

CALIFORNIA RARE FRUIT GROWERS, INC.

THE ARIZONA CULTIVAR

GOING BANANAS IN PHOENIX

Banana trees, although sparsely populated, are growing in practically every section of Phoenix and surrounding areas. Their broad leaves peeking over back fences and adorning sheltered enclaves in front yards are not hard to find. Although these are mostly unknown, or unnamed, varieties, it can be accurately assumed for the purpose of this discussion, that many of their titled cousins of the kind sold at supermarkets will flourish here quite as well. Temperatures over 100 and an occasional frost can take a toll but with a little luck and a bit of acquired know-how, you can enjoy beautiful, tropical foliage growing next to a saguaro cactus and later treat yourself to a banana split made with a homegrown banana.

The banana, by the way, is not a tree but an herb. Julian W. Sauls, Extension Horticulturist with the Texas A&M University Agricultural Extension Service describes it as a tropical, herbaceous plant consisting of an underground corm and a trunk (pseudostem) comprised of concentric layers of leaf sheaths. A true stem with a terminal inflorescence (*flower*) that bears fruit is the last thing to emerge from the center. The flowers appear in groups called hands along the stem and are covered by purplish bracts that roll back and shed as the fruit stem develops. Generally, a bract rolls up and sheds to expose a new hand of flowers almost daily.

A single banana pseudostem will live for only two to three years or until its fruit is harvested and the stem cut

down. But, the corm from which it grew can survive for many years and every one of the dozens of pups it produces has the potential for a stalk of bananas. The corm will continue to enlarge and store energy to nurture an endless supply of pups.

You should grow your banana in full sun even in the summer. If, however, you expose a young, tender plant recently severed from the mother corm to that environment, it will probably fry because it has no roots. New shoots arise from underground buds in an established corm. They receive nourishment during their first few months of existence from the corm while shaded by the foliage of the other members growing from that same mat. After being rudely severed from its mother and planted with its few roots cut off, you must act as a surrogate and provide shelter and water until it can grow new roots, adapt to the new environment and eventually build a colony of its own.

Strong winds shred the leaves of bananas but the green tatters will still take part in photosynthesis and manufacture food. Keep an individual leaf attached until two-thirds of it has turned brown. The unattractive dead leaves needn't be removed, either, but if, for cosmetic purposes, they are, you can shred or chop them up and layer the debris around the base for mulch.

A single banana pseudostem has a short life span producing one stalk of bananas in about 18 months in ideal soil and climate. With less than a perfect environment, you may wait for 2 years or longer to sink your teeth into your own, homegrown, tree-ripened banana. One plant will multiply into a grove in two or three years, however, and will need restraining to remain attractive.

The banana needs well-drained rich, organic soil and, in warm weather, lots of water. During winter after the morning temperature drops to about 55 degrees Fahrenheit, growth virtually shuts down and very little moisture is

required to sustain the plant. The soil around it should be damp. Irrigate only enough to keep it that way. When thirsty, the leaves tend to fold together to conserve moisture. Study them and learn their sign language.

Before planting your banana, test the soil's ability to drain. Dig a post-size hole about 2 feet deep. Fill it with water. If it empties within two hours, the drainage is ideal. If you continue to refill that same hole, however, you may reach a point when the water remains for a long, long time. If you irrigate the banana to that extent after it has been put in the ground, the roots won't get air and rot will set in. Learn to adjust the irrigation frequency to the rate at which the water permeates through and out of the root zone with a flushing action. Wet-feet can kill bananas any time of the year but winter is a most crucial period when water should not be added until the soil is quite dry. This herb is susceptible to diseases associated with cool, wet, soggy soil. Of the numerous other diseases that tend to plague the banana in the tropics, this desert climate does not appear to harbor them.

Banana feeder roots can reach as far away from the pseudo stem as the tips of the leaves extend outward. If at all possible, deep water and feed to and just beyond that range. A common tendency is to irrigate in a basin tightly encircling the corm. Under those conditions, the plant usually languishes under malnutrition. Roots will not penetrate into dry soil and a restricted root system will retard every other feature of the banana plant.

Bananas frequently bloom in Phoenix but fruit is often stunted and limited to three or four hands with rather bland flavor. That can be a function of genetics but poor fruit quality is more likely the result of nutrient deficiency and inadequate water. Tasty fruit can be produced here. Quality may also suffer when the flowering stem is engulfed in a dense banana grove or in close proximity to other hungry, thirsty vegetation. Fruiting exacts a large energy toll from the corm requiring a lot of food and water to sustain it. Competition for the available

nutrients is not helpful. Fertilizers high in potassium(K) are often recommended and are evidently a part of a healthy banana's diet.

After a stalk of bananas has developed, it may be 5 to 7 months before the fruit is mature and ready to pick. If the stalk is exposed to direct summer sun, cover it loosely with any reflective lightweight material; an old T-shirt perhaps. Cut the stalk at the yoke when the ribs on the bananas have practically disappeared and have the appearance of a supermarket banana. Hang it in a dark, sheltered spot to ripen or leave it protected on the plant. Pick a "hand" at a time as desired to ripen on the kitchen counter like any other banana.

In nature, there is no such thing as a "banana plant". Multiple stems emerge from a corm that continually enlarges and sends up new shoots. With adequate food and water, there will always be a "herd" ranging in size from big ones to tiny suckers popping through the surface. To get the best and most fruit, especially under less than ideal conditions, keep the population of any group to three, staggered in size. One adult that will be chopped down to a two-foot stub after the stalk of bananas is harvested; one juvenile and a baby are all you need. Remove all other growth. Sever suckers at their base soon after emergence and scoop out a hollow with a spoon. Fill the cavity with an equal amount of kerosene to kill the bud that will otherwise continue to grow and consume energy. After the inflorescence has emerged, lop off the flower head as soon as the hands fail to set; the immature, tiny fruits fall off. Bananas are believed to flower only after a certain number of leaves have been produced. Guesstimates run to sixty. But, the number of months it takes to reach the magic number depends upon the plant's immediate environment. Count them with a permanent marker if you really wish to satisfy your curiosity.

An old compost pit would be the perfect spot to plant a banana, it is often said. But, you would still have to fertilize the plant if it is your good fortune to have one

in your yard. Bananas can be foliar fed weekly with a balanced, soluble fertilizer. Apply by drenching the leaves on both sides during a cool part of the day. Frequent light feeding of these herbs only when actively growing is better than sporadic, heavy doses of nitrogen that is quickly leached away.

During the active growing season, apply 1/4th cup of ammonium sulfate every two weeks on non-fruiting plant groups and 1/4th cup weekly on fruiting plants. Blend the dry fertilizer into damp soil in a shallow trench at least 18 inches from the clump and water it in until a probe can be easily inserted 18 inches into the ground. Do not fertilize bananas when the morning temperature drops below 55 degrees. In cold weather, growth has virtually shut down and they cannot use the additional nutrient.

To harvest suckers, sever them vertically all the way around the stem. Use a sharp, clean 12' to 15' narrow shovel to its full depth. Worry the base out while inflicting as little trauma as possible. If the sucker has no roots, it probably won't survive. Cut off any existing roots and let the wounds scab off in full shade for several days before planting at the same depth. When you dig the pup(sucker), remove all its leaves as well at their point of emergence from the stem. When you plant the corm, keep its soil on the dry or slightly damp side until active new growth of at least one new leaf appears from its center.

The average mild, Phoenix frost of moderate duration will never kill the corm and roots but the tender leaves will freeze readily unless they can be covered or otherwise protected. The length of the freeze is often forecast. That information is critical to determine the extent of protection you put in place. One hour at 32F may inflict minor injury. Three hours at 33F could kill every tender thing in your yard.

Depending upon the frost severity expected, one or all of the following protective measures can be used if the plants are too tall to be simply covered with a sheet or frost cloth. First, remove any heavy mulch from the basin until you need it again to preserve moisture. Plug in an air fan and direct the air into the leaves. Use one with the largest volume output you can find. An industrial oscillating fan on a stand works great. To protect the stems, wrap them with old jackets or blankets and drape Christmas tree lights on the leaves. Put a floodlight or other heat source underneath. The shock suffered from losing its foliage will delay fruiting and set the development of a banana back several weeks making the energy you spend saving it a worthwhile effort.

Another strategy to cope with a severe frost warning is to remove all leaves and wrap the stem and top with much greater ease. If hit unexpectedly with a frost that kills all the leaves, let them hang for additional protection until frost danger is past.

Assume that this winter will bring a severe freeze and prepare for it in advance. Use electrical devices with caution.

In summary, grow bananas in full sun in well-drained soil rich in organic material. Water and feed them well during warm weather, let the plants rest during the winter, protect them from the two or three mild frosts and mount a sign in your front yard. **TROPICAL FRUIT GROWN HERE.**

These notes compiled by Dick Gross, Secretary, Arizona Cultivar of the California Rare Fruit Growers, Inc. For further information, contact him at rkgross3@cox.net or 623-939-4570