



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 each mo.

Please submit news,
articles, events and
photographs to:
newsletter Sandoval
mastergardeners.org

Editor:
Kate Shadock

“Everything in nature - and we’re a part of nature - was planted here to grow. And not only to feel alive, but to beget and [to] generate and [to] give life to other things.” * These words stayed with me well after sociologist Corey Keyes said them to Shankar Vendantam in his interview on a recent episode of the [podcast, Hidden Brain](#)*. Keyes was talking about human flourishing and languishing, but gardeners have access to this truth on a regular basis!

I think it doesn’t get much better in the garden when there is a successful harvest. This summer, our garlic flourished (yay!). You may recall that I wrote about planting garlic cloves in the garden - then forgetting where they were. These, I’m sorry to say, were not the ones I planted, but the ones my beloved planted - and he planted them in a good spot where they were happy and prolific.

I don’t know about you, but our garden both flourishes and languishes... we celebrated all eight of the cherries two of our young trees finally bore this year. The tomato seeds I started (including those “Fred’s Toms”) are only about a foot tall, meanwhile I’ve already eaten some tomatoes from the plants my friend gave me and those I brought at the SEMG Plant Sale fundraiser.

Our garden consistently teaches us in both its flourishing and its languishing.

I’m excited about the garlic - and all that it will become, “beget... generate...give life” to. After pulling the plants, I let them ‘cure’ on a screen in our dry and dark garage, as my research taught me. Then, once the green stalks were completely dry, I cut the bulbs free and rubbed off the dirt. The bulbs are gorgeous, white and purple. The largest will be used for cooking delicious meals to feed family and friends.



Photo: Meg Buerkle Hunn

I’ve saved some bulbs for the coming season. Here in NM, there’s lore that says **plant garlic at Halloween and harvest around the Fourth of July**. That is easy for me to remember. I also learned that the dried stalks and leaves can be cut up into mulch and placed around plants to deter other pests! I think it’s so amazing and remarkable that one plant can do - “beget, generate, give” so much - with just a little input from me.

May your gardens flourish... “beget, generate, give life” to you and the community of which we are all a part.

~ Meg

August Garden Checklist

Notice: The day after the August full moon (Full Sturgeon Moon – Monday, August 19) The songbirds go silent. They are silently intent on gathering enough food to get fat for their migrations – or to overwinter in place.

1. As the weather cools tomato plants will (finally) set fruit – keep watering and monitoring for pests
2. Start your cool weather plants inside for the winter garden planting in September
3. Do the last deadheading/shaping of rose bushes by 15 August to protect them from winter freeze
4. Buy flowering bulbs to force for holiday blossoms
5. Ornamental grasses provide fall color – “Autumn Glow” and “Regal Mist” are traffic stoppers. Plant them this month

Source: Month-By-Month Gardening: Arizona, Nevada, New Mexico Jacqueline A. Soule

SANDOVAL COUNTY FAIR – Cuba County Fairgrounds

July 31 – August 4

Exhibit Hall open 9am – 8pm Thursday & Friday On Saturday open 8:am – 4pm

Circus performance – Friday and Saturday

Rockin’ At the Rodeo – 9 p.m. to midnight

Parade – Line up begins 9:00 Saturday morning –parade starts at 11:00 am

Powwow – 10:00 Saturday morning

Dance – Saturday 9 p/m/ to midnight

<https://sandovalcountyfair.org/> For full schedule of events

Why don't gardeners have secrets?

*Because the potatoes have **eyes**, the corn has **ears**, and the beans **stalk!***

Public Training Opportunities

Ready, Set, Grow 2024 schedule

?

[August 21, 2024 - "Weed Management in Urban Landscapes"](#) with Dr. Leslie Beck, NMSU Extension Weeds Specialist

[September 18, 2024 - TBA](#) with Dr. Joanie King, NMSU Extension Entomology Specialist. Topic is undecided, but it's sure to be interesting!

[October 16, 2024 - "Native Bees & Pollinator Habitat"](#) with Elliott Gordon, Ambassador for the Xerces Society AND ABQ Backyard Refuge Program

[November 20, 2024 - "Hydroponics for the Home Gardener: Systems, crops and tips for novice growers"](#) with the NMSU Plant & Environmental Sciences Department's Rachel Gioannini, Associate Professor, Horticulture

[December 18, 2024 - "Climate-Ready Trees: Planting Smarter for a Warmer and Shadier Future"](#) with Dr. Marisa Thompson, NMSU Extension Urban Horticulture Specialist.

Gardening with the Masters - Loma Colorado Library

Fourth 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 26 – Drip Irrigation - Michelle Wittie SEMG

September 23 – Preserving the Garden Bounty -

October 28 - TBD

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/>



SEED SAVING

Kate Shadock SEMG 2018

Each fall as I harvest the bounty of my garden, I save seeds for the coming year. Yet, I always wish I'd started earlier. Bet I'm not the only one who'd like to save the seeds from the tomato that bears the earliest ripe fruit of the season.



Photo: Pexels – Pimento Pepper

Seeds are amazing. They are a living time capsule in a protective package. Each seed contains the food necessary to bring forth a plant. Seeds tell the story of hundreds and thousands of years of careful selection, collection, planting and sharing. Seeds found in the Siberian tundra that were buried by ice age squirrels successfully germinated 32,000 years later! It's worth assessing our own "old" seeds by testing if they will sprout when laid between two damp paper towels then in a plastic bag for a week. Saving seeds ensures food and genetic diversity, it saves money and helps to reproduce vegetables and flowers we've grown to enjoy.

"Heirloom" plants, such as Heirloom tomatoes are a result of generations of seed savings. Many of us started seed saving with flower seeds. Hollyhocks are kind enough to package their seeds in a convenient little pouch that are easily stored in a paper bag over winter. It's fun to trade these seed bundles with others who have assorted colors in their garden. The easiest vegetable seeds to save for beginners include beans, lettuce, peas, peppers and tomatoes. One of the most important seed saving practices is to store CLEAN SEEDS.

There are two common methods for cleaning and saving seeds. The dry method allows the seeds to dry on the plant, then collect and clean the chaff from the seeds and store the seeds. This method works well with beans, flowers greens, okra, peppers. The wet method works with seeds that need to be separated from plant pulp such as melons and tomatoes. These seeds are soaked in water then the floater "treads" get removed. The seeds get strained and rinsed a second time then carefully dried and stored. Saved seeds can be successfully stored for 3-5 years. Frozen seeds can be saved for up to 10 years. Always store seeds in a cool, dry place with an optimal temperature of 45 to 55 degrees with 25% humidity. Refrigeration is ideal. For even more information on selecting plants and seeds to save as well as the mechanics behind plant creation check out this [helpful link](https://pubs.nmsu.edu/h/H262/index.html) from NMSU.

Full link: <https://pubs.nmsu.edu/h/H262/index.html>

This article was originally published July 2021

***Why did the gardener bring a shovel to the party?
Because he heard it was ground-breaking!***

How Was Popcorn Discovered?

Could a spill by the cook fire have been popcorn's eureka moment?

<https://www.discovermagazine.com/the-sciences/how-was-popcorn-discovered>



You have to wonder how people originally figured out how to eat some foods that are beloved today. Who discovered that popcorn could be a toasty, tasty treat? Archaeology depends on solid remains to figure out what happened in the past, especially for people who didn't use any sort of writing. Unfortunately, most stuff people traditionally used made from wood, animal materials or cloth [decays pretty quickly](#), and archeologists never find it.

We have lots of evidence of hard stuff, such as pottery and stone tools, but softer things – such as leftovers from a meal – are much harder to find. Sometimes we get lucky, if softer stuff is found in [very dry places that preserve it](#). Also, if stuff gets burned, it can last an exceedingly long time.

Corn's Ancestors

Luckily, corn – also called maize – has some hard parts, such as the kernel shell. They're the bits at the bottom of the popcorn bowl that get caught in your teeth. And since you have to heat maize to make it edible, sometimes it gets burned, and archaeologists find evidence that way. Most interesting of all, some plants, including maize, contain tiny, [rock-like fragments called phytoliths](#) that can last for thousands of years.

Scientists are quite sure they know how old maize is. We know maize was probably first farmed by Native Americans in what is now Mexico. Early farmers there domesticated maize from a [kind of grass called teosinte](#). Before farming, people would gather wild teosinte and eat the seeds, which contained a lot of starch, a carbohydrate like you'd find in bread or pasta. They would pick teosinte with the largest seeds and eventually started weeding and planting it. Over time, the wild plant developed into something like what we call maize today. You can tell maize from teosinte by its larger kernels.

There's evidence of maize farming from dry caves in Mexico [as early as 9,000 years ago](#). From there, maize farming spread throughout North and South America.

Figuring out when people started making popcorn is harder. There are several types of maize, [most of which will pop if heated](#), but one variety, actually called "popcorn," makes the best popcorn. Scientists have discovered [phytoliths from Peru](#), as well as burned kernels, of this type of "poppable" maize from as early as 6,700 years ago.

Each popcorn kernel is a seed, ready to burst when heated. You can imagine that popping maize kernels was first discovered by accident. Some maize probably fell into a cooking fire, and whoever was nearby figured out that this was a handy new way of preparing the food. The popped maize would last a long time and was easy to make.

Ancient popcorn was probably not much like the snack you might munch at the movie theater today. There was probably no salt and definitely no butter, since there were [no cows to milk in the Americas yet](#). It probably wasn't served hot and was likely pretty chewy compared with the version you're used to today.

It's impossible to know exactly why or how popcorn was invented, but I would guess it was a clever way to preserve the edible starch in corn by getting rid of the little bit of water inside each kernel that would make it more susceptible to spoiling. It's the heated water in the kernel escaping as steam that makes popcorn pop. The popped corn could then last a long time.

What you may consider a tasty snack today probably started as a useful way of preserving and storing food.



The ‘Lost Sister’ Of Agriculture: Genetic Research Traces The Domestication Journey Of The Four Corners potato

A new study shows that a native potato species was brought to southern Utah by Indigenous people in the distant past, adding to an ever-growing list of culturally significant plant species that pre-contact cultures domesticated in the Southwestern U.S.

The team of researchers, led by Red Butte Garden and the Natural History Museum of Utah (NHMU) at the University of Utah, used genetic analysis to reveal how and where tubers of the **Four Corners potato** (*Solanum jamesii*) had been collected, transported and traded throughout the Colorado Plateau. The findings support the assertion that the tuber is a “lost sister,” joining maize, beans and squash—commonly known as the three sisters—as a staple of crops ingeniously grown across the arid landscape.



The authors collected DNA samples from modern Four Corners potato populations near archaeological sites and from non-archaeological populations within the potato’s natural range in the Mogollon Rim of central Arizona and New Mexico. The findings indicate that the potato was transported and cultivated, likely by the ancestors of modern Pueblo (Hopi, Zuni, Tewa, Zia), Diné, Southern Paiute and Apache tribes.

“The Four Corners potato, along with maize, cacao, and agave, reflects the significant influence of humans on plant diversity in the landscape over millennia,” said Dr. Bruce Pavlik, former director of conservation at Red Butte Garden and lead author of the study.

S. jamesii has twice the protein, calcium, magnesium and iron content than an organic red potato, and a single tuber can grow to yield up to 600 small tubers in just four months. The nutritious crop would have been a highly valued trade item and crucial in the lean winter months. While the unique distribution of the Four Corners potato came as a surprise to scientists and researchers, local Tribal members suspected this all along.

“The Southwest was an important, overlooked secondary region of domestication. Ancient Indigenous People were highly knowledgeable agriculturalists tuned into their regional ecological environs who traded extensively and grew the plants in many different environments,” said Wendy Hodgson, herbarium curator and research botanist at the Desert Botanical Garden. “Such studies highlight the need to learn from Indigenous Peoples’ perspectives, ethnographic reports, and to view landscapes and some plant species from a cultural, rather than ‘natural,’ perspective.”

S. jamesii is widely distributed across the Rim—the plants thrive in conifer woodlands, and thousands of small tubers can grow beneath a single pinyon pine canopy. These “non-archaeological” populations lack an association with artifacts, grow to be quite large and are continuously distributed across the habitat.

In contrast, “archaeological populations” of the potato occur within 300 meters of ancient habitation sites and tend to be smaller than in the species’ central distribution. The sparse, isolated populations across the Colorado Plateau exhibit a genetic makeup only explained by human gathering and transport.

“Tribes of the Four Corners region have nurtured a connection to food and landscape biodiversity since time immemorial,” said Alastair Lee Bitsóí (Diné), a Navajo journalist who grows and reports on the Four Corners potato. “I’ve grown spuds from Bears Ears, Grand Staircase and Mesa Verde region at my family’s farm in the Navajo Nation, and from them a new generation has been born. Like the ancestors, I am a dispersal agent for its transport and cultivation.”



“The potato joins a large assemblage of goods that were traded across this vast cultural landscape,” said Louderback. “For millennia, people of the southwest participated in social networks, migration and trade routes in the region.”

What is clear is that the species has been transported and grown far from its center of natural distribution. Scientists from the USDA Potato Gene Bank have been sampling the genetics of the Four Corner’s potato for decades and were intrigued by the diversity of genetic patterns along the geographic range.

Link to the full article: <https://www.potatonewstoday.com/2024/07/30/the-lost-sister-of-agriculture-genetic-research-traces-the-domestication-journey-of-the-four-corners-potato/>

Link to additional information about [the Four Corners Potato](#)



WHEN IT'S TOO HOT TO GARDEN – HOW ABOUT A MOVIE?

[KISS THE GROUND](#) (2020)

Kiss the Ground reveals that, by regenerating the world's soils, we can completely and rapidly stabilize Earth's climate, restore lost ecosystems and create abundant food supplies. Using compelling graphics and visuals, along with striking NASA and NOAA footage, the film artfully illustrates how, by drawing down atmospheric carbon, soil is the missing piece of the climate puzzle. This movie is positioned to catalyze a movement to accomplish the impossible – to solve humanity's greatest challenge, to balance the climate and secure our species' future.

Whether you are a student, parent, gardener, business owner, chef, farmer or a concerned citizen, everyone has a unique and powerful path in the movement to regenerate the planet. Find your path today via our non-profit partner, [Kiss the Ground](#) and join their mission of awakening people to the possibilities of regeneration.

[THE NEED TO GROW](#) (2022)

From the folks at Food Revolution Network...

This is a story of CUTTING-EDGE SOLUTIONS to climate change... **The Need To GROW** explores both the opportunities, and the struggles, of challenging the status quo with real world solutions.

The inspiring stories are supported by featured experts Dr. Vandana Shiva (Physicist and Agroecologist), Paul Stamets (world-renowned Mycologist), David King (Master Gardener and founder of SLOLA), Douglas Gayeton (founder of Lexicon of Food), Jeffrey Smith (author of Seeds of Deception), Kathy Kellogg Johnson (composting expert), and Permaculture Guru Larry Santoyo.

Watch **THE NEED TO GROW** free [LINK](#) to movie

CO₂MMON GROUND (2024) Beginning September 1, 2024 – this film will be available to schools across the country. The rest of us need to wait a little longer for it to be available other than limited theater views.

Co₂mmon Ground is the highly anticipated sequel to the juggernaut success documentary, [Kiss the Ground](#), which touched over 1 billion people globally and inspired the United States Department of Agriculture (USDA) to put \$20 billion toward soil health. By fusing journalistic expose' with deeply personal stories from those on the front lines of the food movement, **Co₂mmon Ground** unveils a dark web of money, power, and politics behind our broken food system. The film reveals how unjust practices forged our current farm system in which farmers of all colors are literally dying to feed us. The film profiles a hopeful and uplifting movement of white, Black, and Indigenous farmers who are using alternative "regenerative" models of agriculture that could balance the climate, save our health, and stabilize America's economy – before it's too late.

HELP WANTED

Help Wanted #1 – Placitas Garden Tour – Sunday, September 8

Seven Placitas gardens will be featured in the 9th annual Placitas Garden Tour. This is a perfect opportunity to add to your Community Outreach hours, and to see all the featured gardens during the pre-tour orientation. The gardens are open 9 to 4 and volunteers have 4 hour shifts, starting at 8:30. Sign up to volunteer on the SEMG Members page.

HELP WANTED #2 –Corrales Harvest Festival – Seed Art Table

Volunteers to head up the children's seed art table at the Corrales Harvest Festival September 28 and 29. Signup sheets will be on the SEMG Members webpage soon. These are 4 hour shifts – that count as Community Outreach and are a lot of fun. If you have any questions, contact Sam Thompson via the membership roster.

HELP WANTED #3 – Help Line

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 Sandra Liakus via email or phone number in the member roster.

Reminder to Members & Interns

SEMG provides several opportunities for interns and members to visit public gardens with a guide, labs where garden research is undertaken and commercial locations that are not accessible to the public. Sometimes we even get to tour private gardens with the designer and/or homeowner to see and hear why they made the design decisions. These opportunities are most numerous in the early spring when both gardens and gardeners are resting.

To be current on these openings – keep an eye on our website, in the MEMBERS ONLY section called [PROJECTS AND VOLUNTEERS](#). Some of these sessions are initially available only to Interns; and will be open to members, if there are spaces left towards the end of the sign up period. Some are only available to members as part of their advanced training.

On this same link is an ever changing list of volunteer opportunities where we can give hours to in order to both fulfill our requirements for the year and to learn more about SEMG's support of Sandoval County residents.



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