



the Composter

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Gardening tips for Mid-February through Mid-March

This is your last window for planting many of the cool weather varieties.

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TOG recommends you plant cool season vegetables by **February 15**. The Community Gardens of Tucson extends that date to February 28 except for broccoli seed which they recommend sowing by February 15. Whichever source you trust the message is if you are still trying to plant cool season vegetables, do so ASAP.

PLANT FROM SEED: Arugula, Asian greens, broccoli raab, cabbage, cauliflower, Chinese cabbage, cilantro, collards, dill, endive, fennel, kale, kohlrabi, lettuce, mustard, and parsley. If planting lettuce in February you might be wise to opt for heat tolerant varieties such as Jericho romaine or Prizehead.

PLANT FROM SEEDLING TRANSPLANT: Artichoke, broccoli, cabbage, celery, cilantro, collards, dill, fennel, kale, lettuce, mustard, parsley, spinach, Swiss chard.

Tomatoes. In order to harvest a good crop plant your tomatoes around **February 15**. It takes very little frost to kill a tomato plant so if you plant early make sure to protect your plants from frost. Some local gardeners are even recommending planting in January but surrounding you plants with Walls-O-Water. If you don't have this season extending gear and you are worried about frost improvise by surrounding your plants with a bunch of small plastic bottles filled with water or setting a large jug of water next to you plant and covering both jug and plant with frost cloth. Companion plants for tomatoes: plant borage along with your tomatoes but wait for soil to warm before interplanting with basil and marigolds.



Wall-O-Water and
improvised version

Volunteer Coordinator
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Member at Large

BOARD MEETINGS
ARE HELD THE FIRST
TUESDAY OF EACH MONTH
AT 5:30 pm and are open to
TOG members. Please
contact Mohye through
our Facebook page if you
would like to attend.

TOG SHOP

Frost cloth -12'
wide \$1 per foot

Home Composting
DVDs \$5

ComposterArchives on
CD donation to TOG

Spin diggers \$6
Compost cranks \$40 Heavy-
duty tool to mix compost

Compost Bin \$40

Planting Guides \$7

*Shop by appointment or at
the monthly meetings.*

Also in February: Prune deciduous fruit trees and feed both citrus and deciduous fruit trees. Once chance of frost has passed start cutting away frost killed vegetation from your perennials. If growing your own basil, pepper or eggplant from seed, start those in mid-February. (Or skip the fuss and buy premium starts from the fine vendors at our TOG Spring Fair, March 17.) You can also get a head start by planting starts for warm season garden flowers to draw beneficial insects to your garden and to gladden your heart. Try starting coreopsis, cosmos, dianthus, milkweed and zinnia for transplanting in mid-March through mid-April.

Most gardeners recommended sowing seed of cucumbers, squash and melon directly in the ground. To get an overview of spring planting recommendations refer to the TOG online planting guide: http://tog.phitestlink.com/wp-content/uploads/2016/05/TOG_Planting_Guide.pdf



Melba the Cat checking out Melody's tomato seedlings, early February

TOG February 2018 Meeting Reminder

Where: St. Mark's Presbyterian Church
3750 E. 2nd St.

We meet in the Geneva Room which is located in the NE corner of the rear courtyard. To find us park in the rear (north) parking lot and follow the covered walkway on the east side of the courtyard all the back.

When: Tuesday, February 20, 2018
Doors open at 6:45 p.m.
Q & A and door prizes a little after 7:00
Lecture starts at 7:30 p.m.

TOG's February lecture topic is a very timely one:

"Pruning Deciduous Fruit Trees," by Deb North

A native of Arizona, Deborah North was under the delusion that she was a good gardener during the 25-years she lived and worked in the Silicon Valley. Returning to Arizona in 2003 she rapidly learned that to enjoy gardening in Tucson required significant re-training. She entered the Master Gardener program in 2004 and has never looked back. In the ensuing years the desire to grow things, to learn about best-practices, and to teach others how to garden has developed into a full-time job and a part-time volunteer activity. Now working at Arbico Organics, she is committed to teaching people how to grow sustainably using organic methods.

On Feb. 20, 2018, Deborah will be speaking to Tucson Organic Gardeners about Pruning Deciduous Fruit Trees. The focus of the talk will be on pruning for production and tree health. Join us because now is the time to prune those fruit trees. We want you to produce the best harvest possible in 2018.

TOG Lectures are Free and Open to the Public.
All Welcome!

Tucson Organic Gardeners Spring Fair

St. Mark's Presbyterian Church

3809 E 2nd Street

(1 block west of Alvernon, 2 blocks south of Speedway)

Admission is FREE



Saturday March 17th 2018 9am-1pm

- Spring Plant Starts from Local Growers.
- Native Vegetables, Herbs, Flowers and Seeds.
- Organic Compost, Fertilizers, and Garden Supplies.
- Free Gardening Class at 11am.
- Gift Raffle, Music, Games and Much More



Proceeds benefit Tucson Organic Gardeners, a 501(c) 3 non-profit organization
Questions or Comments: e-mail: TucsonOrganicGardeners@gmail.com

January 16, Lecture Recap

At or January 16 meeting we had two speakers who, because of their shared interest in educating future generations of gardeners and passion for food justice, have shared the floor as speakers at other venues in the past. Our first speaker, Moses Thompson, is largely responsible for setting up the thriving school garden program in TUSD schools. We invited him to talk in particular about the agrivoltaic experiments hosted by a couple of TUSD schools. Michael Kotutwa Johnson is a Hopi farmer dedicated to preserving the traditional Hopi way of dry land farming; he also has an abiding interest in indigenous farming practices throughout the world.

Agrivoltaic Experiment and TUSD School Garden Program

Moses started his first school garden in his job as a counselor at Manzo Elementary School where he used gardening as a means to get students in crisis focused on doing something constructive and calming. Instructors were quick to recognize that gardening could be connected to school curriculum. Over the years Manzo student labor converted their Bermuda grass courtyard into a thriving garden now boasting 17 rainwater cisterns, solar supported greenhouses, fruit trees, chickens and vermiculture. The students grow specialty crops that they sell to a Thai restaurant, fruits and vegetables certified for use in their cafeteria, and produce distributed at an onsite farmer's market. Through their enterprise students learn a whole slew of skills in addition gardening and husbandry skills, such as record keeping, math, customer service and an understanding of food justice issues.

Now hired jointly by The University of Arizona and TUSD, Moses has started up gardens in 21 TUSD school with the help of interns (up to 120 per semester!) enrolled in the interdisciplinary course School and Community Gardens offered by the UA Geography Dept.. Schools participating in the program are all Title One schools, in other words schools eligible for special programs because their students are considered academically at risk.



UA Teaching Assistant for School and Community Gardens course, Morgan Apicella working with student in the Manzo Elementary School garden

The agrivoltaic experiment led by UA's Dr. Greg Baron-Gafford is currently being conducted on three sites: Biosphere 2, Manzo Elementary and Rincon High. Research is looking into whether there is a mutual benefit in co-locating photovoltaic panels and gardening. The gardens are located under the photovoltaic panels which are slanted so that the ground receives sun in the winter but is shaded in the summer. Hoped for benefits to plants located under the panels include: extended season, less water use and better production. The primary benefit on the photovoltaic end is increased efficiency due to the cooling effect of plant transpiration (the panels don't function optimally at high temperatures). Initial results of the experiment seem promising, the UA scientists on the project have noted a measurable increase in energy production by the panels. The season extension component is also panning out well. Carrots were germinated in July and tomatoes continued to produce during hot weather. Because the sun heats the ground in the winter and the panels trap that heat, the panels have also extended the production of frost sensitive food plants into the winter. Sweet potatoes and basil thrived under the panels during the winter, but tomatoes froze. Mango and avocado trees grown under the panels also survived this winter's relatively mild cold snap. An additional benefit to this system is that the tempered microclimate under the panels makes gardening conditions much more comfortable for the gardener. The students taking data for the

experiment have noticed this and the food justice implications for farm workers should this system be scaled up are significant.

Volunteer Opportunity: if you would like to volunteer at the TUSD school gardens please contact Moses at: Moses.Thompson@tusd1.org

Michael's lecture, "Importance of Hopi Agriculture: What it Means to Us All" introduced us the Hopi perspective on organic farming. Michael started by showing us his planting stick, a traditional tool fashioned from greasewood, and by passing around a dried ear of blue corn from which we were encouraged to take some kernels for planting in our own gardens. (For those of you who took kernels: Michael recommends that you plant these 4-6 inches deep here in Tucson, although the Hopi plant them much deeper in their arid terrain.)

Hopi is located on the Colorado Plateau in northeastern Arizona at an elevation between 4500 and 5500 feet. The climate is arid, receiving only 6-10 inches of rainfall per year with a growing season of only 130 days. Annual snow melt is critical to the Hopi way of farming as there is typically no rain between April and July, and the Hopi use no artificial irrigation. The soil becomes warm enough for corn to germinate at the beginning of the long dry season, a coincidence that strikes us as unusually challenging. The deep soil, however is moist, so the Hopi farmer plants deeply to take advantage of this moisture. Before planting in April, Michael will take time to observe the state of natural vegetation; if it is green and lush, indicating good soil moisture, he will plant corn 8 to 12 inches deep. In drought years he may plant corn as deeply as two feet!

Other strategies used to adapt to the unusually arid climate include a careful location of fields, timing and spacing of crops, techniques to direct or retain water and erosion prevention. The smaller size of fields, most commonly one or two acres, and occasionally as large as five acres, helps prevent erosion. Their location on the alluvial plain, in washes or on sandy hillsides helps also prevents erosion and with maintaining soil moisture. Fields located in washes and the alluvial plain also benefit from a fresh layer of soil deposited by snowmelt in advance of the planting season. At harvest farmers will leave the unharvested vegetative parts in place to create snowdrifts, ensuring more soil penetration by snowmelt. A Hopi field of standing crops looks very different from the standard American one due to the spacing of plants. Instead of long rows of corn what you will see is clumps of plants spaced nine feet apart; planting several seeds in the same hole insures that at least some of the seeds will survive, and the plants grow well in clumps, giving each other protection from the elements. The spacing between clumps encourages roots to travel long distances to gather water

from the soil and establish a good base. Squash and melons are also spaced at about nine feet but beans are spaced most closely at three feet. The Hopi do not practice the Three Sisters companion gardening common to many other indigenous Americans.



Michael at his farm

The Hopi way of farming is aimed at providing food for the community rather than at producing a bonanza crop. A successful crop is measured by a community feast rather than by a large profit. The Hopi relationship to crops is above all a nurturing one, and plants are cared for as if they were human relatives. Indeed the Hopi and their crop varieties have a very long familial relationship; DNA analysis links today's Hopi corn to varieties found in the Chaco Canyon archaeological site. Hopi farmers today use basically the same organic methods that they have used since time immemorial, adding in a few modern American methods that they have adapted to suit their specific needs. The Hopi and their crops have adapted to the land and its challenges many times in the past, and expect that they will be able to do so far into the future.

Saving Tomato Seeds,by Barbara Ho



1. Put seeds in glass or jar with about 3-4 inches of water.
2. Let stand for about a week, rinsing periodically. In about a week the gelatinous coating will float to the top and the seeds will settle to the bottom. First pour off gelatinous matter and then use a strainer to retrieve seed and rinse once more.
3. Dry seeds well (e.g. on wax paper).
4. Store in tightly closed container in fridge (not the freezer).

Think like a plant breeder when selecting seeds to save. For example, save seed from plants with the most desirable qualities, choosing seeds from robust plants that yield the biggest, juiciest, most flavorful, most colorful, and fastest ripening fruit. Do not save seeds of hybrid varieties. Seeds of hybrids are often sterile and even if they do germinate will not produce plants or fruit with the desirable characteristics of the parent plant.

Zucchini Bread, a classic Betty Crocker recipe

The home baked zucchini bread that Barbara Ho brought to the January meeting was such a hit we thought that we would print the recipe for all of you who like to bake.

Prep: 15 min. Bake: 1 hr. Cool: 2 hr 10 min
2 loaves, 24 slices each

Ingredients

3 cups shredded zucchini (2 to 3 medium)
1-2/3 cups sugar
2/3 cup vegetable oil
2 teaspoons vanilla
4 large eggs
3 cups all-purpose* or whole wheat flour
2 teaspoons baking soda
1 teaspoon salt
1 teaspoon ground cinnamon
1/2 teaspoon ground cloves
1/2 teaspoon baking powder
1/2 cup coarsely chopped nuts
1/2 cup raisins, if desired

Preparation

1. Move oven rack to low position so that tops of pans will be in center of oven. Heat oven to 350 degrees F. Grease bottoms only of two 8 x 4-inch loaf pans or one 9 x 5-inch loaf pan with shortening or spray with cooking spray.
 2. In large bowl, stir zucchini, sugar, oil, vanilla and eggs until well mixed. Stir in remaining ingredients except nuts and raisins. Stir in nuts and raisins. Divide batter evenly between 8-inch pans or pour into 9-inch pans.
 3. Bake for one hour at 350 degrees F.
-

Pizza-Flavored Kale Chips, by Melody Peters

Here's a tasty and healthful snack. You can also use these chips crumbled as a topping on salad, rice, quinoa, baked potatoes, or any dish that would benefit from a bit of crunch and extra savory flavor.

Equipment needed:

- 1. food processor or immersion blender**
- 2. food dehydrator**

Ingredients:

2 bunches Kale

½ cup dehydrated tomatoes*

1 cup raw cashews

4 large garlic cloves

1 ½ cups hot water

2 tablespoon fresh lemon juice

2 tablespoons nutritional yeast

1 teaspoon basil

½ teaspoon oregano

½ teaspoon sea salt

¼ teaspoon cayenne or sriracha powder



Directions:

- Place dehydrated tomatoes and cashews in separate bowls and then pour enough hot water over each to cover. Soak for about for an hour.**
- Drain water from cashews and discard, but reserve the water used to soak tomatoes**
- Wash kale thoroughly and tear into pieces; discard stems. Spin kale pieces in a salad spinner or dry between layers of paper towel placed in a colander, then place pieces in a large bowl.**

- Blend all ingredients apart from the kale using enough of reserved tomato soaking water to make a thick pesto. (I use an immersion blender but one could use a food processor.)
- Pour the pesto on top of the kale and toss with a couple of large spoons.
- Place kale on dehydrating trays making sure keep pieces in a single layer.
- Dehydrate until crispy. Depending upon your dehydrator this could take a while. In our low temp dehydrator a recipe this size takes almost eight hours to achieve crisp chips.

***You can substitute about 4 ounces of tomato paste for the dried tomatoes. In that case reserve liquid from soaking cashews to help with blending the ingredients into a pesto.**

Upcoming Events:

Friday, February 16, at 7 pm. Author Event at Antigone Books. Contributors to a new book *Eat Mesquite and More: A Cookbook for Sonoran Desert Foods and Living* will be reading. The Food Conspiracy Co-op will prepare some of the recipes from the book for tasting by the audience. Admission is free.

WEDNESDAY, FEBRUARY 21 AT 7:30PM

Free Screening of *Age of Consequences*. | FREE ADMISSION.

at the Loft Cinema, 3233 East Speedway Boulevard

What is the relationship between climate change and the waves of refugees we have seen in the past couple of decades? Will future food and water shortages caused by climate change tip the scales in unstable regions sparking all out wars? What steps can we and our government do to prevent worldwide crises?

It may surprise some that the U.S. military is in the forefront of action concerning climate change. The film will be followed by a panel discussion from members of the military and UA climate scientists.

WEDNESDAY, Feb. 28, 7:30-9 p.m.

also at the Loft Cinema, 3233 East Speedway Boulevard

Screening followed by discussion. *Wasted!: The Story Of Food Waste*. What is the environmental impact of massive food waste in the United States? Does the routine wasting of food in the USA cause hunger elsewhere? How are innovative American and European chefs fighting food waste and what local efforts are being made to divert usable food from the landfills? Sponsored by Center for Biological Diversity, The Community Food Bank of Southern Arizona and P.O.W.W.O.W. (Produce on Wheels With-Out Waste) Featuring a post-film Q&A with local experts. Email: info@loftcinema.org Price: \$9.75, Loft Members \$6.00

2018 Spring Plant Sales

Desert Survivors Spring Plant Sale: March 3th (Saturday) - Members Sale. March 6th (Tuesday) thru March 10th (Saturday) - Public & Members. Plant prices are discounted 20% for members and 10% for the public during the sale. Vast selection of native plants, including trees, cactus, shrubs and perennials. Desert Survivors Nursery is located at 1020 W. Starr Pass Blvd

TOG Spring Garden Fair. Saturday, March 17, 9 am to 1 pm. We will have vendors from all over the Tucson area selling a wide variety of plants including veggie starts, herbs, trees, and some landscape and patio plants. The TOG Spring Fair really offers one-stop shopping for your organic gardening needs. This is an excellent opportunity to buy soil amendments and other gardening aids at a lower price, and to pick up new knowledge. Shop us first then go check out the other spring sales. See flyer above.

Tohono Chul Spring Plant Sale Members' preview: Wednesday, March 14, 12 to 6pm
General Public: Saturday, March 17, 9 am to 5pm and Sunday March 18, 10 am to 4 pm.
Over 1,200 species of native plants, some not available elsewhere. Many cacti and succulents. Tohono Chul Park is at 7336 N. Paseo del Norte in Tucson. The plant sale is held in the Propagation area on the east side of the park just north of the Education Center.

Pima County Master Gardeners Spring 2018 Plant Sale. Saturday, April 7, 8 to 11 am.
This is the source for great bargains on plants grown by the master gardeners themselves. Prices are low and attendance is high. Plants tend to sell out fast so arrive early for the best selection and be prepared for a crowd. Sale located at Pima County Cooperative Extension Demonstration Gardens. 4210 N. Campbell Ave



Justicia is red (or purple) and larkspur is blue...
Happy Valentine's Day, TOGgers!



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CTED



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