

Physical changes of mango fruit ‘Tommy Atkins’ during development and maturation

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Financial support: PIBIC-FACEPE/CNPq

Physical attributes of mango fruit ‘Tommy Atkins’ cultivated in São Francisco River Valley (Brazil) were measured with the objective of characterizing them during development and maturation. Fruits of 40 mm diameter (at 52 daf - days after fruit set) were selected and periodically evaluated until became ripe on tree. Six hundred fruits from forty eight plants distributed in four selected rows on the orchard were used. The treatments corresponded to the age of the fruits. The experimental design was completely randomized with four replications constituted of ten fruits. Fruit fresh mass increased until 120 daf. After that, the differences could be attributed to sampling. Fruit length and diameter stabilized from 106 daf when the pulp became orange. Pulp color changes were important indexes to monitor fruit maturation, being characterized by decreases on luminosity and °Hue and increase on chroma values. Red pigments on skin began to be exhibited at 99 daf. Values of °Hue were lower than 18 from 106 to 125 daf, indicating a purpled-red color. Pulp firmness decreased from 113 to 54 N, during the period from 113 to 139 daf. Then, it is recommended an accompaniment of pulp color and firmness from 106 daf to decide the harvest time.