



## RESEARCH PAPER

# Assessment of bioagents against cotton diseases under South Gujarat of India

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**Abstract :** Cotton (*Gossypium* spp.) is one of the most important economic products of the group of fibres due to volume and value of production. Its cultivation is also of great social importance, due to the number of jobs generated directly or indirectly. The fibre, the main product of cotton has many industrial applications. The manufacturing of yarn for weaving of various kinds of fabrics, cotton batting for hospital use, felt clothing, blankets and upholstery, photographic films and plates for radiography among others. Here in this experiment, different bioagents were evaluated against the cotton foliar disease. This experiment engage the total nine treatments including control from which, treatment T<sub>5</sub> (14.50 PDI) (Seed and soil application *Pf*CICR *i.e.*, seed application: 10<sup>8</sup>cfu/g @10g per kg of seed soil application: 2.5 kg/ha at 30 and 60 DAS) followed by T<sub>8</sub> (18.33 PDI) significantly recorded minimum bacterial leaf blight infection in comparison to the treatment T<sub>9</sub> *i.e.* control (42.33 PDI) in RCH 2 BG II hybrid. For Alternaria leaf spot disease, treatment T<sub>8</sub> (8.17 PDI) (Seed treatment with *Pseudomonas fluorescens* CICR (2 x 10<sup>8</sup>cfu/g) @ 10 g/kg seed + soil application of *Trichoderma viride* TNAU1 (2 x 10<sup>6</sup>cfu/g) @ 2.5 kg/ha in 250 kg of vermicompost and sprays of Kresoxim methyl (0.0443%) followed by Captan 70% + Hexaconazole 5% WP @ 1.5 g/l) were recorded significantly minimum Alternaria leaf spot disease in RCH 2 BG II hybrid as compared to the T<sub>9</sub> *i.e.* control (19.33 PDI) followed by T<sub>7</sub> (9.83 PDI) and T<sub>3</sub> (10.50 PDI) treatment. The highest seed cotton yield was recorded in the treatment T<sub>5</sub> (2606.00 kg/ha) followed by treatment T<sub>8</sub> (2335.33 kg/ha) and treatment T<sub>7</sub> (2275.67 kg/ha), respectively.

**Key Words :** Cotton, *Gossypium* spp, Treatment, Control, Bioagents

**View Point Article :** Sandipan, Prashant B., Patel, P.S. and Patel, R.K. (2023). Assessment of bioagents against cotton diseases under South Gujarat of India. *Internat. J. agric. Sci.*, **19** (1) : 75-80, DOI:10.15740/HAS/IJAS/19.1/75-80. Copyright@2023: Hind Agri-Horticultural Society.

**Article History :** Received : 24.06.2022; Revised : 14.10.2022; Accepted : 16.11.2022

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