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Dragonfruit Cactus (*Hylocereus costaricensis*)

Known in its area of origin as the *pitaya*, dragonfruit cactus gets its name from its fruit, where the heavy scales and the red-and-green coloration invoke a dragon's tail. Native to Central America, the dragonfruit is one of the only cactus commercially raised for its fruit. Today, most of the world's commercially raised dragonfruit are grown in Vietnam, but the cactus does very well in any area without danger of freezing temperatures, and can often be found growing in large numbers in Hawaii and southern Florida.

A Word of Warning

Growing pitayas for their fruit is not a short-term task. The pitaya is a climbing cactus, regularly reaching heights of as much as 30 feet (9.14 meters), and will attempt to do the same in cultivation. In fact, while pitayas make very attractive hanging basket plants, they do not start blooming until the average mass of the plant reaches at least 10 pounds (4.54 kilograms). Combine this with the need to be brought inside when winter temperatures go below 50 degrees F. (10 degrees C.), and a producing dragonfruit cactus needs a considerable amount of room. With that in mind, if winter temperatures are too low to leave the cactus outside, consider a permanent indoor solution.

Also, don't forget that the pitaya is a cactus, and that it bears spines like its relatives. These spines are relatively soft and flexible, but they can still cause damage if they get into the eyes or other soft tissues. Those sensitive to cactus spines from other species should always wear good gloves before handling a dragonfruit cactus.

Care and Feeding

As mentioned earlier, dragonfruit cacti are climbing cacti, and individual branches will sprout roots to enable them to cling to bark, brick, rock, or any other rough surface. Given an opportunity, pitayas will grow up and over walls and other obstacles. However, the plant will not absorb significant amounts of nutrients from these roots, so dragonfruit cacti should be raised in a rich potting mix. They also need at least six hours of full sun per day, and **MUST** be protected from colder temperatures and excessive wind.

Pitayas should be repotted every two years by removing the root ball from the existing pot, placing it in the new pot, and adding potting mix around the edges. Try not to break up the root ball, and try not to dislodge the plant from any fixtures to which it has attached. If attempting to grow one to its largest size, start it in a large pot and expect it to stay there.

As with other cacti, pitayas are adapted to dry soil conditions with exceptional drainage. Always use pots with drainage holes in the bottom, and add perlite, Styrofoam, or other lightweight additives at the bottom of the pot to decrease weight and improve the existing drainage. Water only when the soil is completely dry: in extremely high temperatures, exceeding 104 degrees F. (40 degrees C.), the cactus branches will actually shrink and crumple as they lose moisture, giving a direct sign as to when they need further watering. Otherwise, try to water every week to two weeks, or when the soil is parched more than an inch below the soil line.

If grown solely as an ornamental, particularly in small hanging baskets, dragonfruit cactus should be fertilized sparingly, but if grown for fruit or to reach full size, they need large amounts of nitrogen. The Texas Triffid Ranch uses Mexican bat guano (10-2-1), available from garden shops specializing in organic solutions, mixed with water and added once per month. Try not to use too high a nitrogen level when fertilizing, as this may burn the roots.

Blooming and Propagation

Once the pitaya has reached minimum blooming size, it will start budding from the terminal ends of its branches. The bloom is usually white to yellow, and will only open at night. The flowers may be pollinated by local pollinators such as hawkmoths, or they can be pollinated with a soft brush. Under proper conditions, the fruit itself may ripen in one to two months. Make sure to fertilize and water regularly during fruit set and growth, and a trellis may be necessary to support the weight of the plant at this time. In commercial propagation, the pitaya is trained up a wooden support and allowed to spread out from a height of six to eight feet (1.83 to 2.44 meters), allowing the fruit to get proper air circulation. For best results, grow two pitaya close to each other, to minimize self-fertilization.

When ripe, dragonfruit grow a thick rind that protects the fruit from insects, and this rind must be removed or cut through to reach the pulp. In the species *H. costaricensis*, this pulp will be a bright red-purple with tiny black seeds. For best results, cut dragonfruit lengthwise into quarters, then grasp the rind and pull back. The juice of *H. costaricensis* will stain clothing and porous surfaces, so be careful of splashing when cutting. While the fruit may be eaten at room temperature, many prefer it chilled before preparation. As far as other preparation is concerned, it can be eaten raw or made into jelly, and makes a very distinctive addition to fruit salads, especially ones containing subtle-tasting fruit such as watermelon or honeydew.

While dragonfruit seeds are edible and digestible, they may also be saved for growing more pitayas. Scrape them out of the dragonfruit flesh with a knife or spoon, place them on paper towels or another absorbent surface, and let dry for one to two days. Seeds may be saved in the refrigerator for up to a year without appreciable problems with viability. Sow the seeds on a sifted propagation mix and keep the mix moist but not wet: the seedlings will reach flowering size within two to five years.

Alternately, pitayas share with their cactus cousins an aptitude for asexual propagation. If branches break off, lie them on their sides in a pot filled with rich potting mix, making sure that the break is not buried. Water gently, and the branch will sprout roots and start growing from buds at the terminal end.

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