The seeds know when it's safe to come up, it's part of their genetics. Now is the time to check the moisture in the flats. On an above freezing day, open them up and if they look like they need a drink give them one. The excess water will drain away. Don't forget to replace the lids tightly.

As your seedlings grow, start widening the slits in the covers, once a week or so make the slits a little bit bigger, eventually you'll have more open areas than covered and you'll be able to transplant the seedlings into the garden because they are completely hardened off. I have put in seedlings that barely had their first set of true leaves and they thrived in the ground.

After transplant care is typically the same as for indoor sown seedlings. They need a drink and just a little bit of food: 10% strength after their first week in the ground, then increase slowly as the season progresses. After about eight weeks and a few feedings your seedlings will be able to take a full strength feeding.

Zone 3 tips for wintersowing from Sharon in Wainwright:

This is what works for me. I use those jumbo 6 packs or 3-4 inch containers and those black nursery flats with drainage slits. Whatever container you use, don't use

those little cells or jiffy pots, they dry out way too fast and the seeds will die.

I don't sow the perennials till around late February or March especially in this zone. It may be ok for the folks who live in the south to start in December, but not here. If the weather is extremely cold like minus -30C or below, wait to do it on a mild day like -10C or so, or you can put your containers or flat into a spare fridge for a few days first or what I did, I placed them into the pumphouse which stays around 0C. (a pumphouse is a little shed that keeps our well water from freezing). Then transfer them outside on the picnic table or an unheated greenhouse when the weather is mild. I find this method acclimatizes the seeds first and you'll have better germination. Many seed propagating books and seed experts will tell you to never place your moist sown seed directly into the freezer ever. Rapid true freezing of the seed embryo is usually fatal. This makes sense because in nature temperature doesn't go from +20C to -30C -40C within minutes. Seeds should be introduced gradually to freezing temps not abrupt.

For covers I used those regular plastic domes that fit on the flats. I heat up a knife on the stove and make air slits/holes on top for air transpiration and for rain to get through. Duct tape both ends, so they don't blow off. Keep them in a sheltered corner out of the harsh winds, and cover with lots of snow for extra protection. Once it starts warming up in the spring, bring them out into more sun and keep an close eye on your flats each and every day. On warm days you may have to water and take the flats off, on cold frosty days/nights make sure you put those covers back on, otherwise they're goners. When you're at this stage, I use clothespins on one end when the flats need to be watered for ease of access.

Be patient, some seeds take longer than others to germinate, some need a warm, cold, warm, cold cycle. Some seeds didn't pop up till the end of June, early July. A lot of my wintersowed perennials did not put on a splendid show the first year, but let me tell you the next year you'll be blessed with hardy-tough disease-free, beautiful plants!

With annuals, choose the hardy or half-hardy types; sow closer to your last frost date. With the tender annuals indoor sowing is still my preferred method because our growing season is way too short.

Don't be afraid of snow....snow is good because it helps insulate and keeps them moist when it melts.

Sharon's list of seeds to try in zone 3:

1. *Acer palmatum* Japanese Red Maple X
2. *Achillea filipendulina* 'Cloth of Gold'
3. *Achillea millefolium* 'Cerise Queen'
4. *Achillea ptarmica* The Pearl Superior
5. *Achillea sibirica* var. *camtschatica* 'Love Parade'

6. *Adlumnia fungosa* Climbing Fumitory
7. *Agastache foeniculum* 'Hazy Days'
8. *Alcea* Hollyhock 'Queeny Purple'
9. *Alchemilla mollis* Lady's Mantle X
10. *Allium tuberosum* Garlic Chives
11. *Alyssum maritimum* Snow Crystal
12. *Alyssum* Royal Carpet
13. *Ammi majus* Laceflower
14. *Amsonia tabernaemontana* Willow Blue Star
15. *Anaphalis margaritacea* Pearly Everlasting
16. *Anchusa officinalis* Alkanet
17. *Anemone tomentosa* 'Robustissima' X
18. *Angelica archangelica*
19. *Angelica gigas* X
20. *Anthriscus cerefolium* Chervil
21. *Anthriscus sylvestris* 'Ravenswing' X
22. *Aquilegia McKana* Giants Columbine
23. *Arabis caucasica* 'Rosea'
24. *Armeria maritima* 'Vesuvius'
25. *ASCLEPIAS incarnata* Butterfly Weed X
26. *Asclepias incarnata* 'Ice Ballet' Butterfly Weed
27. *Aster novae-angliae*
28. *Astilboides tabularis* Shieldleaf X
29. *Astrantia major* Masterwort X
30. *Atriplex hortensis* 'Plume Red' Orach
31. *Aurina saxatile* Alyssum
32. *Baptisia australis*
33. *Bidens humilis* 'Golden Eye'
34. *Brachycome Bravo* Mix
35. *Brassica oleracea* Osaka Red Ornamental Cabbage
36. *Brassica oleracea* Kale Palm Nero Di Toscana
37. *Brassica oleracea* Kale Redbor
38. *Calendula officinalis*
39. *Campanula carpatica* Deep Blue Clips Bellflower
40. *Campanula glomerata* 'Alba' White Clusterflower
41. *Campanula glomerata* Clusterflower Blue
42. *CAMPANULA persicifolia* 'Alba'
43. *Catananche caerulea* Cupids Dart
44. *Caulophyllum thalictroides* Blue Cohosh
45. *Centaurea cyanus* 'Black Ball'
46. *Centaurea macrocephala* Bighead Knapweed
47. *Centaurea uniflora nervosa* Knapweed
48. *Centranthus ruber* Jupiter's Beard Red
49. *Cheiranthus cheiri* Wallflower
50. *Chelone obliqua* Turtlehead X
51. *Chenopodium giganteum*

52. *Chrysanthemum nivelli* 'Snowstorm'
53. *Clarkia amoena* Godetia Satin Mix
54. *Clarkia unguiculata* Choice Double Mix
55. *Clematis alpina* 'Pamela Jackman'
56. *Clematis recta* purpurea X
57. *Cleome Sparker* Blush X
58. *Cleome* Violet Queen X
59. *Corydalis sempervirens*
60. *Cyclamen purpurascens*
61. *Cynoglossum amabile* Blue Shower
62. *Dalea purpurea* Purple Prairie Clover X
63. *Daucus carota* Queen Anne's Lace
64. *Desmodium canadense* Showy Tick Trefoil
65. *Dianthus barbatus nigrexcens* Sweet William 'Sooty' X
66. *Dianthus deltoids* 'Flashing Lights'
67. *Dianthus speciosa* Rainbow Loveliness
68. *Dicentra spectabilis* 'alba' White Bleeding Heart X
69. *Dicentra spectabilis* Bleeding Heart
70. *Digitalis Foxy* Mix
71. *Digitalis grandiflora* Yellow Foxglove
72. *Digitalis lutea* Small Yellow Foxglove
73. *Diascia barberae* Pink Queen Twinspur
74. *Dracocephalum moldavicum* Dragonhead
75. *Echinacea purpurea* 'White Swan'
76. *Echinacea purpurea* 'Magnus'
77. *Echinops ritro* Globe Thistle
78. *Eryngium giganteum* 'Miss Wilmot' Sea Holly X
79. *Eryngium glaciale* alpine X
80. *Eschscholzia maritima prostrata* Golden Tears
81. *Eschscholzia californica* 'Mission Bells'
82. *Eupatorium atropurpureum* Joe Pye Weed
83. *Eupatorium rugosum* 'Chocolate' X
84. *EUPHORBIA polychroma* X
85. *Festuca ovina glauca* 'Elijah Blue'
86. *Foeniculum vulgare dulce* 'Rubrum' Bronze Fennel X
87. *Gaillardia grandiflora* 'Burgundy'
88. *Gaillardia* 'Goblin'
89. *Geranium macrorrhizum* 'Ingwersen's Variety'
90. *Geranium* Pink & White X
91. *GERANIUM pratense striatum* 'Splish Splash'
92. *Geranium yoshinoi* X
93. *Geum trifolium* Prairie Smoke
94. *Gomphrena* Mixed (germinated but killed with late frost)
95. *Gypsophila oldhamiana* Baby's Breath Manchurain
96. *Gypsophila paniculata* Baby's Breath X
97. *Gypsophila repens* 'Rosea' Baby's Breath

98. HELENIUM hoopesii
99. Helianthus maximillianii Prairie Sunflower
100. Heliopsis helianthoides 'Lorraine Sunshine'
101. Heracleum lanatum Giant Cow Parsnip X
102. Hesperis matronalis Sweet Rocket
103. Heuchera Palace Purple
104. Iberis umbellata 'Candycane Mix'
105. Impatiens balfouri X
106. Impatiens glandulifera Himalayan Jewelweed
107. Lathyrus Old Spice Mix Sweet Pea
108. Larkspur Giant Imperial Mix
109. Lavatera trimestris Silver Cup
110. Lavatera trimestris Mont Blanc
111. Lavender Dwarf Munstead
112. Leonurus sibiricus Siberian Motherwort
113. Leucanthemum 'Becky'
114. Leucanthemum Crazy Daisy
115. Liatris spicata Gay Feather
116. Ligularia dentata 'Othello' X
117. Ligularia stenocephala 'The Rocket' X
118. Limonium hybrida Mello Yellow
119. Limonium sinuata Statice QIS Apricot
120. Limonium latifolium Sea Lavender
121. Limonium tataricum German Statice
122. Lunaria annua variegata alba X
123. Lunaria Money Plant Purple X
124. Lupine Cherry Pink
125. Lychnis alpina Snow Flurry
126. Lychnis chalcedonica 'Alba' White Maltese Cross
127. Lychnis coronaria white/pink
128. Lysimachia punctata Yellow Circle Flower X
129. MACLEAYA cordata Plume Poppy X
130. Malva moschata Musk Mallow
131. Malva sylvestris ssp. mauritiana 'Bibor Felho'
132. Malva sylvestris 'Brave Heart'
133. Meconopsis betonicifolia Blue Poppy X
134. Mesembryanthemum Mixed Colors Livingston Daisy
135. Mirabilis Four O'Clock Mix (germinated but froze with late frost)
136. Monarda citriodora Lemon Bergamot
137. Monarda fistulosa Wild Bergamot
138. Monarda hybrida 'Lambada'
139. Myosotis alpestris Forget Me Not Indigo Blue
140. Myrrhis odorata Sweet Cicely
141. Nasturtium Empress of India
142. Nasturtium Jewel Mix
143. Nasturtium Tall Mixture

144. *NEPETA subsessilis*
145. *Nigella damascena* Love-In-A-Mist X
146. *OENOTHERA missouriensis* Ozark Sundrop X
147. *Oenothera speciosa* Showy Primrose
148. *Oenothera tetragona*
149. *Papaver oriental* Coral Reef X
150. *Papaver orientale* Oriental Poppy
151. *Passiflora caerulea* Passion Flower X
152. *Pennisetum alopecuroides*'Moudry'Black Fountain Grass X
153. *Penstemon barbatus* 'Prairie Fire' X
154. *Perilla frutescens*
155. *PEROVSKIA atriplicifolia* X
156. *Persicaria affinis* Himalayan Fleeceflower
157. *Petalostemon purpureum* Purple Prairie Clover
158. *Petunia Supercascade Blue*(germinated but froze with late frost)
159. *Peucedanum littorale*
160. *Phacelia campanularia* California Bluebell
161. *Phacelia tanacetifolia* BeePlant
162. *Phlomis tuberosa*
163. *Phlox paniculata* New Hybrid Mixed
164. *Physostegia virginiana* Obedient Plant X
165. *Platycodon grandiflorus* 'Fuji Pink'
166. *Polemonium caeruleum* 'Alba' White Jacob's Ladder
167. *Polygonum orientale* 'Kiss over the Garden Gate'
168. *Potentilla nepalensis* 'Miss Wilmott'X
169. *Primula denticulate* X
170. *Pulmonaria saccharata* 'Mrs. Moon' X
171. *Reseda odorata* Mignonette
172. *Ricinus* Castor Bean (germinated but froze with late frost)
173. *Rogersia tabularis* X
174. *Rudbeckia* Becky Mix
175. *Rudbeckia fulgida* 'Goldsturm'
176. *Rudbeckia* Primadonna Deep Rose
177. *Ruellia humilis* Wild Petunia
178. *Ruta graveolens* Rue
179. *Salvia viridis* (horminum) Painted Sage
180. *Salvia x superba* 'Blue Queen'
181. *Sanguisorba menziesii*
182. *Scabiosa columbaria* 'Butterfly Blue'
183. *Schizachyrium scoparium* Little Blue Stem
184. *Scutellaria baicalensis* Baikal Scullcap
185. *Sedum syn Hylotelephium ex 'Morchen'*
186. *SIDALCEA malviflora* (Starks hybrids)
187. *Solidago sphacelata* 'Golden Baby' X
188. *Sorghastrum nutans* Indian Grass
189. *Stachys byzantina* Lamb's Ear

190. *Stachys officinalis* Betony X
191. *Symphyandra hoffmanii* Ring Bellflowers
192. *Tanacetum coccineum* Painted Daisy
193. *Thermopsis caroliniana*
194. *Thalictrum* Wild Meadowrue
195. *Thymus serpyllum* Creeping Thyme X
196. *Trifolium rubens*
197. *Valeriana officinalis*
198. *Veratrum nigrum* False Hellebore
199. *Verbascum nigrum*
200. *Verbena bonariensis*
201. *Vernonia noveboracensis* Ironweed
202. *Veronica gentiantoides*
203. *Veronica longifolia* 'Blauriesin' BLUE GIANTESS
204. *Veronica spicata*
205. *Veronicastrum virginicum* 'Apollo'
206. *Veronicastrum virginicum* Bowman's Root
207. *Veronicastrum virginicum* rose.