

## EFFECT OF TEMPERATURE ON DIFFERENT VARIETY OF WHEAT UNDER LATE SOWN CONDITION FOR THE CHHATTISGARH PLAIN

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**Abstract:** The least effect of thermal stress was observed in case of GW-273 (13 days). The maximum, minimum as well as mean temperature increased gradually when the sowing was delayed from 25 November to 05 January, CRI to 50% flowering and 50% flowering to maturity. At 50% flowering to maturity the maximum, minimum and mean temperature was observed as high as 40.5, 22.3 and 31.4 °C for variety Amar when sown on 05 January. This showed that 34-35 °C maximum, 17-18 °C minimum and 26-27 °C mean temperature were more favorable for higher yield of wheat crop under Raipur condition. It was observed that plant height decreased when the sowing was delayed from 25 November to 05 January. The highest dry matter was observed at maturity for Kanchan (809.8 g/m<sup>2</sup>) while lowest dry matter was observed in varieties Amar (476.5 g/m<sup>2</sup>). The dry matter growth rate varied differently for different varieties under different thermal environments. Temperature pattern revealed that the maximum and mean temperature was lower when the crop was sown on 25 December while the minimum temperature was lower on 05 January sowing as compared to other sowing dates from sowing to 30 days after sowing. Among the four varieties, GW-273 was found to be moderately susceptible while other varieties are susceptible for thermal stress; this might be probable reason for reduction total duration and stunted crop growth.

**Keyword:** Temperature effect, Thermal stress, wheat yield

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