

EFFECT OF DIFFERENT THERMAL ENVIRONMENTS ON THE GROWTH AND DEVELOPMENT OF WHEAT VARIETIES FOR CHHATTISGARH PLAIN

Pandhurang Bobade*, S.K. Chandrawanshi, S.R. Patel and D.K. Kaushik

*IGKV, RMD College of Agriculture & Research Station, Ajirma,
Ambikapur, Surguja-497001 (Chhattisgarh)
Email: pawaragri@gmail.com

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Abstract: The effect of different thermal environments on the growth and development of wheat varieties for Chhattisgarh Plain. Higher number of ear heads/m² observed with 05 December and 15 December sowing may be due to favorable temperature conditions during tillering stage i.e., maximum was below 28°C, minimum was below 12°C and mean temperature was below 20°C. Length of ear heads of different wheat varieties was influenced due to temperature and shifting thermal environment. Longer ear head (9.4 cm) was observed in first and second date of sowing (25 November and 05 December) as compared to delayed sowing of 15 December, 25 December and 05 January. Longer ear head was observed in variety GW-273 (9.4) while minimum (8.4) was observed in Amar. The maximum number of grains/ ear head was observed in D₁ (52) as compared to other sowing dates (D₂, D₃, D₄ and D₅). The test weight of different wheat varieties was influenced significant by different thermal environment and delayed sowing ultimately resulted in lower test weight. On an average the higher test weight (40.1) was observed in D₁ (25 November) at par with 05 December sowing as compared to late sown condition. Maximum grain yield 3307 kg/ha was harvested in 2nd (05 December) date of sowing which was significantly higher as compared to before and delayed sowing. On an average significant higher grain yield was obtained in variety Kanchan (3190 kg/ha) followed by GW-273 whereas, the lower grain yield was recorded in variety Amar (2609 kg/ha) and Sujata (2740 kg/ha) being at par to each other. Higher straw yield (4667 kg/ha) was observed in Kanchan under 2nd sowing date (05 December) whereas the lowest (2703 kg/ha) was observed in variety Amar under 05 January sowing. On an average, in different sowing dates significantly, highest straw yield (3964 kg/ha) was recorded in variety Kanchan as compared to other varieties.

Keyword: Grain yield, Straw yield, Thermal environments

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*Corresponding Author