

Winter Sowing with Milkweed & Other Natives



What is winter sowing and why do it?

- A way to start seedlings outdoors in mid-winter
 - Uses mini-greenhouses made from plastic containers
- Mimics nature's process to prepare seeds to grow
 - For seeds which need cold & moisture to germinate best
- Improves odds over direct sowing in ground in fall
 - Bottles work like a cold frame to 'jump-start' spring
 - Easier to keep track of tiny seedlings in spring
 - Seeds aren't eaten before they sprout
- Cheaper and easier than indoor sowing
 - Requires virtually no attention till mid-April
 - Seedlings are 'pre-hardened' – more resistant to light frost
- Also works for cold-loving veggie crops
- Cost-effective way to propagate lots of natives
 - Native plants are vital to restore lost habitat



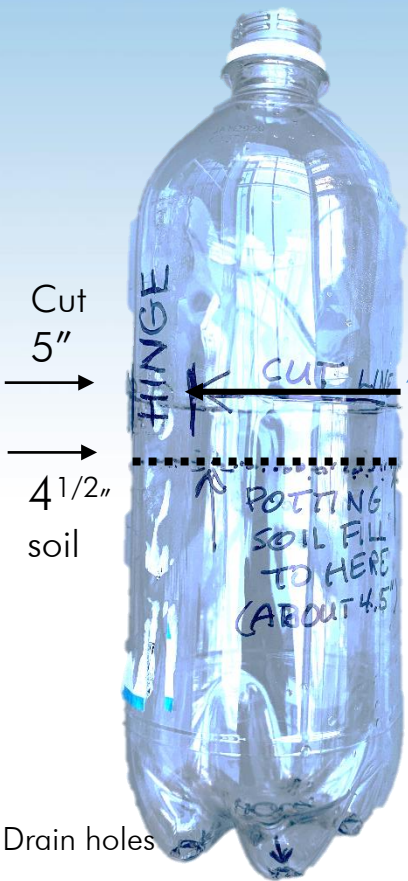
To make your garden Monarch & pollinator-friendly, there are 4 essentials:



- Pick a spot with enough sun (at least 6 hours)
- Plant a continuous sequence of blooming nectar flowers
- **Plant milkweeds** (a variety of species)
- Go organic – no pesticides or herbicides



Winter sowing basics



February 1



- Moisten but do not soak potting mix
- Poke drain holes in clear or translucent bottle
- Draw line around bottle 5" from base
- Cut around leaving 1" uncut "hinge"
- Fill & gently firm soil to 4.5" from bottom of bottle
- Choose your seeds & LABEL YOUR STICK & envelope
- 20 seeds/bottle
- Spread seeds on surface and pat to barely cover
- Insert your labeled stick inside
- Tape bottle shut, label outside too
- Set plastic bottles outside in Jan/Feb
- Pick a sunny spot but not sheltered
- Let Nature do the work
- Watch for seedlings around April 15
- Cut open along tape on first warm day (~75F)
- Prop top open on nice days & water if it's dry
- Flip shut if frost threatens
- If no danger of frost, leave top propped open

May 15



Transplanting instructions

- For best results, pot up seedlings around 5/15
 - More time to adjust before planting in garden
- Buy organic potting mix; use clean, 3" or 4" pots
- Empty the seedlings from bottle onto a surface
 - Work in a shady spot not full sun
 - Gently tease the seedlings apart with fingers
 - One plant per pot
- Place moistened soil mix in the pots
 - Make a hole to drape the seedling's roots into
- Pat the soil around the seedling
 - Same level as it grew in the bottle
- Keep soil moist
 - Leave seedlings in shade for first few days
- Transplant to garden when plant looks sturdy and roots are well developed
- Fertilize sparingly in the garden



In mid-May your seedlings should be ready to transplant.





Appendix

Potting soil guidelines

- There are as many soil mixes as there are winter sowers!
- Any good sterile potting mix will do the job – sterile mixes prevent damping off – ‘seed starters’ are more fine textured
 - Miracle Gro Performance Organic’s All Purpose Container Mix, ProMix, Johnny’s Seed Starting Mix, Espoma’s Organic Seed Starter Mix - just to name a few



Potting soil D-I-Y

- you can mix your own, in proportions roughly like this:
 - 1/3 drainage-promoting material such as perlite
 - 1/3 moisture-retaining material such as coir or peat
 - 1/3 nutrient-containing material such as sterile or home-made compost



Fertilization guidelines



- Be aware that some 'seed starting mixes' are mostly just sphagnum moss or peat; they do not provide nutrients (read the labels!)
 - Nutrients not needed initially since seeds have their own, BUT, you'll need to add a diluted fertilizer once the first true set of leaves have appeared, which will happen while they are still in their bottles
- AVOID soil mixes with added chemical fertilizers, although organic is OK
 - I prefer a mild organic N-P-K liquid fertilizer that I can water in at 1/2 strength every 2 weeks or so once the seedlings are up and growing in their bottles
 - Natives do not need a lot of fertilizer but while still in small containers the nutrients leach out quickly

Hardy Annuals* Suggested for Winter Sowing

Abronia umbellata (sand-verbena)
Adonis aestivalis (pheasant's eye)
Ageratum houstonianum (floss flower)
Agrostemma githago (corn cockle)
Alonsoa acutifolia (maskflower)
Amaranthus caudatus (love-lies-bleeding)
Amberboa moschata (sweet sultan)
Anagallis indica (blue pimpernel)
Anchusa (bugloss)
Alyssum maritimum (sweet alyssum)
Antirrhinum majus (snapdragons)
Argemone mexicana (prickly poppy)
Asperula azurea (woodruff)
Brachycome iberidifolia (swan river daisy)
Browallia demissa (bush violet)
Bupleurum rotundifolium (ox-eye daisy)
Calandrinia grandiflora (red-maids)
Calendula (pot marigold)
Callistephus (China aster)
Campanula (annual Canterbury bells)
Celosia (cockscomb)
Centaurea (cornflower)
Centranthus macrosiphon (valerian)
Chrysanthemum paludosum (mini-marguerite)
Clarkia elegans
Collinsia bicolor (Chinese-houses)
Collomia coccinea (mountain-trumpet)
Consolida ajacis (Larkspur)
Convolvulus (dwarf/bush morning glory)
Coreopsis tintoria (calliopsis)
Cosmos bipinnatus (tall cosmos)
Cosmos sulphureus (sulphur cosmos)
Crepis rubra (hawks-beard)
Cuphea ignea (fiery cuphea)
Cynoglossum (Chinese forget-me-not)
Datura species (thorn-apple)
Delphinium (larkspur)
Dianthus chinensis (China pinks)
Diascia barberi (twinspur)
Dicranostigma franchetianum (bright-yellow poppy)
Dimorphotheca aurantiaca (Cape marigold)
Dracocephalum moldavica (Moldavian dragonhead)
Echium creticum (bugloss)
Emilia javanica (tassel flower)
Eschscholzia californica (California poppy)
Fagopyrum esculentum (buckwheat)

Felicia bergeriana (kingfisher daisy)
Gaillardia pulchella (blanket flower)
Gilia (bird's-eye)
Godetia (fairytan, farewell-to-spring)
Gypsophila (baby's breath)
Helianthus (sunflowers)
Helichrysum (strawflower)
Heliopsis (paper daisy)
Hunnemannia fumariifolia (Mexican tulip poppy)
Iberis (candytuft)
Ionopsidium acaule (false diamond-flower)
Lathyrus odoratus (sweet peas)
Lavatera (annual mallow)
Leonurus (lion's paws)
Limnanthes douglasii (poached-egg plant)
Limonium sinuatum (statice)
Linaria bipartita (toadflax)
Linum (flax)
Lobularia (alyssum)
Lupinus (lupine)
Lychnis (catchfly)
Malcomia maritima (Virginian stock)
Malope trifida (malope)
Malva (mallow)
Matthiola bicornis (night-scented stock)
Myosotis dissitiflora (forget-me-not)
Nemesia strumosa (Cape jewels)
Nemophila (baby blue-eyes)
Nicandra (shoo-fly)
Nicotiana (flowering tobacco)
Nigella (love-in-the-mist)
Osteospermum (Star of the Veldt)
Papaver (poppy)
Petunia hybrida (petunias)
Phacelia (scorpion weed)
Phlox drummondii (drummond phlox)
Rehmannia angulata (Chinese foxgloves)
Reseda odorata (mignonette)
Rudbeckia bicolor (gloriosa daisy)
Salpiglossis sinuata (painted tongue)
Salvia splendens (scarlet sage)
Sanvitalia procumbens (creeping zinnia)
Saponaria vaccaria (soapwort)
Scabiosa (pincushion flower)
Schizanthus pinnatus (butterfly flower)
Senecio elegans (ragwort)
Silene armeria (none-so-pretty)
Specularia perfoliata (Venus' looking glass)

Thunbergia alata (clockvine)
Tithonia rotundifolia (Mexican sunflower)
Torenia fournieri (wishbone flower)
Trachymene caerulea (laceflower)
Tropaeolum (nasturtiums)
Ursinia anethoides (dill-leaf ursinia)
Vaccaria (cow soapwort)
Venidium fastuosum (Cape daisy)
Viola tricolor (pansy)
Viscaria (rose-of-heaven)
Xeranthemum (everlasting flower)

*note that zinnias are not on this list. Annuals that are extremely tender can easily be direct sown instead of wintersown; you'd have to wait so long to ensure they aren't frostbitten you gain no advantage by wintersowing them.

Source: Trudi Davidoff, wintersown.org



Common Garden Perennials for Winter Sowing

Here's a list of common garden perennials, the varieties are listed by common names with their zone ranges included. The zone ranges are "suggested", many of these plants will be hardier beyond the zone listing. "b" is a Biennial. As always, you can research the seeds you want to germinate with Winter Sowing; learn more about the plants to see if they will be happy in your own garden. If you are unsure as to any plant's ability to germinate via Winter Sowing where you are then do hold some seeds back to winter sow close to the very end of winter

Aster 4-9
Artemesia 3-8
Astilbe 4-8
Baby's Breath 4-9
Balloon Flower 4-9
Bee Balm 4-9
Bellflower 3-8
Blanket Flower 3-10
Blue-Eyed Grass 5-8
Blue Fescue 4-9
Blackberry Lily 5-9
Blazing Star 4-9
Blue Beard 7-10
Butterfly Weed 3-9
Broom 6-9
Cactus (varies by species, zones 3-10 included)
Canterbury Bells (b) 3-8
Carnation 4-8
Catmint 5-9
Candytuft 3-8
Cinquefoil 5-8
Chinese Lanterns 5-8
Chrysanthemum 5-10
Clematis 5-9
Columbine 3-8
Coral Bells 3-9
Coreopsis 4-10
Coneflower 3-8
Cranesbill 5-8
Creeping Thyme 4-9
Cupid's Dart 5-10
Daylily 4-10
Delphinium 3-7
English Daisy 4-8
Evening Primrose 5-8
Everlasting Sweet Pea 5-9
False Indigo 3-9
Flax 5-9
Foxglove (b 4-8) (p 3-8)
Fleabane 6-9
Fountain Grass 6-9
Gaura 5-8
German Statice 3-9
Geum 5-7

Globe Thistle 3-8
Goat's Beard 3-7
Heather 5-8
Helenium 4-8
Iceplant 6-10
Hardy Hibiscus 5-10
Helleborus 3-8
Hollyhock 3-9
Hosta 3-9
Iris 4-9
Jack-in-the-Pulpit 5-9
Jupiter's Beard 5-8
Joe-Pye Weed 5-8
Lamb's Ears 4-8
Leadwort 7-10
Lily-of-the-Nile 6-10
Lily-of-the-Valley 3-8
Lily (Oriental varieties) 4-8
Lupine 4-8
Malva 4-8
Meadowsweet 3-8
Money Plant (b) 5-9
Mountain Bluet 3-8
Obediant Plant 4-8
Ox-Eye Daisy 3-8
Pampas Grass 7-10
Pasque Flower 5-7
Penstemon 3-8
Persian Buttercup 7-10
Peruvian Lily 7-10
Phlox 4-8
Pigsqueak 3-8
Pincushion Flower 3-8
Pinks 3-9
Plumbago 5-9
Poppy 4-9
Prairie Coneflower 3-10
Prairie Sunflower 4-10
Primrose 5-8
Pyrethrum 3-7
Red Hot Poker 6-10
Rudbeckia 3-9
Rose Campion 4-8
Russian Sage 3-9

Salvia (varies by species 4-9)
Sea Holly 5-9
Sedum (varies by species 3-9)
Shasta Daisy 5-9
Sea Pink 6-8
Snow-in-the-Summer 3-7
Spurge 4-9
Sundrops 4-8
Toad Lily 4-9
Verbena 6-10
Veronica 3-10
Viola 4-7
Yarrow 3-10

Source: Trudi Davidoff, wintersown.org

WinterSown Vegetables and Herbs

Winter Sowing is fabulous for starting veggies. If you've had problems with direct sowing veggie seeds, such as the seeds get eaten by birds or critters, or they either desiccate or rot in the soil, or bugs eat them, or there's insufficient germination (for whatever reason) try Winter Sowing your vegetable seeds.

Some good Veggie choices are:





Allium family (onions, shallots, garlic, chives)
Artichokes (zone seven and warmer)
Beans (need very well-draining containers)
Beets
Brassica family (cabbage, broccoli, kale, collards, etc)
Carrots
Celery
Celeriac
Chards
Corn (select an "early" type as it can germinate at lower temps)
Cucurbit family (cukes, squash, pumpkins, melons, gourds)
Leafy Greens
Lettuces
Nightshade family (eggplant, tomatoes, peppers, potatoes - from real seeds....not "seed potatoes")
Oriental veggies (any non Tropical)
Parsnip
Peas
Radishes
Spinach
Kitchen Herbs
Anise
Basil (tender annual best sown towards end of winter)
Borage
Chamomile
Chervil
Chives
Cilantro/Coriander
Dill
Fennel, Wild
Lavender
Lemon Balm
Lovage
Mint
Oregano
Rosemary
Rue
Sage
Summer Savory
Sweet Marjoram
Tarragon
Thyme

Source: Trudi Davidoff, wintersown.org









Rudbeckia hirta – Black-eyed Susan

<u>Germination Code</u>	<u>C(30)</u>
<u>Life Cycle</u>	Biennial
<u>Sun Exposure</u>	Full, Partial
<u>Soil Moisture</u>	Medium-Wet, Medium, Medium-Dry
<u>Height</u>	2 feet
<u>Bloom Time</u>	June, July, August, September, October
<u>Bloom Color</u>	Yellow
<u>Advantages</u>	   
<u>USDA Zones</u>	3-9
<u>Plant Spacing</u>	10-12"







Lobelia cardinalis – Cardinal flower

<u>Germination Code</u>	C(60) D
<u>Life Cycle</u>	Short-Lived Perennial
<u>Sun Exposure</u>	Full, Partial
<u>Soil Moisture</u>	Wet, Medium-Wet
<u>Height</u>	4 feet
<u>Bloom Time</u>	July, August, September
<u>Bloom Color</u>	Red
<u>Advantages</u>	   
<u>USDA Zones</u>	4-9
<u>Plant Spacing</u>	6-16"







Asclepias tuberosa – Butterfly weed (milkweed)

Germination Code	C(30)
Life Cycle	Perennial
Sun Exposure	Full, Partial
Soil Moisture	Medium, Medium-Dry, Dry
Height	2 feet
Bloom Time	June, July, August
Bloom Color	Orange
Advantages	   
USDA Zones	3-9
Plant Spacing	1-3'







Asclepias incarnata – Rose milkweed (pink) & Ice Ballet (white)

Germination Code	C(30)
Life Cycle	Perennial
Sun Exposure	Full, Partial
Soil Moisture	Wet, Medium-Wet, Medium
Height	4 feet
Bloom Time	June, July, August
Bloom Color	Pink
Advantages	   
USDA Zones	3-9
Plant Spacing	18-36"







Monarda fistulosa – Wild bergamot

Germination Code	A
Life Cycle	Perennial
Sun Exposure	Full, Partial
Soil Moisture	Medium-Wet, Medium, Medium-Dry, Dry
Height	4 feet
Bloom Time	July, August, September
Bloom Color	Purple
Advantages	   
USDA Zones	3-9
Plant Spacing	2-3'



Echinacea purpurea – Purple Coneflower

<u>Germination Code</u>	A
<u>Life Cycle</u>	Perennial
<u>Sun Exposure</u>	Full, Partial
<u>Soil Moisture</u>	Medium-Wet, Medium, Medium-Dry
<u>Height</u>	4 feet
<u>Bloom Time</u>	July, August, September
<u>Bloom Color</u>	Purple
<u>Advantages</u>	   
<u>USDA Zones</u>	4-8
<u>Plant Spacing</u>	18-24"



Cephalanthus occidentalis - Buttonbush

<u>Germination Code</u>	A
Life Cycle	Perennial
<u>Sun Exposure</u>	Full, Partial
<u>Soil Moisture</u>	Wet, Medium-Wet
<u>Height</u>	up to 12 feet
<u>Bloom Time</u>	June, July, August
Bloom Color	White
Advantages	  
<u>USDA Zones</u>	4-9
<u>Plant Spacing</u>	3-4'



Marigold seeds

(not recommended for winter sowing.)

Last frost date in Westport: May 12

DAYS TO GERMINATION: 4-7 days at 75-80°F (24-27°C)

SOWING: Transplant (recommended) - Sow into seed pots 4-6 weeks before last frost date, lightly covering seed. Grow indoors under lights. Transplant out after danger of frost. OR, Direct seed in sunny border one week before last frost date - Sow 1/4" deep. Pinching encourages branching.

NOTES: High temperatures can cause plants to stall, and temporarily decline in growth and bloom. Deadhead regularly to increase blooms and/or apply fertilizer according to directions.

LIGHT PREFERENCE: Sun.

PLANT HEIGHT: Varies 1-2 ft.

PLANT SPACING: 8-18". French Marigold: 8-12". Gem Marigold: 12". African Marigold: 12-18".





HARDINESS ZONES: Annual (needs to be replanted yearly)

SOIL REQUIREMENTS: Average soil. Feed moderately. pH: 6.0-7.5 preferred.

USES: Beds, borders, mass plantings, containers, and window boxes. Edible flowers, cut flowers (tall varieties). Said to repel pests so farmers plant them around vegetable rows.




SCIENTIFIC NAME: Tagetes spp.



<u>Germination Code</u>	C(30)G
<u>Life Cycle</u>	Perennial
<u>Sun Exposure</u>	Partial, Shade
<u>Soil Moisture</u>	Medium-Wet, Medium, Medium-Dry
<u>Height</u>	7 feet
<u>Bloom Time</u>	July, August, September
<u>Bloom Color</u>	Pink
<u>Advantages</u>	   
<u>USDA Zones</u>	3-8
<u>Plant Spacing</u>	3-4'

Eutrochium purpureum – Sweet Joe Pye Weed



Germination Code	C(60)
Life Cycle	Perennial
Sun Exposure	Full, Partial
Soil Moisture	Medium-Wet, Medium
Height	6 feet
Bloom Time	July, August, September
Bloom Color	Purple
Advantages	  
USDA Zones	5-8

Vernonia novaboracensis – NY Ironweed



Asclepias speciosa – Showy milkweed

Germination Code

C(30)

Life Cycle

Perennial

Sun Exposure

Full

Soil Moisture

Medium, Medium-Dry, Dry

Height

3 feet

Bloom Time

June, July, August

Bloom Color

Purple

Advantages



USDA Zones




3-9

Plant Spacing

2-3'






Asclepias purpurascens – Purple milkweed

<u>Germination Code</u>	<u>C(30)</u>
<u>Life Cycle</u>	Perennial
<u>Sun Exposure</u>	Full, Partial
<u>Soil Moisture</u>	Medium-Wet, Medium, Medium-Dry
<u>Height</u>	3 feet
<u>Bloom Time</u>	June, July
<u>Bloom Color</u>	Purple
<u>Advantages</u>	  
<u>USDA Zones</u>	4-9
<u>Plant Spacing</u>	18-24"



Cutleaf coneflower – Rudbeckia laciniata

<u>Germination Code</u>	<u>C(30)</u>
<u>Life Cycle</u>	Perennial
<u>Sun Exposure</u>	Full, Partial, Shade
<u>Soil Moisture</u>	Medium-Wet, Medium
<u>Height</u>	7 feet
<u>Bloom Time</u>	July, August, September, October
<u>Bloom Color</u>	Yellow
<u>Advantages</u>	  
<u>USDA Zones</u>	3-8
<u>Plant Spacing</u>	2-4'



garden with alice

Email questions to alice@gardenwithalice.com

