



# Pinal County Cooperative Extension Garden & Landscape Newsletter September 2008



## STAYING COOL WHILE WORKING IN THE GARDEN

If you like to garden outdoors but dread the hot weather of summer, let me share with you some tried and tested ways to work in your garden and, at the same time, avoid heat related injuries.

In gardening circles, Arizona is well known for its year round growing season. Something can be grown, and harvested, during each month of the year. This also means, of course, that garden chores must be done every month of the year. The question frequently comes, "How can I enjoy working in my garden without ending up in the hospital with heat stroke?"

Cloudless skies and frequent high pressure systems are the rule of early summer in our area. Sometime in late May or early June, the daytime high temperatures will hit 100°F. and continue to climb. They will peak, usually during June, around 110°F. The record high is 121°F. From early June through mid-September, sometimes to mid-October, we can expect to see summer high temperatures well above the century mark. These summer temperatures can discourage even the most avid gardeners.

Towards the end of June, but usually in mid-July in our area, we look forward to the onset of the Southwestern monsoon season. Water vapor from the oceans moves into the area and, reacting with the high temperatures, forms fast developing, often vicious thunderstorms that blow dust and, if we are lucky, bring some rain. The increased humidity and rainfall tend to drop the high temperatures somewhat, but rarely below 100°F.

The end of the summer temperatures usually comes in mid-September. The weeks after Labor Day can seem interminably long but the end is usually in sight. Occasionally, the weather conditions cause the 100°F plus heat to linger on into October, but that is a rare occurrence. We are always grateful when we see that first day in the 90's and then the 80's.

You are going to ask me why I didn't write this column back in May before the really hot weather arrived. That is a good question, and fair. I guess I didn't think of it. Still, we have a ways to go to cooler weather and with the fall garden season upon us, there is still a lot of perspiration to fall and heat to endure. So, let me share with you some hints for staying cool outdoors in Arizona summer weather.

First, get an early start on your chores and quit before the intense heat arrives. After the summer equinox, the daylight hours begin to shrink gradually. An early start in June may have to begin around 5 am, while an early start in August may be no earlier than 5:30 or 6 am. Whatever the current daylight conditions, it is a good idea to start work about sunup when the temperatures are at their coolest point. Then, as the temperatures begin to climb, our bodies slowly acclimatize to the increasing temperatures and we do not notice the effect nearly as much as when we go in and out of an air conditioned building, car or store. Gradual acclimatization helps us stay more comfortable for a longer period.

—Staying Cool, Continued on Page 5

### IN THIS ISSUE:

<b>STAYING COOL WHILE WORKING IN THE GARDEN</b>	<b>1</b>
<b>EUCALYPTUS TREES IN DESERT AREAS</b>	<b>2</b>
<b>OVERSEEDING DESERT GRASS LAWNS WITH ANNUAL RYEGRASS</b>	<b>3</b>
<b>CAROB TREE</b>	<b>4</b>

## EUCALYPTUS TREES IN DESERT AREAS

What is a good shade tree for your home?

There are many trees that grow well in our low desert environment and selecting one over another can be a tough challenge. “Is there a tree that will fit into my tiny yard with out scraping the roof tile?” “How much water will the tree require?” “Will its roots readily invade my septic system or sewer line?” These are only a few of the many questions that are asked when people are deciding on a tree.

The only way that we can make good decisions is if we understand the characteristics, that is, the strengths and weaknesses, of each tree under consideration. Then, and only then, can we make informed decisions. With that in mind, I want to talk about a group of trees that are sometimes praised, sometimes snubbed, and occasionally misused in our landscapes: the eucalyptus.

Eucalyptus trees are common throughout the warm desert regions of Southern Arizona. They are heat and frost tolerant. Those mentioned in this article require full sun exposure. Most use relatively little water and some can go for an extended time without an irrigation. This makes them intriguing candidates for low water use landscapes. At the same time many are also tolerant of over wet conditions, and can be planted in frequently irrigated locations, such as in a lawn. Most give good shade and provide color to the landscape. The color is provided sometimes by flowers, but more commonly through the bark of the tree itself. While there are many species to choose from, not all make good trees for home yards.

Eucalyptus trees frequently become root bound if they stay in a pot too long. I give you this as a word of warning. Root binding refers to a condition that sometimes develops in the root system of plants that sit in a container too long. As the roots expand out from the trunk of the tree, they hit the inside of the container and either begin to circle as they grow around the inside of the container wall, or bounce back into the root ball at a sharp angle. Root binding causes a constricted root zone that can stunt the tree and leave it susceptible to being blown over in a wind storm. In general, the best trees often develop from small, freshly grown plants that have not spent a lot of time in a container.

Some eucalyptus trees are too large or too messy for home yard conditions, and some have a

tendency to lose branches during windstorms. On the whole, however, many are good neighbors and can be planted with confidence around our homes. Let's get to know them a little better. Here are six different eucalyptus trees that have proven themselves well adapted for home yard planting, and a couple that have not.

*Eucalyptus microtheca* has been a mainstay in many yards over the years. Even though it needs a little extra room to grow properly, it still is acceptable for limited spaces. It is commonly known as the Coolibah tree. It grows at a moderate rate up to thirty-five feet tall and spreads to about the same width. It has eight-inch long, silvery-gray leaves. Most forms of this species have smooth bark and are generally grey in color, but some selections have a nearly white bark. Unlike many eucalyptus trees, it has little problem with iron deficiency. It has been described as “ nice, quiet, graceful, open-canopied tree.”

*E. papuana*, also called the Ghost Gum, is another good choice for our warm temperatures. Some forms have more than one trunk. It is a tall tree, growing up to sixty feet tall, but in our area it is usually much shorter. It has beautiful, snow white bark and grows at a moderate to fast rate. It spreads to about fifteen to thirty feet wide. The more moisture it receives, the faster it grows. The leaves are three to five inches long and colored a leathery gray to green. They are one to one and one-half inches wide and pointed at the tip. Sometimes the frost can cause a purple tint in the leaves. It prefers soils that drain well.

*E. salmonophloia* is called the Salmon Gum because of its smooth, pinkish-colored bark. It has glistening, dark green leaves. It grows at a relatively slow rate up to about one hundred feet tall. However, because of its slow growth, it almost always stays much smaller for a longer period of time, good news for people with small yards. An added benefit is that it doesn't have all the peeling bark that other species have. It is a great residential tree because it does not grow fast and gives off only a little bit of litter.

The common name of *E. sideroxylon* is the Red Ironbark. This tree is somewhat frost tender, down to only 20 to 25°F., but its ribbon-like, blue green leaves and its dark colored thick furrowed bark

—Eucalyptus, Continued on Page 7

## OVERSEEDING BERMUDA GRASS LAWNS WITH ANNUAL RYEGRASS

If you are planning on keeping your lawn green throughout the coming winter season, now is the time to overseed with winter rye.

Golf course superintendents get antsy if their greens and fairways are not over seeded by October 1 of each year. They choose to convert their summer Bermuda grass turf to a winter hardy rye variety at that time because the warmer temperatures of early fall aid in seed germination and plant vigor; while waiting until cooler temperatures to prevail may cost them in a reduced stand and a slower growth habit. Both of those can seriously affect the quality of the playing surface. In residential lawns, we should take a leaf from their turf management book. If we want a thick vigorous stand of ryegrass, early October is the right time to plant.

Changing our lawns from summer to winter grasses is a common rite of passage marking the unofficial change from warm weather to cool weather. Whether we choose to overseed, or not, is a personal decision; but no matter what our stand, when we see new ryegrass lawns sprouting up, we know that cool weather is just around the corner. However, if we delay into November to make the change, oftentimes the weather turns too cool and we do not get good germination. So, if you are going to do it, do it now!

The annual ritual of converting all forms of Bermuda grass and other warm weather lawns to a winter hardy grass begins in earnest on, or around, the first of October. The conversion process is fairly simple and usually quite successful, as long as a few simple rules are followed.

To keep a lawn green year round in Pinal County, it is necessary to switch a summer lawn in the fall over to a cold season grass for the winter months and then back to the summer lawn in the spring. The warm season grasses are well able to withstand our high summer temperatures, but when it comes to the cooler temperatures of winter, the summer grasses can't wait to shut down and go to sleep. This is called "going dormant".

Both the common and hybrid forms of Bermuda grass are good examples of a lawn that will go dormant during the cold months. While it is a sure thing that they will green back up with new growth

next spring, the intervening months of drab brown sends most people looking for a more colorful alternative.

Another disadvantage of dormant turf is weeds. The soft, gentle rain that comes with winter storms stimulates the germination and growth of winter weeds like Mediterranean grass, bur clover, creeping woodsorrel, shepherdspurse and others. Soon after one of these rains, brown, dormant lawns will be splotched with widely varying patches of green. This makes the lawn area look ragged, unkept and messy.

There are other ways, besides planting a cold weather grass, to maintain a well-kept, winter-dormant lawn. One way is to simply hand pull the winter weeds; but most of us soon find hand pulling is a never ending job that quickly gets old. Another way to keep winter weeds out of a dormant lawn is to apply a late fall treatment of a soil active herbicide like oryzalin. With good coverage and adequate movement of the chemical into the soil, a hassle free, dormant winter lawn can be maintained.

Overseeding the summer grass with a winter hardy variety easily solves pesky weed problems without having to pull or spray. The weeds still grow, but regular mowing will keep them at a uniform height with the grass and the green color of the lawn will mask and hide the green color of the weed. Another benefit of overseeding is the attractive winter lawn which nicely offsets the rest of the landscape.

If overseeding seems right for you, now is the time to start getting ready. The warm temperatures of late September and early October are ideal for overseeding. If you wait until November, the cooler temperatures may slow the germination of the new seed and leave a skimpy, uneven lawn. The patches of bare ground scattered through the seeded area can be quite unsightly. Early October provides excellent temperatures for good germination and growth of the young seedling plants.

The best winter grass is annual ryegrass. Annual ryegrass seed is fairly inexpensive and germinates well. The grass will stay green well into the spring, only dying out when the heat of June arrives.

—Overseeding, Continued on Page 6

## CAROB TREE

If you are looking for a good shade tree that is relatively unfazed by the heat of the desert, I really think that you should take a look at the carob tree.

The carob is a handsome, evergreen shade tree that is highly tolerant of the desert environment. Its shape, texture and color allow it to play a versatile role in any landscape, and because it is not one of the more common selections for desert landscapes, it offers a fresh alternative to the South American mesquites, the several species of palo verde, and the assorted pine trees so commonly planted today.

The carob tree is known by several different names, including its scientific name of *Ceratonia siliqua*. Depending upon location, it is also called St. John's Bread, Algaroba, Karoub and Caroubier. It has long been planted as an agricultural product in its native eastern Mediterranean area, including the southern coast of Asia Minor and Syria. Its cultivation can be traced back to the early Greeks. Later it was carried to Spain and Morocco by the Arabs. In all of these countries, the large pods, rich in protein and sugar, have been an important forage crop for all types of livestock, and provided food materials for the poor in times of famine. It has also been used to make syrups and different types of drinks. The pod can be ground into a fine powder and used for a chocolate substitute.

The carob is purely a warm climate tree and seems to thrive in areas with the same temperature range as that of the orange. In colder climates it tends to freeze back and sometimes even dies when temperatures reach the high 'teens to low 20s°F. For this reason, its range in the United States is mainly confined to the southern parts of California, Arizona and Florida.

At maturity, the carob is a large tree, reaching 35 to 40 feet tall under good conditions and about the same in width. Avoid planting the carob in small, constricted areas where constant pruning would be required to keep it under control. It does not require large amounts of water, but, when irrigated, it does need to be irrigated deeply enough to reach all of the roots. It will do nicely on a citrus irrigation schedule.

For those that want or need a full sized tree quickly, this may not be the right choice. A rather slow grower, it may only reach 20 feet in about 10 years, but given good water, nutrients and space for roots to grow, the carob will generally live to a great age, all the while slowly but steadily growing until it reaches full size. Do not crowd these trees. Their great size at maturity will

require a lot of space to avoid competing with their neighbors for water, nutrients and sunlight. No other trees should be planted within 35 to 40 feet, unless the plan is to remove neighboring trees later on as crowding occurs.

The normal growth habit of a carob is a multi-stemmed bush which, when allowed to remain with its branches growing to the ground makes a large hedge plant that screens dust, wind and noise from the landscape. The shrub or hedge can be left informal or can be pruned and shaped into a formal specimen plant. More commonly, the carob is pruned to a single trunk and allowed to grow into a tree. It will have a dense head of limbs and leaves that is rounded in shape.

The foliage is dark green and, again, very dense. Because of the leaf density it makes an outstanding shade tree. Individual leaves are divided into 4 to 10 round leaflets that average about 2 inches in length. The leaflets are coarse and stiff which adds a texture to the landscape that is unique among desert-adapted trees.

The carob is interesting in that there can be both monoecious trees; male and female flowers separate and apart from each other but found on the same tree, or dioecious trees; male and female flowers that are found on separate trees. In other words, dioecious trees are either male or female. This is important only when one wants to know exactly whether or not there will be seed pods produced on a particular tree. Obviously, a tree that only has male flowers will not produce fruit while female trees and trees with both male and female flowers will. Some people prefer no mess and therefore prefer a tree that will not produce fruit while others may, indeed, want to collect the pods for future use. Unfortunately, there is no way to tell which flowering habit a seedling tree will have until it actually flowers. By then, it is, of course, too late because the tree has already been planted in the ground and made several years of growth. Most carob trees planted in the United States are generally reported to have both male and female flowers on the same tree.

Trees with female flowers produce an abundant supply of long, flattened, dark brown, leathery pods. As mentioned before, these pods are rich in sugar and can be ground into a fine powder which can be used as a chocolate substitute. If the pods are to be collected and used, the tree will need to be irrigated regularly for best quality.

—Carob Tree, Continued on Page 7

Second, as noted before, once outside, try to stay outside. With your body acclimatized to the heat, don't go and spoil it by going indoors and flopping in front of the fan. Once you are adjusted to the air conditioned air inside your home, it is pretty tough to go back outside. So, bring a container of water and a tray of snacks with you and enjoy the outdoors until you are finished.

Third, wear light colored, loose-fitting clothing. Research has shown that wearing light weight, light colored clothing with long trousers and a long-sleeved shirt will reduce radiant heat load by half and water loss by two thirds in hot, desert conditions. Yes, you heard me right. Long trousers and long sleeves keep us cooler than abbreviated tee's and shorts alone! The clothing shades our skin from the sun's burning rays and minimizes heat gain from direct contact with sunlight.

I can hear it now. "The long clothing traps the heat close to my body and I get hot!" you say. Yes, to some degree that is correct, but, using our perspiration trapped in our clothing is an excellent way to stay cool.

I once worked a summer at Cleman's Cattle Company in Adamsville, usually chopping weeds in cotton and grain sorghum fields. If you want to know about the effect of heat combined with humidity, work vigorously in 110°F temperatures in a grain sorghum field filled with plants that are actively giving off water to keep themselves cool. That experience definitely teaches the value of a drink of water on a hot day.

One of the full time employees was an older gentleman of Native American ancestry. He always wore a long sleeved shirt, long trousers and, underneath, a heavy set of long johns. "Sandy", I asked him one day, "Why do you wear so many clothes when it is so hot?" His response was enlightening. "It keeps me cooler." he said, which is more than he usually said to anyone in a day. In a gracious attempt to help a young kid learn about the desert he went on to add, "When the undershirt gets wet with sweat, the wind blowing through makes me cooler." So there is the next rule: remember to layer.

Ever since, I have always remembered his advice. It really does work. Just last weekend, while working outdoors, in a long sleeved shirt, long pants

and a tee shirt underneath, I chanced to come inside on a brief errand and walked under an overhead ceiling fan. The extra breeze, coupled with the normal temperature of our cooled home, chilled me to the bone. I hurried with my task and went back outside where my acclimatized body and soaked undershirt kept me comfortable.

The same goes for the type of outer clothing we choose to wear outdoors. Tight fitting, tight weave clothing tends to hold body heat in close to our bodies, which makes us feel warmer. Loose fitting, thin weave clothing lets the extra heat exit and keeps us cooler. Lighter colors tend to reflect more of the sun's rays while dark clothing absorbs the heat.

I am also a big believer in large brimmed, loose weave hats. Keeping the sunlight from striking our heads reduces the heat gain in a delicate part of our bodies and minimizes the chance of a heat related problem. A loose weave in the construction of the hat will allow any heat given off by our heads to easily escape. Not only does a hat keep us cooler, it also helps prevent skin cancer that seems to so frequently show up first on our forehead, cheeks, ears and nose.

The next rule is to take frequent, short breaks during the work day to rest and cool off. Take the breaks regularly, but take those breaks in the shade of a veranda, tree or awning, not in the house. You want to rest just long enough to cool slightly but not long enough to lose perspiration. It is too hard to get cranked back up. Your break should be long enough to relax a little, but short enough that you can get right back to what you were doing without having to work back up to a sweat.

Finally, tank up on water before you start and remember to drink regularly while working. Good hydration will not only replace water lost through perspiration, but it will also help us work longer into the work day and get more things done. Sports drinks with electrolytes will help replace valuable minerals lost through perspiration and keep our bodies functioning as they should.

We can't do anything about the heat and humidity of our Arizona summers, but we can take steps to help us stay relatively comfortable while working outdoors. With a little preparation and good sense, we can make good use of our year round growing season.

Perennial ryegrass is another possibility, but the real benefit to perennial rye is in milder climates where it persists from year to year. Because of the high summer temperatures in Pinal County, perennial ryegrass will completely die out, except in the shade, thus losing its primary benefit. Perennial ryegrass seed is also more expensive than annual ryegrass seed. The bottom line: save your money and plant annual ryegrass.

When preparing to plant annual ryegrass, it is important to remember that the heat-loving Bermuda grass will most likely still be green at the first of October. In order to ensure proper seed contact with the soil, it will be necessary to thin out the growth of summer grass. This is most easily done by lowering the lawn mower blade gradually until you have scalped the lawn area close to ground level. It is important to remove all grass clippings. If a grass catcher is not available on the mower, it will be necessary to rake the area with a flexible leaf rake and remove the litter.

The next step is to apply ryegrass seed over the relatively bare surface at the rate of one to one and one-half pounds of seed per 100 square feet. Be sure to distribute the seed evenly, either by hand or with a lawn seeder. It is also important to overlap the seeded areas to be sure of complete coverage. As you apply the seed, look around you. Chances are you will see that this most recent step has been watched with interest by every bird in the neighborhood.

These insatiable seed robbers can be foiled by covering the seeds with a thin layer of manure or other organic mulch. The mulch will help hide the seed from the birds and also help keep the seeds moist between irrigations. The mulch should be evenly distributed to a depth of about one-fourth of an inch over the entire area.

It is critical to keep the seed moist until it has germinated and has developed a root system capable of picking up sufficient water to meet the plant's needs. Set the sprinkler to wet the entire lawn area. For best seed germination, apply light irrigations to the seeded area several times during the day, especially during the warmer parts of the day. The germinating seed must not be allowed to dry out during this stage or it will die. If water

accumulates on the surface of the soil, it is okay to turn off the sprinkler temporarily, but do not forget to keep an eye on the seed and water again as necessary.

Water accumulating on the soil surface is bad because it may float out the rye seed and expose it to the air, birds or drying temperatures. Sometimes it will wash the seed into lower lying areas causing an uneven stand. When the water disappears from the soil surface, and the surface of the mulch begins to dry, be sure to start the sprinklers again. Scratch the surface to make sure water has penetrated the manure covering and has thoroughly wet the seed surface.

After all the seed has germinated and the area has a green cast, the frequency of irrigation can be cut back to once each day or once every other day depending upon the current temperatures. If wilting of the new grass seedlings becomes evident, be sure to water immediately!

The new lawn should be first mowed only when the entire area is approximately two to three inches tall. Use a sharp mower and remove the clippings during the first mowing. Set the mower to cut at one and one-half to two inches above ground level and repeat the mowing when the grass grows about one inch above the set level.

It generally takes about two weeks to get a good stand of annual ryegrass in the fall, so patience and diligent care are essential.

The transition back to summer grass in the spring is much more simple even than the fall transition. Simply scalp back the annual ryegrass with the mower in May or early June, whenever the nighttime temperatures reach 60°F. on a regular basis, and deep irrigate the lawn. Soon the Bermuda grass will start growing again.

With a little advance planning and an eye for detail, beautiful, deep green winter lawns are possible throughout the desert regions of Arizona.

Trade names used in this publication are for identification only and do not imply endorsement of products named or criticism of similar products not mentioned.

## —EUCALYPTUS, Continued from Page 2

make it truly spectacular. It is a medium tree growing from twenty to eighty feet tall, depending upon the variety and the amount of water it receives. It has red to pinkish colored flowers. It resists drought fairly well once it is established but young plants need to be watered regularly, perhaps once per week in warm weather, to ensure rapid growth early. It does not like to have its feet wet continually so it is probably not a good choice for lawns. It needs a soil that drains quickly in order to prevent iron deficiency symptoms.

*E. spathulata*, the Swamp Malee, is a small tree, growing from six to twenty feet tall. Its small size makes it perfect for smaller yards. Don't let the 'Swamp' in its name deter you. It does quite well in the desert. It has small leaves, two to three inches long, and iron deficiency symptoms are rare. It prefers full sun and will tolerate both drought and wet conditions for short periods of time. It has smooth, reddish bark and gray-green ribbon-like leaves. It is hardy, like most of its relatives, to about fifteen to twenty degrees F. making it pretty much freeze damage free in our warm climate.

*E. torquata*, is also relatively cold hardy, seventeen to twenty-two degrees, and has beautiful red and yellow flowers that make good cut flowers in a vase. Some varieties bloom on and off most of the year. It is commonly called the Coral Gum. It grows to about twenty feet tall and about as wide. It has a slender trunk and grows at a moderate rate. Its rough bark is colored dark brown. Sometimes a heavy flower and seed production season will cause some of the small branches to shed. Otherwise, it seems to be pretty much free of problems.

There are two species that are not recommended for home yards, but frequently are selected and planted. *E. camaldulensis* is much too large for most home yards, doing much better in parks and large, open areas. It is also known as the Red Gum. *E. polyanthemos*, the Silver Dollar Gum, seems to be highly prone to chlorosis in our soils, especially in soil that does not drain well. Unless you want to experiment, or take a chance, pick another tree.

Eucalyptus trees make good shade trees, provide color and interest to a landscape and many are quite problem free. When selecting a good specimen tree for your yard, consider selecting one of the recommended varieties that fits your needs.

## —CAROB TREE, Continued from Page 7

A large tree requires an extensive root system to keep the top supplied with water and nutrients. The carob is no exception. A close examination of carob trees will often reveal large, protruding brace roots at the base of the trunk. These brace roots can push, heave or break sidewalks, carport slabs, curbs and gutters and other permanent outdoor fixtures located too close to the base of the tree. It is best to give carob trees more than normal space away from any permanent structures to avoid any possibility of damage.

Young trees will need winter protection for the first few years, but as they mature, they will become winter hardy down to about 18°F.

The only real problem that carob trees experience in the desert is Texas Root Rot. The carob is extremely susceptible to this silent, but not so subtle killer of dicot trees. Avoid planting the carob or other susceptible trees and shrubs where this soil borne fungus is known to exist.

The carob tree provides a valuable and interesting alternative to other, more commonly used landscape trees and, in the right location, can provide the interest and shade needed for that special spot in the landscape. If you would like to see a good example of a carob tree, admire the mature tree near the northwest corner of the main fire station at the corner of Florence Street and Florence Boulevard in Casa Grande.

If you have questions, you can reach one of the Master Gardeners at the Cooperative Extension office, 820 E. Cottonwood Lane, Building C, in Casa Grande. The telephone is (520) 836-5221. The author's email address is [gibsonrd@ag.arizona.edu](mailto:gibsonrd@ag.arizona.edu)

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