# Organic Gardening Community Quarterly

**July-September 2018**

INTRODUCTION:

## Congratulations to those of you who garden in our summer's heat! In this issue, we offer tips on warm season gardening, rainwater harvesting, keeping on top of invasive grasses, we share lots of local upcoming events, recipes, and a recommendation for great summer reading. Enjoy!

Tucson Organic Gardeners

Our mission is to promote sustainable gardening and composting in the Tucson community through meetings, lectures, and publications. TucsonOrganicGardeners.org

Rita Gardens

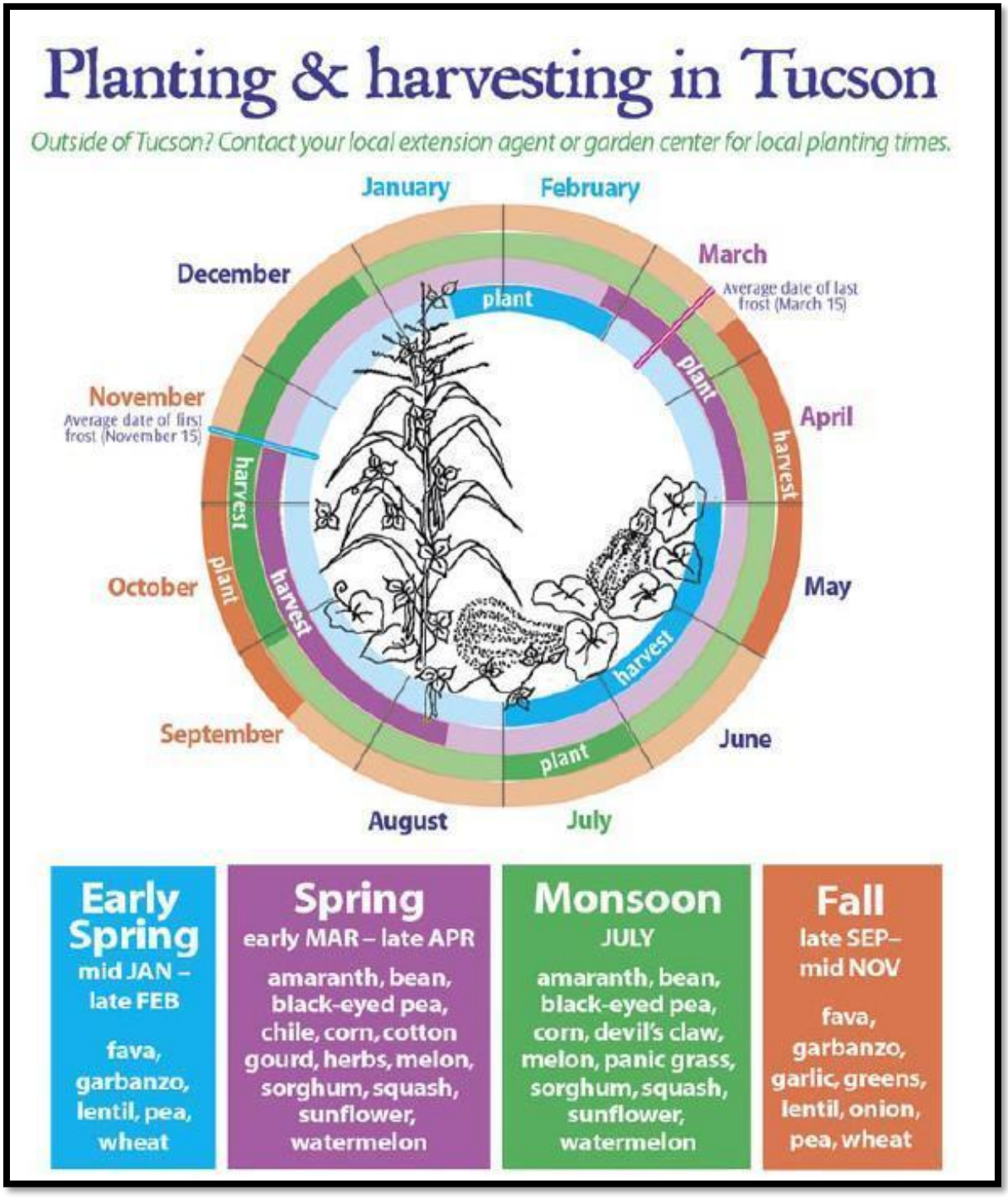
Focused on developing a healthier, connected community through gardening and gardening related activities. WeLoveToGrow.org

Community Gardens of Tucson

Our mission is to create and support accessible community gardens with Tucsonans of diverse experience levels, abilities and cultures in order to educate, foster wellness and enhance the environment for people, plants and pollinators. CommunityGardensofTucson.org

IN THIS ISSUE:

# PLANTING GUIDE




## Tucson Organic Gardeners Planting Guide:

http://www.tucsonorganicgardeners.org/wp-content/uploads/2016/05/TOG_Planting_Guide.pdf

## Community Gardens of Tucson Planting Guide:

https://www.communitygardensoftucson.org/planting-guide/

# OUR CONTRIBUTORS

**Melody Peters** has been gardening in Tucson for 38 years. Most of that time she has been planting native wildflowers, shrubs and trees, but once she joined TOG she started seriously growing vegetables and fruit. Some of our readers will know her as the recent editor of the Composter. She is coordinator of Rincon Heights Community Garden.

**Elizabeth Smith** is a 2nd generation Tucsonan who's only a few generations removed from Irish potato farmers and has growing in her blood. She has been digging in our desert soils for almost 45 years and one of her first gardens was a plot of cotton in her backyard at age 8. The late George Brookbank became her mentor while she was in college, where she learned from his extensive knowledge of growing in dry, hot climates. Since then she has added new (and old) methods of growing to her repertoire such as organic cultivation, permaculture, rainwater conservation, harvesting native foods and vermiculture. Elizabeth is a former Chef and the founder of WeLoveToGrow.org a non-profit focusing on teaching people how to grow in our challenging climate as well as subjects like preparing and cooking foods from the garden and the desert, canning, soap making, vermiculture and more.

**Bruce Plenk** is Community Gardens of Tucson's Chairperson and is contributing his review of the book, *Kiss the Ground: How The Food You Eat Can Reverse Global Climate Change, Heal Your Body and Ultimately Save Our World* by Josh Tickell. Bruce lives in a house with solar electricity and solar hot water, has worked as the solar coordinator for the City of Tucson and is now a solar consultant. He has been the Gregory School Garden co-garden coordinator with Patti Hartmann for several years and continually tries to understand why some plants do well and others don't in the garden! He says he is still working on that…

**Chef Harry Crane** is a retired Executive Chef for the Kraft Heinz Company where he managed a number of areas including the Foodservice Culinary Team and finally the test kitchens at Kraft's Oscar Mayer Company in Madison Wisconsin. Prior to joining Kraft, Harry was a chef in one of the Chicago area's top French restaurants and was a chef instructor at The School of Culinary Arts at Kendall College. Harry is a member of the American Culinary Federation and a member and past president of the Research Chefs Association. Harry spends much of his time cooking for himself, his wife Andrea and their friends. In his spare time, Harry is the CGT coordinator for the Sunrise Elementary School Garden and is working with the Friends of Tucson's Birthplace to establish a foodservice kitchen at the Mission Garden.

# MONSOON PLANTINGS

By Elizabeth Smith and Melody Peters

July usually marks the season of monsoons in our dry Sonoran desert. There aren't a whole lot of things we can plant at this time of year with temperatures so high but there are a few things that will grow very nicely once the monsoons kick in. The traditional "Three Sisters" gardening method is a great way to create a Native American inspired monsoon garden. Start with 6-10 corn kernels of a short season corn variety like "Yukon Chief" or "Glass Gem" if you'd like to try your hand at growing popcorn. Plant in a 2-3 foot diameter space and wait for them get to be about 6 inches tall. Then plant 1 or 2 beans next to each of the corn plants and at the same time, plant 2-3 squash seeds like zucchini or acorn squash in with the beans. The beans will start climbing the corn stalks and the squash will cover the ground. They all benefit each other: the corn providing some shade and a trellis for the beans; the squash providing living mulch that helps keep the soil moist and cool and relatively weed free; and the beans fixing nitrogen into the soil.

Other things that grow well this time of year include all kinds of melons, black eyed peas and sunflowers. Another plant to try is climbing Malabar spinach. Not a true spinach, it loves the heat and provides edible leaves that taste like a cross between real spinach and okra.

Once the rains begin, you may get a new flourishing of tomato flowering. Many gardeners report their late summer, early fall tomato crops are even more amazing and productive than their spring and summer crops so don't give up on those straggly looking tomato plants too soon.

Try to direct rainwater runoff to your garden areas and tree wells to take advantage of the mineral rich, chlorine free rainwater. Did you know that rainwater collects nitrogen from the atmosphere as it falls to the ground? This is one of the reasons plants do so well right after a good rain shower.

If you are one of those Tucson gardeners who feel gardening in the summer's heat requires too much effort and too much water, then consider planting a cover crop in July in order to nourish your soil and maintain its beneficial microbial activity. At this time of year cowpeas are a great choice as they use considerably less water than most other garden vegetables and they are great nitrogen fixers. Cow peas, originally from Africa, have long been a staple of American southern cuisine. They come in a variety of colors – golden brown, pink, red, black, red and white mottled, black and white mottled and of course the familiar black-eyed-pea. The Native Seed Search retail store sells many varieties of cow pea, some of which have been developed locally and are well adapted to our arid climate. Cow peas can be harvested when young and flat to be eaten as green beans, when the seeds are first beginning to swell in the pods to be eaten like fresh shelled peas, or left until the pods are brown and crisp to be used as dried beans. If you are planting cow peas as a cover crop rather than for harvest

you will get maximum nitrogen-fixing benefit by killing off the plants once they have started flowering. This is because the nitrogen stored in the root nodules gets diverted to the beans in order to form the proteins that make beans so nutritious. The best method for arresting growth is to cut the plants right down to soil level leaving the nitrogen-rich nodules in the ground. Use this no-till method and you will be set to plant your nitrogen-loving cool season vegetables in late summer or early fall.

*U'us Mu:N cowpea that Elizabeth has been growing for several years*

Tepary beans are an even more heat-loving and drought-resistant crop suitable for growing either for harvest or as a cover crop. A staple of the Tohoho O'odham diet, this small bean has a venerable history, and is known to have been cultivated by the Hohokam, predecessors of the O'odham. Plant the beans ½ to 1 inch deep early in July just prior to, or just after, the first major summer rainfall. Tepary beans need moisture to germinate but surprisingly little water thereafter; in fact they cannot survive overwatering. If you choose to harvest your tepary beans rather than use them as a cover crop, bear in mind that they are very dense little packets of protein and complex carbohydrate and will require more cooking time than other beans. One recommended cooking method is to quickly boil them to break down the hard seed coating and then allow them to sit overnight in the same water. The following day change the water and simmer the beans without salt (cooking beans with salt prevents them from softening) for several hours until they are soft. Since this is quite a lot of bother you might opt to cook up a large batch and freeze some for later use. You can find a scrumptious looking recipe for brown tepary bean chili with sweet potatoes at: https://www.library.pima.gov/blogs/post/now-sowing-tepary-beans-mar15aug10/

The monsoon season is also a good time to plant herbs and flowers. Most herbs apart from parsley and cilantro love heat but bear in mind that many of them can't take full strength summer sun. Find a partially shaded spot to plant basil, mint, oregano or thyme. Planting herbs in containers gives you the option to locate them in a shady spot during the summer and moving them to a sunnier location during cooler weather; it is advisable to plant mint in containers as it has a tendency to run rampant in garden plots. Flowers that can be planted during the monsoon include: Arizona Summer Poppy, Bahia, cosmos, Devil's Claw, gaillardia, morning glories, pectis, poppy mallow, senna species, Yellow Evening Primrose, and desert zinnia.

***Honeybee visiting Indian Blanket (Gaillardia aristata). Growing flowers and herbs in your food producing garden will attract pollinators as well as beneficial insects that prey on insect pests.***

# CONSERVING WATER IN THE GARDEN

By Elizabeth Smith

When things heat up in Tucson, it seems like we barely get to turn off the garden hose because plants become thirsty again so quickly and our water bills can cause us some distress until hydrating monsoons arrive to give us and our plants much needed relief. But there are ways we can conserve water, especially during this trying time of debilitating heat and dust devils. The first method is the easiest: incorporate biodegradable mulch onto the surface of your garden beds and you may be able to reduce your watering times in half. Mulch is a great way to keep your plants' roots hydrated and cool while increasing the health of your soil. Don't dig it into your soil though; it needs to stay on top of your soil and at least 3 inches is best. Don't forget your fruit bearing trees. Spread organic matter out to the drip line of the branches and make a well to capture more water. Along with that, take a look at any decorative rock streams you may have. They look just like miniature dry river beds so put them to work for you by redirecting them to lead to your tree wells and other plantings, instead of just out to the sidewalk and asphalt when it rains.

Another way to conserve water is to actively harvest the rain. Plants love pure rainwater and rain barrels and cisterns placed under downspouts can collect a lot of rain during a rainstorm to be used later in your landscape and garden. Be sure and put a mosquito barrier on the inlet of the barrel. If you are within Tucson city limits, you can take a class and sign up for a rebate to collect your rainwater. It's also possible to reuse your gray water but it

will take a little more planning to do it properly. Go to https://www.tucsonaz.gov/water/rainwater-harvesting-rebate to learn more about rebates and techniques to actively harvest your rainwater.

And one last but very beneficial way to conserve water is to choose plants that require less water. Purslane grows entirely on its own with the onset of summer rains and is one of the most nutritious plants known to mankind. Native and heat loving plants and trees like aloe, agave, ocotillo, prickly pear, mesquite and palo verdes do well all by themselves and will be the easiest plants you will ever grow. For more edible type plants, see the article above for more ideas on monsoon plantings.

# LIVING SUMMER SHADE

By Elizabeth Smith

Now that summer is here things are really heating up outside. One of the ways you can make your yard and garden a little more inviting when it is 105 outside is to plant shade.

There are a lot of options for planting shade but deciduous trees are the obvious one. Deciduous means "shedding leaves annually" and this is a great way to go because these types of trees will keep things cooler with a canopy of shade in the summer months and when they drop their leaves in the fall, they will allow the sun to warm your yard and house when temperatures cool down. Some examples of deciduous trees that do well here in the desert are figs, pomegranates, Arizona ash, Chinese pistache (Pistacia chinensis, not to be confused with the edible pistachio tree), Desert Willow, Chaste tree (Vitex agnus-castus), and don't forget our desert mesquites of which I highly recommend the honey mesquite (Prosopis glandulosa).

Other options for shade in your yard are vines and shrubs. Evergreens to try are privet, a shrub or small tree, and star jasmine and bougainvillea, vine type plants that may need to be trellised. A really nice deciduous vine option you might want to try is Tombstone rose (originally called Lady Banks rose). Honeysuckle is a beautiful hummingbird attractant that can be evergreen if the winter stays warmer.

Bamboo can be a great shade option too. Bamboo is just a giant grass and "non-clumping" varieties will spread similar to the way that Bermuda grass does so be sure and ask for non-invasive "clumping" varieties like "Tropical blue" or "Weaver's" bamboo which won't spread across your yard, thus saving you years of future weeding hours.

As a side note, the best time to plant any tree was a year ago, and the second best time is NOW. But, seasonally, you will have the best luck planting in the early spring or late fall. If you just can't help yourself and must plant now, keep trees and shrubs shaded from summer's intense sun and well watered until established.

# BUFFELGRASS, JUNGLE RICE, and Other Invasive Grasses

by Melody Peters

Like much of the western United States, Tucson and its surrounds can claim more than its share of invasive grasses. Many of these are warm-season perennials introduced from other semi-arid regions such as Africa, the Mediterranean, the Middle East and parts of Asia, to serve as forage and erosion control after our native grasslands had been significantly overgrazed. The grazing benefits of the non-native grasses proved short-lived as herbivores, both domestic and wild, prefer the tastier and more nutritious native species and will eat the non-native ones only when they have little choice. This in itself puts pressure on native grasses and give the non-native ones a distinct advantage in the competition for resources such as water, light and room for roots to grow.

Locally the best known invasive plant is Buffelgrass (*Pennisetum ciliare*) and for good reason. Buffelgrass not only outcompetes native grasses for resources, but it also presents a severe fire risk. Fire is not endemic to the desert. A quick look at unspoiled areas of our Sonoran desert will tell you that plants are naturally spaced some distance apart; they have evolved strategies to signal each other to maintain this distance so that each plant's root system can find enough water to survive. In the natural desert where there is no fine tinder filling in between plants, fire is less likely to catch hold; consequently, desert plants have not evolved to regenerate after a fire. Now look at a compromised tract of desert like that on Tumamoc Hill and you will see a landscape where space between native plants is occupied by tan-colored stands of buffelgrass, a situation prone to fire. A buffelgrass fire devastates the desert ecosystem by killing native plants, including roots and seeds. After such a fire the native plants do not regenerate but buffelgrass, which has evolved on savannahs where fire is a natural occurrence, grows back even stronger so that it eventually establishes a monoculture where there was once an extremely diverse population of native plants. Buffelgrass is even a threat to our desert grasslands. Although our native grasses are adapted and even dependent upon occasional wildfires, they cannot withstand the very high temperature of a buffelgrass fire. Buffelgrass burns at about 1600 degrees F as opposed to most plant materials that burn at a range of 600-800 degrees F.

The rapid colonization of buffelgrass is aided by its two-prong reproductive strategy. It spreads both by rhizomes (underground stems) and by means of its abundant wind-borne seed. It takes a lot of muscle and a caliche bar or mattock to remove large stands of deeply rooted buffelgrass, but fortunately the rhizomes don't break off underground in viable bits from which the grass can regenerate as is the case with that other common African invasive -- Bermuda grass. Buffelgrass is much easier to pull when the ground is wet; my favorite removal technique for small neighborhood infestations is to cut off and bag any loose seed heads first, and then use a mattock or hand pick to dig up the plants right after a rain. Bag, seal and solarize any buffelgrass before putting it in the trash.

***Two photos to help you identify Buffelgrass from the Arizona Sonora Desert Museum Website:***

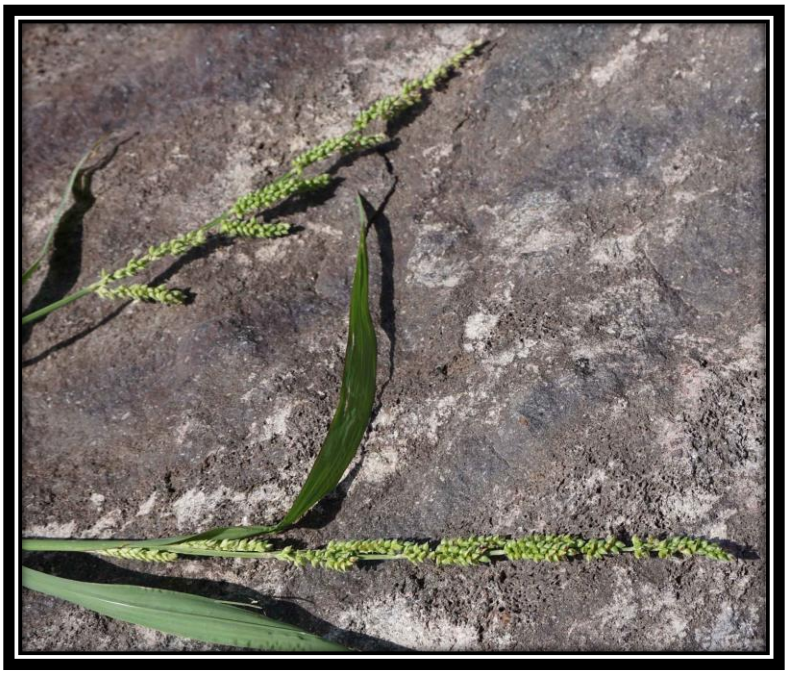
http://www.desertmuseum.org/programs/invasive_Grassland.html

In Arizona buffelgrass is considered a noxious and prohibited weed and property owners are responsible for removing it. The once popular ornamental Fountain Grass, *Pennisetum setaceum*, is close relative of buffelgrass, and is likewise invasive so should not be planted. Pima County has a specific ordinance against buffelgrass and violators in unincorporated Pima County can be reported. In Tucson buffelgrass infestations can be reported as a violation of the general weed ordinance.

Other invasive non-native grasses considered a threat to our desert and desert grasslands include the annual bromes (aka foxtails) which sprout up mostly in low-lying areas in response to winter rains and warm season perennials such as lovegrasses and Johnson grass, a type of sorghum.

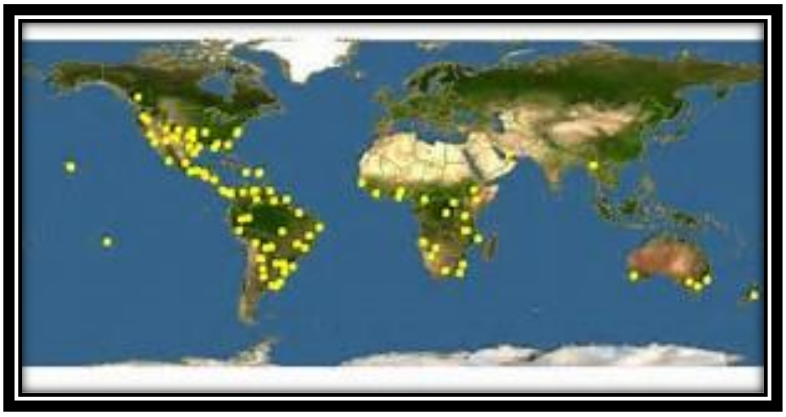
All of the above grasses thrive in semi-arid conditions. Members of my Rincon Heights Neighborhood Association and its community garden have long been familiar with buffelgrass and foxtails, but when they starting asking me about a tall vigorous grass that first appeared in our garden four or five years ago, I had to do some research. The grass, which frequently bears purple splotches on its leaves, has awnless seed heads with four neat rows of round pale green flowers followed by round seeds. The plant grows from a rosette-shaped base and has only short stolons (above ground rooting stems) so it spreads almost entirely by seed. After many attempts to identify this grass on the web I finally emailed photos of it to the Pima County Cooperative Extension and received the answer that it was most probably Jungle Rice (***Echinochloa colona)***, and that our best strategy for getting rid of it was to conscientiously pull it whenever it appears.

***The mature leaves of Jungle Rice often sport purple splotches & the stems are jointed***

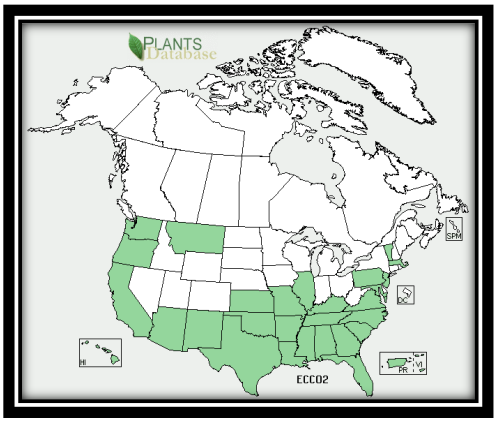


***Each flower spike must bear around hundred seeds and each mature plant can have a dozen or more seed bearing spikes, so if you figure each plant can produce on average 1000 seeds, it is easy to see why this weed spreads so quickly.***

Jungle Rice is of Asiatic origin, most likely from India where it has been cultivated for its nutritious seed for centuries, but it has now naturalized very successfully world-wide in moist regions from latitudes 30 degrees south of the equator to 30 degrees north of the equator. That range is extended in regions where there is sufficient heat and moisture, as can be seen from the distribution map of the United States below. Since the plant can't tolerate frost or severe drought, it usually grows as an annual. It can survive on 12 inches rain per annum but can't tolerate prolonged flooding. So you can see that by cultivating and irrigating garden plots here in subtropical Tucson, we are providing Jungle Rice all its growing requirements.



***World-wide distribution of* Jungle Rice, *Echinochloa colona***




***Jungle Rice distribution in the USA.***

If you do a little research on *Echinochloa colona*, you will find that it is part of a large genus including barnyard grass and various types of wild millet. While considered a weed invasive to crops such as rice and alfalfa, the grass does provide nutritious forage for domesticated animals as well as wild ones such as the hippopotamus. Its small but numerous seeds can be harvested for human consumption and in India where the seeds are known as

"samo" or "kirng," they are sometimes prepared as a low-glycemic porridge eaten during fasts. http://sindhirasoi.com/2013/04/kirng-upmathick-savory-porridge-using-samo-seeds-rice/

In truth we don't know how the infestation of Jungle Rice started in our community garden, but since learning to identify it I have observed it in other irrigated situations such as schoolyards. However the seed arrived in our community garden, we have had to face up to the fact that we now have a major infestation and that we need to be assiduous about removing the plants before they set seed, or the infestation will continue to grow. I have found that the easiest way to remove the grass is to wait until the plants are strong enough to pull without breaking, but before they have flowered or set seed. If the ground is moist all but the largest plants can usually be pulled without the use of tools.

Making a Case for Native Grasses

It can be difficult to learn to distinguish between native grasses and their invasive counterparts, so many home owners, businesses, gardeners and landscapers ban all grasses from their properties. This is both understandable and regrettable as native grasses play an important role in our regional ecosystems. If you would like to have a better-rounded palette of plants in your garden, consider learning about at least a few native grass species. Think about replacing a Bermuda grass lawn with native Buffalo grass (not to be confused with Buffelgrass!) or a combination of Buffalo grass and Blue Grama. For natural looking landscape accents, go to a reputable nursery specializing in native plants. You will probably be steered to grasses like Deer Grass, Pink Muhly, Mexican Feather grass or Side Oats Grama, all of which can make dramatic visual statements in your landscape while providing food and habitat for the native birds and insects that depend upon them. So pick your grass well and you will enjoy it.

Online Resources:

Common Invasive or noxious weeds of Arizona including reporting form:
https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1482_2016.pdf

Desert Museum page including volunteer opportunities for Buffelgrass removal: http://www.desertmuseum.org/programs/invasive_Grassland.html

Landscaping with native grasses and grass-like plants:

**HTTPS://DESERTXERISCAPE.WORDPRESS.COM/GRASSES/**

# SUMMER RECIPES

Summer Produce by Harry Crane

When I was a kid growing up in the Mid-West, I was lucky to have had my own garden. The lettuces and radishes were nice in the spring but my favorites were the summer vegetables. I can still remember the burst of flavor after biting into a hot August tomato right off of the vine.

Much later in life when I was a chef, I tried to cook with the seasons as much as possible. In the summer I always went back to my old favorites. I loved combining the tomatoes, peppers and cucumbers to name a few. Adding fresh herbs pulled everything together.

Over the years while I worked in the Chicago area, I enjoyed giving cooking demonstrations at the Chicago Botanic Garden. They had a remarkable vegetable garden with an outside kitchen. Their rules were quite simple – highlight seasonal vegetables in recipes that visitors to the Garden would enjoy and be able to easily make at home. The two following recipes illustrate what they wanted.

The Quinoa Summer Salad is a good transition between late spring and summer vegetables. It requires minimal cooking and a little chopping to create a very satisfying vegetarian entrée or a tasty side.

The Garden Gazpacho is a modified version of a dish we served during the summers at the restaurant where I worked for many years. We would mound the chopped vegetables in a flat soup bowl and the wait staff would pour the liquid over the vegetables tableside. This version is easier to navigate at home and develops some great flavors before it is served. This is a refreshing first course or it can be served as a light but flavorful summer lunch. Serve with a crusty baguette and, as an entrée, it could be made a bit more substantial, if desired, with the addition of crab or shrimp mixed with the avocado garnish.

## Quinoa Summer Salad

6 Servings as a vegetarian main dish or 8 as a side dish

### Ingredients

| | | |
|---|---|---|
| 1 | cup | Quinoa, cooked according to package directions |
| 3 | | Green onions, sliced thin |
| 1 | | English cucumber, diced |
| ½ | cup | Radish, diced |
| 1 | pint | Cherry tomatoes, sliced in half (or equal amount of any fresh tomato diced) |
| 1 | cup | Italian Parsley, rough chopped |
| ½ | cup | Mint, leaves rough chopped |
| 2 | Tbl | Lemon juice |
| ½ | tsp | Kosher salt |
| ½ | cup | Olive oil, fruity extra virgin |
| To taste | | Pepper, black ground |

Preparation:

1. Place cooked quinoa, while still warm, in a large mixing bowl. Add sliced green onion and press the onion into the quinoa with a spoon to release the flavor. Set aside to cool while preparing remaining ingredients.
2. Dice cucumber and radish to approximately ½-inch dice. Slice cherry tomatoes in half (or dice other tomato).
3. Chop parsley and mint.
4. Place lemon juice in a small bowl. Add salt and mix to dissolve. Whisk in olive oil.
5. Add cucumber, radish, tomatoes, parsley and mint to the quinoa. Stir to disperse ingredients. Drizzle the olive oil dressing over the quinoa and stir to evenly distribute. Add a few grinds of black pepper to taste and mix. Taste and adjust seasoning with a little salt, if necessary.
6. Cover and chill. Serve on a bed of lettuce leaves if desired.

Quinoa is a complete protein so it is perfect as a vegetarian main dish. It is a great side dish with roasted or grilled meats (especially lamb) or poultry. It is excellent served as an accompaniment to grilled or poached salmon.

## Garden Gazpacho

### Ingredients Makes 6 Servings

| | | |
|---|---|---|
| 2 | | Tomato, medium ripe |
| 1 | | Bell pepper, yellow stem/seeds removed |
| 1 | | Onion, red small |
| 2 | ribs | Celery |
| 1 | | Cucumber, seedless or seeds removed |
| ½ | cup | Bell pepper; red roasted seeds/skin removed or jarred pimento |
| 2 | cups | Tomato juice |

| | | |
|---|---|---|
| ¼ | cup | Vinegar, sherry |
| ½ | cup | Olive oil, extra virgin |
| ¼ | cup | Parsley with stems |
| 1 | clove | Garlic |
| To taste | | Kosher or sea salt/black pepper ground |
| To taste | | Hot sauce (optional) |
| Garnish | | Avocado, ripe diced |

Preparation:

1. Small dice one tomato, yellow bell pepper, one-half red onion, one celery rib and one-half of the cucumber. Reserve all in a large glass or other non-reactive bowl.

2. Rough chop remaining tomato, and one-half cucumber, red onion and celery. Place in work bowl of food processor or blender. To this mixture add red bell pepper, tomato juice, vinegar, olive oil, parsley and garlic. Pulse to coarsely puree contents.

3. Pour pureed vegetables into bowl with diced vegetables and mix. Season with salt and pepper to taste and refrigerate several hours.

4. Adjust seasoning, if necessary, before serving. Serve in flat soup bowls. If desired, garnish with a small mound of diced avocado in the middle of the bowl.

# SUMMER READING: *KISS THE GROUND*

## Why All of Us Should Kiss the Ground….and Do It Often!!! A book review, not a rant.

### By Bruce Plenk

So as usual, I couldn't get into the Tucson Book Festival presentation that I wanted to see due to lack of planning on my part, so I stumbled into my second choice, the somewhat abstractly named Land and Water presentation. The water guy was from Connecticut and sorta boring. But the land guy, Josh Tickell, had good cred with me since I had heard of him when he wrote ***From the Fryer to the Fuel Tank*** about 20 years ago and got me and a lot of other folks interested in biodiesel as a green transportation fuel. I mean how could you argue with turning used grease from places like KFC into car fuel!!

Anyway, he launched into a presentation about something called Regenerative Agriculture. The basic point was that we needed to preserve and regenerate soil. Can't really argue with that either….And he's making a movie about the concept just to make sure that we get it!

Well, I couldn't quite understand his point, so I bought his book, ***Kiss the Ground*** (Enliven Atria Books, 2017, $26.00), and read it. It's a pretty quick read and not too different than some of Michael Pollan's books. [He's the one who wrote ***The Omnivore's Dilemma, Food Rules***, etc and is THE proponent of small scale local food production.] Tickell travels around and interviews interesting people doing this regenerative agriculture and writes about them. The book's subtitle sets out a pretty dramatic course of action: "How the food you eat can reverse climate change, heal your body & ultimately save our world!"

So in a nutshell, eat mostly vegetables grown organically and without tilling the soil. Know your farmer. Support those folks who are growing veggies and meat without damaging the soil-no (or minimal) herbicides or

pesticides, manure from animals as the main fertilizer, no tilling, crop rotation, and soil improvement as a conscious goal. I know, this sounds like permaculture meets Pollan and it kinda is.

Here are a few highlights: WWII and the Nazis were responsible for nitrogen fertilizers and we're now in a War with Nature. Desertification is happening worldwide and is partly a result of increased use of fertilizers and tilling, which disturbs the local water cycle, increases the heat of the air and ground and leads to topsoil erosion. Desertification results in fertile land being lost, water tables dropping, people moving to cities and to some extent, civil strife (see Syria!!). So putting more carbon in the soil with compost or manures increases water retention, retains carbon and improves the soil's infrastructure, especially the mycorrhizal fungi, the key to healthy soil. The bad news is that it takes about 500 years to build one inch of topsoil and in the U.S. we are losing topsoil ten times faster than that! And all of this helps remove some of the increased carbon we're putting into the atmosphere. According to Tickell, we all need to support soil improvers, those regenerative ag farmers and ranchers, by buying from them at farmer's markets, patronizing restaurants that buy their "no-till, no chemicals" products, and pushing for changes in federal farm subsidies that now basically support soy and corn in favor of those supporting healthy soils.

He ends the book, not with an index (which would have been helpful), but with 59 Personal Choices and Public Initiatives to guide us toward soil regeneration. These range from eat organically to save seeds to keep a fruit bowl in the kitchen to start a Kiss the Ground chapter on your campus (see www.KisstheGround.com.) And he has three movies, an interesting website, and speaker training too!! All of which focuses on preserving healthy soil as the start of a lot of big changes in the world!! I think he's on to something!!

# TUCSON ORGANIC GARDENERS NEWS

Tucson Organic Gardeners takes a break from hosting its public lecture series during the summer but we hold members' only potlucks during the break. Our June Potluck, held at the Tucson Botanical Garden, was well attended, the lovingly prepared food was up to the usual great TOG standard, the atmosphere friendly, and the surroundings beautiful.

The TOG Board continues to meet throughout the summer and is presently exploring ideas for attracting a broader audience for its 2018-2019 lecture series. In the coming months will be inviting all ***Composter*** readers to participate in an online poll so that they can express preferences for the ideas we have come up with or even take the opportunity to suggest lecture or demonstration topics of their own. So stay cool and stay tuned!

# COMMUNITY GARDENS OF TUCSON NEWS

## Garden Work Parties!


**Every Saturday!**
**7 am – Noon**

**"Ace Acre" Community Garden Location:**

**7471 S. Houghton (Houghton/Valencia)**

*Garden site is behind Rita Ranch Automotive and Ben's Bikes*
*& across the parking lot from Ace Hardware*

***Wear closed toed shoes, sunscreen & bring gloves***

***Snacks and water provided (:***

**Questions? Call/Text 591-2255**

**WeLoveToGrow@gmail.com facebook.com/RitaGardens**

Rita Ranch Community Garden (The Ace Acre) and Community Gardens of Tucson is proud to announce a cooperative venture with Vail Blended Learning Academy. Vail Blended is Vail School District's Digital Campus which prepares students aged kindergarten through high school for the future by incorporating technologically advanced digital instruction with traditional classroom, face to face, and real world, hands on instruction.

Principal Kristen Murray initiated a new program for the upcoming school year where students will have the option to participate in a class teaching all about growing plants using organic techniques and practices. Community Gardens of Tucson Executive Director Elizabeth Smith has been invited to teach this class. Middle and high school students will have the opportunity to learn about sustainable and environmentally friendly growing methods. Students will have their own garden plot in the Rita Ranch "Ace Acre" Community Garden and will be responsible for planning their garden, starting plants from seeds, planting, feeding, weeding and cultivating their garden plot. Kids and gardens go easily hand in

# GARDENING FOR A CAUSE

By Shelley Kruis, Site Coordinator for Rincon Mountain Community Garden

Rincon Mountain Community Garden is one of the furthest NE community gardens in Tucson and it's no exaggeration to say that they are an active and generous group of gardeners. Their Site Coordinator, Shelley says, "Once a month, we send produce to the church to take to the Women and Children's Center when Rincon Mountain Presbyterian Church sends their monthly meal for the center. Also, one of our gardeners has purchased a plot to grow produce for the center. He takes produce from his plot and other plots a few times a month." Most gardens have excess produce and rather than try to make just one more dish out of the gazillion zucchinis you got from your zucchini plant, why not donate the excess? If you are looking for a place or an organization that needs produce, you need only reach out to your local place of worship, Senior Center or the Community Food Bank and you can be sure they will put it to good use.

# Monsoon Season Plant Sales

**Desert Survivor's Monsoon Plant Sale:**
July 21st (Saturday) - Public & Members

**Fall Plant Sale:**
September 22nd (Saturday) – Members only Sale
September 25th (Tuesday) thru September 29th (Saturday) – for Public & Members
Our retail plant nursery is located at **1020 W. Starr Pass Blvd**, Tucson, AZ 85713

***Everything is 10% off on our sale days, and 20% off for Members!**
***Come See the Huge Selection of Plants Available at Our Sales!**

## Tohono Chul Monsoon Madness Plant Sale,

7366 Paseo del Norte, Tucson, AZ, 85704

Friday | July 27 | 3 – 7 p.m.

Saturday | July 28 | 8 a.m. – 1 p.m.

The monsoon season brings you more than just rain as we host local growers & nationally-renowned plant experts with their specially-selected inventory. The annual sale is for more than just plant nerds, anyone can come on down to buy the weird and wondrous and learn plant care from the professionals.