

Yavapai Gardens

Master Gardener Newsletter

December 2020-January 2021



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2020, Who would have thought.

by Nora Graf



The idea of New Year's resolutions seems to be sourced in optimism. This is the year I am going to be better somehow. New Year's Day 2020 was no different. All of us making plans, designing gardens, ordering seeds. Midway through March Covid-19 changed everything except the garden. We could stay at home but were encouraged to avoid everything else. It didn't work well as the virus just kept spreading. But we had our gardens. People who had never gardened

before took it up. Seed companies were swamped with orders. I decided that was a good thing; the reason was unfortunate, but the positive outcome is that maybe there are more gardeners than ever out there. Our lives were up-ended but we can still grow plants.

Normally in this issue I spend time thanking all those who have helped me with the newsletter during the year but this year I am going to include others. I honestly spent the year mostly at home. I didn't know what was going on with the Master Gardeners except for Mary's emails. It turns out there were quite a few people still working hard. Master Gardeners were still answering phone and email questions. Others were managing to keep meetings going via zoom. Officers still officiated. Under the surface, people were making sure we kept in touch, we kept volunteering, we kept the organization from faltering. To all of those who continued to volunteer under difficult circumstances a big thank you!!

As for my tiny piece of that world I want to say thank you to those that helped me. My editors really are a terrific help. I find that I'm getting sloppy as time goes by and they keep me on the straight and narrow. Thanks to Lisa Gerber, Pam Bowman, Marilyn Perkins, and Laurie Cameron. Laurie Cameron has also been a great source of interesting articles for the newsletter. Linda Guy and Judy Kennedy also contributed articles this year. Thanks for letting me write less. A special thank you goes out to Jeff Schalau, Mary Barnes, and the entire staff of Yavapai County Cooperative Extension for continuing to let me keep going with this.

New Year's resolutions are made with the intent of making our lives better. Resolutions vary from simple to complex. Some we repeat each year with the best of intentions. Some are just really hard to keep. Two things we can resolve to do is approach the new year with optimism and we will plant a garden in 2021. Gardening is inherently an act of optimism. 2021 will be better.

Some Like It Hot, Growing Horseradish

Armoracia rusticana

by Nora Graf



Anyone looking for something new? How about something spicy? You might want to try horseradish. It will grow here

Just a note: Wasabi (Wasabi japonica) and horseradish are completely different plants. Wasabi is an aquatic plant that needs running water and is very difficult to grow, so the

majority of products called wasabi in the United States are actually horseradish.

Horseradish originally came from the southern part of Russia and the eastern part of Ukraine. It has been known and cultivated for centuries, being used for both medicinal and culinary purposes. Ancient Greeks and Romans used it medicinally for back pain and cramps. In the Middle Ages (C.1000-1300) it was used in the Jewish Passover Seder. Then in 1542, it was included as a condiment in Leonhart Fuchs (of Fuchsia fame) herbal, *De Historia Stirpium comentarii insignes*, [Notable Commentaries on the History of Plants.] By the 1600s people were spicing up roast meat with it, a practice that continues even today. It came to the United States in the mid-1800s when immigrants started to plant it in northeastern Illinois. It was there that the commercial horseradish industry began. John Henry Heinz started bottling a horseradish sauce made from his mother's recipe in 1869. He bottled it in a clear jar, unique for the time and it was one of the first condiments sold in the United States. Horseradish is still grown in Collinsville, Illinois, 12 miles from St. Louis. You may be familiar with one of its landmarks, the Brooks Catsup Bottle Water Tower, the world's largest catsup bottle. Collinsville is the horseradish capital of the world. Horseradish is grown in other parts of the United States and the world, but Collinsville is the place to be for the real experience.

Horseradish is a perennial but is often grown as an annual depending on the location. The leaves radiate out

in a rosette, like dandelions, up to 18 inches across, from the main taproot. The leaves are a darker green which can vary in shape. They can be heart-shaped, tapering or some variation in-between. The margins or edges of the leaf can be smooth, wavy, or lobed and the surface might be rugose or crinkled. The leaves also vary in size. The plant can grow from two to three feet, even taller if left to flower.

Flowers are terminal racemes (they grow at the end of the branches, oleanders) The flowers are carried on short stalks, with the oldest flowers at the base and new flowers appearing at the tip for example snapdragons. The flowers are white with four petals which places them in the brassica family, home to cabbages, broccoli, mustard and cauliflower.

You are growing the plant for the taproot, which has side shoots. The roots are off-white to a light tan outside and in. They can reach up to a foot in length while the entire root system can grow several feet deep. For that reason, it grows best in deep loose soil. If you have hard soil it might be best to loosen the soil up to 22 inches deep to make it easier for the roots to grow. Remove any rocks, as they can impede root development. It is recommended that the soil have a pH of 6.0 to 7.5. You can also grow horseradish in raised beds or a large container with a soil mix that is heavy on organic matter. A very large container is needed for good root development. Wherever you decide to grow it, it might need afternoon shade in the hottest areas of the county.



The best way to get started is with root cuttings or crown divisions. If you know someone who is already growing it you can beg them for some roots to get started. Label the top of the root. You will need a 6 to 10-inch root, 1/4 to 1 inch in circumference, with a least one bud. Make sure you plant it the same way it was originally growing and make sure the marked top is up. In Arizona plant from Nov 1-Feb at 1 at 2000 to 3000 feet elevation, Feb-Apr at 3000 to 4000 feet elevation and Feb 15- Mar 15 at 4500-6000 feet elevation.

Crown division is a commonly used method to increase the number of plants and its easy to do. First dig up a plant, remove the dirt, and cut the plant into sections

including at least one crown bud and some upper leaves for each division. Replant each section to start a new separate plant. If you can find fresh horseradish in the



stores you can use those roots to start new plants.

Good watering practices are needed in the summer heat. Lean into more moisture rather than less. Keep it evenly watered, like tomatoes, not too wet, not too dry. If for some reason they get too dry, the leaves will dry up but you can rescue the plant by giving it a good watering and new leaves should start to grow. Drought conditions can cause the roots to taste sour or bitter. A good layer of mulch will help keep the soil moist.

When harvesting simply dig up the roots. If you are growing it in-ground, any root segment left behind can sprout so it can be a bit invasive in certain conditions. Do not rototill them into the soil! Harvest once the temperatures cool; the best time is after a hard frost. Most of the leaves should have been killed off. You can just leave them in the ground and dig them up before the plant starts to grow again. You will have to dig deep and carefully to get all the roots out if growing in the ground. One of the benefits of a container is that you can just dump it out. The main root is the thickest but the smaller roots can be saved to plant for next year. To store the roots, keep them in a cool dark place like the refrigerator. Place them in a ventilated bag and they can be stored for around three months.

Preparing the roots isn't difficult but it needs to be done in a very well-ventilated room or outdoors. Once you rupture the skin, the fumes can irritate eyes and noses and cause difficulty breathing. The fumes come from mustard oils that are released from damaged plant cells. If you use a food processor, step well back to loosen the lid. Begin by washing the roots, removing all the dirt and debris, then dry. Remove damaged areas and soft spots, and peel the entire root. Grate or chop by hand or use a food processor. Once grated the puree loses color and taste quickly so it's best to only prepare what you need and continue to store the remainder of the roots in the refrigerator. You can add salt and vinegar to the grated roots to improve taste and it will preserve the color and flavor for a longer time. For each 1 cup of horseradish add 1/8 to 1/2 cup of vinegar (any kind). Store in the refrigerator. Use fresh as it won't hold up if it's been cooked. You can smooth out the flavor by adding cream (whipped or straight) or mayonnaise.

Insects and diseases are out there to make life difficult. Insects include but are not limited to the beet leafhopper which can carry a virus to the plants, crucifer weevil, cabbage loopers, and flea beetles. Various pathogens also infect horseradish; Turnip mosaic virus, the fungus *Albugo candida*, *Verticillium dahlia*, bacterial leaf spot, and *Cercospora* leaf spot.

One interesting fact I found was that you should not feed any part of the plant to animals. Apparently, the volatile oils can cause serious inflammation of the stomach

that could be fatal.

Varieties are categorized by leaf shape, size, and texture but only occasionally categorized by taste. There are other varieties available so look around.

Maliner Kren is a vigorous grower and has the largest roots. Sometimes called 'Common' it has crinkled leaves with good quality large roots but is susceptible to virus and rust.

New Bohemian lacks root quality and yield but is resistant to white rust and mosaic but susceptible to virus. Roots not as large as Maliner Kren. You may see them named 'Swill' or 'Sass'.

Cultivar 'Variegata' is less invasive with variegated cream-colored leaves and will grow in partial shade. Something to consider for our hotter areas.

Big Top Wester has smooth, large upright leaves that taper at the base. It has some resistance to rust and mosaic. Roots are large but are rough or corky on the outside.

Sources: I found several companies that offer horseradish, but also search your grocery store, Etsy, and Amazon. Local nurseries including the big box stores sometimes have it available.

Johnny's Seeds, Nourse Farms, Mountain Valley Growers, Gurneys, Daisy Farms, Peaceful Valley Farm all have horseradish listed in their catalogs.

Creamy Horseradish Sauce

Yield: 1 1/2 cups Preparation: 5 minutes Total Time: 5 minutes

1 1/4 cups reduced-fat sour cream

1/3 cup prepared horseradish

1 teaspoon kosher salt

1 teaspoon freshly ground pepper

Combine sour cream, horseradish, salt, and pepper in a medium bowl. Chill until ready to serve.



The Intoxicating Effect of Sweet Peas

by Nora Graf



One of the memories I have from my childhood is the sweet peas my mother planted for many years. They were easy to grow, had beautiful flowers, and an intoxicating aroma that allowed even a small vase to fill a room with their scent. I still love sweet peas but have gotten out of the habit of growing them. It seems other people have forgotten about them too. It's time for

a come-back, I think.

It's still not too late to plant them. Anytime from late September thru February depending on the weather. You need the temperature to be no hotter than the mid-90s. Sweet peas aren't fond of the heat and as soon as it gets hot they will dry up. They do like our winters and will burst into bloom very early. The nice thing is that they will be one of the first things to bloom in the spring. Depending on where you live, it could be as early as February when they start to bloom. You can extend the blooming season by planting them in a place that gets afternoon shade.

Most sweet peas are vines that can grow to about 5 feet tall and need a trellis or something to hold onto as they grow. There is a variety that only grows 8 to 10 inches which is great for growing in containers or hanging baskets. There is also a variety that grows halfway between those two at just 3 feet tall.

Sweet peas like a rich soil so before planting amend your soil with plenty of compost or, if you plan-ahead, dig in manure a few weeks before you plant. Dig it in deeply, you want to work it in to create about a twelve-inch-deep bed. Even with that sweet peas will do better with monthly fertilizer.

Sweet peas can be challenging to get started. They have an incredibly hard seed coating. For the best success in getting them to sprout you should help them along. Get a plastic or glass container that has a tight-fitting lid. Take two paper towels and cover the bottom of the container. Add a bit of water to dampen the paper towels. Place the seeds on top of the paper towel and add enough water so that it comes to halfway up the seeds. You don't need to entirely cover the seed. Put the lid on tightly. Leave the seeds in the water for 24 hours. In

that time the seeds should be swelling. Once that happens you can plant the seeds. Any seeds that don't swell up may need more time or can be nicked to make a tiny break in the seed coat and left in the water a while longer. When the seeds are ready, plant one-half to one inch deep. If you want to plant the seeds directly in the ground without pre-sprouting, keep the soil damp all the time, not sopping wet, but damp. In general, keep the soil moist. Once they germinate, even watering as with most vegetables is best.

Early in the spring they will start blooming. They tend to be very prolific bloomers and if you cut flowers or deadhead on a regular basis they will reward you with more blooms. As it starts to get hot let some of the flowers go to seed. You can save the seeds or just let them fall to the ground and under the right conditions they will keep showing up season to season. The seeds don't just fall, they sort of explode flinging seeds about.

Like all garden plants, horticulturists have been tinkering with them, sometimes for good, sometimes not. Some of the modern varieties aren't as sweet-smelling as the older ones but the flowers tend to be bigger. They have also explored expanding the color range creating some very dramatic varieties.

By the way, don't eat sweet peas, they can be toxic.

Spencer Sweet Peas are the blowzy, show-offs. They have just average scent but grow on strong stems with multiple flowers. Breeders have worked with these plants to create some spectacular flowers including striped, bi-colored, and flake patterns. They do need 12 hours of sunlight to bloom. They are supposedly more heat-tolerant but this was coming from Britain and I think they have an entirely different view of heat tolerance than we do.



Grandiflora types still retain the distinctive scent but have bigger flowers. They have shorter and sturdier stems than the Spencer's and fewer flowers per stem. However, they are very prolific.

The **semi-grandiflora** are not as ruffled as Spencer's and not as plain as the Grandifloras. They have wavy petals and intense fragrance.

Multifloras are some of the earliest flowering types and have multiple blooms per stem. They were created for the cut-flower market.

Species Sweet Peas are different species that have been selected for growing in gardens. The species is *Lathyrus* and the group contains around 150 species. Oddly enough only one has a real scent, *Lathyrus odoratus*. This species along with *L. latifoliosus* are two favorites.

Perennial sweet peas: my Grandparents in Wisconsin had some growing in their yard. I didn't think they would grow well in Yavapai County but one of my editors told me she has some growing in the shade at her place in Prescott. Sweet peas really don't do well in the heat but no harm in giving perennials a try. You may have the perfect place for them to thrive.

Cuthbertson is one of several other named types but this one is known for its ability to withstand hotter weather.

Dwarfs, semi dwarfs, and intermediates are all scaled-down versions. The dwarfs grow 6 to 12 inches, the intermediates up to 18 inches. Good for pots or baskets, the flowers themselves have short stems that are not really designed for cutting.

When you start looking for seeds you might want to look for Mammoth mix. It is said they are more heat resistant than most others. Select Seeds, Renee's Seeds, Botanical Interests, and Johnny's seeds have a lot of varieties to choose from but there are lots of companies that sell sweet peas so look around, and read the descriptions. Not all sweet peas are heavily scented.



Meet a Master Gardener: Garry Neil

By Laurie Cameron



Garry Neil is a unique Master Gardener: he doesn't do any gardening. Having attended the master gardening program in Yavapai County, he works at the Camp Verde Extension Office's help desk where his main interest is dealing with plant issues — diseases, infestations, etc. He has a BS and an MS in botany and loves to deal with plant issues. His academic

background is in plant physiology and lichenology.

Garry lives in Arizona from January to June. The rest of the time, he lives in Oregon, where he is also a Master Gardener and works at the Oregon Extension help desk as well.

While in Arizona, he has been working with the Forest Service in doing an extensive survey of lichen species in the Red Rock Ranger District for the Forest Service and Arizona State University. In Oregon, he is also actively involved with the Northwest Lichenologist Society.

Garry has done presentations on lichens at several local gardening clubs along with one at the monthly MG meeting. He also does presentations at the Forest Service Visitor's center every May along with an exhibit. With the aid of the FS Wildlife Biologist, he helped initiate the Lichen Appreciation Week, which is held yearly during the first week in May. This coming January he will be working with Dr. Frank Bungartz, lichenologist at ASU, on a brochure for the public about common lichens found in Red Rock Ranger District. ASU has the fourth-largest lichen collection in the United States.

Garry thinks Jeff has done an outstanding job keeping the MG program front and center with the public in Yavapai County. The one area of improvement would be recruiting enough volunteers to work at the Camp Verde Extension Office's help desk. It is an enjoyable task for any Master Gardener.

I asked him what the most common types of plant issues he sees while working at the UA extension office. "That is a tough question to nail down," he said. "All sorts of questions and issues come to the extension's desk and usually, there is always one issue or more that becomes apparent every year either because of a high insect infestation of a certain type of disease. Also, there are a lot of clients every year that are starting a garden and want to know what they need to do to be successful—soil prep, what to plant, when to plant, irrigation, etc".

New Introductions for 2021

by Nora Graf

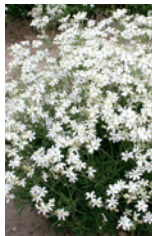
I am always looking for new plants. Something a bit more interesting, bigger, smaller, or just because it's new. To satisfy that craving there are a wide array of new plants introduced each year. It doesn't necessarily mean better, but you never know until you try. I've included new introductions that are likely to thrive in our area but some that are just cool. I've listed some of the sources where they are available. Most have multiple sources.



Thanksgiving Ornamental Oregano:

Oregano comes in a number of interesting varieties, but this is the first one I've seen with such bright, colorful flowers. Oregano is easy to grow. It can spread here and there but never invasively so. This pink-flowered version is attractive to pollinators and is a tough plant. It blooms from early to late summer. (Available through High Country Gardens, Bluestone Perennials)

Mongolian Snowflakes (Clematis): The pictures are of a very showy plant. It is drought tolerant but will need extra water during the summer. Two to three feet high and wide. Will take sun to partial shade. Pollinators love it. (Available through Plants Delight, High Country Gardens, Bluebird Nursery)



Andropogon gerardii "Red October": If you are looking for grass, this is a stunner. The plant starts out with dark green foliage and turns purple-red in the fall and then bright red after the first frost. It has burgundy-red flowers that bloom in August. Grows 4-6 feet tall and 2-3 feet wide. It is deer and rabbit resistant. Good drought tolerance. (Available from many sources online)

Shirley Poppy "Amazing Gray": I'm a big fan of poppies but not a big fan of how some breeding programs seem to be focusing on muddy colors. I'm perfectly aware that some people love them, just not my cup of tea. I'm talking about brownish, grayish versions of color so when I saw this picture of "Amazing Gray" my thought was 'here we go, now they are going to ruin poppies,' but there was something very striking and attractive about them. The description says they are gray, silver, lavender. There can be variations in the flowers including white edges, rosy centers, pinkish tones, and can be either double or single flowers. (sources: Swallowtail Seeds, Select Seeds, Park Seed, Baker Creek Heirloom Seeds, Wildseed Farm, Territorial Seeds and lots of other places)



Hot Chili: Armageddon: I'm not going to be trying these as it is one of the super-hot chilies. I like spicy food, but super-hots are a bit much. Still if it's your thing you might give these a try. Not sure I understand the need to develop hot peppers that are so hot only a tiny number of people can actually eat them. It produces fruit earlier than other varieties and in large quantities. (The only US sources I could find are Burpee and eBay. It was developed in England.)

Tomato: Sassy Red has a ribbed shapes It is described as having: "BIG, complex flavors". It is slightly acidic, which is tomato nirvana for me. It's indeterminate. Came from a single farmer who had raised it for 50 years. (Available only at Tomatofest.com)



Tomato: Sarandipity attracted me because the photograph looked like a Renaissance painting. They are just lovely. This is one of the dwarf tomatoes I wrote about in the last issue. The tomatoes are medium size and round that ripen into a brick-red, chocolate color with metallic green stripes. The flavor is supposed to be mild and sweet. (Seeds are available at Tomatofest.com, Heritage Seed Market, Renaissance farms, Sage Garden Greenhouses, and likely a few other places)



Cucumber Martini: Martini has smooth, white skin. This is one fruit you can easily find in the tangle of leaves of the plant. It can be picked small or large and has a juicy crunch and small seeds. (sources: Territorial Seeds, Veseys Seeds, Totally Tomato, Swallowtail garden and I'm sure others)



Herb Basil Everleaf Emerald Towers: When I first saw the picture, I did a doubletake. It looked like basil but not really. It flowers later than Genovese basil so the plant has a much longer harvest time. It also has this weird (for basil) columnar growth habit, two to three feet tall. It works in pots or in your garden bed. I'd go for a basil that doesn't flower as readily as most of the varieties out there now. (Source: Burpee, Territorial Seeds, Park Seeds, Swallowtail Gardens, Jung Seed, Stokes Seeds, and other places)





Congratulations

for completing your first 50 hours

Lora Gale—mentor Carol Young

Deborah Boush—mentor Linda Guy

MG Announcement

Please be sure all of your 2020 hours are submitted by December 31st.



Yavapai Gardens Searches

The Yavapai Gardens newsletters are on our website as pdf files and are not searchable. However, the specific horticulture topics found in each newsletter are now noted next to the newsletter link. Hopefully this will help if you are looking for a particular subject. Thank you Jo Graves and Kim Corcoran for compiling the data. <https://extension.arizona.edu/yavapai-gardens-newsletters>

2020 Newsletter Deadline Schedule

The newsletter comes out every two months. Please note the deadlines.

Publish	Date	Deadline
Feb-Mar	Feb 1	Articles Jan 5, announcements Jan 25
April-May	April 1	Articles March 5, announcements Mar 25
June-July	June 1	Articles May 5, announcements May 25
Aug-Sept	Aug 1	Articles July 5, announcements July 25
Oct-Nov	Oct 1	Articles Sept 5, announcements Sept 25
Dec-Jan	Dec 1	Articles Nov 5, announcements Nov 25

From the Editor: Send or email articles to the address below. Email is preferred. Please see schedule for deadlines.

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Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Jeffrey C. Silvertooth, Associate Dean & Director, Extension & Economic Development, Division of Agriculture, Life and Veterinary Sciences, and Cooperative Extension, The University of Arizona.

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MG NEWSLETTER



Next Meetings

No Meeting in December.

January 20, January meeting on Zoom,
Mary Barnes will be sending out an
announcement.

