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Studies on the effect of ethrel on ripening of banana fruits cv. GRAND NAINÉ

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Abstract : The present investigation studies on effect of ripening behavior of banana (*Musa* spp.) fruits cv. GRAND NAINÉ was conducted in Post Graduate Laboratory, Department of Horticulture, B.A.College of Agriculture, Anand Agricultural University, Anand during October 2007. The experiment was carried out in Completely Randomized Design with four replications and six treatments. Treatments were applied with different concentrations of ethrel @ 500, 750, 1000 ppm (2 minutes dip), hot water and ethrel 250 ppm (2 minutes dip), ethrel 250 ppm (2 minutes dip) along with storing in Ice and simply dipping in water formed control treatment. The different ethrel concentrations significantly influenced ripening of banana fruits. Ethrel @ 1000 ppm resulted in early ripening of banana fruits helping in early marketability. The treatment had highest marketable fruit (73.61%), minimum spoilage percentage (31.20%), highest pulp: peel ratio (7.00). Untreated fruits recorded delayed ripening, lower physiological weight loss (15.45%), least marketable fruits (29.87%), maximum spoilage of fruits(32.39%) and minimum shrivelling(11.24%), lower pulp to peel ratio (4.82) and slow colour development during storage, Thus it can be concluded that the banana fruits treated with ethrel at 1000 ppm was found the best for early ripening of fruits up to 8 days of storage.

Key words : Ethrel, Ripening, Banana, Post harvest treatment

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Fruits play very important role in daily human diet. They are important source of vitamins, minerals and salts. They also supply carbohydrates for energy and proteinous compounds for muscles building. Fruit consumption per capita in India is very low which is only around 46g per day as against a minimum of about 85g recommended by the dieticians. So that to meet our daily requirement there is need to increase production of fruits in India. India is the second largest producer of banana after mango with a total production of 18.24 million tones with an area of 4.63 lakh ha. This is 15.12 per cent of total fruit production in India (Anonymous, 2006a). Various researchers estimated the post harvest losses of banana to be around 30-40 per cent (Chadha, 1995). The reason for high post harvest losses are lack of proper knowledge for sorting, grading and packing of harvested produce, non-availability of the commercial cold storages, lack of cool chain during transport as well as storage. As, it is climacteric fruit post harvest handling plays an important role in maintain the quality and shelf life of fruit. In view of the above

considerations and inadequate research on ripening of banana, the study was conducted during the year 2007 to determine the effect of post harvest treatments on ripening behaviour of banana fruits cv. GRAND NAINÉ.

RESEARCH METHODS

The present investigation entitled studies on effect of ripening behavior of banana (*Musa* spp.) fruits cv. GRAND NAINÉ was conducted during October 2007 at the Post graduate Laboratory, Department of Horticulture, B.A. College of Agriculture, Anand Agricultural University, Anand with the objectives of to find out optimum concentration of ethrel for ripening of banana fruits with best quality under ambient condition. The experiment was conducted in a Completely Randomized Design with four replications and six treatments viz., T₀ - Control (dipping in water for 2 minutes), T₁ - Ethrel 500 ppm (dipping for 2 minutes), T₂ - Ethrel 750 ppm (dipping for 2 minutes), T₃ - Ethrel 1000 ppm (dipping for 2 minutes), T₄ - Hot water dipping + Ethrel 250 ppm (dipping for 2