TIPST 20

Automated system for acquisition and image processing for the control and monitoring boned Nopal.

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ABSTRACT

Leaf nopal is one of the most characteristic foods of Mexico, and its consumption is growing in several countries such as China. The cactus leaves are protected by thorns, which need to be removed before consumption. In this paper, we describe the use of acquisition techniques and image processing to control the process of cactus boned using a laser Nd: YAG. The areolas, areas where thorns grow on the bark of the nopal, are located using a CMOS sensor. The images of nopal are acquired, digitized and then processed using segmentation algorithms. Once the positions of the areolas are known, the coordinates are sent to a galvanometer, which is connected directly to the laser of Nd:YAG that sends pulses laser to remove thorns.

Key words: Image segmentation, laser Nd: YAG, CMOS Sensor.