

## PROPAGATION OF *CARICA PENTAGONA*

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### INTRODUCTION

*Carica pentagona* belongs to the same group of plants as the papaya. It has a thick, fleshy trunk. Its leaves and fruit alike are held on stalks from the trunk. The plant itself looks very tropical with its heavy green trunk and palm-like foliage. It grows as a single trunk unless pinched or nipped by a heavy frost. It then becomes multiple, having as many as four or five trunks. Although it seems very tropical, when grown properly, *Carica pentagona* seldom dies from a winter freeze in Southern California. More than likely problems will be related to heavy soil or excessive moisture in the winter months.

Unlike most tropical papayas, *Carica pentagona* does not need male and female plants and requires no cross pollination. The small fruits are already set as the flower opens. Ripe fruit can reach a weight of up to six or seven pounds. It can be left on the plant to ripen, or picked when the fruit just begins to turn yellow and ripened indoors. Another attribute is that the fruit is seedless and has no hollow center cavity. To become palatable, sugar, honey or other juices should be added to enhance flavor.

Little is known about the origin of *Carica pentagona* in its native Ecuador [a synonym is *C. × heilbornii* V. M. Badillo var. *pentagona* (Heilborn) V.M. Badillo]. It was discovered in the early part of the century by explorers in the remote high altitude valleys of the Andes Mountains where, until then, it was known only by the Ecuadorians. In the 1950's, the plant was brought to New Zealand, where it found great acceptance and thrived in the sub-tropical climate. Sometime in the early 1970s, *Carica pentagona* found it's way to California, where it was grown by a handful of rare-fruit growers.

### PRODUCTION OF STOCK PLANTS

For optimum cutting production, it is beneficial to grow stock plants in containers. This allows the versatility of moving plants into the greenhouse for the winter and to the shadehouse for the outdoor growing season. Greenhouse-grown cuttings do not root as well as the fresh spring and summer shade-house growth. It is also important to use a light, fast draining mix and feed frequently as *Carica pentagona* is a heavy feeder.

## CUTTINGS

Cuttings should be prepared 3 to 5 in. in length. Ideal cutting stock will be 3/8 to 3/4 in. caliper; however, *Carica pentagona* stumps can be rooted almost as large as they can be found. Cuttings from the perimeter of the plant with short internodes tend to root better than growth from the inner shaded structure. Tip cuttings as well as internodal cuttings can be rooted, but should be stuck in separate flats because tips tend to sprout before they root and should be treated separately. For best results, cuttings should be completely defoliated, leaving only a short petiole of 1/4 in. If foliage is left on the cuttings, the petioles are very long and tend to drop almost immediately and rot in the flat. Cutting flats should be new or cleaned of all debris and sterilized. Standard plastic propagation flats are recommended. Rooting media should consist of approximately ten parts coarse perlite and one part peat moss. Cuttings have also been successfully rooted in straight coarse perlite. Hormone powder containing 8,000 p.p.m. of IBA is recommended. Results with liquid IBA are varied, as it seems that many of the carrier solutions are too strong and tend to burn the base on the soft, fleshy cuttings.

## ENVIRONMENT FOR ROOTING

The best environment for rooting is a plastic covered bench inside a shaded greenhouse. Temperature should be kept between 75° and 85° F. Cuttings kept too hot or too cool do not respond as well as cuttings kept within this 10 degree range. After cuttings are set into the bench, a light solution of captian W 50 and Benlate is recommended as a fungicidal drench before closing the cover. Relative humidity should be maintained between 80 and 90%. Under these conditions callus begins after 5 to 7 days and healthy roots are noted after three weeks.

## PLANT PRODUCTION

After cuttings are rooted and removed from the tents, they are hardened up for one to two weeks before potting. A 4 in. pot is used, which provides adequate room for rapid foliage and root development. Plants are moved out to the shade house after two weeks or so and shortly thereafter, are ready for field planting for fruit production or shifting into a larger container for sale to the retail trade.

## SUMMARY

*Carica pentagona* is a unique new fruit. Oftentimes it is misunderstood when the fruit is treated like that of a Solo papaya or Mexican papaya. Ornamentally, the plant is quite beautiful. When the fruit is prepared properly, *Carica pentagona* will be met with great acceptance in Southern California as well as in other subtropical areas where it can be grown.