

# Desert Adapted Landscape Plants and Foraging Native Edibles



Presented By: Laura Ward  
Arizona Master Gardener  
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A University of Arizona trained gardener who completes a Cooperative Extension semester-long specialized course in gardening/ horticulture.

A non-paid volunteer who agrees to complete a specified number of volunteer hours and continuing education hours each year.

## What is an Arizona Master Gardener?

The Master Gardener provides educational leadership in home gardening, landscaping, and irrigation.

We may not be experts or “masters” at any or all horticulture topics, but we are trained to help you find science- and research-based information.

County-specific and local. Each extension office has their own program. We focus on our conditions in the low desert.

Give presentations and classes to local groups, write articles. "Spread the word" on gardening

Operate the Plant Help Desk to assist the public with plant and pest questions and problems

## What does a Master Gardener do for the Community?

Assist in setting up and maintaining community and school gardens

Maintain demonstration gardens to show plants, planting methods, composting, irrigation, and pest management

Conduct annual plant sales, special clinics, and assist other organizations with courses

# Arizona Municipal Water Users Association (AMWUA)

- AMWUA assists Arizonans to conserve and protect our water, stretching and preserving it for the future.
- Master Gardeners partner with AMWUA for smart water use and desert-adapted plant information. AMWUA is the subject matter expert.
- For more than 35 years, AMWUA and its partners provide information, tools, and assistance to conserve water. Arizonans have embraced a culture of conservation, and it's paying off.

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# AMWUA in Mesa

<https://www.mesaaz.gov/residents/sustainability>

Click on the blue News box in the upper right to see events

**mesa·az** Home About Us Residents City Hall Things To Do Business Search

Sustainability

**Sustainability**  
55 N. Center Street  
Mesa, AZ 85201  
**Hours of Operation**  
M-Th 7am-6pm  
**Contact Information**  
480-644-3306  
480-644-4774 Fax  
E-mail

Residents

## Sustainability

Font Size: + - Share & Bookmark Feedback Print

There you are... just who we're looking for! If you got here, we know you're interested in sustainability, green ideas and protecting the natural environment. But sustainability also includes creating a better community, boosting economic growth, and promoting a vibrant social network. Even the smallest act can make a big difference.

You've taken the first step by visiting this site where you'll find lots of simple choices for your next step - finding ways to make a positive impact! With your help, ideas, and participation, it will all contribute to building a sustainable community. Find [Mesa's Living Green Info Card \(PDF\)](#).

**news**

- Living Green Events for April**  
4/7/2019 4:56:59 PM
- Living Green Events for March**  
3/8/2019 7:35:27 PM

[more news](#)

### HOT TOPICS

**April Sustainability Savings Tip:** Celebrate nature and find 10 simple actions to make a positive impact on the planet!

See our monthly **Living Green Events** by clicking on the link in the blue "news" box, upper right.

## Living Green Events for April

Post Date: 04/07/2019 4:56 PM

It's an amazing month. Celebrate nature in April!

### \$\$\$ APRIL SUSTAINABILITY SAVINGS Tip \$\$\$

CELEBRATE NATURE! – It's the Earth's turn to celebrate! Check out [10 ways to make a positive impact](#) on the planet.

- **Living Green Village** at **Celebrate Mesa** will be how we'll be celebrating Earth Day! Solar cooking demos, tree hugging booth, composting, Xeriscape and more. Free. 10 a.m. to 2 p.m. at Pioneer Park. [See highlights](#) from last year's event.
- **Earth Day**: April 22 - Find our info page and see our countdown to Earth Day with a planet-friendly tip each day, fun links for youth and lots more!
- **Arbor Day**: April 26, It's a holiday just for trees! Plant a tree, do something nice for your existing trees, attend a tree planting, learn more about proper tree care to keep your trees healthy and beautiful. Our Arbor Day site has everything you need to learn more.
- **Water Awareness Month**: April is Water Awareness Month, a great time to learn about one of our most precious resources, water! We're overflowing with ideas, tips, resources and events to help you conserve water and save money.
- **National Mayor's Challenge for Water Conservation – Save Water, Win great prizes.** Mayors nationwide, including Mesa Mayor, John Giles, have challenged their residents to conserve water, energy and other natural resources on behalf of their city. Go to [MyWaterPledge.com](#). *Note: Mesa has finished within the Top 10 for the last few years. Right now, we're trending at #9. Let's show how good Mesa is at saving water.*

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### MARK YOUR CALENDAR!

**April 11, 6-7:30 p.m. Soils and Fertilizers:** Master Gardener Laura Ward will share information about the characteristics of our desert soils and how to use fertilizers to keep your plants, shrubs, and trees healthy. She will discuss when and how to use compost and fertilizer, as well as when you can save your money and skip the fertilizer.

**April 13, 10 a.m – 2 p.m. IT'S OUR GREEN EVENT OF THE YEAR!** **Living Green Village** at **Celebrate Mesa** will be how we'll be celebrating Earth Day! The first 75 youth who fill out a passport in the Living Green Village get a free "Rides" bracelet (\$5 value). Besides the Living Green Village, the event also includes Cool Rides and Bounce Houses, Mesa Farmers Market and Flea, Food Trucks, a Petting Zoo, Live Music, an Escape Room, Superhero Sightings, a Zero-Waste Wear Fashion show by EVIT students, and so much more!



# Decide what you want to select your plants for:

- Growth rate
- Mature size
- Hardiness
- Flower color
- Foliage color
- Deciduous vs evergreen
- Thorns
- Allergenic or not

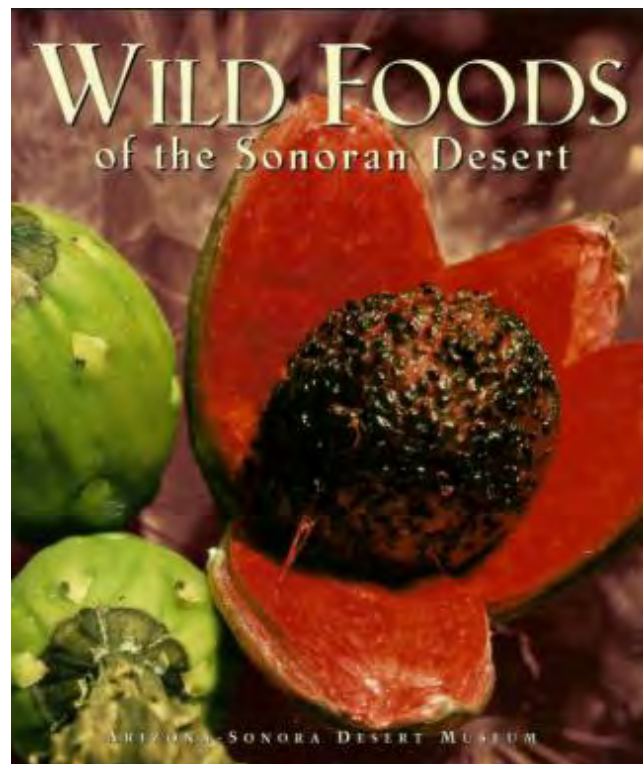
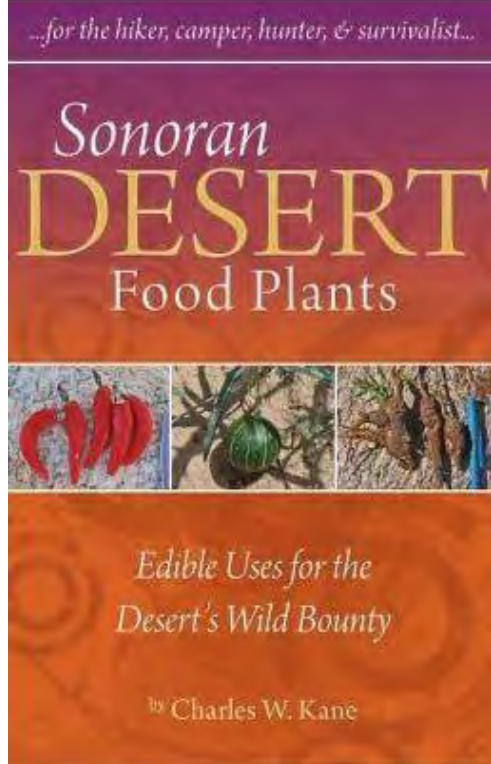
# Select Your Plants For:

- Shade
- Flower color year-round or during a particular season
- Low water requirements
- Bee, butterfly or bird attractors
- Low litter (for example, near a pool)
- Sun requirements
- Edible and medicinal qualities

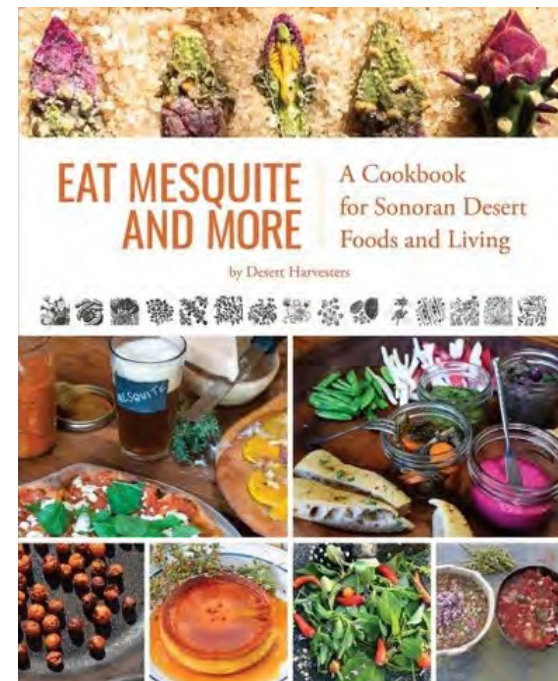
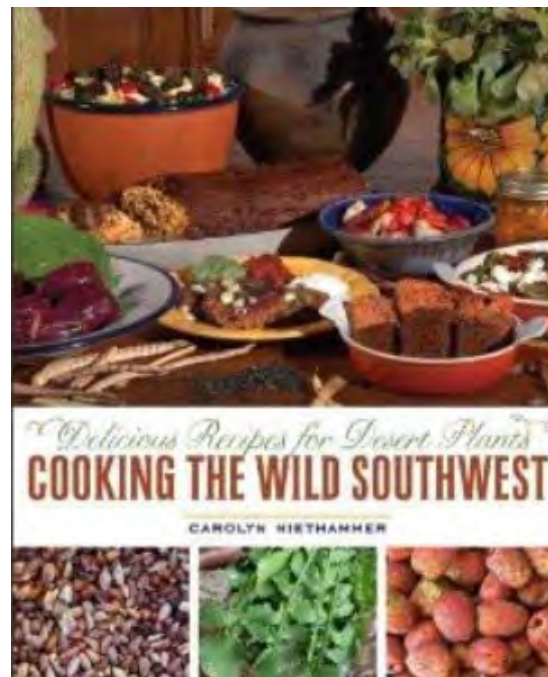


# Selecting Your Plants

- The AMWUA guide does not list edible and medicinal qualities of plants, but does list the other plant qualities from the previous slides.
- <https://www.amwua.org/plants/>
- Search on trees, shrubs, groundcovers, vines, cacti, succulents, grasses, annuals, perennials, and plant combinations
- For edible and medicinal qualities, there are several useful books available.



Consider a book on native and medicinal plants of the desert, and cooking with them



# Scientific Versus Common Names

Common names for plants are unreliable. Several plants may have the same common name or a plant will have many common names. Common names on plant labels may be incurred.

To obtain and care for the correct plant, use the scientific name. Each organism has one and only one scientific name, not shared with any other

For example, *Vitex agnus-castus* may be called vitex, chaste tree (or chastetree), chasteberry, Abraham's balm, lilac chastetree, or monk's pepper

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# AMWUA

Guide for using AMWUA Publications to Select – Install – Maintain plants. Pubs are available at the library and at the water conservation office.

- Landscape Plants for the Arizona Desert
- Xeriscape: Landscaping with Style in the Arizona Desert
- Landscape Watering by the Numbers

Simple as 1 2 3

**1 Select**  
“Landscape Plants for the Arizona Desert”  
A guide to explore more than 200 low-maintenance, water-thrifty and beautiful plants that thrive in Arizona.

**2 Install**  
“Xeriscape: Landscaping with Style in the Arizona Desert”  
A step-by-step guide through the design, installation and care of your new low-maintenance landscape.

**3 Succeed**  
“Landscape Watering by the Numbers”  
A tool to determine how much water your plants need to ensure they're healthy and beautiful.

Free online tools to ensure your success

amwua  
ONE FOR WATER

Get the guides NOW at:  
[AMWUA.org/landscape](http://AMWUA.org/landscape)



- From the Xeriscape Book
- Note that these plants appear to be blooming all at the same time







Trees



Shrubs



Ground Covers



Vines



Cacti

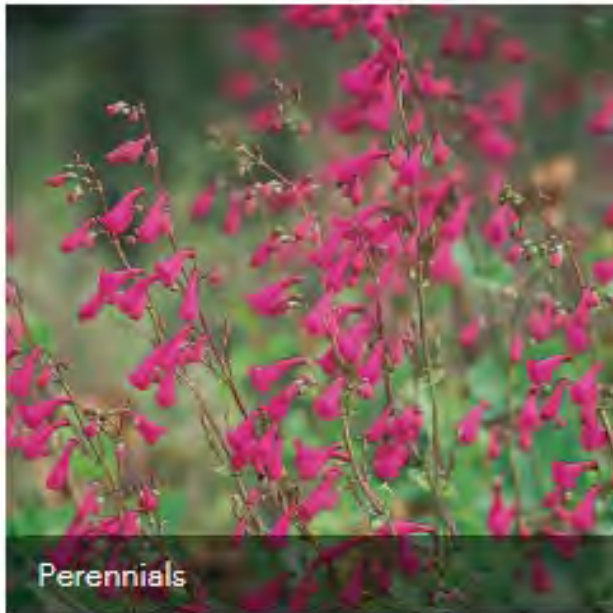


Succulents

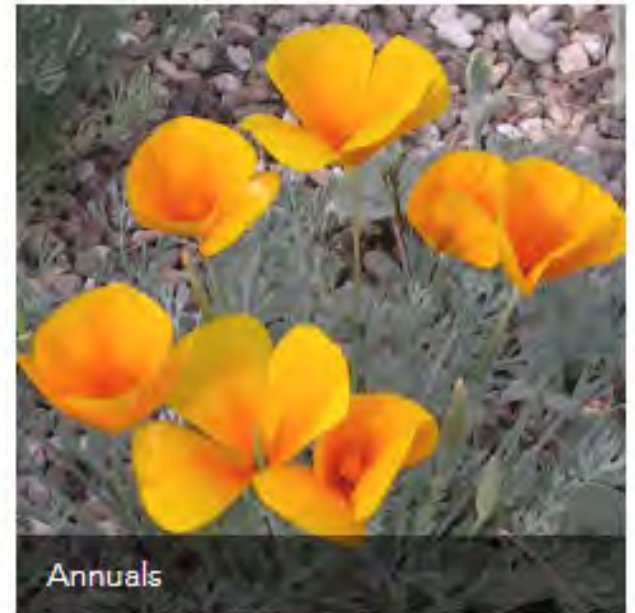




Grasses



Perennials



Annuals



Plant Combinations







# Shrubs

57 Plants Found

Refine your search by using the options below...

### Filter by Size:

- Show All
- 0-3 wide
- 4-10 wide
- 11-20 wide

### Filter by Sun:

- Show All
- Full Or Reflected Sun
- Full Sun
- Partial Sun
- Shade

Search Plant Name



Arizona Rosewood



Arizona Yellow Bells



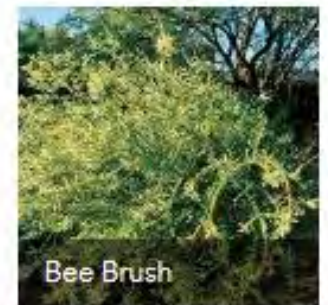
Baja Fairy Duster



Baja Ruellia



Barberry



Bee Brush



<< Return to List



# Orange Bells

Tecoma hybrid

Add To Wishlist



Attracts Wildlife

## The Basics

Type: Shrub

Sun: Full Sun

Hardiness: 28°F

Water: Moderate

## Growth

Growth Rate: Fast

Mature Size: 8' Height X 5' Width

Mature Form: Upright

## Foliage

Evergreen: Semievergreen

Color: Medium Green

Texture: Medium

## Flowers

Color: Orange Trumpetlike Clusters

Season: Year-Round In Frost-Free Weather

## Comments

Litter: Moderate

Thorns: None

Allergenic: No

## Special Features

Notes: Also Try *T. Garrocha*.

## Photo Gallery



Photo Credit: Mountain States Wholesale Nursery



Photo Credit: Mountain States Wholesale Nursery



Photo Credit: Scott Millard



# Edible Landscape and Wild Plants



# Use Caution

- Ensure you have properly identified the plant. Ask for help if you need it.
- Consume small amount at first to determine possible allergies or digestive problems. Sometimes very little public or accurate information is available on wild plants and weeds as edibles
- While some edible plants are fine for humans, they may be toxic to pets or horses.

# Use Caution

- Check with your doctor or pharmacist if you are taking medications for possible drug interactions. For example, prickly pear fruit has known interactions with some diabetes drugs
- Know what the plant has come in contact with before eating it (herbicides, pesticides, chemicals). Wild plants are generally free of these, but backyard plants and weeds may have come into contact.

# Edible Landscape Plants - Herbs

## Rosemary

- There are many species, all are edible but some taste better than others
- Look for the larger-leaf varieties, these usually have more oils and better flavor
- They are used as landscape shrubs all over the valley, often you see them sheared





# Edible Landscape Plants - Herbs

Mexican Oregano. *Lippia graveolens*.

- Not a true oregano, but tastes very similar.
- Drought tolerant, hardy
- Difficult to grow from seed, best to buy a started plant.



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# Edible Landscape Plants - Wolfberry

- Several species of Wolfberry bushes grow here. Some are sweeter than others
- Relative of the Goji berry.
- Thorny, woody shrubs of varying ultimate size. The fruits vary from tart to sweet.
- Not very attractive growth and foliage. Random and thorny. Can be pruned a bit if needed





# Edible Landscape - Hackberries

- Netleaf Hackberry *Celtis laevigata* var. *reticulata* (red berries) grows into a tree
- Spiny or Desert Hackberry *Celtis ehrenbergiana* (orange berries) large bush/shrub
- Evergreen. Small flowers and fruit develop in summer.
- Desert Hackberry is thorny and bushy, it make a nice hedge where you want to keep out people/pests



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# Edible Landscape Plants - Cactus

- Cactus pads are edible and tart. Best eaten when young (this time of year).
- Cactus fruit are deliciously sweet. Some have hard seeds, others have soft seeds
- Common edibles: Prickly pear, barrel, saguaro, cow's tongue.
- Peruvian apple cactus is the absolute best-tasting cactus fruit, according to many





# Edible Landscape Trees - Legumes

- Our Mesquite, Palo Verde and Ironwood all have edible beans. They are best eaten young but can be cooked to eat after they get older and hard.
- Young, green Palo Verde beans taste like edamame.
- Mesquite flour is made from the pods. Sweet, nutty and gluten free.



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# Edible Landscape Trees - Legumes

Be careful about trimming off the lower branches too much to make them into “shade” trees. This can result in breakage during microbursts or high winds unless they have good protection from a structure. Palo Verde is especially susceptible to wind damage



# Edible Landscape Trees - Legumes

Legume trees are not difficult to grow from seed.

Seeds must be scarified and soaked. Scarifying can be done with a small file or clipper. Nip through the hard seed coat.

Soak for at least 24 hours and then place in a damp paper towel in a bag for several days

Once the seed starts to put out tiny growth (tail), plant it in the soil. Use mostly native soil. Keep moist until growing well.



# Edible “Weeds”

# London Rocket / Wild Mustard

## *Sisymbrium irio*

- A spicy flavor, like a mustard-horseradish
- Grow with winter rains
- Easily distinguishable from other plants
- Leaves and seeds have excellent nutrition





# Mallow / Cheeseweed

## *Malva parviflora*

- Very mild taste
- Grow with winter rains
- The entire plant is edible
- Seen everywhere on roadsides



# Bowlesia

## *Bowlesia incana*

- Ground cover type
- Tiny paw-shaped leaves and leggy stems
- Grows with winter rains
- Mild, plain-tasting. A bit course and hairy. Best to mix with other green or juice it.
- Best eaten young





# Lamb's Quarters / Pigweed

## Amaranthus spp.

- Many similar plants are called pigweed, most are in the Amaranthaceae (Amaranth) family.
- Grow with winter rains
- Grown in India as a food crop
- All species are considered edible



# Wild or Prickly Lettuce

## *Lactuca serriola*

- Green, toothy leaves or , green or purplish stem.
- Edible but bitter. Eat young leaves.
- Milky substance (Lactucarium) which comes out of the plant when it is cut. Contains chemicals that may provide pain-killing properties



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# Wild Lettuces and Thistles

- Wild lettuces and thistles are safe to eat, but some are more palatable than others.
- Best to eat young leaves.
- Eat in moderation.
- Sow thistle (pictured)



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# Common Purslane

## *Portulaca oleracea*

- Prostrate succulent with a mild taste.
- Tolerates heat better than winter weeds
- May be confused with horse purslane, which looks similar, and is edible but not tasty.
- Horse purslane has a round leaf and a hairy stem; common purslane had an elongated leaf and no hairs.





Common Purslane



Horse Purslane





# Fertilizer, Compost and Mulch

# Fertilizer and Compost

- Desert-adapted plants and trees do not need fertilizers or amendments
- However, compost and mulch are helpful. Living organisms in the compost build the soil provide a very healthy living “soil web” for roots to thrive
- Compost is also a fertilizer, but very low in NPK (typically a max of 2-2-2). We use it to feed and build the soil rather than the plant.



# Role of Living Organisms

- Continue the decomposition process
- Improve nutrient availability
- Keep soil aerated
- Are engaged in symbiotic relationships with plants.

# Cover Crops or Green “Manure”

Crops used specifically to:

- Break up heavy soil
- Increase nitrogen in soil
- Hold Moisture
- Prevent Erosion
- Control pests / disease
- Cultivated or turned under before the crop matures and allowed to decompose



# The Importance of Mulch

Mulch provides three advantages. It builds the soil, it keeps the soil MUCH cooler, and slows evaporation.

Woody mulch works well as a soil builder. It breaks down over time. However it is carbon-based, so as it breaks down, the composting process may take some nitrogen from the soil.



# The Importance of Mulch

“Living mulch” also works well. Sweet potatoes and cowpeas thrive in the heat.

Cowpeas are edible, and black-eyed peas are a type of cowpea. Peas also fix nitrogen in the soil.



Photo from Greg Peterson, Urban Farm

After the summer, work plants into soil to compost in place.



# The Importance of Mulch

- For maximum results, use BOTH woody mulch and living mulch around the trees.
- After the summer, work the plants into soil to compost in place.
- Mulch at least 6 foot diameter around the trunk, more for larger trees (out to the drip line is optimal).

# Mulches in Summer

- Moderate the soil temperatures
- Help prevent evaporation
- Help to prevent a crust from forming on the soil surface
- Keep many weeds from germinating
- Can protect tender crops from insects, pests and rot.



# Mulches in Winter

- Can slow soil warming as spring progresses
- Can hold heat in the soil on cold nights  
night when frost is expected
- May provided home for both beneficial and unwanted insect pests
- Prevent weeds from germinating

# IRRIGATION

“Gardening in the west is easy. All you have to do is make the soil, and make the water.”

*Eleanor Welshom*

# Irrigation

- Learn how long to run water to achieve desired depths, adjust frequency and not length of run time
- To keep down alkalinity and salts, use rainwater when possible. Our tap water is alkaline and high in Total Dissolved Solids (TDS) which includes salts
- Salts include not only sodium, but potassium, calcium, magnesium, chloride, sulphate, bicarbonate and carbonate



# Irrigation

- Don't overwater desert plants. They will grow overly fast which may result in weak stems/trunks. This can cause them to be more susceptible to wind damage.
- Water when establishing a new plant, then only during long dry periods thereafter



# Maricopa County Extension Master Gardener Plant Help Desk

- The Maricopa County Extension Plant Help Desk provides research-based information to assist you with plant and pest problems.
- Email: [maricopacountyplanthotline@gmail.com](mailto:maricopacountyplanthotline@gmail.com). Responses will generally be within a week
- Visit: 4341 E. Broadway Rd Phoenix, AZ 85040. Bring in a plant or pest sample. Location is in Southeast Phoenix, near Tempe.
- If a master gardener cannot answer your question, they will refer the question to University expert staff members.



# Resources

- University of Arizona Extension Publications  
<https://extension.arizona.edu/pubs>
  - Many, many free gardening publications
- Contact me or view my presentations on my website:  
Tenthgenerationfarm.com