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RESEARCH PAPER

Post harvest treatments for enhancement of ripening in Kesar mango

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SUMMARY : An experiment was carried out to study the post harvest treatments on ripening of Kesar mango fruit during storage at Department of Horticulture, Junagadh Agricultural University, Junagadh during 2007 to 2009. Significant variation was observed due to post harvest treatments for majority of characters and enhanced ripening and gave early marketable fruits. Ethrel 1000 ppm gave highest marketable fruit and maximum percentage of ripened fruit. Lowest physiological loss of weight and percentage of spoiled fruit were recorded with carbendazim @ 1000 ppm. For qualitative parameters, ethrel 1000 ppm with carbendazim 500 ppm gave lowest acidity and maximum reducing sugar, whereas, ethrel 1000 ppm gave maximum reducing sugar. Similarly, highest percentage of total sugar was noted at ethrel 1000 ppm + carbendazim 500 ppm + neem extract 5 per cent during all days of storage. TSS was also found significant and highest TSS was registered with ethrel 1000 ppm + neem extract 10 per cent. In case of organoleptic test, ethrel 1000 ppm + carbendazim 500 ppm performed for better fruit and pulp color, whereas, ethrel 1000 ppm for highest rank in taste.

Key Words : Mango, Post harvest, Ethrel, Marketable, Spoiled, Organoleptic

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The mango (*Mangifera indica* L.) is a delicious fruit. Besides fine taste, its high palatability, sweet fragrance, attractive colour and nutritional value, it is called as king of fruits. It is grown in many states on large scale on 2.20 million hectares land and total production of 13.79 million tones with 6.30 MT / hectare productivity (Anonymous, 2008). Ripening is the problem of mango as due to climacteric nature of the fruit. Post harvest handling can play a major role to reduce post harvest losses. For good market price, it becomes essential that fruits must be ripened at proper time and transported to the market without spoilage. The fruits are ripened after harvesting. If harvesting is not done at exact maturity indices, the ripening of fruit is delayed or some time fruit is deteriorated without ripening. In market, many hazardous and unscientific methods are employed by the traders for ripening which is dangerous to human health. For good market price, it becomes essential that fruits must ripe uniformly and timely. Therefore, an experiment was conducted for post harvest treatment to enhance the ripening in mango cv. KESAR.

EXPERIMENTAL METHODS

Green mature fruits with uniform size and shape having specific gravity between 1.0 and 1.04 were selected. The trial was conducted during three year from 2007-2009. The statistical design was Completely Randomized Design (C.R.D.) with three replications. The trial comprised of different eight treatments like control (T_1), ethrel 750 ppm (T_2), ethrel 1000 ppm (T_3), carbendazim 1000 ppm (T_4), ethrel 1000 ppm + carbendazim 500 ppm (T_5), ethrel 1000 ppm + neem extract 10 per cent (T_6), ethrel 1000 ppm + hot water treatment 52^{0}C $\pm$ for 5 minutes (T_7) and

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