Title Determination of maturity period of selected cucurbits based on marketable and sensory quality

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Abstract

India is the second largest producer of vegetables in the world. Among different vegetables cucurbits like bitter gourd, bottle gourd, ridge gourd and pumpkin stand in pride position because of their health benefit. Due to unavailability of proper maturity standard sometimes cucurbits are harvested at immature or over mature stages. As immature fruits are much susceptible to mechanical injury as well as rapid physiological senescence process, it suffers huge post harvest losses during handling. Besides as immature and over mature fruits are rejected by consumer, farmers are force to sell their produces at lower price.

Keeping this in mind a study was carried out to determine the optimum maturity period of cucurbits like bitter gourd, bottle gourd, ridge gourd and pumpkin based on marketable quality like texture and colour. As consumer preferences are the most important criteria in marketing system, a sensory evaluation was carried out to determine the period of maximum acceptance. From the day of anthesis to over maturity fruit hardness, seed hardness, peels colour (L, a*, b*) was recorded in one day interval. Over all sensory acceptances were determined based on visual colour, texture and appearance. Although no definite trends in lightness (L) and redness (a*) were observed, general increasing trends in yellowness (b*), fruit hardness and seed hardness were observed. Sensory evaluation revealed that maximum acceptability period for bitter gourd, bottle gourd, ridge gourd and unripe pumpkin are 6-13 days, 7-12 days, 4-10 days and 6-11 days respectively.