

Research Article

Performance of Different Wheat Genotypes on Occurrence of Spot Blotch Disease and Yield under Varying Dates of Sowing

R Patsa¹, S Hembram^{1*}, PM Bhattacharya¹, S Bandyopadhyay¹ and S Dutta²

¹Department of Plant Pathology, Uttar Banga Krishi Viswavidyalaya, Pundibari, Coochbehar-736 165; ²Department of Plant Pathology, Bidhan Chandra Krishi Viswavidyalaya, Kalyani, Nadia-741 252; Email-jitsatya2008@gmail.com

Abstract

Biotic stresses play an important role for significant yield loss, among them spot blotch disease is one of the most destructive diseases, which attacks wheat plant at most crucial growth stage. Environmental factors play crucial role for initiation and spread of the disease. In UBW-9 and Sonalika cultivars the relation between thousand grain weight and date of sowing indicates that thousand grain weight was more in early sown as compared to late sown crop. The Area Under Disease Progress Curve (AUDPC) was significantly higher in 4, 5 and 6th date of sowing. AUDPC in Sonalika was 10.08 per day in contrast to UBW-9 with only 3.66 AUDPC per day with delayed planting from 16th November. Phenol, OD phenol, peroxidase and polyphenoloxidase activity was higher in UBW 9 as compared to Sonalika on 16th November date of planting. At the same time it was also observed that Sonalika losses 45.5 kg of yield per hectare per day where as UBW-9 losses 37.5 kg per hectare per day with delayed planting from 16th November. The effects of canopy temperature on plant yield were found to be significant at first date of sowing than delayed sowing. The AUDPC per day increased significantly as a function of sowing time from 26th November to 16th December. Higher chlorophyll content (650.86) was recorded in UBW-9 as compared to Sonalika.

Key words: AUDPC, date of sowing, sonalika, spot blotch, UBW 9, wheat

Citation: Patsa R, Hembram S, Bhattacharya PM, Bandyopadhyay S and Dutta S. 2018. Performance of different wheat genotypes on occurrence of spot blotch disease and yield under varying dates of sowing. *J Mycol Pl Pathol* 48(4): 417–427.