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U of A Cooperative Extension, Pinal County 820 E. Cottonwood Lane, Bldg. C., Casa Grande, AZ 85122
(520) 836-5221 **http://extension.arizona.edu/pinal**

Adding Color to Landscapes

Could your yard use an addition of color to make it more attractive?

One of the fastest ways to do a make-over of an every day, ho hum landscape is to add plants that display lots of color. Color provides variation to break up a monotonous, one-color landscape and brings interest to an otherwise drab yard. It can also provide an opportunity to bring out in even the most novice of artists, a sense of satisfaction from creating an emotionally pleasing work of visual art.

Color can be added to any landscape with the careful selection and placement of annual flowers, bulbs, and perennial flowers, shrubs, and trees. There are many plants that produce colorful flowers, too many to list in this space, but there are a few that have proven to be both hardy and showy under desert conditions.

Annual flowers are often the first plants we consider for quick and eye-popping color. They can be planted in beds and zones throughout the landscape. Some, like California poppy, are native to arid regions and use relatively little water once they have sprouted and become established. Others, like marigolds and zinnias in the summer, and pansies and petunias in the fall, will need regular irrigation to keep their colors vibrant and the plants healthy. For quick color to large areas, consider a fall planting of sweet peas on a trellis. The resulting barrage of color can provide an attractive screen to hide something in the yard that you would prefer to hide, like a bare wall or service area.

There are a number of flowers that grow from bulbs that will do well in our area. One of the most hardy and easiest to grow are the many types of iris. Iris are relatively easy to care for because they are not particularly fussy about fertilizer or water but their showy mass of flowers in the spring are truly a treat. Other bulbs that can be planted in the desert include amaryllis, calla, canna, and crocus. Most bulbs are planted between October and January each year for best results.

Shrubs perform a large number of tasks in the landscape. They can hide foundations or stark corners of buildings or sheds. They can provide accent to a particular area, such as around a swimming pool. The can also help define spaces as they break up a landscape into various function areas, such as oasis, patio, and barbeque areas. They can also help hide less attractive views such as an outdoor work area or the storage area for an outdoor garbage receptacle.

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Colorful shrubs include the Mexican bird of paradise and its cousin, the yellow bird of paradise. Ruellia, blue hibiscus, the various forms of lantana, and cassia are all examples of flowering shrubs that do well. If a vining type of plant is needed, such as to cover a trellis or to cascade over a wall, consider bougainvillea, queen's wreath, honeysuckle, wisteria, and jasmine.

Perhaps the most striking eye-catching color plants in the landscape are the flowering trees. Trees are usually the first plants to attract attention when they are in full bloom. Many, like the jacaranda and the chaste tree are truly spectacular in their blooming seasons.

Silver wattle acacia is a medium-sized tree that will grow to twenty-five feet tall. It has silvery-blue-green evergreen foliage. It bears masses of yellow flowers in the late winter and early spring.

The sweet acacia is also a medium sized tree that can grow up to twenty feet tall and spread to twenty-five feet wide with feathery, finely divided leaves and thorns on the stems. The yellow, sweet smelling, marble-shaped flowers bud out in January and can continue through April. The tree is a good choice for heavy alkaline soils.

The bottle brush grows more like a bush than a tree in its growth habit because it seldom grows more than eighteen feet high. Smaller trees are good candidates for small yards or tight corners. It is a slender tree with a semi-weeping habit of growth and produces brilliant red flowers May through July. It needs good drainage and full sun. Yellowing, stunting, and browning of leaf tips and margins is an indication of iron deficiency. Feed it regularly with a quality chelated iron fertilizer.

The desert willow is well adapted for the heat and soils of Pinal County and gives many white to lavender flowers from July through August. It is a relatively slow growing plant but it can reach up to twenty-five feet tall. It is a popular tree in desert landscapes.

The jacaranda is a beautiful flowering tree with green, fern-like foliage and sky-blue flowers. It forms an irregular, rounded head and occasionally forms multiple trunks. It grows to thirty feet and provides light shade. On cold nights when temperatures approach 25°F, extra frost protection may be needed. The two-inch tubular shaped flowers grow in many eight-inch clusters. Flowering usually occurs in late spring or early summer but can occur any time between April and September.

Planted in strategic places, the orchid tree lives up to the expectation of its name providing a spectacular show of light pink to purple orchid-like flowers in the early spring. It is a small, showy tree growing to twenty feet with large twin-lobed leaves that provide an interesting visual effect. It requires a hot, sunny location and well-drained soils. After flowering it produces a huge crop of beans that some find messy. These can be trimmed off if desired. It tends to grow as a shrub and often develops several stems. Careful pruning can force growth upward.

The Texas mountain laurel is an evergreen, shrub-like tree with lavender to violet-blue, sweet-smelling wisteria-like blooms in four- to eight-inch clusters in the spring. A slow grower, it can eventually reach twenty-five feet tall. It is heat and alkali tolerant but it does require soils that drain well. The bright red seeds are poisonous and the pods should be removed before ripening.

The chaste tree is one of the more colorful of the desert-adapted trees. It is valued for its large, lavender seven-inch flower spikes that appear in summer. It is a shrub-like tree that can grow up to twenty-five feet in our area. Since it loses its leaves in the winter, it is a good candidate for shading south facing windows in the summer and letting warm sunshine in during the cooler months. It is heat and alkali tolerant.

While not always easy, the addition of color to the landscape can be an exciting and rewarding pathway to a pleasing outdoor living area.

Fungus Gnats and Their Control

When they get inside our homes and take up residence, fungus gnats can be aggravating.

Sometimes, even with our best efforts, these tiny flying insects invade the inner sanctum of our homes and become annoying pests. When we trace them to their source, they seem to be coming from the soil of our potted, indoor plants. What is up with that? Are they hurting the plants? How did they get inside the home? What am I going to do about them?

Beyond aggravating and persistent, fungus gnats can be embarrassing when guests seated comfortably inside our homes continually have to wave these critters away. When we sit down to rest, eat dinner, or work on a project, they are a nuisance as they buzz around our eyes and nose. If you have them, you definitely want to know how to get rid of them. Before we talk about control however, it is important to know about the insect and its life habits because that understanding helps us know where they are vulnerable. If we know their weaknesses, we can use those against them.

These pesky critters are small, so small that unless you are bothered by them they sometimes go unnoticed. In general, they are between one-sixteenth and one-eighth inch long. Like I said, they are tiny. They have two wings, which makes them a relative of the house fly, and they have a dark-colored body with light grey-colored wings. If you have access to a microscope, magnifying glass, or hand lens, you will be able to see that their antennae growing from the head are longer than the legs. They are segmented, meaning that there are joints in the antennae. The legs of the fungus gnat are long and slender.

The gnats are attracted to light so the first place where we generally find them is around a window, especially during the day. If you have potted plants in the house, one way to see if you have them is to check the windows nearby. They will be trying to get out. We, of course, would like to help them find their way out, but generally, that is not really a practical, long-term solution.

Another good way to scout for fungus gnats is to place a yellow sticky trap or two in a discrete place among the houseplants. The insects are attracted to the yellow color, and, if the traps are good and sticky, they will get stuck in the goo. A yellow plastic bottle, covered with cooking oil will also serve just fine. By checking the trap regularly, it is easy to figure out if there are any of these insects present.

Why are they attracted to your houseplants? Well, actually, they are not. The adults are attracted to the organic potting soil in the containers where the plants are growing. More to the point, they are attracted to super wet potting soil. Perhaps I should explain.

The reason that they are called fungus gnats is because the larval stage feeds on fungi that are hard at work decomposing the chunks of potting soil in your plant container. The adults do absolutely no harm to healthy indoor plants. They are not even interested. Neither do they bite humans or other animals. They are just a nuisance. The interest of the adults is simply to find a mate and begin the life cycle anew.

The life cycle of a fungus gnat begins with an egg that is laid by the female adult. As the egg hatches it turns into a larva that searches around looking for fungi to eat. They kind of glisten in light and sometimes leave a slimy trail as they move about. Since the indoor plant potting soils that we use consist of a wealth of organic matter, it is not unusual to find fungi hard at work breaking down the material. Finding such a wonderful food source, the gnats do quite well there.

Besides the organic potting soil, there needs to be moisture, lots of it, to encourage the growth of the fungi needed by the gnats. For this reason, gnats are generally a problem only in potting soils that are super wet. One way to slow down, reduce, or eliminate a fungus gnat problem is to cut back on water and let the soil dry out. With just an inch of

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dry soil at the top, fungus gnat activity in a container can be greatly reduced.

A common way to check for the larvae of fungus gnats is to use freshly cut chunks of potato. Place the wet surface down into the potting soil so that the skins of the potato tuber are left exposed to the air. The larvae love the potato and tend to migrate towards them. As you monitor the tuber pieces regularly, you will be able to see the larvae as they feed on the potato. Sometimes populations can be reduced by scooping out these chunks and disposing of them once the larvae are inside. You probably will not get all the larvae that way, but it can help.

The larval stage will eventually go into a resting stage, called a pupa. Later, the adult will emerge to start the next cycle of life. Indoors, where we keep room temperature around 70 degrees F, a complete life cycle can occur in as little as seventeen days. If the temperature is warmer, the life cycle can be completed in a shorter period of time.

Besides properly managing the frequency of irrigation and using sticky traps as previously mentioned, there are other steps that can be taken. First off, it is important to begin with uninfested potting mix. Using mix that already has the insects in it is only asking for trouble.

Second, some people have found success by placing a layer of sand on top of the potting mixture in the container. The adults do not like to lay their eggs in dry sand and larvae cannot maneuver through it easily. Increasing the amount of sand in the potting mixture can also help reduce the retention of water.

Third, other people have found that pouring white wine, or cedar vinegar mixed half and half with water, into a shallow dish or bowl will attract the adults. They fall into the solution and drown. Don't let the vinegar come in contact with the roots. It may harm them. The solutions used will need to be changed out regularly because they can get moldy over time.

Fourth, there are a few biological control agents, such as nematodes and bacteria, which can help control fungus gnats. They work by feeding on the larvae. Nematodes, microscopic roundworms, and a bacteria, Bacillus thuringiensis israelensis, are available commercially from sources that specialize in biological pest control.

Fifth, it is important to check window screens and doors to make sure they fit tightly. These tiny insects can fit easily through the smallest crack if they want to get in.

Sixth, insecticides could possibly help. Just so you know, I do not like to recommend chemical control techniques in this situation because, after all, the affected plants are inside our homes. Personally, I would use one or more of the methods mentioned above first. If the problem proves to be just too great, then and only then, would I use a pyrethrin insecticide labeled for the purpose. I would take the plants outdoors to apply the chemistry and then cover them with a screening material to keep any other fungus gnats from reinfesting the plant until I knew that it was safe to bring it back into the house.

Finally, as a last resort, you can always simply discard the plants, soil and all, wait a few days for any adults hanging around indoors to die out, and then purchase new plants. Sometimes that route is easier.

Common Garden Tomato Problems

With the cool spring temperatures that we have seen these past few months, your tomato crop may be looking good right now, or, maybe not.

There are many potential problems that can quickly turn a great-looking early tomato season into a wilted, nonproductive mess. It could be the cold, it could be the heat, it could be a virus, it could be an insect, or it could be a whole host of any number of different conditions. To be a good desert tomato expert, one needs to know what these constraints might be and how to deal with them.

Tomatoes really prefer moderate temperatures during the growing season. Once temperatures go over 90°F, production can pretty much shut down depending upon the particular variety that you choose to plant. Frosty or freezing temperatures can quickly kill these tender plants. On the other hand, moderately cool temperatures, such as we have seen this spring, are generally good for tomato production. That is why many of you are sharing tomatoes with your neighbors. It has been a good year for tomatoes.

However, you may also be among those who have recently seen a collapse of vines. If you have not, you probably will shortly unless you know what to expect and head off the problems. Let's give a heads up for what to expect, and what to look for as we head into the warm part of the year.

We have already talked about the pollenation problems when temperatures go much above 90°F. There is not much that we can do about that, unless we have planted one of the more heat tolerant varieties. They are okay varieties for our area but not really spectacular in their yields. Okay, I am waiting for rebuttals from you Celebrity, Heat Wave, and Roma fans! Going into the warm season, make sure that you water and fertilize correctly to minimize stress on your plants, and then hope that the spot where you planted them will be advantageous enough to get you by a little longer into the season.

Okay, let's get into the more serious problems. First off, there is the tomato hornworm. This is a large caterpillar with a predominant horn on its hind end and feeds on the vines and fruit. The tomato hornworm can reach four inches long and become almost as big around as a finger. The large size of this animal makes it bulky enough to consume entire leaves and small stems. In addition, it is a sure bet that no one wants to find a worm chewing on that nicest tomato in the patch.

Tomato hornworms can be hard to find in the garden. They are dark green in color, which matches the color of the foliage of the vines, and they have silver to white lines arranged diagonally along their bodies which gives them a bit of camouflage to hide them from their enemies. Sometimes it is easier to look for their large, black droppings that may be on the ground on settled onto leaves. If you see the droppings, look around closely because they will be there, somewhere.

The best way to get rid of hornworms is to simply pick them off by hand or to snip them with shears. It is quick and easy to do. When they are small, *Bacillus thuringiensis* may also give some relief. If they have been a particular problem in the garden, rototilling after harvest will get rid of resting pupae which have burrowed into the soil to wait out cold or hot temperatures.

Aphids can also be a problem in tomatoes. Aphids are soft-bodied insects that remove valuable juices and nutrients through sucking mouthparts. Since almost every aphid at this time of year is a female, and because aphids give birth to live young, populations can explode quickly. The problem is further enhanced because female aphids do not need to mate to produce young. One aphid today can mean thousands tomorrow, their reproduction is that rapid.

Check regularly for aphid populations in the garden. Especially look on the underside of leaves because they prefer the bottom surfaces. It protects them from the environment and enemies. However, they will also be found on the upper sides, so check both sides.

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Predator insects like lady beetles and lacewing larvae will clean up an aphid infestation quickly but sometimes considerable damage can occur before the problem can be completely resolved. Help the natural predators along by washing the plants off early in the morning with a strong stream of water from the hose. Once the aphids are off the plant, it is difficult for them to return. It may take several treatments at regular intervals to keep the aphids washed off. Remember, they reproduce quickly.

Another pest that is often prevalent but easy to miss is the tomato russet mite. This mite is not easily seen without magnification. If fact, it is hard for me to see with a ten power hand lens even when I know what I am looking for. They are best seen under a good microscope such as the one that I have in my office. If you think you might have mite problems, bring in a leaf sample and either I or one of our trained volunteers will help you look.

Tomato russet mites are rose-colored, conical-shaped mites with eight legs. They are good at crawling around and finding fresh feeding sites. When their populations explode, they can suck the life right out of a leaf and eventually the plant. The most common symptom of russet mites are leaves that turn yellow, wilt and then turn tan as they die. Some have described the condition as a plant that is "melting." For more information, and photos, take a look at the University of California, Davis integrated pest management website. Just type in tomato russet mite into your browser and you will find a wealth of information on this pest. I like the UC Davis site best. Insecticidal soaps are a good first step in controlling these pests.

We are seeing quite a few tomato plants with virus problems. These tiny and very microscopic "particles" are carried from plant to plant by aphids and other sucking mouthpart insects that pick them up when they feed on an infested plant and then travel over to a healthy one and inject them as they feed on that plant. The best way to avoid virus diseases, then, is to 1) use healthy uninfested seed or transplant stock and 2) control the insects that carry them. Common virus diseases include curly top virus and the various mosaics. Most virus diseases tend to turn parts of the tomato leaf yellow and leave the other parts green. The discoloration can go across the veins. This is called a mottling symptom. The curly top virus, in addition, can cause the plant to turn the leaves upside down so that the bottom of the leaf is pointing up. It is this symptom that helps give the disease its name.

Going into the warm season, fruit sunburn can be a very real problem. The harsh sun can quickly burn tender fruit and leave them with yellow or brown spots on the "skin" and outer portions of the fruit. Place a good nursery shade cloth, or even a layer of burlap, on a frame above the tomato vines. The shade will allow sufficient sunlight into the canopy of leaves to produce the energy necessary for plant growth while screening out the harshest rays.

Tomatoes are a great garden treat at any time of the year. The marvelous taste of fresh garden-ripe tomatoes can finish off that tossed salad or fresh-grilled hamburger. With a little planning and good care, many of the major problems that affect tomato vines and fruit can be avoided.

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Growing Citrus in the Home Garden

Of all the fruiting trees, citrus seems to be the all time favorite.

It never fails. When the telephone rings, by far the most common topic of discussion is citrus. In comparison, relatively few will call about apples, figs, or apricots. No, the question will usually concern oranges, grapefruit, and lemons. I am not sure I know why this is, but, it is reality. So, in that light, let's talk citrus.

One of the main reasons that citrus trees are popular is because they produce a lot of fruit. A mature tree is capable of giving basketfuls of fruit each year and some trees have been known to produce fruit for a hundred years or more. In our area, there are many trees still going strong at fifty and sixty years in the ground! Given good care, citrus trees should and do live a long time. As long as they can stay healthy, one tree can indeed produce a lot of fruit.

Oranges, grapefruit, and lemons seem to be the most commonly planted citrus in our area, but there is a wide variety of other types of citrus from which to choose. The diversity of different forms gives the gardener the opportunity to personalize the landscape and share exciting, mostly unknown fruit with neighbors. Tangerines, blood oranges, pummelos, kumquats, mandarins, and an array of hybrids all do well in this climate and might just be the answer for that one, special spot.

A long harvest season is another reason that citrus is popular. Unlike some of the other fruiting types, citrus hold their fruit on the tree for relatively long periods of time. With apricots, for example, the harvest may last only one or two weeks. With citrus, the harvest season can often be measured in months.

For those who are really into fresh citrus fruit, with the right variety selection, it is possible to harvest citrus just about year round. The earliest varieties of mandarins start ripening around mid-October with each species and variety of citrus following in their normal seasons until the last Valencia oranges fall from the trees the following September. I know. For most, there simply will not be enough room in the yard to plant a large orchard. Still, by mixing and matching a few varieties here and there, you can still eat fruit for months at a time.

Tree size and yard space will determine how many trees one can plant. Trees planted too close to buildings, fences, or each other will generally yield less quality fruit than those that are given plenty of room. Crowded trees are often limited by access to water and nutrients. Trees shaded by neighboring trees fail to receive enough sunlight to sustain fruit growth and development. Smaller varieties or dwarf plants could be a solution for tight areas.

A good example of a smaller-sized tree is the Marrs orange. The Marrs has a tree diameter of about twelve feet at maturity as compared with twenty to twenty-four foot diameters for full-sized trees. At maturity, the Marrs reaches only six to seven feet tall, making it easy to pick fruit from the top of the tree. The quality of the sweet fruit is excellent and some prefer it over other orange varieties.

For container gardening or in cramped areas, a dwarf variety might be the answer. Most dwarf citrus trees are small because they are grafted onto the Flying Dragon rootstock. This rootstock severely limits the growth of any variety budded to it. The down side of dwarf citrus is that they are generally slower growing than full-sized trees and they never really become strong fruit producers. They do give us the ability to produce tasty fruit in cramped areas.

Citrus use moderate amounts of water, especially during the hot summer months. Flood irrigated citrus, where we fill a well around the tree with water from a hose, need to be watered every seven to ten days during June, the hottest and driest month. If the monsoons are late and the high temperatures persist, it may be necessary to drop the irrigation frequency down to once every five days. During winter, it may not be necessary to irrigate more than one time per month. If you water with a drip or sprinkler system, you may need to water every two to three days.

Citrus require nitrogen fertilizer at regular intervals during the year. About five pounds of 21-0-0, ammonium sulfate, or six pounds of 16-20-0, ammonium phosphate, are required by each full-sized, mature tree each year. The total amount should be spread out over the entire year in at least three, four, or more applications.

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When irrigating trees, either by flood irrigation or by drip irrigation, it is important to make sure that salts in the soil and in the water never exceed concentrations that would damage plant tissue. Burning or drying of leaf tips and margins is a typical symptom of salt burn and can seriously injure the tree. Make sure that the entire area underneath the tree from the trunk out to the last twigs is carefully watered and apply extra water to the surface of the soil occasionally to leach salts out of the root zone of the plant. This will reduce the salinity hazard to the tree.

Fortunately, there are very few serious insect pests and disease ailments that bother citrus in our area. The orange dog caterpillar, the larval stage of a beautiful monarch butterfly, feeds on the leaves but they rarely do enough damage to warrant control. On small trees, where multiple insects might destroy many leaves, the larvae can simply be picked off by hand and destroyed at will. The larvae are brown- and white-splotched caterpillars which look very similar to bird droppings on the leaf. Most people just leave them alone so that they can enjoy the butterflies later on.

Citrus thrips, a small, tan, cigar-shaped insect, does scar the outside of leaves and fruit, sometimes with dramatic effects, but they do not harm the interior of fruit nor cause long term harm to the tree. Since no effective controls exist for thrips in the home garden, these insects can be ignored.

We need to add a just a word about root stocks. Any citrus tree that you purchase will be grafted onto a rootstock variety. The rootstock adds disease resistance and affects the size and productivity of the tree. In the past, 'sour orange' rootstock was the mainstay. It is a good rootstock and still works well. It gives a tree good protection against a soil fungus that causes a serious disease called "foot rot." It is one of the root rot diseases and can be fatal to the tree. There are other varieties that are commonly found in the trade. Some are better for Arizona than others. Perhaps in a future article, we can talk about some of these varieties. For now, when you purchase a tree, try to find out the name of the rootstock and keep it safe in case you need to know it later on.

With proper care, the many varieties of citrus available to the home gardener in southern Arizona will add diversity, color, and a different texture to the landscape for many years. The secret to successful citrus production really lies in how well each tree is provided the right care at the right time. An understanding of what the trees need at a given period of time coupled with good attention to detail should keep both trees and owners happy for years to come.

For more information about caring for citrus trees, call for a free bulletin entitled "Citrus in the Home Garden". If you have questions, you can reach one of the Master Gardener volunteers at the Cooperative Extension office, 820 E. Cottonwood Lane, Building C, in Casa Grande. The telephone is (520) 836-5221. gibsonrd@ag.arizona.edu is the author's email address.

If you have questions about this newsletter, have any plant related problems, or wish to have a publication sent to you, please call (520) 836-5221 x204 or (520) 374-6263 and leave a message. If you have a plant problem and are able to email a picture, please send a picture with any information you can provide about the plant and your contact information to our diagnostic team at macmastergardener@gmail.com and a Master Gardener will contact you.

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Richard D Gibson

Richard D. Gibson

Extension Agent, Agriculture

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