

Wintersowing Notes - Lynn Watson

Garden hungry people, you can start planting seeds for spring right now. Plant annual, perennial, and vegetable seeds. Germination is inside mini-greenhouses of translucent plastic recyclables: (Clear milk jugs and pop bottles). No indoor light set up and no inside watering. Plant, then, place containers in the snow. Keep sowing containers of seeds all winter. Plants grown outside = need no hardening off. Transplants go into spring gardens.

Supplies:

- *Translucent Milk/Water jugs/Liter pop bottles
- * Warm Water * Germination mix * Plant Seeds
- Bypass Hand Shears/ Steak Knife * Shallow Plastic tubs (2)

Preparing Containers:

Selecting Containers - The container must hold enough germination mix for the roots and provide headroom for the sprouts. Containers can dry out quickly on a warm spring day; use ½ gallon milk jugs, water jugs and pop bottles so you can put deeper potting mix in them. The container must be translucent enough to let sufficient light in for your seedlings; check that you can see your finger through the plastic from the inside. Re-inflate squashed ones by filling with hot water. Rinse all containers with hot soapy water. Rinse well.

Ventilation and Drainage - You must have sufficient ventilation holes (top) and drainage holes in the bottom of your containers to allow rain/snow melt to enter, ventilate and drain freely to avoid seed rot. The soil should be able to retain sufficient water to allow germination.

Cutting Steps: If you choose milk jugs or pop bottles, recycle the cap the (Or save them for pot feet.) Use a stiff steak knife or bypass cutters to make cuts.

1. Milk/water jugs: Cut top half almost off in an inverted U shape in order to create a hinged top that flips up. Follow manufacturer line. (The bottom of the inverted U is a straight cut across.) Cut all the way around the milk jug except for the handle part. **Milk Jugs** – Cut holes in jug bottom. At least 4 that you can ‘stick your thumb through’.

2. Soda Bottles: Cut bottles about 2/3 for the bottom portion and 1/3 for the top. Cut a vertical slit (about 3") up the side of the top portion of the soda bottle, so you can fold it a bit to fit inside the bottom portion.

Use knife to cut holes for ventilation and drainage. **Soda Bottles** - Cut little finger size holes for drainage. Cut holes for ventilation.

Filling Containers with Growing Mix:

Potting mix - A good quality, soilless germination mix makes a difference in moisture retention and adequate drainage. Don't use anything labeled "GARDEN soil". You're looking for a light-weight mix, not a heavy one. Use Germination Mix #3 (4 cubic foot bales - Save unused portion in bag or trash can year to year.) Add warm water in plastic tub to GERMINATION mix. It should be like thick pudding.

Depth in Container: Three inches is the minimum recommended amount for moisture retention. Fill the milk jugs right up to the cut (at least 3-4" after watering) so they have more of mix to grow in. Deep roots=sturdy plant

Seed Selection and Timing:

Winter Sowing is based on the idea of re-seeds, referring to any plant that re-seeds in your area naturally. Compared to seeds sown indoors, Winter Sown plants will be ready for transplant a little later but will be much healthier and catch up quickly. Warmer weather plants get a healthy head start.

The only seeds that need to go out as early as **December** (or earlier) are those that require a long cold stratification period of 3+ months or are hydrophilic (need to stay moist) and should be sown immediately upon collection in the fall. These would be some perennials, and most trees & shrubs.

Cold stratification: seeds that require 30-60 days of cold stratification, start sowing in **February**. Seeds that don't require any cold stratification can be sowed in **March or April (spring-sowing)**. Early sowing could actually hurt some seeds that will rot sitting in the container that long.

It's never too late to start perennials. I keep going into summer. Those plants often get planted in the fall.

Temperatures below freezing at night: Stick with cold hardy vegetables, herbs, and flowers. Start early veggies (broccoli and lettuce) in jugs. Wait until closer to the last frost date for warm season veggies, such as melons, cucumbers, or tomatoes. Otherwise, if you have a warm spell, they will germinate, and then when temps drop (to the 20's or teens at night), seedlings need additional protection, such as a row cover.

Seeds: Placing, Planting and Labeling:

Seed Placement: Place or sprinkle seeds on germination mix in appropriate pattern. **Plant large leaved seedlings** (squash, cucumbers) 1: per soda bottle. 2 per jug, Med: 3 per jug, Small: 4 per jug. **Small, fine seeds** don't have a big fuel reserve,

plant at /just below the surface of the soil. Just enough energy to get the root and the leaves up. Planted too deep and sprout can't get above soil.

Place or sprinkle seeds over moistened germination mix. Cover seed or not as needed. Sprinkle on thin layer of moist vermiculite. Water with a fine spray from a spray bottle. It should be running out the bottom as fast as is introduced through the top so it doesn't stay soggy, and the seeds are floating on top of the water.

Labels: I use pieces of old plastic mini blinds for my labels Venetian blind. Use a good grease pencil or waterproof marker. Condensation and wear will cause the label to fade otherwise.

Placement of Planted containers: Set jug in snow, **E or N exposure**

Water: Rain and/or snow assures a supply of moisture to the seeds as they prepare to germinate. Do not put under anything.

Sun: Too much sun, changing temps, can burn seedlings. Place on a north-facing or shaded place for winter. With spring, the sun's angle changes. When seeds have their first true leaves, move shade lovers to filtered light (behind shrubs) and the sun lovers to brighter, filtered light.

Extra Insulation: Ring around annual containers with perennial containers, like a covered wagon circle = additional insulation, less temperature variation for annuals protected this way. Throw a blanket or row cover over the heap if it looks like the temps are dipping below 35 (if annuals have sprouted). Get off as soon as sun is up.

Safety: Put containers in a safe place where animals can't find them and tear into them. Surround with a length of fence.

Wind: To keep jugs together, set half-gallons around two liter bottles to hold like a corral. Then surround with bricks/blocks or run a wooden or bamboo stake through the handles so they'll stay together.

Watering and Condensation:

Containers: some sun all the day. 'More sun': checked more often, may need water. Water should be running out bottom as fast as is going into the top seed aren't soggy or floating.

Condensation = enough moisture in the container. As temps rise, check containers often to be sure mist is condensing on the inside. If the soil looks dry, mist top or place container in a shallow tub of water. Avoid heavy watering from the top; seeds could wash out the drainage holes.

Using tops: Check the containers often for ventilation: warm air needs to escape. When it's light jacket weather, remove tops (at first just during the day and replacing the tops if we have a very cold night, especially with the

half hardies and the tenders). Leave tops off as soon as sprouts emerge if there is not a chance of frost.

Preparation for Transplanting:

Winter Sown plants are not transplanted until the seedling has its first set of true leaves. Quick growing flowers/vegetables, are better off getting the seeds to sprout, then sticking the plug in the ground.

If plant leaves are bent up against the side of the milk jug, they may rot. Transplant into small 'flower pot ' with good drainage until ready to put it in the ground. The entire root ball gets planted so roots aren't disturbed at that planting.

Plants are growing too fast? Ground temperature is not warm enough to transplant out? Put containers in the shade to slow growth.

In early spring, do not plant starts too early unless plants can be put in cold soil or under a milk carton mini-greenhouse /wall of water/plastic hoop house. For hot weather plants like squash and cucumbers be sure the soil is warm enough! (Bare feet comfort=warm enough plant time)

Contact with soil fosters residual bottom heat. Do not put planted container in a low place that collects water and prevents drainage. Dig down to set in snow to keep jugs steady. Keep them upright as snow melts.

Resources

Canadian Winter Sowing: Garden Webforums.gardenweb.com

davesgarden.com/community/forums/f/coldsow/www.lakehousecreations.com/winter_sowing.htm

Tom Clothier's Garden Walk and Talk **tomclothier.hort.net/**

Wintersowing.org

Important Terms: Ventilation allows warm air to escape, Sufficient Drainage allows excess moisture to flow away & Access to hydrating rain and/or snow assures a supply of moisture to the seeds as they prepare to germinate.

Basic Steps: Apply to everyone:

Wintersowing: Wintersowing.org (Notes: Yardscapes-Lynn Watson)

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- 1.**Collect liter bottles, plastic food jugs clear enough to see your finger through when stuck in the neck. Re-inflate squashed ones by filling with hot water. Swish all containers with hot water and empty.
- 2.**Cut 4 holes large enough to push thumb through around jug bottom. Cut jug open following manufacturer 's line in plastic jug, leaving enough connection to make a hinge.
- 3.**Add warm water in plastic tub to GERMINATION mix. (No extra chemical additives). It should be like thick pudding. Fill jug bottom with germination mix to $\frac{1}{2}$ way full.
- 4.**Place or sprinkle seeds on germination mix in appropriate pattern. Insert label/waterproof marking. (Venetian blinds make good labels.)
- 5.**Close jug by pushing upper 1/2 into base.
- 6.**Set jug outside in snow, or shady (E or N) exposure.
- 7.**When first true leaves emerge, transfer to a 6 hour sunny exposure.