



Sandoval Extension Master Gardener Newsletter

<http://sandovalmastergardeners.org/>



New Mexico State University • Cooperative Extension Service • U.S. Department of Agriculture

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NMSU and the U.S.
Department of
Agriculture cooperating.

**SEMG Newsletter
Submissions
Deadline: 25th of each
month**

Please submit news,
articles, events and
photographs to:
newsletter@sandovalmastergardeners.org

Editor:
Kate Shadock

From Meg Buerkel Hunn, Advisory Council Chair

Tenacity

The definition of TENACITY, according to the online Cambridge Dictionary, is “the determination to continue what you are doing.” Over the last month, my daughter and I took some friends on a road trip around New Mexico. I confess that traveling with three small humans between nine and twelve takes some tenacity - the inertia can be dragging, and the silliness can bring on insanity, but seeing wonder through their eyes makes it worth it! My husband and I are currently in the UK, accompanying our daughter as she is part of the St John's Cathedral Choir singing in Canterbury and Rochester Cathedrals. Tenacity was imperative as our travel took an unexpected additional 10 hours (in the form of an extra flight and an overnight 'snooze' on the floor at DFW).

Tenacity has been the theme of my summer. And I will say that it takes about a ton of tenacity to garden in New Mexico. The soil is hard; the rain, infrequent; the sun, brilliant; the temperatures, extreme. And yet, people have been growing food and beauty here for centuries upon centuries.



At Bandelier National Monument, we saw an example of a 'waffle garden' planted with the Three Sisters, and we learned that the Ancient Puebloans would plant these waffle garden plots all over the mesas and the valley floors in the hopes that the rains would water at least some of them. The tenacity of people.

At the Baker Street Underground station, I glimpsed a plant growing in the middle of the tube tracks - the trains would rush over it, and yet it was there, green with tiny blooms. The tenacity of plants.

As Master Gardeners, we are provided an education by NMSU scientists on best practices for gardening in New Mexico. As Master Gardeners, we continue to build upon this learning by experimenting in our own gardens and sharing our knowledge with each other and the public. As Master Gardeners, we have a community of support.



Many of you who read this newsletter are not (!) Master Gardeners... please consider joining our ranks this coming year, for a chance to deepen and share your tenacity and wisdom and experience in the garden! The intern training course runs from January through April - it's a wonderful way to learn more, to volunteer in our communities, and to befriend other tenacious New Mexico gardeners! And, for those of us who have been Master Gardeners for a year or more than ten years, perhaps you'll consider being a mentor in 2024 - it's a great way to refresh your knowledge and renew community. For more information and to apply, please visit our website, sandovalmastergardeners.org.

~ Meg

SAVE THE DATE! Saturday, November 18, 2023 1:00 pm – Intern graduation
St. Frances Episcopal Church, 2903 Cabezon Blvd. Rio Rancho NM

August Garden Checklist

1. Replace rock mulch with plant friendly materials
2. Create moisture retaining berms around trees and flower beds
3. Cool season autumn vegetables can be planted in September - start the seeds indoors now
4. Replant any non-drought adapted perennials with low water species
5. Tour local botanical gardens to see what looks good after the heat of July – takes notes to add to your garden

Source: Month-by-Month Gardening: Arizona, Nevada & New Mexico Jacqueline A Soule,

Down & Dirty with Rachel - Sandoval County Extension Agent

In *Outlive*, Peter Attia claims we are at a transition point from Medicine 2.0 to Medicine 3.0. He says Medicine 1.0 started around the time of Hippocrates about 2400 years ago. This version of medicine was based on observations and guesswork. Some of the cures and prescriptions worked. Others, such as bloodletting, did more harm than good. The germ theory of disease and the scientific method ushered in Medicine 2.0. Attia argues that Medicine 2.0 has been extraordinarily successful against acute illnesses and contagious diseases but has hardly made a dent in tackling chronic diseases. In contrast to Medicine 2.0, Medicine 3.0 is proactive and aims to prevent chronic diseases from appearing in the first place. The shift in mindset of Medicine 3.0 is encapsulated by four main points. Medicine 3.0:

1. “places a far greater emphasis on prevention than treatment”;
2. “considers the patient as a unique individual”;
3. has an “honest assessment ... of risk—including the risk of doing nothing”; and
4. “pays far more attention to maintaining health span, the quality of life”.

Reading *Outlive*, I have been struck by the parallels of this medical transition to the agriculture transition. I would argue that we are also at the beginning stages of transitioning from Agriculture 2.0 to Agriculture 3.0. Agriculture 1.0 encompassed almost all the 12,000 years humans have been farming. It consisted of small-scale subsistence farming that was not efficient enough to support a large population or free up more than a select few from working the lands. The shift to Agriculture 2.0 began in the 1600s with the advent of monoculture sugar fields on slave plantations. The transition accelerated with the first inorganic phosphorous fertilizers in the 1800s and even more so with the invention of the Haber-Bosch process to synthesize inorganic nitrogen in 1914. Agriculture 2.0 has been marked by monoculture fields and widespread use of inorganic fertilizers, herbicides and pesticides, and tillage. The goal of Agriculture 2.0 is to produce uniform food that has long shelf lives and is durable for shipping as cheaply as possible. As anyone who has bought a tomato at the store within at least the past thirty years knows, this food does not always have a perceptible taste.



Reaching towards the future. Photo courtesy R. Zweig.

Beyond the injury to our dinner plates, Agriculture 2.0 has done significant damage to the environment, exemplified by algal blooms due to runoff fertilizer and the Dust Bowl, among others. Furthermore, monoculture cropping systems threaten the success of agriculture itself and its ability to feed the growing human population due to loss of genetic diversity and decreased ability of crop populations to fight disease. Think of the Irish potato famine and, more recently, the Fusarium wilt (Panama disease) wiping out Cavendish banana plantations.

Just as with Medicine 2.0, Agriculture 2.0 has brought tremendous benefits. Its efficiency gains have indirectly spawned many of the inventions and luxuries of today by allowing more people to pursue jobs outside of agriculture, allowing for a more nourished population and the physical and mental benefits afforded by that, and supporting a large population with more brains to tackle problems and generate ideas.

Agriculture 3.0 mirrors Medicine 3.0 by trying to build on the gains of Version 2.0 while taking a more holistic approach that ultimately results in a healthier person or farm and ecosystem. To see this mirror more clearly, let's go point by point of this mindset shift.

1. *Version 3.0 “places a far greater emphasis on prevention than treatment”.*

Instead of reacting to pest outbreaks, weeds, or low soil fertility by spraying pesticides and herbicides and applying inorganic fertilizers, Agriculture 3.0 aims to stop such problems in the first place through practices such as providing habitat for beneficial insects, intercropping, cover cropping, and zero or minimal tillage. (Yes, many of the pesticides and herbicides in Agriculture 2.0 are applied before an outbreak, but I argue this is still a reactionary measure to years of practices that do little to prevent pest outbreaks.)

2. *Version 3.0 “considers the patient as a unique individual”.*

One of the great advances of Agriculture 3.0 is better remote sensing technologies. These can measure nutrient levels and soil moisture down to the plant, allowing for precise microdosing. Similarly, disease and pest problems can be caught earlier before they have spread. This conserves water and prevents overuse of fertilizers and pesticides.

3. *Version 3.0 has an “honest assessment ... of risk—including the risk of doing nothing”.*

Agriculture 3.0 emphasizes a damage threshold below which no action is taken. This threshold differs for each individual and farm, depending on economic and other goals and the individual's tolerance of the risk of not doing anything (potential for the problem to spread) and risk and costs of action (potential harm to environmental and personal health; costs of input and labor).

4. *Version 3.0 “pays far more attention to maintaining healthspan, the quality of life”.*

The goal of Agriculture 3.0 is to have farmland and ecosystems that are healthy and self-sustaining to the largest extent possible. This means caring for the soil as the living entity it is and applying closed-loop systems as much as possible. Rather than being drip fed inorganic nutrients, the soil should be able to generate its own. This last point of the mindset shift is exemplified by the Native American proverb “We do not inherit the Earth from our ancestors; we borrow it from our children”.

I want to be clear that Agriculture 3.0 does not necessarily need to be organic. Rather, Agriculture 3.0 uses our available resources, technology, and knowledge wisely to create a system that is more sustainable while also being able to support our population. Farmers are resistant to change and with good reason. The transition to Agriculture 3.0 is not going to be quick, and there will be growing pains. But the will for a new approach to agriculture is starting to take root and spread.

One more parallel between Medicine 3.0 and Agriculture 3.0. Both are incorporating elements of Version 1.0 that the scientific revolution helped prove were effective, such as medicinal foods and the first fertilizers that were applied 8000 years ago: manure.

Last month's puzzler: There are three light switches in a room. Only one switch controls a light bulb in an adjoining room, and you can only enter the adjoining room once to check if the bulb is on or off. How can you figure out which switch controls the light bulb if you can only enter the adjoining room once?

Answer: Turn on the first switch and leave it on for a few minutes. Turn off the first switch and turn on the second switch. Enter the adjoining room. If the light is on, you know the second switch controls the light bulb. If the light is off and the bulb is warm to the touch, then you know the first switch controls the light bulb. If the light is off and the bulb is cold, then you know the third switch controls the light bulb.

This month's puzzler: There are twelve balls of identical size. All are the same weight, except for one which is slightly heavier, but you can't tell by holding it. With a set of balance scales, can you determine which is the heavier ball with just three weighing's? (Adapted from *Mensa presents the ultimate puzzle challenge*, Carter, Russell, and Bremner, 1999).



Public Training Opportunities

Ready, Set, Grow

- Aug. 16 Greenhouse Topics - Title/Presenter TBD
- Sep. 20 "Container Gardening: Raised Beds & Potted Plants (indoors & out!)" with John Garlich, Bernalillo County Agriculture and Natural Resources Agent
- Oct. 18 Composting with John Zarola, President and Outreach Coordinator for the Bernalillo County Extension Master Composters program
- Nov. 15 Season Extension with Hoop Houses - Title/Presenter TBD
- Dec. 13 ANTS! with Dr. Joanie King, NMSU Extension Entomology Specialist

To register for a class go to: <https://desertblooms.nmsu.edu/grow.html>

Previous classes are recorded and archived for access. Check out the [Ready, Set, Grow website](#) for those links.

Gardening with the Masters – New Time & New Place

Upcoming, in-person, classes, held at Loma Colorado Library the 4th Monday of the month. The class runs from 6:45 pm to 7:45 pm as the library closes at 8:00 p.m. These classes are not recorded. We encourage you to join us in person, so your individual questions get answered. New Gardening with the Masters classes will be announced here as they are created.

August 28, 2023 – Preserving Your Harvest – Angie Johnson

September 25, 2023 – Beekeeping For Beginners - Presenter TBS

October 23, 2023 – Poisonous Plants – Sandra Liakus

November 27, 2023 – Strawbale Gardening – Cathryne Richards

Pre-recorded Classes

Courtesy of COVID, we adapted some of our in-person classes to Zoom, recorded them and they are available at <https://sandovalmastergardeners.org/gardening-classes/gardening-with-the-masters-online/>

How to Grow Your Own Food – With or Without a Garden

From The Guardian – Alys Fowler

There's no such thing as an effortless crop, but plenty that are pretty foolproof – even if you have just a windowsill or room for a few pots.

If you only have a windowsill

The Lilliputian world of microgreens offers those with the smallest spaces the opportunity to grow some crops with flavor as well as vitamins and other nutrients. Microgreens are merely seedlings harvested when they are no more than 4 inches or so high and grown so close together that they resemble a small forest. You don't need proper pots or a seed tray: a yoghurt tub or a takeaway container will do, as long as you punch holes for drainage. Microgreens are a one-hit wonder, however – each cut is the end of life for the seedling – so you will need to re-sow every two weeks or so. When buying seeds, check the packages and hunt for those with the most inside.

The entry level into this world, which is vast and runs from amaranth to watercress, is dried peas from the supermarket. Sow them cheek by jowl and cover with just a little compost. The flavor of just-harvested pea shoots is fresh and green, just as if you have been frolicking in a summer meadow. Once you have succeeded here, try the seedlings of radishes, cabbage, broccoli, mustards, Greek cress, basil, perilla (shiso) ... The list is endless – even carrot seedlings are delicious.

If you have a bit more space and a sunny enough spot, I recommend getting a lemon tree or perhaps a kumquat. Not because you are likely to harvest bowls full of fruit, but for the leaves, which harbor all the flavor of the rind, but in a subtle and interesting way. They can be used in curries, puddings or – my favorite – gin and tonic. You could even add some coriander microgreens and truly up your game. Citrus trees need bright, warm conditions and watering twice a week in summer.

If you have space for outdoor pots

Whether they are on a balcony, in a courtyard or just by the back door, pots can offer growing conditions to match open soil, as long as there is plenty of good light and daily watering in the summer. The light bit is essential: too much shade and your crops will struggle. You need at least three hours of sunlight a day to get a decent harvest.

Everyone wants to start with tomatoes, but you will get more bang for your buck buying a chili plant. Chilies are greedy feeders and they may need housing in five- or even 10-liter pots so you can keep them satiated. Once they start to flower, give them organic tomato feed every other week and one or two plants will keep you supplied all year.

If you don't like chilies' heat, at the other end of the spectrum you could try dwarf French beans, which are very easy to grow. Mid-May is the perfect time to start sowing, then repeat-sow every two to three weeks till the end of July so you get a succession of picking right into early autumn. You want to harvest the beans when they are no thicker than a pencil, with just a hint of seed showing inside. The best variety [I have found is Faraday](#); the flavor is unbeatable.

Each plant needs to be 6 inches apart from its nearest neighbor. Sow two seeds per station, one half deep around the edge of a container so the beans can hang over the edge; this keeps them clean from the soil. Once the flowers appear, make sure you water well as this will help the fruit to set; other than that, they will do all the hard work for you. If there's space in the middle of the pot, you could sow a bee-friendly flower such as calendula to encourage pollination.

If you have soil

The joy of soil is that it does the work for you. Plant roots can grow far into its depth and explore for minerals and nutrients, while friendly microbes help defend against pests and diseases. Establish a perennial by watering it regularly until you see signs of new growth, after which it will basically look after itself.

I can't think of a better crop for soil than globe artichokes. These architecturally handsome plants have strong silver leaves that reach a meter or so in height, and tall flowerheads for you to harvest. A mature clump can give you up to 10 heads to eat every summer. You will find young plants for sale now; they take a year to establish, but after that you can be picking for many years to come.

If you are somehow tired of eating them, you can always make a version of Cynar liqueur by soaking the outer petals in vodka. Or leave them to flower, in which case the bees will thank you and your garden will look quite beautiful.

You need to buy young plants and give them plenty of rich soil to get their roots into, so buy a bag of farmyard manure. [Manure has some cautions with using. Know where it came from, how aged is it, was the grass sprayed with pesticides? etc. Reference [USING ANIMAL MANURE](#)] Dig in a good bucketful with each plant. Three plants are more than enough; each plant 6 inches apart from its neighbor somewhere it can soak up the maximum rays. Other than cutting back the old flower spikes each spring and giving a mulch with compost every autumn (the more you feed, the more flowerheads you will get), there is almost nothing to do other than harvest.

Globe artichokes look lovely planted with easygoing herbs such as lavender, lemon balm, herb fennel and rosemary, and create an effortless pretty garden that you just have to eat.

Original Article: [How to Grow Your Own Food – With or Without a Garden \(getpocket.com\)](https://getpocket.com/)

Upcoming Events:



ISA 2023 International Tree Climbing Championship - World Championship

Deliberately repeated from August Issue

Hosted by and in partnership with ISA Rocky Mountain Chapter

When: August 11-13

Location: Hyder Park, 700 Pershing Ave SE

8:00 AM till 5:00 PM

Admission is FREE

World-class tree climbing competitions

Food trucks/face painting/climbers' corner/activities for kids

Safe Gardening

Avid gardeners tout the benefits of gardening, which are many. It's easy to forget gardening also can be hazardous, at least until the gardener is in a doctor's office with an injury or condition that needs professional support. In April, we covered hand safety; in May, avoiding sunburn; In June, preventing heat stroke. In July we discussed various kinds of skin cancer.

Muscle Cramps, Sprains and Strains

Information from the Mayo Clinic

A muscle cramp is a sudden, unexpected tightening of one or more muscles. Sometimes called a charley horse, a muscle cramp can be very painful. Exercising or working hard, especially in heat, can lead to muscle cramps. Some medicines and illnesses also might cause muscle cramps. Muscle cramps aren't usually harmful. Self-care measures can treat most muscle cramps.

Symptoms - Muscle cramps occur mostly in leg muscles, most often in the calf. Cramps usually last for seconds to minutes. After the cramp eases, the area might be sore for hours or days.

Causes - A muscle cramp can happen after working a muscle too hard or straining it, losing body fluids through sweat or simply holding a position for a long time. Often, however, the cause isn't known.

Most muscle cramps are harmless. But some might be related to a medical concern, such as:

Not enough blood flow. A narrowing of the arteries that bring blood to the legs can cause a cramping pain in the legs and feet during exercise. These cramps usually go away soon after exercise stops.

Nerve compression. Pressure on the nerves in the spine also can cause cramping pain in the legs. The pain usually gets worse with walking. Walking bent slightly forward, such as when pushing a shopping cart, might ease cramping.

Not enough minerals. Too little potassium, calcium or magnesium in the diet can cause leg cramps. Medicines often prescribed for high blood pressure can cause increased urination, which may drain the body of these minerals.

Prevention - These steps might help prevent cramps:

- **Drink plenty of liquids every day.** Muscles need fluids to work well. During activity, drink liquids regularly. Keep drinking water or other liquids without caffeine or alcohol after the activity.
- **Stretch your muscles.** Stretch gently before and after using any muscle for a time. To avoid getting leg cramps at night, stretch before bedtime. Light exercise, such as riding a stationary bicycle for a few minutes before bedtime, also may help prevent cramps while you sleep.

Muscle Strains - For immediate self-care of a muscle strain, try the R.I.C.E. approach — rest, ice, compression, elevation:

- **Rest.** Avoid activities that cause pain, swelling or discomfort. But don't avoid all physical activity.
- **Ice.** Even if you're seeking medical help, ice the area immediately. Use an ice pack or slush bath of ice and water for 15 to 20 minutes each time and repeat every two to three hours while you're awake for the first few days after the injury.
- **Compression.** To help stop swelling, compress the area with an elastic bandage until the swelling stops. Don't wrap it too tightly or you may hinder circulation. Begin wrapping at the end farthest from your heart. Loosen the wrap if the pain increases, the area becomes numb, or swelling is occurring below the wrapped area.
- **Elevation.** Elevate the injured area above the level of your heart, especially at night, which allows gravity to help reduce swelling.

Some doctors recommend avoiding over-the-counter pain medications that can increase your risk of bleeding — such as aspirin, ibuprofen (Advil, Motrin IB, others) and naproxen sodium (Aleve) — during the first 48 hours after a muscle strain. Acetaminophen (Tylenol, others) can be helpful for pain relief during this time period.

Muscle Sprains - A sprain is a stretching or tearing of ligaments — the tough bands of fibrous tissue that connect two bones together in your joints. The most common location for a sprain is in your ankle.

Initial treatment includes rest, ice, compression and elevation. Mild sprains can be successfully treated at home. Severe sprains sometimes require surgery to repair torn ligaments.

The difference between a sprain and a strain is that a sprain injures the bands of tissue that connect two bones together, while a strain involves an injury to a muscle or to the band of tissue that attaches a muscle to a bone.

Muscle Cramps— Original Article <https://www.mayoclinic.org/diseases-conditions/muscle-cramp/symptoms-causes/syc-20350820>

Muscle Strains – Original Article <https://www.mayoclinic.org/diseases-conditions/muscle-strains/diagnosis-treatment/drc-20450520>

Muscle Sprains – Original Article <https://www.mayoclinic.org/diseases-conditions/sprains/symptoms-causes/syc-20377938>

Consider Becoming A Mentor For Class Of 2024

“With every deed you are sowing a seed, though the harvest you may not see. ~
Ella Wheeler Wilcox, poet.

Sandoval Extension Master Gardeners are already gearing up for the Intern class of 2024, starting January 2024. Certified SEMG members may volunteer to mentor a small team of interns, along with 2 or 3 other mentors. The mentor's obligation extends from when the classroom portion of the training program begins until the intern achieves Master Gardener certification, up to one year from graduation from the training class.



Because so much information is provided during the training class about gardening, volunteering, continuing education, the relationship with Sandoval Extension projects, meetings and other activities, the mentor will help usher the intern through the program. The mentor's role is to assist the intern as they successfully move through the training class, help them achieve their required 30 volunteer hours within 1-year from graduation of the training program, answer questions about the Master Gardener program and simply be a friend who shares a passion for gardening.

This is a team effort. As part of the team of mentors to your group you will take responsibility to sit through a selection of the overall training modules, help answer questions of the interns on those materials, attend Q & A sessions online with the instructors, ensure your interns are successfully completing the tests and helping the team understand the on-going SEMG projects they can volunteer for, and support team building projects to help your interns become part of the SEMG family.

SEMG members are asked to sign-up for this important role in connection with the 2024 Training Class. If you are interested in joining a team, please contact John Thompson or Michelle Wittie via their contact info in the Members roster to sign-up as mentor.

There are benefits for being a mentor – all your **required** volunteer hours are covered for the year by the time the training is completed. You learn a lot. It's also a LOT of fun!

As Winston Churchill said, *“We make a living by what we get, we make a life by what we give.”*

Volunteers Needed – ISA Annual Conference

Deliberately repeated from August

REMEMBER: First, you fill out and submit your volunteer form and get a special code or a direct link to the registration page.

Then go to the registration page and input the code to get the discounted price.



Volunteer for the ISA 2023 Annual International Conference in Albuquerque, New Mexico

Volunteers who sign up for and work a **minimum of 8 hours** at the event will receive a discount for attending the conference of **\$150**. The regular rate for non-members is usually **\$680**!

Please fill out the form [here](#) and you will receive a discounted rate that you can use to register. This rate is reserved for only confirmed volunteers who ISA has notified. If you do not receive a notification email Alyssa.Obrien@emnrd.nm.gov. Note, you need to sign up to volunteer and then fill out a registration. Make sure to do both.

Student volunteers who work across all three days of the conference will receive **complimentary registration**. This rate is only reserved for confirmed volunteers who ISA has notified. Register today and join ISA in one of the oldest cities in the United States, Albuquerque, New Mexico on 14-16 August. ISA will host the event along with the ISA Rocky Mountain Chapter at the Albuquerque Convention Center.

The ISA 2023 Annual Conference will **open at 10 a.m. Monday, 14 August with our general session** featuring a dynamic keynote, offer three days of great educational sessions, and conclude on Wednesday evening, 16 August with our closing celebration.

The ISA Annual International Conference is the world's premier gathering where arboricultural professionals, tree workers, and other tree enthusiasts from across the globe come together to discuss the benefits of and how to properly care for trees. Attendees will have the opportunity to expand upon their knowledge with lectures given by industry specialists and network with leading professionals in the tree care community.

Visit the [2023 Annual International Conference website](#) to see schedule of events, hotel recommendations, and additional helpful information.

HELP WANTED #1 – Corrales Harvest Festival

The **Kiwanis Club of Corrales** is looking for volunteers to help with parking and clean up at the Harvest Festival Sept 30 - Oct 1.

The money they raise provides grants (to kids projects and community organizations like Sandoval Extension Master Gardeners).

If you have time to help it would be greatly appreciated. Contact Lynn Martinez at lynn.martinez@cblegacy.com for additional information

HELP WANTED #2- Help Line Coverage

We still have need of volunteers to cover the **Helpline**. This is online, from the comfort of your own home. Each week of coverage earns 10 hours of Outreach credit. For more information, contact Penny Lindgren or Sandra Liakus via their email or phone numbers in the member roster.

HELP WANTED #3 Co-Chair Needed

Project is Sandoval County Administrative Building Plant Watering/Maintenance

Backup for watering schedule

Assistance analyzing plant problems.

Help resolve plant issues in the building.

Annual repotting coordination

Contact Michelle Wittie if you are interested.

HELP WANTED #4 Co-Chair Needed

SANDOVAL SEED SHARE PROJECT

Seek seed donations from large companies.

Analyze seeds for viability in Sandoval County.

Assist in packaging and distributing seeds.

Contact Michelle Wittie if you are interested.

