



Sow-Easy Vegetables

This year, why not try the mini-greenhouse, winter-sowing method to get a jump on spring vegetable planting?

Story and photos by Michelle Mero Riedel



Clockwise from top left: Rhubarb Swiss chard growing in the author's garden; Super Sweet 100 hybrid tomato; Mammoth Table Queen acorn squash; Big Dipper sweet pepper; hot peppers; Buttercream hybrid sweet corn



Most gardeners start vegetable seeds indoors under grow lights, direct sow into the garden or purchase starter plants at garden centers. I'd done all three to get my vegetable garden under way until I read about winter sowing at www.wintersown.org. First used to start perennial plants, this method also works well for starting vegetable seeds. I now use winter (or cold) sowing to start my entire vegetable garden.

With perennials, winter sowing involves sowing seeds in mini-greenhouses during the winter months. Seeds of tender plants, such as annuals, herbs and vegetables, are sown in the spring, usually at the end of March through the end of April. Since there are two categories of vegetables—cold-season vegetables that like the cool weather and warm-season vegetables that like summerlike temps—timing is important.

Seed Planting Schedule

In USDA Zone 4, it is best to sow the cold-season crops at the end of March through early April. Some of my favorite chill-loving crops include broccoli, Swiss chard, potatoes, peas, lettuce, cabbage and kale. Both the cold-crop seeds and seedlings can handle cooler temperatures

and short periods of frost.

Warm-season or tropical vegetables—including tomatoes, peppers, eggplants, cucumbers, corn and beans—are best sown mid- through the end of April. These plants prefer warm temperatures and soil. It's best to cover the mini-greenhouses with a blanket or move them to a warmer environment if temperatures dip below freezing.

Root crops also benefit from this method. Radishes, carrots, beets and potatoes are some popular examples. Although best direct sowed, I've had success planting these seeds in the mini-greenhouses, too. By the time transplanting occurs in early June, these plants have developed roots and leaves.

Why Winter Sow Vegetables?

Sowing vegetable seeds in small greenhouses has many advantages compared with direct sowing into the ground:

- Birds or other critters won't eat the seeds, so there's a higher germination rate.
- Soil stays warmer for faster germination and earlier planting, a plus in our cold climate.
- Seed planting is spread out over a longer period of time, so it's more

After planting vegetable seeds in rows and columns, add a layer of topsoil the width of the seed followed by a little water.



Sow-Easy Vegetables

Oregon Sugar
Pod II



Buttercream
hybrid sweet
corn



Rhubarb Swiss
chard is ready
to divide.



These tomato seedlings are ready to divide and transplant.

seedlings

relaxing.

- You plant only the seeds that have germinated; therefore, you don't waste garden space.
- You can move mini-greenhouses around. Full sun is best in cool spring weather; in warm weather, part sun is preferred.
- It's cheaper and less fuss than sowing seeds under lights, too.



Simple Setup

Any soft, plastic container with a lid can be recycled into a greenhouse. I like to use gallon-sized milk and water containers as they are easy to acquire, thanks to my neighbors. They also allow a lot of vertical room for the plants to grow, making them the ideal vessels. To prepare the containers, I use a utility knife to make half-inch cuts in the container bottom, turning the knife so that a hole appears for drainage. I do this four times with the holes evenly spaced apart. Next, I make a horizontal cut from one edge of the handle to the other, about 4 to 5 inches from the container bottom. Being careful to not cut through the handle, I pull back on the handle to open the top.

Organic soil and seeds are always a good choice for vegetables. To my containers, I add 2 to 3 inches of pre-moistened organic potting mix. Don't use moisture-retention or seed starting soils—they aren't necessary and tend to be costly. Smooth out the soil so it's even. Next, add seeds in rows. One of the reasons I like the square-bottom containers is they conveniently accommodate three or four rows and three or four columns. Planting plenty of seeds ensures enough will germinate. For tiny seeds, such as lettuce, a light, even sprinkle works well. Then, cover the seeds with soil to the depth recommended on the seed package and moisten the topsoil with a spritz of water. Add a plant label inside the con-

tainer before covering so you don't forget what you've planted. Using duct tape (I recommend 3M's clear duct tape), adhere the top of the container to the bottom, completely covering the horizontal cut line. Last, label the container exterior and remove the cap. Place the container outside in a sunny location, and let nature take it from there.

Monitoring Moisture

Luckily, seeds have the ability to determine when weather conditions are perfect for germination. As the weather warms, seedlings start to emerge. Lettuce seed is one of the first to germinate, usually in about two weeks. Inside the greenhouse, the temperature is much warmer than outside, and that's the reason why the plants grow so fast compared with direct sowing in the ground. For warm days (above 60 degrees F), the soil can dry out easily. A gentle spray of water may be necessary. In addition, if it hasn't rained for several sunny days, keep an eye out for dry soil. Evenly moist soil is always preferred. Another hint is to look for condensation on the container sides. This is a sign the seeds and seedlings are warm and getting proper moisture.

If the temperatures dip to or below freezing, cover the greenhouses that contain the warm-weather seedlings with a blanket at night. Tender, warm-season seedlings are easily killed by frost.



Far left: Most of these vegetable seedlings are ready for dividing.

Left: After dividing, Tenderpick bush beans grow in individual pots before going into the garden.

plant shock. They've been acclimated to both warm and cold temperatures already.

Transplanting

Most of the divided plants end up in smaller containers for plant sales and further growth. These smaller container plants will sit outside, either on a table or shelf, or head into my greenhouse. I like them to grow to a considerable size before selling, sharing or planting them into my garden. My vegetable garden is usually planted by the end of June, and plants are at a fairly mature size by then.

Waiting to put well-established plants into the garden has some benefits. Since I don't have fencing, rabbits and deer used to devour the little grown-from-seed

plants. With mature plants, they may nibble but they don't devour them. Adding potted, mature vegetable plants into container gardens allows them to fairly compete with other same-sized plants.

Vegetable gardeners will continue to sow certain seeds directly into the ground as well as indoors under grow lights. But when looking for an easy way to jump start the season that doesn't take up any garden space, winter sowing is a fantastic alternative. Let the sowing begin! □

Master Gardener and professional photographer Michelle Mero Riedel gardens in Washington County. She is a frequent contributor to Northern Gardener.

Another option is to move the greenhouse up against the warm side of the house or into the garage.

Removing Covers

In Minnesota, the average last frost date is between May 1 and May 30. However, there are many years when we have frost later than the average. Taking the covers off is a personal preference. The cold-weather crops will do just fine with some chilly temps. But the warm-season crops should remain in the containers for as long as possible, depending on the outside temperature. I tend to err on the side of caution, keeping warm-season vegetable plants and even some of the cold ones in the greenhouses for as long as possible, letting the plants tell me when it's time for them to leave. That's usually when the plants start heading out the top of the container or looking a little overcrowded. Then it's time to divide.

Dividing Plants

Some winter sowers recommend dividing plants when the first set of true leaves emerges. I've found it's better to wait until the plants are several inches high and have a strong root system. Tomatoes are one of the last plants to divide. They do exceptionally well when the weather has warmed up, sometimes as late as early June. When it is time to transplant, cold- and warm-season seedlings don't experience trans-



As soon as plants have four to five leaves and strong roots, they can be divided and placed into smaller, individual containers to continue growing. This early acorn squash will be put in its own pot.



One of the author's vegetable gardens is squeezed in between perennial gardens.