

## Effect of NAA, triacontanol and boron on initial seed quality and storability of bitter gourd (*Momordica charantia*) cv. PUSA VISESH

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### SUMMARY

The field experiment was conducted during *Rabi* season of the year 2009 at College of Agriculture, Raichur, in order to find out the response of NAA, triacontanol and boron on seed quality and storability in bitter gourd cv. PUSA VISESH. The experiment was laid out in randomized block design considering eight treatments viz., NAA (25 and 50 ppm), triacontanol (0.5 and 1.0 ppm), boron (3.0 and 4.0 ppm), water spray and absolute control. Results revealed that NAA 50 ppm recorded highest initial seed germination and lowest electrical conductivity. Whereas, boron at 4 ppm recorded highest seedling length, seedlings dry weight and dehydrogenase enzyme activity. Resultant seeds stored in cloth bags under ambient storage condition and seed quality tested after every month end of storage period (February, 2010 – January, 2011). The storage study revealed that boron at 4 ppm maintained highest seed quality parameters like seed germination, seedling length, seedling dry weight, speed of germination, dehydrogenase activity and lowest electrical conductivity at the end of twelve months storage period.

**Key Words :** Bitter gourd, Seed quality, Cloth bag, Storage

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**B**itter gourd (*Momordica charantia* L.) is one of the most important tropical vegetable crops. It belongs to the family cucurbitaceae and popularly known as balsam pear, karela, or bitter melon.

The plant growth regulators (PGR's) are considered as a new generation agrochemicals after fertilizers, pesticides and herbicides. In bitter gourd, it is possible to increase the yield by increasing the fruit set by using growth regulators. Use of PGR's and micro nutrient like boron might be a useful alternative

to increase crop production. GA<sub>3</sub> and NAA are also important growth regulators that may have ability to modify the growth, sex ratios and yield contributing characters of plant (Shantappa *et al.*, 2007).

The micronutrient and cations are involved in enzyme systems as cofactors with the exception of Zn, Mn, Cu and B. These are capable of acting as 'electron carriers' in the enzyme systems and are responsible for the oxidative-reduction process in the plant system. In the present study efforts were made to know the effect of plant growth regulators (NAA and Triacontanol) and chemical (B) on seed yield and quality of bitter gourd (*Momordica charantia*) cv. PUSA VISESH.

Storage and preservation of quality seed stocks till the next season is as important as producing quality seeds. Farmers and scientists opined that safe storage of seeds is advantages as it reduces the burden of seed production every year, besides timely supplying of desired genetic stocks for the use in years following periods of low production. The germination and vigour which can be expected from stored seeds is another

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