

Bananas

In Orange County

Laguna Hills Nursery

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Orange County is a *sub-tropical* climate with 3 months of warm weather, 3 months of cool weather and 6 months of variable weather. Bananas prefer tropical climates where the temperature stays warm all year however, success is possible nearly anywhere in coastal Southern California.

Description

Banana plants are actually a perennial herb with a pseudo-stem (false trunk) made of layers of leaf bases. Like celery stalks the *trunk* is mostly water. It arises from an underground rhizome that branches and sends up new pups (or suckers). The banana trunk grows to full height within the first year, then blooms and produces a bunch of fruit that ripens during the second year. The fruit requires 6-12 months to develop fully from the bloom. Banana leaves are usually folded down from their midrib during the warmest part of the day and open flat during cool and/or humid conditions. The foliage and trunk die to the ground following harvest. New trunks emerge constantly from the base.

Prepare a Site

To grow the best crop locate your banana plant in full sun in well-drained soil. The plants will grow beautifully in full shade but will produce very few fruit. It is best to allocate a clear area of soil about 3-4' across so that the banana suckers have enough area to develop. Bananas will grow in any soil provided it has good drainage. On poorly draining soil you can create a raised bed (minimum 12") above or a dry well (below). The majority of varieties need protection from the strongest winds. Leafy evergreen trees or tall bushes make the best windscreen. Banana plants will grow faster initially if the surrounding soil is amended with materials to increase airflow. Pumice, perlite, decomposed granite, gravel, or sand can help.

Installing the Plant (from container)

As bananas grow and multiply, each subsequent generation grows higher until many roots are exposed. It is preferable to plant the initial plant a bit deep. The plant can be situated with the top of the roots 4-6" below the final soil surface of the planter. The plant should be in the center of the designated planting area.

Actually banana rhizomes often grow in a fairly straight line sending up one trunk after another. You can install the plant at one side and direct it across the designated area.

Installing the Plant (from sucker)

Suckers can be successfully removed and replanted from a mother plant from April-September. The strongest ones are those with a fat stem topped with thin, swordlike leaves. Suckers that are between 1-3' tall when removed give the best results. Sever the connection between the sucker and its mother (closer to its mother) using a trenching shovel or any similar tool with a narrow blade. It is desirable to have at least a bit of root system attached to the sucker.

It is ideal to let the sucker heal for a few days in the shade before replanting. I have always installed them a day later seemingly with no problems. As with container-grown plants it is preferable to place the sucker a bit deeper than it was originally. It is easy to tell the direction the sucker and its rhizome are headed, compared with container plants. Placed close to one side of the site you can face it to grow across its designated area.

In Containers

Choose a big pot. If more than one generation is desired you must have a container wide enough to allow 2 or more trunks to fit. Deeper pots provide better drainage. It is not likely for banana plants grown in containers to produce a full-size bunch. Sand is an ideal potting soil for containers taller than 16". Sand mixed with either peat moss, perlite, or pumice will help lighten the soil.

Post Planting Care

After planting the bed should be mulched deeply with organic matter (compost, dead leaves, etc.) to keep the soil moist and provide nutrients. A good *palm food* will help young plants get started.

Bananas prefer regular moisture but can tolerate periods of drought surprisingly well. If the leaves are always folded down (day and night) the plant usually needs more moisture.

Regular Maintenance

Bananas in Nature like their old leaves left hanging on the trunk. Their appearance is much improved, however, if at least once per month the yellow leaves and dried portions of the sheaths are removed.

WARNING. BANANA SAP CAUSES A PERSISTANT STAIN ON CLOTHING AND MASONRY THAT CAN LAST FOR 6 MONTHS OR MORE. Wear old clothes when working with banana plants. The stain resembles a blood stain. On the plus side no part of a banana plant is toxic. As each trunk grows it will send up 3 or more pups (suckers). Generally it is best to only save 1 or 2 per year as replacements. The pups with the most sword-like foliage are usually the strongest. Eliminate extra pups by slicing through them slightly below ground level, or they can be removed and planted elsewhere (see Installing the Plant from Suckers). Do not remove more than 2 pups from the mother at one time. Removing pups damages the mother's roots and may cause her to fall over. If you allow more than 2 trunks to develop per year, each trunk will produce a bunch with fewer fruit. If there are more than 5 trunks the inside ones may stop producing fruit.

You can try timing your crop. The best quality fruit are possible when the bunch is harvested just before winter. The time from emergence of the pup to ripening of the fruit ranges from 18 months to 2 years depending upon the variety (and the weather). Removal of all pups other than those emerging at the chosen time can give you better results, unless of course you may want them to ripen at different times of the year.

The Flower & Fruit

The banana flower bud emerges from the top of the trunk following the last leaf, called the *flag* leaf (a small leaf only 1-2 feet long). This usually happens 10-15 months after the trunk first emerges from the ground. The stalk supporting the bud arches over until it is hanging down. As the bud scales open up (from base to tip) the flowers inside appear. The

first flowers are female and become fruit. After all female flowers have opened the remaining flowers are all male. Male flowers do not make fruit. The bud elongates and can continue to produce male flowers for months. The majority of banana growers will sever the stalk about 6-12 inches past the last developing banana. The developing fruit grows quickly at first then seemingly very slowly for 5 months. Under ideal conditions (tropical climate) the fruit can be harvested 6-8 months after the bloom. Locally expect 8-15 months. The fruit seems to suspend any development between mid-November and mid-April.

The fruit will ripen and be edible even when picked several months premature, but the amount of flesh will be just a fraction of normal. The developing fruit has angular creases like those on freshly ironed trousers. Maturing fruits fill out and the creases nearly disappear. Once the fruit starts to turn yellow the bunch should be removed quickly. The skins of fruit left too long on the tree will split open quickly. If the bunch is cut from the tree the ripening process accelerates. Fruit can be picked individually when mature and the rest left on the tree will ripen at a slower rate.

Bracing the Trunk

Vigorous plants of most varieties can produce bunches heavy enough to cause the trunk to fall over or break. The trunk should be braced as it starts to lean. It can be tied to a fence, a strong stake or can be braced by two 10' lodge poles lashed together about 2' from the top. Make certain the trunk is protected by a carpet remnant and the cord is strong.

Trunk Removal after Harvest

The trunk and foliage dies slowly after harvest. It is felt that stored energy in the trunk is transferred to the offspring, however decaying trunk tissue may transfer disease. Many growers will dispose of the spent trunk by cutting it down about 2-3' per week.

Varieties

Here is a list of our favorite and most sought after cultivars. Some references list trunk height, others list height of the top of the foliage. We will list

trunk height. Commercial bananas are known as *Cavendish-type*.

Ae Ae 12 ft. Beautiful plant with leaves, trunk and fruit variegated green, cream and white. The large bunches of 6" fruit can be difficult to ripen if not protected from cold and wind. This was originally grown by Hawaiian royalty. Usually grown in afternoon shade.

Cardaba 12 ft. Large, triangular fruit usually cooked or can be eaten when "dead" ripe. Produces a small bunch of large fruit. Vigorous and very cold hardy. Foliage and fruit has a blue-green color. Phillipines.

Dwarf Brazilian aka Dwarf Hawaiian Apple 10 ft. Produces a 40 lb. bunch of 6" fruit of outstanding quality. The dense, smooth flesh has a strong apple/citrus flavor and refuses to get mealy after ripening. The shelf life is at least double what is typical of commercial fruit. The trunk doesn't require bracing and is quite tolerant to wind and cold. HIGHLY RECOMMENDED

Dwarf Jamaican Red 7 ft. Small bunch of medium size fruit with dusky red skin and soft, sweet orange flesh. The trunk and leaf midrib are red. Slow growing and very sensitive to cold. 40°F may kill it. Decent wind tolerance.

Dwarf Namwah 8 ft. Large bunch of slender fruit with outstanding sweetness and flavor. Fast growing and will grow under unusually cool conditions. Underside of new leaves is maroon/purple, with older leaves retaining purple mid-rib. Good resistance to cold but poor wind tolerance. From Thailand.

Goldfinger 10 ft. This is a hybrid of a Cavendish-type with *Dwarf Brazilian*. It produces larger fruit and heavier bunches than *Dwarf Brazilian*. The flavor is excellent but not as distinct. Cold tolerance is good, but wind tolerance is just average.

Ice Cream 13 ft. Large bunches of 6" blue fruit than ripens to yellow with sweet, creamy white flesh. Occasionally will suffer from spongy core. Slender trunk. Good cold tolerance. POPULAR

Manzano 9 ft. Medium bunches of short, plump fruit with thin skin. The wonderful sweet tart flesh is terribly astringent until "dead" ripe. Fastest fruiting may be only 15 months from dirt to harvest. Good tolerance to cold and wind. The good looking plant is probably the best variety for containers.

Mysore 20 ft. Large bunches of 4" fruit with excellent flavor and shelf life. Beautiful plant with reddish trunk and undersides of the leaves. This is the most popular commercial banana in India.

Orinoco 12 ft. Small to medium bunch of large 8" triangular fruit that ripens bright yellow. This is a sweet cooking banana that can be eaten fresh. The fruit has a pithy core. It is often dried into chips. The plant is very cold, wind and drought tolerant. The flowers are quite showy. Originally from India this plant is famous in Venezuela and the most common throughout California.

Raja Puri 8 ft. Medium size bunch of small, plump fruit with smooth, creamy sweet flesh. The bunch "chokes" easily if the plant is stressed. The plant is quite cold tolerant and wind tolerant. It is popular in India.

Williams 9 ft. Cavendish-type. Large bunches of large fruit with excellent quality flesh. This appears to be the best "commercial-type" banana we can grow. It is not very hardy to frost, but better than other Cavendish-type varieties. We have grown bunches weighing over 70 lbs!