While the raspberry is not a good choice for our harsh desert environment, blackberries on the other hand actually do quite well in our gardens.

Just think about it. You go outside into your own yard, just as the sun peeks over the horizon, and pick a bowl full of ripe, juicy blackberries. You wash them up and plop them right into your bowl of morning cereal, or set them on your breakfast table to eat fresh. Not a morning person? Then pick them fresh in the evening and garnish a bowl of your favorite ice cream. If the plant produces more than you can eat fresh, juice them out to make homemade jelly or jam. I personally like blackberry jelly on a freshly baked batch of Dutch oven biscuits.

I have on my office shelf here a jar of blackberry jam that an entrepreneur in Iowa sold to me some years ago while I was on an agricultural field trip. To create her masterpiece, she just went out to the back of the farm where the blackberries were growing wild along the fence, collected what she needed, and then made, and sold, jar after jar out of her home operation. I was so impressed that I asked her to autograph my jar, which she was gracious enough to do. I hope that homemade jam gets better with age because I just haven’t been able to bring myself to open the jar and test the sweetness. Just the anticipation is enough for me.

In the yard or garden, the bright green leaves and colorful fruit add diversity and color to area landscapes. Surprisingly, they are often overlooked as possible contenders for precious space in backyard gardens, probably because they can take up a lot of room in a yard and because of the sharp, prickly thorns. Those that allow themselves to be put off because of these issues are shorting themselves of a real horticultural treat.

Okay, I will be the first to admit that the thorns should command a healthy respect. They can indeed cause problems when they snag you as you walk by, or when it comes times to pick the fruit. However, consider the flip side. There are not a lot of people who are going to push through a blackberry bush to gain access to the other side. A side benefit of varieties with thorns planted in strategic areas is an added sense of security. For those who cannot abide the thorns, you might find the best of both worlds by selecting a thornless variety.
Some may shy away from blackberries because they have heard that the blackberry varieties and their near relatives, the raspberries, are not known for their desert hardiness. I will definitely agree on the raspberry. We just haven’t found a raspberry variety yet that can consistently stand up to the heat, salinity, and soil compaction of the desert environment. However, this is definitely not true of the blackberry. There are at least four varieties of blackberry that have proven their ability to stand up to our conditions and produce well. Unfortunately, they all have thorns.

The wild blackberry, you see, is well armed naturally to protect itself and its fruit from marauders and blackberry thorns can scratch skin and clothes as one works in and around the berry patch. Now don’t be imagining that these thorns are overly nasty, like the fabled “jumping cholla” that break off and get into your skin. Blackberry thorns are just simple structures that help protect the plant from those who would taste of the sweetness.

Well adapted to the desert are four varieties: ‘Brazos,’ a thorny, moderately upright Texas native, “Rosborough,” “Womack,” and “Brison.” All have been tested in our area and found to be highly adapted. “Rosborough” yields a little better than other varieties and is most often found in local nurseries during the planting season.

‘Brazos’ produces big clusters of large, fairly firm, sweet, juicy high quality berries. The variety has been found to be highly productive and ripens in mid-May in our area.

‘Rosborough’ produces extra large, sweet, shiny, deep black berries similar to ‘Brazos’ but is reported to have improved firmness and an excellent flavor. This variety is also upright in growth habit and thorny, but the vines hold up well under extreme heat and dryness. It ripens in late-May.

If you just have to have a thornless variety, consider ‘Thornless Boysen’ and ‘Thornless Logan.’ ‘Logan’ is a red berry and ‘Boysen’ reddish-black. Local tests find that they may not produce as well as ‘Rosborough’ and the yields may be variable, but they offer an alternative. They ripen during May and June.

Proper care of blackberries requires an understanding of the flowering and fruiting nature of the plant. Roots of blackberries are perennial, which means that the plant will live indefinitely from year to year, but the fruiting canes, the branches, are biennial. The bottom line: individual branches will only bear fruit once and only on the previous year’s growth. Good berry production requires proper pruning to maintain the productivity of the vine.

When caring for the plants, old canes that have already produced are pruned out after the bearing season is over. New canes that have grown during the season will be lying on the ground or hanging free depending upon the growth habit of the vine. Vigorous canes from these are then selected and trained for the next year’s berry crop. These canes should be headed back at that time to enhance secondary branching.

Trailing varieties are best grown on a trellis or other type of physical support so that the berries are more easily exposed for picking. Trellising will also cut down on the space required to grow the plants. Training trailing varieties up also gives easy access to control the weeds that always seem to pop up through the low-growing canopy.

Upright growing varieties do not require a trellis but they are easier to handle if they are tied to a wire about two to three feet above the ground.

Finally, all blackberries require deep soil, full sun, and ample water through the growing season. Given proper care, blackberry plants can give variety and a sweet taste to our desert gardens.
With the advent of cooler weather, we might as well now talk frost and freeze protection so that when that inevitable freeze comes along, you will have had plenty of time to get ready.

Sooner or later, a freeze warning is going to creep into the long term forecast. At that time, you have several choices. One, you can choose to ignore it and let your cold sensitive plants fend for themselves, or two, you can gather the needed materials together early, watch the forecasts, and take timely action as needed. Once choice is easy, but sometimes devastating to sensitive plants, and the other takes a little extra work, but helps greatly in keeping a yard looking good.

Yes, I know that many cold sensitive plants are just too big or ungainly to protect. A spectacular bougainvillea, an aggressive queen’s wreath vine, or a large citrus tree may be just too large to protect; but smaller plants, especially young plants which can be seriously damaged from cold weather, are easier to protect and timely action may pay dividends later if we take the time and effort. If you choose to protect your plants, here are some facts that you need to know.

The average date of the first killing frost in Pinal County has long been set at about November 6th each year but the recent warm winters have pushed that date back towards the end of the month or even into December. Because of the warming trends, we may have become a little too lax in preparing for winter weather, and because of that, we sometimes get caught unprepared. Tender plants like bougainvillea, citrus, and the last of your summer garden plants could be blasted with cold temperatures.

For those of us familiar with desert weather, we know that big changes can take place overnight. We know that warm, balmy days can turn into winter cold within just a few days, sometimes within just a few hours. Now is a good time to get ready for these cold temperatures and frosty nights. A little time spent now on prevention can save a lot of grief later. Let’s review once again the basics.

It is important to remember that there is a difference between frosts and freezes. Frost is the most common type of cold weather injury. It occurs when low temperatures and humidity combine with calm and clear nights to cause surfaces such as leaves, soil and car windshields to cool faster than the surrounding air. The moisture in the air condenses and freezes in place. This condition is called a frost.

Freezes occur when temperatures drop below 32° F. All plants have a specific temperature at which they will begin to suffer damage. Once that temperature is reached, damage begins. Lemons will begin suffering damage right around 32°, while oranges usually do not start showing freeze damage until 26° or below. Grapefruit falls in between.

So how do we protect our plants against damage? When thinking of cold weather protection, most people immediately think of covering their plants at night, and that is exactly right. Improperly done, however, covering will actually afford little protection and may actually harm tender plants.

Remember, natural cold descends from the atmosphere during the night. Natural warmth radiates upward from the earth, which is heated during the day by the sun. When the amount of cold overpowers the amount of radiated heat and temperatures go below what sensitive plants can endure, cold damage can occur.

Coverings shelter plants from the cold air that is descending down upon the plants and trap the radiated heat that is moving upward from the earth. This minimal protection often is quite sufficient to keep tender plants from harm.

In order for coverings to be successful, they must accomplish each of these two tasks. To do this, they must extend all the way to the ground. Full coverage will keep the warmer air trapped inside from escaping. They must also be put in place before it begins to get cold, which usually means late afternoon. They must not be removed until temperatures
rise to a safe level, usually well into the following day. Covers are removed to allow the sun to reheat the soil underneath the plants. This will provide warmth for the next night’s protection.

Cloth, cardboard or paper coverings insulate better against the cold than plastic coverings. I prefer quilts, blankets, bed sheets and burlap when I cover my plants. However, plastic could work for frost protection if the temperatures do not dip too low. Plastic tends to radiate heat faster than these other coverings and are a little more risky to use. In a pinch, and if plastic is all that is available, rig a frame to hold the covering off of the plant foliage. The cold temperature of the plastic itself could damage tender plant tissue.

Extra warmth can be provided for the most tender or most valuable plants, by placing a low watt light bulb inside the covering. The extra heat from the light bulb can help keep the air temperatures inside the tent high enough to avoid plant tissue damage. In doing this, do not forget safety. Do not let the light bulb touch the covering or the leaves or stems of the plant. Coverings could catch fire and tender tissues can be damaged by the heat.

Use an outdoor extension cord and make sure that there is no standing water that could cause an electrical hazard. Do not forget to turn the light off during the daylight hours to save money and avoid the possibility of plant damage.

Flood irrigating works for frost protection on the principle that water must give off heat to freeze and the slight amount of heat released can moderate the sharp plunges of temperature during a frost. Flooding is risky because water must be present for the complete duration of the freeze or frost or the colder temperatures resulting after heat release may worsen the damage. I wouldn’t risk sprinkling the trees with water. It is too dangerous in the event that you do not have good water coverage or the sprinkler quits running during the time when temperatures are below freezing.

The easiest form of frost protection is to create and use microclimates in the garden. Citrus trees, for example, do well in the narrow spaces between houses because the close proximity of the walls tend to protect them from plunging temperatures. Heat-loving and frost sensitive plants like bougainvillea and hibiscus seem to do best on south-facing walls with an overhanging roof.

Cold weather protection requires planning and careful observation of weather patterns. Now is the time to make plans and preparations to protect our tender plants once the forecast tells us that a frost is coming. Then, with just a little effort, we can put our plans into action.
Almost everyone enjoys a nicely arranged display of indoor houseplants, but not everyone believes that they have the skill to keep them alive.

Some people have a green thumb and can grow just about anything. Others seem to kill whatever they put their hands on. I personally reject the notion that it takes a special knack to grow healthy plants, indoors or out, and instead believe that if we know and follow the rules of basic plant care that anyone can grow just about anything.

Take for example, a simple Schefflera. The Schefflera is a common houseplant that will live for years inside a home or office. It is fast-growing, has dark green leaves, and displays a relatively thick canopy that is still open enough to let light through a window to brighten a room. It is not too fussy about conditions and many people find it an easy plant to grow. However, it does need a fertile, well drained soil that does not dry out so fast that the plant goes into shock between irrigations. In addition, it does not like sloppy wet soils, a shortage of nitrogen, and a lot of salt polluting its root system. If we give it what it needs, it should do just fine.

Philodendron is another relatively easy plant to grow indoors. It too is a hardy, fast-growing leafy plant that is pretty common in many homes and offices. For old movie buffs, perhaps you will remember the long, long, philodendron that curled around Katherine Hepburn’s office in the movie Desk Set. When she received a “pink slip” from the head office, she mistakenly believed that she and the other reference librarians were to be replaced by a computer. Some of you will remember that she enlisted all of her staff to help her carefully remove her plant from its perch and carefully tuck its long stems into a box for safekeeping. Now that was a fine specimen of a philodendron.

Philodendrons need a rich, well-drained soil and a regular, light fertilization with nitrogen. Given these conditions, and the right amount of water, they can live for long periods of time without a lot of fuss. If you want long philodendron vines curling around your office, like that of Ms. Hepburn’s, you can do it, if you give it the right care.

We could say the same about any number of houseplants. On the other hand some, like African violet, orchid, and cyclamen, are a little fussier and require specialized and intricate care. If your track record of growing any houseplant is not good, you might want to steer clear from these more difficult-to-grow plants until you get some experience by growing some of the less demanding species.

So, what are some of the basics in good plant care? For indoor plants there are five key elements: water, light, temperature, soil, and nutrition.

Water is probably the most important aspect of houseplant care. Without water, plants will surely die, no matter how well adapted they are to the indoor environment. All plants have a preferred water requirement and successful caretakers understand that when they need it, they need it. When they don’t they don’t. Overwatering can present real challenges, especially if the roots become waterlogged and diseased. Under watering and overwatering are both sure-fire ways to kill a plant. We should learn how much water a particular plant needs, and how often it should be irrigated, and then match those requirements. Some people use a moisture meter to test soil water content. I just stick my finger into the potting soil to the middle knuckle and feel whether the soil feels slightly moist or bone dry. Both methods of testing soil moisture levels work well.

Light is the next important factor. All plants have a light requirement. Some prefer full sun, some can get by on medium light, and some prefer no direct sunlight at all. Many houseplants are lost each year because a plant wanting medium light is put into a dark corner of the house, and vice versa.

One way to make sure the plant is getting enough light is to read the label that comes on most plants and then follow the directions. If they prefer a lot of light, consider placing them in a south-facing or west-facing window. If they like moderate light, an east window usually will do quite well. Low light requirements can often be met by placing the plant in a north-facing window or in a place without a light source.
Temperature is another critical factor in good houseplant growth and development. Yes, you guessed it. Every plant has a temperature requirement just as it has a water and light requirement. Some plants are fussy about cold and heat, and it is important to avoid putting a sensitive plant in a spot where they could get chilled or overheated. For example, a south-facing window with a lot of direct sunlight could cause a cold-loving plant to overheat. During the winter time, cold air coming off a window sometimes damages a tropical, heat-loving plant.

All potted plants need good drainage. They just do not like to have wet feet all the time. Good drainage is a function of the type of potting mix in which the plants are growing. It is important to choose a soil that holds water well, but allows excess water to drain out the bottom of the container. Many potting soils will mix 50 percent compost or some other type of organic matter with 50 percent sand, perlite, or vermiculite.

Growing a plant in a container will severely restrict the root system and require it to grow in a volume of soil that is much smaller than normal. Because its foraging area is much restricted, the roots will have less room to pick up nutrients. For this reason, plants in containers will need to be regularly fertilized with a balanced and complete fertilizer, that is, a fertilizer that has all three of its descriptive numbers with a value higher than zero.

The three numbers on a container of fertilizer stand for the percent nutrient in the mix. The first number is the percent nitrogen, the second is the percent phosphorus, and the third number is the percent potassium. Container plants need all three. A regular fertilization with a good, all purpose fertilizer will work wonders on most houseplants.

What are the signs that something is not right with a plant? The symptom that most often gives us the first clue is leaves turning yellow and falling from the plant. A sick leaf, especially more than one, usually means that one of the above conditions is not right. A little exploring will help identify the problem. Once we know the problem, we can then take corrective action.

I contend that anyone can grow a nice, healthy houseplant if they give it the right growing conditions. With a little determination, attention to detail, and a desire to succeed, a home or office can be a perfect place to grow an indoor plant.
Spreading mulch around outdoor garden and landscape plants can help reduce your water bill and improve plant health.

By definition, mulches are materials that are placed on top of the soil beneath garden and landscape plants to reduce water evaporation, add a little extra nitrogen fertilizer, prevent weed germination, minimize soil crusting, and buffer soil temperatures. By comparison, soil amendments are materials that are mixed into the soil to improve soil tilth. All too often we rely solely on soil amendments to help us through the growing season while neglecting the important benefits of a good surface mulch.

Probably the greatest single benefit provided by surface mulches is the reduction of water evaporation from the surface of the soil. Soil is formed by the erosion of parent rocks into small particles that support plant growth. The spaces between these particles are called pores. It is in these spaces or pores that irrigation water is stored.

Surface evaporation results when the sun heats up the soil and causes water molecules near the surface to evaporate and drift off into the air. Because water molecules tend to stick to each other, the evaporation of one molecule pulls the next one just below it into a position where it can be evaporated. In this manner, one by one, water droplets are lost from the soil. This upward movement of water towards the surface like juice in a straw is called capillary action. Capillary action will continue until the attraction of the soil particles for the water molecule equals or exceeds the attraction between the individual water molecules themselves and the water tension is broken. By this time, however, much water will be lost through evaporation. Placing a protective layer of mulch on top of the soil prevents the sun from heating and evaporating the water.

There are other benefits provided by mulches. The evaporation of water tends to build up salt layers at the soil surface. Salts are chemicals that dissolve easily in water. Think table salt in a soup. Most water supplies in Arizona have at least some salt dissolved in them. As water evaporates these salts are left behind.

The accumulation of salt at the soil surface can cause the soil to crust over, hinder the emergence of young seedlings at germination, and contaminate irrigation water as it is applied to the soil. Dissolved salts easily enter plants through the roots as they absorb water and, move up to the leaves, causing salt burn symptoms. By reducing water evaporation, mulching minimizes or prevents these types of problems.

Another benefit is cooling of the soil underneath the mulch. As the mulch layer shields the soil from the sun’s rays, it keeps the temperature of the soil around the roots at a level favorable for root and plant health.

A good surface mulch will help reduce weed problems when it is applied in a layer that is thick enough to smother germinating weed seeds. For most weedy plants that germinate, seed, and die in one year, this often means a mulch depth of at least two inches. When selecting a mulch, avoid those that may be contaminated with seeds or vegetative parts of weeds that could grow new plants. For highly aggressive perennial weeds, such as Bermudagrass and nutsedge, mulching may only work for a short period during the growing season.

Many plants are damaged each year because soils are allowed to become too dry. Because mulches slow evaporation, and prevent or slow the growth of weeds that steal water, mulches help buffer the severe fluctuations of soil moisture that can occur between irrigations. This means that more water is available for the desirable plants for a longer period of time with less waste.

Organic mulches laid on the soil begin to decompose as microorganisms in the soil begin to work at the soil-mulch interface. As these materials begin to break down, nitrogen is often released into the soil. As a plant food, the release of nitrogen is a good thing. It is a slow process, but it does help.

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Okay, you say, with all of these benefits that come from mulching, how do I get started? It is important to select the correct mulch for the task at hand. It is also essential to think about the plant’s water needs and how irrigation water will be applied through the mulch.

Many different materials can be used as mulches. Peat moss, composted leaves, straw, stones, and even plastic sheets or asphalt shingles can be used. Decorative bark, gravel, compost, redwood sawdust, peat moss, composted steer manure, and forest mulch products all have their place. For vegetable and flower beds, the organic mulches are most desirable, because these can be tilled into the soil as soil amendments at the end of the growing season.

Yard waste used for mulching should be well composted before it is applied. Composting breaks the raw plant materials down into a product that has uniform texture and color. This uniformity creates a pleasing visual perspective to the landscape that non-composted materials cannot provide. Composting also helps destroy weed seeds.

Pea gravel, cobblestones, or crushed rock mulches are popular in desert landscapes. These layers of decomposed granite, river gravels, and other inert materials act to prevent germination of weed seeds by serving as protective mulches to the underlying soil. While the stones do absorb heat, they tend to keep the soil cool and moist underneath. Knowing this, the ancient farmers here in our own desert frequently used sand, gravel, and even rock mulches, depending upon the crop they were growing, to help even out moisture demand.

Mulches used around trees and shrubs should begin a few inches from the trunk and spread outward towards the outer edge of the plants. Never apply mulch next to the trunks of trees and shrubs because crown rot disease, and other problems, can result. Keep an eye on the thickness of the mulch. As the layer settles over time, it will be important to keep adding new material.

Drip irrigation systems, both above ground and below ground, work well with mulches. The layout of the garden, the slope of the soil, and the source of water, are key factors determining the correct irrigation system to use. One benefit of above ground applications of water is the potential to leach nitrogen and organic acids from the decaying organic mulches into the soil where they nourish the plant, feed the microorganisms, and help improve the structure of the soil.

Mulches aid in maintaining favorable conditions of the soil around garden trees, shrubs, and bedding plants. By using mulches correctly, many of the common soil problems that are all too often seen in area gardens and landscapes can be avoided.

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 and leave a message, or call (520) 374-6263 to reach one of our volunteer Master Gardeners. When leaving a message, please clearly state your name and your telephone number. 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. You are also welcome to stop by our office at 820 E. Cottonwood Lane, Bldg. C in Casa Grande.

This newsletter is available to view on our website at:  http://extension.arizona.edu/pinal

Richard D. Gibson
Extension Agent, Agriculture

RDG/te/sh/aw

60 mailed copies
261 emailed
INTEGRATED PEST MANAGEMENT WORKSHOP

This workshop is part of the State Signature Program Initiative Project: Enabling Schools to Practice and Implement Integrated Pest Management-Expansion of IPM in a child’s world

November 10, 2015 8:30 am—4:30 pm
Pinal County Cooperative Extension Office
820 E. Cottonwood Lane, Bldg. C
Casa Grande, AZ  85122

The flyer link is:
https://extension.arizona.edu/integrated-pest-management-training

Agenda questions and to register for the class, contact Shaku Nair, at nairs@email.arizona.edu

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