SAN BERNARDINO REGIONAL

SEED LIBRARY

February 2018

Illustration by Michele Martínez © 2018

MISSION STATEMENT

Our mission is to facilitate growth of open-pollinated seeds among residents of San Bernardino County. We are building a seed collection and repository, educating gardeners about the practice of seed-saving and creating communities of seed saving gardeners.

The San Bernardino Regional Seed Library (SBRSL) is a depository of seeds held in trust for gardeners. Gardeners come to the library and borrow seed for their garden. Gardeners grow the plants in their garden and at the end of the season, they let a few plants 'go to seed.' From those plants, they collect seeds to return to the Library to replenish its inventory. All seeds are free to the public.

5 Great Things About This Seed Library!

1. BIODIVERSITY IS AT RISK. A far wider variety of seeds can be kept fresh by many people growing. We all gain when we combine our efforts. The SBRSL is focused on varietals ideal for home gardeners.
2. SAVE MONEY. Gardeners can save hundreds of dollars each season by growing their own food and saving their own seed.
3. PLANTS CHANGE OVER TIME. Over time plants will change if response to our local climate and soil, and gradually will become better seeds for our areas.
4. GIVE POLLINATORS A CHANCE. The SBRSL will also offer seeds for growing plants that pollinators enjoy. Bees, butterflies, and more pollinate your garden plants.
5. CA NATIVES. Let's save the CA Native seeds. Some botanic gardens and other groups save these seeds and "reforest" our environment. CA Native will be available for you and your garden.

Where to find us:
Facebook: https://www.facebook.com/sbrseedlibrary/
Website: http://mgsb.ucanr.edu/Seed_Library/
Email: info@sbrsl.org

Master Gardener Helpline
Phone: (909) 387-2182
Email: mgsanbern@ucanr.edu

Location: Chino Basin Water Conservation District
4594 San Bernardino St
Montclair, California

Check Out Hours: Saturday, 12:00 pm to 2:00 pm
Check In Hours: Monday through Saturday, 8:00 am to 5:00 pm

FEBRUARY PLANTING GUIDE
Zone 18/19

Sow Outdoors
Chard
Cilantro
Chives
Dill
Carrots (short stubby varieties in heavy clay soil, and longer tapered ones in loosely sandy soil)
Lettuce – bibb and iceberg
Mustards
Green & Bulbing onions
Parsley
Peas
Radishes
Spinach

Sow indoors
Peppers
Tomatoes

Plant
Bare-rooted artichokes
Garlic cloves
Shallots
Grapes
Berry vines
strawberries

Transplant
agapanthus
chrysanthemums
coreopsis
African daisies (gazania)
English daisies (bellis)
gloriosa daisies (rudbeckia)
Shasta daisies
daylilies (hemerocallis)
delphiniums
dianthus
statice (limonium)
violets

Scatter
Ageratums
Alyssum
Calendulas
Columbines
African and Shasta Daisies
Delphiniums
Four-o-clocks
Hollyhocks
Marigold
Morning Glories
Nasturtiums
California and Shirley poppies
Snapdragons
Verbena

* Divide cool-season native grasses and clumping perennials (native iris, potentilla, heuchera)
* Spread manure and compost throughout the garden to enrich the soil and jump-start spring plant growth

Dill - photo credit: Christy Gray

MY DOGWOOD SEED EXPERIMENT

by Michele Martínez, Mountain Master Gardener

Creating gardens in national forest areas can be both satisfying and challenging. There is a limited range of plant choices, and growing in the woods means striking a balance between preserving ecosystems and keeping wildlife in check. For MGs who staff the info table at the Running Springs Farmer's Market, one familiar questions is: "What native plants will work in my yard?" The dogwood is just one good example.

Last summer, fellow MG/info table staffer, Susan Campbell, offered some tips on propagating native plant seeds. She had attended a talk with a native plant expert and shared what she had learned regarding how many of our favorite California native seeds require special processing before being introduced to the garden. One of those she mentioned is the Pacific Dogwood (*Cornus nuttallii*), a plant we'd like to encourage. This is the story of how I used Susan's good information, and enlisted the help of our wildlife to coax dogwoods to my yard.

Our land hosts a variety of conifer, black oak, and smaller deciduous shrubs. We've long admired our neighbors' dogwood trees, but we've never had any of our own. Known for their springtime blooms, fall foliage, and bright red berry clusters, Pacific dogwoods require well-drained soil, some moisture, and filtered sunlight. Since the early 2000s, and the loss of many pines to bark beetle, there are more sunny patches for Dogwoods. Unfortunately, these trees are notoriously difficult to transplant. To grow dogwoods from berries, seed bank experts perform a process called *stratification*. Berries are first treated with hot water, or mild acid, and the fruit is removed. Seeds are then kept moist while they are refrigerated 3 to 4 months. These actions, as Susan pointed out, are meant to mimic what happens in nature. Picture a ripe dogwood berry that is eaten by a robin. The seed is first stone-ground in the bird's gullet, then mashed, acid washed, and finally "planted" with the bird's own fertilizer.

After talking with Susan, I read up on *stratification*, and I got to thinking. What if I ask my backyard birds to do the work for me? In the spirit of a Master Gardener, I kept on reading while I undertook a seed propagation experiment as follows:

First, I gathered berries from some of my neighbors' plants (thanks, Marie and Tony). --Seed collection sites, like *Rancho Santa Ana Gardens*, recommend collecting seeds from several plants to preserve existing trees and to ensure a mix of DNA.

Next, I placed the berries in plates near our bird feeders and bird baths, along with a sprinkling of bird seed. I noted that within a few hours, all the seeds had disappeared. --Bird and wildlife publications list many animals that feed on dogwood berries, including chipmunks, band-tailed pigeons, flickers and woodpeckers, grosbeaks, jays, robins and towhees, finches and bluebirds.

Finally, after the snow melted, I surveyed the bird feeder area. I was amazed to find five new dogwood seedlings situated just below the cedar trees where the birds roost. Another three saplings have sprung up in our patio planters where chipmunks often root around. Before this year's first snow, I transplanted the planter saplings in the yard with fingers crossed.

For next year's experiment, I'll try more "hard to propagate" berries--maybe Oregon grape (*Mahonia spp.*) or Toyon (*Heteromeles arbutifolia*). I am thankful to my MG friends for their advice and our backyard animals as well. If nature does its cyclic thing, there will be more berries for the animals in years to come.

Further Reading:

Native Plant Propagation

California Native Plant Society http://www.cnps.org/cnps/about/

Processing Seeds of Native California Plants, Michael Wall & John Mac Donald, Rancho Santa Ana Botanic Garden, 2009 http://www.hazmac.biz/Seed%20Processing/2009S.pdf

Birds & Wildlife and Native Plants

"Bugs, Birds, and Bushes," Northwest Native Plants Journal, Volume 10 Issue 2-2013 http://www.nwplants.com/information/emag/vol10-2.pdf

Cornell Ornithology Lab - All About Birds

https://www.allaboutbirds.org/browse/topic/feeding-birds/

Pacific Dogwood sapling (Left) and dogwood berries with bird seed in the feeder (Photo, Michele Martínez)

OVEN-ROASTED ROOT VEGETABLES

Michele Martínez, Mountain Master Gardener

Roasting vegetables with a mix of oils, herbs, and tangy fruits enhance their natural flavors. Root vegetables are perfect for oven roasting. They're rich in vitamins and minerals and easy to prepare. Each root veggie brings its unique character to the meal. Beets and rutabagas have an earthy taste. Sweet potatoes, yams, and carrots are nature's roasting sweets. Root vegetables are best kept cool and dry, stored in a paper bag or the refrigerator crisper. For roasting, choose the fresh ones: firm, with a smooth, crisp skin.

Ingredients

- 8 ounce bag pearl onions (par-boiled)
- 2 parsnips
- 1 turnip
- 2 carrots
- 1-2 Tbsp. good-tasting olive oil
- ½ tsp. toasted sesame oil (available in the super market's international section)
- ½ tsp. pomegranate glaze syrup (found at specialty stores, or substitute 1 tsp. canned cranberry jelly)
- juice & zest of one tangerine
- coarse salt
- Herb mix – Fresh or dried herbs can be used. For fresh herbs, remove the leaves of sage, rosemary, thyme, and marjoram, and finely chop before sprinkling. If using dried herbs, remove the leaves from their woody stems and rub between your palms to release, and blend the flavors.

* For extra zest, add a pinch of the following: cardamom, chipotle powder, or Spanish smoky paprika

1. Pre-heat oven to 400 degrees F.
2. To par-boil pearl onions, bring 1 cup of water to a boil, add onions and cook about three minutes. Remove from the heat and let cool (about three more minutes). Drain, pat dry, and gently squeeze the onions to remove their outer skin.
3. Rinse and clean vegetables with a veggie brush. Peel the turnip with a paring knife or potato peeler. Pat everything dry, and chop the veggies into 1 ½ inch pieces. A same-sized chop allows everything to roast at the same rate.
4. In a large bowl, toss onions and veggies with combined oils. Mix in the pomegranate syrup (cranberry jelly). Add tangerine zest and juice, reserving a bit of juice for later. Toss in the mixture with the herb mix, and spread vegetables evenly onto a metal baking sheet. *Roasting on a sheet makes for even heat contact, so veggies taste pan-roasted rather than steamed.
5. Place sheet at the center of the oven and keep watch, stirring occasionally, for 30 to 40 minutes, depending on the oven. Remove when veggies are browned around the edges (we like a bit of Cajun-style char). Salt to taste, adding a final spritz of the reserved tangerine juice, and serve.

CAULIFLOWER LEAVES?

Wondering what to do with all those leaves after you harvest the cauliflower head?

You could sauté the leaves in a small amount of olive oil or butter, garlic, onion and seasonings. Want something a bit more adventurous? Try this: Roasted Cauliflower Short Grain Brown Rice Risotto with Lemon, Walnut and Mascarpone recipe from Gingerroot on Food52.com

Serves 6 as a first course, 4 as a main course

- 3 cups cauliflower florets (save any green leaves! see below)
- Extra-virgin olive oil
- Sea salt
- 2 garlic cloves, finely chopped, divided
- 3 ½ cups chicken stock
- 4 cups water
- 1 Meyer lemon
- 2 tablespoons unsalted butter
- 1/3 cup finely chopped sweet onion
- ½ cup finely chopped cauliflower leaves (thick, fibrous stalks discarded)
- 1 ½ cups short-grain brown rice
- 1/3 cup vermouth
- 2 generous tablespoons mascarpone
- 1 tablespoon finely chopped Italian parsley
- Freshly ground black pepper
- Freshly grated Parmigiano-Reggiano
- Walnut oil, for drizzling
- ¼ cup walnuts, lightly toasted in a 350° F oven for 5 to 7 minutes, finely chopped

1. Preheat oven to 425° F. Tear off two approximately 12-inch square pieces of tin foil and set aside on a baking sheet.
2. In a medium bowl, toss cauliflower florets with a few glugs of olive oil, a pinch of sea salt, and one finely chopped garlic clove. Lay out cauliflower mixture on one of your tin foil squares in a single layer. Top with second piece of foil and fold up edges on all sides to create a sealed packet. Roast in oven for 15 minutes.
3. While cauliflower is roasting, combine chicken stock and water in a saucepan. Cover and bring to a boil and then reduce to a simmer, keeping it on the stove.
4. Carefully pry off top piece of foil to expose cauliflower (watch out for the hot steam!). Shake tin foil slightly to move pieces around. Roast cauliflower for 6 minutes more, until tender and browned but still moist. Remove pan from oven. When cooled, coarsely chop the cauliflower florets.
5. Transfer chopped roasted cauliflower to original medium bowl. Add zest from lemon and 2 tablespoons of lemon juice. Set bowl aside.
6. In a Dutch oven, melt butter over medium heat. Add onion and remaining finely chopped garlic and cook until fragrant, stirring. Add cauliflower leaves and a pinch of salt. Continue cooking and stirring until onion softens and begins to become

translucent. Stir in rice and cook, stirring, 1 minute. Add wine and cook, stirring, until absorbed, about 1 minute.

7. Stir 1 cup (I use my soup ladle) simmering broth into rice and cook, stirring constantly until absorbed. You want the mixture to be simmering, not boiling, so adjust heat if necessary. Continue cooking and adding broth, 1 cup at a time, stirring constantly and allowing each addition to be absorbed before adding the next, until rice is just tender and creamy--about 25 minutes. Fold in cauliflower-lemon mixture and stir to combine. Add mascarpone, stirring to combine. Turn off heat. Taste for salt, adding if necessary. Stir in parsley and several grinds of fresh black pepper. If risotto is too thick, thin with a bit of the remaining broth (there will be a little left).
8. Plate risotto, sprinkling each serving with Parmigiano-Reggiano, a drizzle of walnut oil, and toasted walnuts, serve immediately and enjoy.

UPCOMING EVENTS

February 17
Germinating Tricky Seeds
Time: 11am – 12pm
The presentation will focus on getting those challenging seeds to grow. Some seeds just need a little help like some overnight soaking or a little cut to the outside layer of the seed coat...just a little something extra. We will give specific tips on which seeds need extra help and what to do with them.

March 3
School & Community Garden Resource Day
Time: 9am – 12pm
Join us for a morning of resource sharing, tips and tricks, and a workshop to help either kickstart or grow your school or community garden!

Meet with other educators and administrators who are leading school & community gardens; ask local experts questions to help troubleshoot current garden issues or brainstorm new ideas; learn about where to get funding and free materials such as soil, compost, mulch, and seeds; and receive resources from the San Bernardino Regional Seed Library.

March 3
Gardening for Viable Seeds Workshop
Time: 11am – 12pm

April 28
Community Seed Swap
Time: 10am - 1pm
Celebrate Earth Day as well as the SBRSL 1-year anniversary with a Seed Swap. Come to Chino Basin Water Conservation to share your own harvested seeds and trade seed stories, recipes, and seeds. Gardeners are invited to bring saved or leftover vegetable, flower, and herb seed packets to share and swap with other gardeners. Beginners are welcome to participate, even without seeds. Talk to experts all about tomatoes, starting seeds indoors, seed saving, seed germination testing, and more. Look for more details next month.

TOMATO SEED SAVING

Vicki Peyton

Native to Mexico and
Central America where it was cultivated by the Aztecs and Incas as early as 700 AD, the tomato was introduced to Spain in the 16th century. It then spread to Portugal, Italy, and later to other parts of Europe. By the mid 1800's, the tomato was a staple in the United States. As new varieties were developed, it became more difficult for families to find their favorites.

Seed saving is a way to preserve and perpetuate plant varieties from one generation to another. It has saved many heirloom varieties from extinction. It is a practical, inexpensive way to produce your own seeds for the next season. Locally selected varieties are usually better suited to your garden and your climate. You can share your seeds with other seed savers, and it's an enjoyable hobby.

To produce tomatoes that grow true to type, (they resemble the parent plant), choose heirloom seeds. An heirloom variety is at least 50 years old. It has come from a plant variety that has passed through several generations within a family or community. They are chosen for their superior taste, appearance, and overall performance. Heirloom seeds are open pollinated, meaning that they are pollinated naturally by insects, birds, wind, or an animal. Open pollination creates a more genetically diverse gene pool which allows the plant to adapt to local conditions. There are hundreds and hundreds of heirloom varieties to choose from. Here is just one example.

Breed: Open Pollinated
Season: Mid
Leaf Type: Potato
Plant Type: Indeterminate
Plant Height: 5 ft.
Fruit Size: 1-2 lbs.
Fruit Shape: Beefsteak
Skin Color: Deep Pink
Flesh Color: Deep Pink

Resource: https://njaes.rutgers.edu/tomato-varieties/variety.asp?Chianti+Rose

How to Save Tomato Seeds
Harvest ripe tomatoes from several different vines of the same variety. Cut across the middle and squeeze the juice and seeds into a bowl. You'll see that each tomato seed is encased in a gelatinous coating. (This prevents the seed from sprouting inside the tomato). Remove this coating by fermenting it. This mimics the natural rotting of the fruit and has the added bonus of killing any seedborne tomato diseases that might affect next year's crop.

Fermenting
Step 1: Add about half as much water as there are tomato seeds and juice in the bowl and stir the mixture twice a day for about 3 days. Keep a close eye on the mixture—especially if it's a warm area, as fermentation happens more quickly at high temperatures. As the mixture ferments, its surface will become covered with white or gray mold. Don't keep the bowl in the kitchen, anywhere it can be tipped over by animals or children, or where you'd be able to smell it—it will get pretty rank.

Step 2: When bubbles begin to rise to the top of the mass, or when a thick coat of mold has formed, stop the fermentation by adding enough water to double the mixture, and stir vigorously. The clean, good seeds will settle to the bottom of the bowl. Gently pour off mold, debris and any seeds that float (they're hollow). Add more water and repeat the process until only clean seeds remain.

Step 3: Capture the seeds to be saved by pouring the liquid through a strainer, wipe the strainer bottom with a towel to remove as much moisture as possible.

Step 4: Dump the seeds onto a glass or ceramic plate to dry. Stir twice a day to ensure even drying and to prevent the seeds from clumping together. Warning: Tomato seeds will germinate unless you dry them quickly. To speed drying, you can use a fan, but don't put the seeds in sunlight or an oven.

Storage
Once the seeds are thoroughly dry, place in an airtight container for storage. Tomato seeds remain viable for years, even stored at room temperature. For extra protection, you can store them in the refrigerator or freezer, but let them come to room temperature before opening the jar so you don't introduce moisture from condensation. Small packets of silica gel will help absorb excess moisture also. (http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=11597)

San Bernardino Regional Seed Library - SBRSL
If you would like a seed resource, consider visiting the San Bernardino Regional Seed Library. This is a depository of seeds that is free to the public. Gardeners come to the library and borrow seeds for their garden. Once the plants grow, they let a few plants "go to seed." They then collect the seeds to return to the library to replenish its inventory. Checkout hours are Saturday from 12 to 2 PM. The library is located at the Chino Basin Water Conservation District, 4594 San Bernardino St., Montclair, CA. (https://www.facebook.com/sbrseedlibrary)

Happy gardening everyone!

WINTER SOWING: GETTING A JUMPSTART ON SPRING PLANTING!

Nancy Tharp

Are you tired of the clutter, cost, and time consumed with starting seeds indoors in order to get a jumpstart on spring planting?

Why not try 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 (I.e. milk jugs, large water bottles, plastic pop bottles). After sowing, the mini-greenhouse is placed outside to wait for the end of winter. Seeds can be started December - April depending on your climate. They will be happy in most conditions, even with snow coverage or rainstorms! The seeds will begin to germinate in their own time when the conditions are right for them.

This method is effective because it supplies everything that a plant needs in a natural environment. In order for seeds to germinate, they need 4 things: oxygen, water, light, and specific temperatures. Winter sowing provides these by using good (preferably organic) potting soil which provides a lot of space for oxygen, condensation, the sun's natural light, and the warming of the mini-greenhouse as spring progresses.

Benefits of Winter Sowing

- No more indoor grow lights hanging over your soil and seedlings all winter.
- Big savings on electricity by discontinuing the use of grow lights, heat mats, and heat lamps for 16 hours a day.
- Save space by not having your house taken over by seedlings for several weeks a year,
- Not having to 'harden' your seedlings (i.e. taking them outdoors, indoors, outdoors, indoors... for several days before leaving them outdoors for good.) This is a HUGE time saver not to mention it alleviates the worry of accidentally leaving them outside!
- Once the containers are outside, they can be left alone until ready to be planted in the ground.
- Conserves the resources of having to put seedlings into gradually larger containers.
- They are actually stronger and healthier when the seeds germinate outdoors in the elements.
- Quality Control -- You know the quality of your veggies will be perfect because YOU grew them.
- Your seeds will be protected from harsh rains, getting washed away, predatory birds, animals, insects, and harsh winds...
- It's super fun to go out in the cold winter and peek inside to see if they are sprout-

ing yet.
- Stops gardeners from going crazy in the winter with nothing to grow!

Setting up Your (Mini Greenhouse) Containers
There are many variations of the method, but for your best success try it the first year as recommended below, then play with it for your location, weather, and your style in following years.

Supplies Needed
- Plastic containers to winter sow your seeds. (e.g. ...milk, water, or juice jugs, pop bottles... clear or translucent white preferable.) * NOTE - salad or rotisserie chicken tubs, take out containers, yogurt jugs etc. CAN be used... but you will get your BEST results using the larger/taller containers. Using shorter containers will not allow the headroom you need to grow tall seedlings.

- Potting soil mix (organic if you can) Seed starting mix is not recommended as it doesn't have the components needed to grow full grown healthy seedlings. They may be in their containers for a couple months and will need the nutrition in the mix.
- Fresh seeds (organic if you can) - grow what you LOVE!
- Something to make drainage holes in the bottom -- drill, sharp knife, sharp dowel, soldering iron (outdoors only, wearing a face mask due to possibility of inhaling the toxic plastic fumes). A hand drill seems to be the favorite.
- Something to cut the containers -- scissors, exacto knife, Dremmel, serrated kitchen knife, plastic cutters...
- Spray bottle filled with water
- Duct tape (packing tape does not hold well)
- Plant labels (plastic works well)
- Marking pen - paint pen works best because it doesn't fade (purchase at a craft store or Amazon)

What you need to DO
- Set up a small workstation indoors or outside
- Drill drainage holes in the bottom (maybe 4-6 in milk jug) and 2 holes on the sides one inch up from the bottom in case the bottoms ones get blocked. Make sure you drill/make the holes BEFORE you cut the containers! It's much easier that way.
- After drilling your drainage holes, cut your cleaned containers horizontally, about 2/3 way up, leaving about a 1-2 inch hinge
- Fill container with about 4 inches of very damp soil (soak the soil first in a bucket or tub)
- Plant your seeds, not too deep. For smaller seeds, you just need a dusting of soil mix over them
- Spray them with water after planting the seeds and covering lightly with soil mix.
- Put label inside the container with date, plant variety and whatever information you want. (Days to maturity, height, plant spacing, etc.) This is important because if the label outside the container fades or washes away you'll need to know what's in there.
- Tape it closed all the way around with duct tape. If you skimp on duct tape, you may not get the results you want. Any gaps can let cold wind in and stop the condensation/greenhouse effect they need for germination.
- Throw out the little screw lid on top. You don't need it
- Label the outside with the paint pen (date, variety, how many seeds, a number if using a numbering system.)
- Put it immediately outdoors so it doesn't dry out. Put it right out in the open in the rain, snow, cold, heat. It needs all the elements to contract, expand, grow and get hardened. If you're in an area that doesn't get snow or rain you may have to water the jugs if they begin to dry out. If the condensation disappears from the jugs you will need to water them. Simply place them in a container of water and let them soak up the water. Make sure to drain excess water or remove them from the water container after they are sufficiently watered.
- Lastly, just CHILL and BE PATIENT!

They will go into hibernation for a bit. They may freeze depending on your climate. They will just sit there and appear to do nothing for a while. When conditions are right you'll start to see sprouts pop up which will quickly turn into full grown seedlings, all 'hardened' and ready to be transplanted! When conditions are suitable to plant take the tape off of the container and open them for a few hours and close them at night for a couple days to get them use to open air. If an unexpected frost occurs, cover the containers with a row cloth, blanket, or sheet. Once they are full grown and strong enough to transplant, you can plant them anywhere for their final home... in the ground, in containers, 5-gallon buckets, plastic or fabric grow bags, raised beds, growing trays or tubs, hanging baskets etc. Then start saving and preparing more containers for next year because you're certain to fall in love with winter sowing!

For more information on Winter Sowing there is a lot of information on the internet. Here are some that I have used and highly recommend: Facebook ~ Winter Sowing (Vegetable Gardening with Sheryl Mann) has a wealth of files and videos available as well as an amazing group of members, veterans and newbies alike, that are willing to lend support, encouragement, and can answer your questions or tell you where to find your answers. Also on Youtube, check out http://goo.gl/NDLfRI for several videos on all aspects of winter sowing or go to www.youtube.com/Juicing-Gardener.

QUICK START GUIDE

Print this page and use as a quick guide to setting up your winter sowing containers.

1. Drill drainage holes

2. Cut across

3. Make sure to leave a hinge

4. Fill with about 4" of soil

5. Insert your seeds

6. Cover the seeds lightly with soil and spray thoroughly

7. Insert plant label

8. Seal opening with duct tape and label

9 Set outside and wait for nature to take it's course