

## Improving the Tuber Yield of Potato through use of Growth Retardant

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With the decline in land area and other resources for agriculture, there is a greater challenge to produce more food to meet ever-growing population. In this regard, different approaches are required to produce more food per unit land area. In the past, several growth hormones and growth retardants have been used successfully to improve the productivity of crops. With this background, in the present study, mepiquate chloride, a growth retardant was used to test the effect of potato growth and yield. Mepiquate chloride is an inhibitor of GA and therefore, upon application. The GA effect is reduced. Potato being a tuber crop needs improvement in tuber production rather than vegetation growth. This however is possible if vegetative growth is controlled mainly by use of growth retardants. Mepiquate chloride being a growth retardant it is expected to reduce the vegetative growth and at the same time improves the tuber yield. Accordingly, in the present study, when chemical is sprayed on potato plants twice at 45<sup>th</sup> and 60<sup>th</sup> day, enhanced the tuber yield significantly. At all the stages of mepiquate chloride sprayed, at 300ppm resulted in higher yield when compared to other treatments. The tuber yield per plot showed an increase from 29.4 to 47.5%. Further, the vegetative growth in mepiquate chloride sprayed plants reduced significantly over unsprayed control plants. The results therefore indicate that, mepiquate chloride can be used to improve the tuber yield and therefore increase the food security of the modern world.

### Biography:

Dr. M Mahadeva is presently working as Professor in University of Agricultural Sciences, Bengaluru. And nominated as member for Karnataka Bio diversity Board, Karnataka Rajya Vignana Parishath, Environmental Protection Institute and Joint Secretary for Institute of Agroforestry farmers and Technologies. Guided eight M.Sc students out of which two students secured gold medal and guided one PhD student. Presently guiding four M.Sc and three Ph.D students. Awarded as Best faculty in 6<sup>th</sup> Academic Brilliance Award, 2018 from Research wing for excellence in Professional Education & Industry.