EFFICACY OF HYDROPHILIC POLYMERS ON GROWTH, YIELD AND QUALITY OF TOMATO GROWN UNDER WATER STRESS CONDITIONS

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ABSTRACT

Cultivation of vegetables is greatly affected in areas with low rainfall and scarcity of irrigation water. Therefore, efficient utilization of limited water for crop growth and development in these areas is of great concern. The hydrophilic polymers are of immense use in string water (100-300 times of its own weight) and supplying it to the plant in accordance to the need. They could play an important role in stress alleviation at appropriate time as needed by the plants. Hence this study was undertaken to assess the efficacy of hydrophilic polymers severally and in combination with organic and inorganic fertilizers on growth, yield and quality of tomato cv. CO 3. The results revealed that the application of polymer TerraCottom 4.5g per plant with recommended dose of manures and fertilizers (FYM 25t+ NPK 15:100:50 kg + Azospirillium 2kg + Phosphobacteria 2kg ha $^{-1}$) followed by Polyvinylalcohol 15.0g per plant with recommended dose of manures and fertilizers improved the growth, yield and quality of tomato under water stress conditions.

Key words : tomato, hydrophilic polymers, yield and quality, water stress conditions