REVISTA BRASILEIRA DE FRUTICULTURA

v. 31, n. 3 p.637-929

PITAYA

The pitaya is a plant that comes from America, and the yellow (*Selenicereus*) possibly comes from Colombia or Ecuador, but the red (*Hylocereus*) can be found in Mexico and Guatemala, Costa Rica and El Salvador. The pitayas belong to the Cactaceae family and there are two main commercial species: the one with red peel -*Hylocereus undatus (*Haw) Briton & Rose and the one with yellow peel - *Selenicereus megalanthus* (Schum ex. Vaupel, Moran). The first gender has other 25 species, some which are very similar to *H. undatus*. This one is known as pitaya of the red peel and has white pulp, while the yellow has yellow peel and white translucent pulp and bigger seeds. The red one with red pulp is the *H.lemairei* (Hook.) Britton &Rose. The basic description of *H. undatus* (red with white pulp) is the following: epiphyte plant, rupicolous or ramified terrestrial, with trigone branches, or branches with three wings, with a little more than 20cm of average length and 5 to 7cm of diameter, with lobes of 2.3cm of height, green or grayish, as it becomes older, due to the wax that covers it, with sharp, reconstructed and corneal edges. In the stalks there are areolas, from 2 to 3 cm of diameter, distant from 3 to 5cm among them, with 3 to 6 thorns each one, measuring 1 to 4mm, underwing with an expanded base in a bulb.

The flowers are lateral, nocturne, measuring 20 to 35cm of length, white, complete, aromatized with the beginning of the night, when they are pollinated by insects. There are numerous stamens, and they were counted in a quantity superior than 800 in only one flower, arranged in two rows, around the pistil formed by 14 to 28 cream styles. The sepals are light green. The pollen is yellow and abundant.

For the occurrence of the crossed pollination or self- pollination it is necessary that the flower opens, what happens at night, but its opening is preceded by several steps, that is: from 12 p.m. on there is a swelling of the flower bulb and the beginning of the anthers dehiscence. In the beginning of the night (after 7 p.m.), the floral opening happens, with the separation of the perianth and the bracts. At this stage the anthers are with its maximum dehiscence. The stigma lobes extend, but as there is a separation of the stigma stamens and as there can be a height difference of these organs, this makes it difficult for the self-pollination. At this phase, the low relative humidity and the insolation may influence the flower senescence, what happens in the beginning of the following morning. The red pitaya fruit develops rapidly and between 30 to 40 days after the fertilization it is ready to be harvested. In our conditions, as the flowering occurs between December and April, there can be fruits harvest in this period, due to the successive flowering periods. The yellow one takes up to 6 months to reach maturity. The pitaya adapts itself to certain conditions, such as in regions with temperatures ranging from 18 to 26 ºC, altitude from 0 up to 1850m above sea level, and annually rain periods from 1.200 to 1.500 mm; it prefers sub humid climates, half shadow, without hoar, with well drained soils. However, the pitaya can adapt to diverse climate types: the tropical, sub tropical and arid.

The harvest occurs periodically with the fruits in the early mature stage, because they ripen after the harvest and preserve themselves more. It must done by carefully cutting the fruit penduculate with scissors. After the harvest, the fruits are washed so that they can be cleaned and classified. This is done with cloth and with the cut of the floral remains and the driest scale. The pitaya can be used as dry fruit or juice, pulp, ice cream or mousse, or as sweets pigment. It is known by its medicinal properties due to the presence of captina in the fruit, which is considered a heart tonic, as well as its oil has a laxative effect, what is efficient for the control of gastritis and kidney infections. It is also used for preparing shampoo and it has effect against headaches.

Luiz Carlos Donadio
Agricultural Engineer, Professor
Unesp/FCAV, Jaboticabal-SP