International Journal of Agricultural Sciences ☞DOI:10.15740/HAS/IJAS/18.1/489-495
Volume 18 | Issue 1 | January, 2022 | 489-495 ■ ISSN : 0973-130X Visit us : *www.researchjournal.co.in*

RESEARCH PAPER

Effect of early sowing on growth and yield of blackgram varieties under rainfed condition

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Abstract : The field experiments was conducted during 2014-15 in Rabi season (October - December) at Agricultural Research station, Kovilpatti to identify the optimum time of sowing and best suitable blackgram variety for rainfed vertisols. Experiment was laid out in split-plot design with three replications. The treatment combinations comprised of three dates of sowing *viz.,* 39th, 41st and 43rd standard weeks (pre- monsoon, monsoon and post-monsoon sowing, respectively) in main plot with four different black gram varieties *viz*., Vamban (Bg) 6 and Vamban (Bg) 7, NUL 7 and CO 5 in the sub plot. The results revealed that sowing during 39th standard week (pre- monsoon-D_1) registered increased growth and yield parameters *viz.,* plant height (26.8 cm), DMP (2455 kg ha^{-1}), LAI (4.0), No. of pods/plant (20.4 nos.), No. of seeds/pod (4.2 nos.), 100 seed weight (4.5 g), which reflected on increased grain yield. Accumulated Growing Degree Day (AGDD) (1247) and Accumulated Helio Thermal Unit (AHTU) (5845), total amount of rainfall (293.5) received also higher under pre-monsoon sown crop which results in higher biomass and increased grain yield (885 kg ha^{-1}). Similarly among the varieties tried, CO 5 registered higher growth and yield attributes which reflected on increased grain yield (843 kg ha^{-1}) which was followed by NUL 7 (790 kg ha^{-1}).

Key Words : Time of sowing, Variety, Blackgram, Yield, Economics

View Point Article : Subbulakshmi, S. (2022). Effect of early sowing on growth and yield of blackgram varieties under rainfed condition. *Internat. J. agric. Sci.*, **18** (1): 489-495, **DOI:10.15740/HAS/IJAS/18.1/ 489-495.**

Art icle History : Received : 14.10.2021**; Revised :** 20.11.2021**; Accepted :** 23.12.2021