Research Paper

THE ASIAN JOURNAL OF HORTICULTURE
Vol. **6** | Issue 2 | December, 2011 | 335-338

Article history:
Received : 20.06.2011
Revised : 25.07.2011
Accepted : 22.09.2011

Effect of cycocel, potassium sulphate and benlate on morphology and fruit quality in ber (*Ziziphus mauritiana*) cv. BANARASI KARAKA

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Abstract : A field experiment was undertaken to find out the effect of potassium sulphate, cycocel and benlate on various morphological parameters and on post harvest life of ber, cultivar Banarasi Karaka was selected for the experiment. Foliar application of various treatments that is potassium sulphate (0, 1 % and 2%), cycocel (0,1000 and 1500 ppm) and benlate (0 and 500 ppm) to runoff stage. Frist application was given in month of September during blooming period followed by second application of pea stage of fruits. Experiment was laid out in Randomized Block Design with three replications. Uniform cultural practices were followed during course of investigation. Higher concentration of potassium sulphate (2%) was found effective to increase the fruit length, diameter and weight followed by lower concentration of potassium sulphate (1%). In general application of potassium sulphate was found beneficial than control. Foliar application of cycocel and benlate did not exert any significant effect on various morphological parameters .During storage of fruits a combination of (cycocel 1500ppm, potassium sulphate 2 per centand benlate 500 ppm) significantly increased TSS and ascorbic acid content at different period of storage and maintained maximum level at 12 days of storage. Whereas acidity increased with pre-harvest application of C_0 k_2 B_1(0 ppm, 2%, 500 ppm).

Key words : Cycocel, Potassium sulphate, Benlate, Ber

How to cite this article : Singh, Shailendra V. (2011). Effect of cycocel, potassium sulphate and benlate on morphology and fruit quality in ber (*Ziziphus mauritiana*) cv. BANARASI KARAKA, *Asian J. Hort.*, **6** (2) : 335-338.

Ber or Indian jujube (*Ziziphus mauritiana* Lamk.) is native to India. Leading ber growing states in India are Haryana, Punjab, Uttar Pradesh, Rajasthan, Madhya Pradesh, Gujarat, Bihar, Maharashtra, Andhra Pradesh, and Tamila Nadu. It is well documented in ancient literature in India and grown widely at commercial scale. Ber fruits are rich in Vitamin C, Vitamin A and Vitamin B complex. A lot of work on nutritional and hormonal aspect has been done on several fruit crops .Whereas information on these aspects in ber is scanty. Hence, present experiment was undertaken to find out the influence of cycocel, potassium sulphate and benlate on morphological parameters and fruit quality parameters during storage in ber.

RESEARCH METHODS

A field experiment was carried out to see the response of potassium sulphate, cycocel and benlate on morphology and fruit quality in ber (*Ziziphus mauritiana*) cv. BANARASI KARAKA. Treatments consisted of various concentrations of potassium sulphate (0, 1 and 2%), cycocel (0, 1000, and 1500 ppm) and benlate (0 and 500 pmm). Experiment was carried out in Randomized Block Design with three replications. Distilled water was used to prepare the solution. Different concentration of chemicals were sprayed to the ber plants at flowering and pea size stage. Control plants were treated with distilled water. All chemicals and distilled water were applied to the plant upto runoff stage. Morphological parameters were taken at maturity stage. Whereas post harvest parameters of different days of storage were observed in the laboratory after harvesting of the fruits. Total soluble solid was determined by Erama hand Refrectometer at 20^0C. (Anonymous, 1970). Estimation of acidity was done by methods described by Rangana (1977). The titrimatric methods for estimation of ascorbic