

4.1 Growing Pineapples and Preparing them for the Table

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Flowering pineapple, about 4 inches (10 cm) tall.



A 10 inch (25 cm) green pineapple. Note that it is tied to a support because it is too heavy to support itself. It will keep growing larger until it ripens.



A ripe 10 lb (4.5 kg) pineapple. You can't buy something like this (unless you visit a plantation) because commercial growers must pick them earlier and they begin to shrink as soon as they are picked. Even at the plantation, a fruit of this size will probably fall off the plant before it ripens.

Growing Your First Plant

You can start pineapple plants from the pineapples you buy. Pick a fresh looking fruit with a large, healthy, green plant on top. Fresh pineapple will have a shiny skin. Commercial pineapples are shipped without removing the plant on top because the top cut wound, unlike the bottom cut, will cause premature rot. However, the top plant will transpire water quickly, causing the pineapple to shrink (they were heavier and larger when initially picked). Therefore, you should remove the top plant immediately after you

bring it home, see below. For this reason, the pineapples you grow can be larger than commercial ones.

For best eating, choose a pineapple that is yellow about $\frac{3}{4}$ way up; it should be quite fragrant. Riper fruits will have some rot at the bottom and greener ones will be sour near the top. Do not buy a totally green pineapple for eating because pineapples do not sweeten once it is picked from its plant. If you try to wait until it ripens, it will simply rot. The only reason for buying a green pineapple is if you plan to start a pineapple plant and it is the only one with a fresh pineapple plant on top. Very often, the plant atop a ripe pineapple does not look healthy.

To grow the pineapple, simply twist the plant off the fruit and place it in a container with water. I have used gallon jugs (for milk or drinking water). Cut off the top third of the jug, creating a large opening; leave the handle, if it has one, for convenience in carrying it around. Fill the jug with water and place the plant in it, making sure that the bottom of the plant is well under water. Place in a sunny spot. A dense mat of roots should grow in 2 to 3 months.

Another method of starting the plant is to twist it off the pineapple and then remove some of the bottom small leaves. This should reveal some roots that have already formed under the leaves. If you see some roots, there is no need to start the plant in water.

Even if you see no roots, starting in water is not necessary; you can plant the freshly detached plant in its soil. This method may be faster, but requires more work because you will need to monitor the water in the crown (see following paragraph) to make sure that it does not dry out. It can survive about a week without any water in the crown and dry soil, but this will stunt growth and delay fruiting. When the plant is suffering from lack of water, the leaves will start to shrivel and wrinkle, but the plant can survive long periods without water, especially after it has rooted. Starting in water is more full-proof because you can see the roots growing in the water.

Plant it in a large pot (minimum 12 inch diameter, up to 32 inches) with $\frac{1}{3}$ mixture of soil, peat moss, and bark. The exact mixture and ingredients are not critical, and you can use just about anything in which roots can grow; adding some sand at the bottom of the pot may be a good idea. For such large pots, I usually drill a few $\frac{1}{2}$ inch holes near the bottom of the pot to make sure that the roots do not get water-logged when it is over-watered. Pineapples belong to the bromeliad family and the leaves form a "crown" at the bottom of the plant that holds water. This makes frequent watering unnecessary, and simplifies your work. As long as you can see some water in the plant, watering is not necessary, no matter how long you haven't watered it. However, you should try to keep the soil moist in order to accelerate root/plant/fruit growth.

For growing large pineapples (6 to 10 lbs; most store pineapples weigh only about 4-6 lbs), you must make sure that there is always water in the crown, with the soil moist all the time (but not water-logged), and lots of sun and fertilizer (20-20-20 for 12 months, 15-30-15 until the fruit appears [Miracle Grow] every 1-2 weeks). *Do not fertilize the water held in the crown*; apply fertilizer only to the soil. Resume 20-20-20 during fruit growth. Instead of 20-20-20, you can use any x-y-z fertilizer where x is larger than y, z.

The plant begins its main growth stage by first making long leaves that are relatively narrow; as the leaves mature, they become wider. Then the base of the plant begins to fatten; this is the first sign that a pineapple is coming, and a pineapple "flower"

will grow up from the center. There are many subspecies of plants with different growth habits (short wide leaves vs long narrow ones, white bracts around the flowers vs red or pink, etc.); thus if your space is limited, you want one with more compact growth habits. These plants make excellent house plants because they are quite pretty. In the first year, they will grow to 3 to 5 feet in diameter; however, after a few years, they will grow into huge specimens that will be too unwieldy for most homes. They also tend to produce very small, inedible fruits when raised as house plants with insufficient sun/light.

They are seldom attacked by insects or diseases and should not need any spraying. In many areas, they cannot be planted outdoors because (1) they cannot tolerate frost (they can tolerate cold temperatures down to about 35 degrees F [1 degree C]) and (2) rabbits, deer, etc. will eat them unless protected with wire mesh. Because the entire plant is quite tender, even rabbits can eat the whole plant, leaving nothing but the root stub. Those without a greenhouse can grow them outdoors during the warm months and bring them indoors during the freezing months. They will prosper indoors with fluorescent lights placed just inches from the top of the plant. If "grow lamps" are too expensive, ordinary lighting fluorescents will do. Use two 4-ft lamps for a small plant and more for larger ones, turned on for 16 hours. Those with a greenhouse can get by with minimal heating -- just enough to prevent freezing. The tips of the leaves have sharp barbs; you might cut them off to prevent eye injury, especially because they grow at eye level for small children.

The pineapple flower consists of a miniature pineapple with rings of tiny purple flowers that sprout starting from the bottom of the miniature pineapple. No pollination is necessary. The fruit will continue to enlarge until the day you pick it, and ripens by turning yellow, starting from the bottom. *It is very critical that you pick it at exactly the right time, within a window of only about a week* -- pick it too early, and it will be sour; too late, and it will start to rot from the bottom and the whole fruit can turn soft and mushy. All commercial fruits must be picked too early, and this is why they tend to be on the sour side. You can leave partially yellow pineapple at room temperature and it will turn yellow and become very fragrant. But it will not become sweeter and will lose moisture rapidly and shrink; this is why pineapples in stores tend to be small -- they were larger when initially picked. The ability to pick the pineapple at the optimum time is one advantage of growing your own. The bottom half of the fruit is tastier than the top half unless it is over-ripe, and the very top will not ripen until the bottom is too ripe. *Pick it when it is about 3/4 yellow, and as soon as it is strongly fragrant.* Pick the fruit by holding it in both hands and rocking it from side to side; you might also try a twisting motion. It should pop off easily, because the fruit is designed to naturally fall off the plant as soon as it is ripe.

Often, before the pineapple ripens, the plant will grow new shoots on the stem just below the pineapple. Unless you plan to grow a large pineapple farm, break these new shoots off when they are about an inch long (when you can grab them with a pair of pliers), so that the nutrients will go to the pineapple instead of these shoots. Later on, you will get better shoots from the base of the leaves and from underground. If shoots appear from underground or from the base of the leaves, let them grow as these will yield good pineapples later on.

Cutting the Pineapple

As soon as you pick the pineapple, twist the top plant off and discard (the only thing the plant will do is to siphon off the juices), or use it to start another plant. I usually cut only part of the fruit at one time, since large pineapples can be huge and are too large to be eaten in one day. Lay it on its side and slice off round disks about 1/2 inch thick, starting from the bottom. Then place each disk flat on a cutting board and cut it into 8 sections in the way you cut a pie or a round pizza. Now it will be a simple task to trim off the center core and outer skin. Any brown intrusions into the fruit from the skin should be excised. Each section can then be diced lengthwise and across, so that you end up with pieces roughly 1/2 to 3/4 inch on each side.

When you cut across, you will cut the veins that run radially out from the center of the fruit; this is important, as we shall soon explain. If you decide to cut only part of the fruit, take the remaining upper part and *immediately* place it on a dish at least one inch deep, in its upright position (cut side down). The fruit will drip juices into the dish from the cut end for a long time. Place this remaining section in the refrigerator and it will keep at least several weeks; if the top is not completely ripe, leave it at room temperature until it turns yellow. As soon as they are diced, place the cut pieces quickly into a deep bowl, as they will start to drip juices rapidly -- you don't want to lose any of this wonderful juice. Leave the bowl *uncovered* and *place it in the refrigerator overnight*. The pineapple is now ready for the table!

The reason for leaving it in the refrigerator overnight is that the diced sections will release their acidic juices that make the pineapple sour and that attack your lips and the linings of the mouth. This is why it is important to cut across the veins when dicing, so that the juices can flow out. It appears that, after the acids flow out, these acids either react with the air or undergo some kind of aging process and are neutralized, and the whole bowl of fruit becomes sweeter. If you can't finish the whole bowl in one serving, simply return it to the refrigerator; once cut in this way, the pieces will keep for about a week in the fridge and become even less acidic. You might enhance the taste by adding small amounts of sugar and/or pinch of salt, etc. A small amount of salt will greatly enhance the taste. Mix the diced sections well with the juices at the bottom of the bowl just before serving.

Multiplying the Plants

The first year of growth, as described above until the first fruiting, will seem like an eternity, especially when you are waiting impatiently for that first pineapple. The first fruit can be anything from a tiny pineapple to a 6 pounder or larger, depending on how well you grow it, and may take up to 2 years. With sufficient sun, water, and fertilizer, it should fruit in about 18 months.

After fruiting, the plant begins to multiply rapidly. Therefore, transplant it into a larger pot as soon as you see more than one new shoot sprouting from the soil. Each plant fruits just once and after that the old plants do not fruit and only sprout new plants. There are two types of new sprouts: those that emerge from the section of the central stem

above ground, and those that grow out of the soil from the root sections. Sprouts that grow above ground are attached firmly to the mother plant only in the beginning. After a few months, *when they are over several feet in diameter*, you will be able to pull them off the mother plant quite easily. Clearly, a large pineapple on top of such a plant will cause that plant to fall over and detach from the mother plant. Therefore it is best to remove such plants as soon as you can easily pull them off and plant them in another pot so that they can grow their own root systems.

I have used large pots (32 inch diameter) for the mother plant so that I can just pull off the upper shoots and stick them in the same pot. Although such plants initially have only very short roots, you need not worry because they are bromeliads -- you only need to make sure that the plants hold some water in their crowns, and they are guaranteed to survive. You will see these roots wrapped around the bottom of the plant; unwrap them as much as you can before planting. Until they grow sufficient roots, you may need to fill the crowns with water, about every 2 to 5 days. Once the new sprouts have grown so large that the pot has too many leaves (the new plants should be over 3 feet in diameter), cut off the old mother plant and all of its leaves with a pruning saw at the level of the soil and discard them. If you have ever been to a pineapple farm in Hawaii, you will have seen huge piles of these discarded old pineapple plants. If the pot is not overcrowded and the old plant is healthy, it should not be cut off, as it will help the new shoots (and pineapples) to grow.

Each mother plant can sprout about four new plants a year if well cared for, so your pineapple "farm" can grow exponentially. By the fourth year, you can be harvesting between 10 and 15 fruits a year! Since today's cultivars do not have a specific "ripening season", you will be harvesting them all year. From the second year on, the pineapples can become huge. They can be so heavy as to fall off from their own weight before they ripen. Therefore, if you see them starting to lean or bend over, insert a stick into the soil and tie the pineapples so that they are properly supported. You may need to tie them at the top and at the bottom of the fruit because what you need to do is to prevent the fruit from twisting off from its stem. The shoots that grow out of the ground fruit faster and tend to make larger fruits than the plants you transplant from the above-ground stem shoots, because the latter start out with almost no roots. Therefore, if you end up with too many plants, discard these stem shoots. The most important factors determining the size of the fruit are sunshine, watering, and fertilizer.

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