

CHANGES OF MORPHO-PHYSIOLOGY, YIELD AND QUALITY OF BROCCOLI WITH CALCIUM AND SALICYLIC ACID

Khursheda Parvin*

Executive Summary

Broccoli (*Brassica oleracea* var. *italic* L) is an important cole crops belongs to the family Brassicaceae, which is attracted more attention due to its multifarious use and great nutritional value including rich in antioxidants. Broccoli also has cancer-fighting properties and eating more than one serving of broccoli a week reduces the risk of prostate cancer by up to 45%. Successful production of broccoli depends on various factors where nutrient and hormone are very important. Therefore, it is highly desirable to explore different possible ways to enhance the productivity of broccoli employing cost effective and easy technologies. The experiment was conducted at Horticulture farm of Sher-e-Bangla Agricultural University, Dhaka-1207 during Rabi season of 2016-2017. Effect of salicylic acid (SA) and calcium Ca was evaluated on broccoli production in aiming of enhancing quality rich broccoli production along with investigation of variation on growth, physiology, yield contributing and yield character as well as quality attributes. BARI-brokoli 1 was used as testing material in this study. Calcium application improved vegetative growth such as plant height, leaf area including leaf length and breadth as well as canopy spread where 15 mM of Ca showed best result compared to others. Higher yield production was found from Ca treatment mostly at 10 mM concentration. Where, higher vitamin C and curd dry matter content were evaluated from higher concentration of Ca. On the other hand, SA supplementation showed very interesting effect on greater biomass production compared to yield production notably from 0.8 mM SA treatment. Better growth development, yield production and quality enhancement were significantly affected by in combination of Ca and SA.

*Assistant Professor, Dept. of Horticulture, SAU, Dhaka-1207.