Short communication

Production potential, quality and thermal utilization of fodder pearl millet varieties under different sowing environments in irrigated conditions of central Punjab in India

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Abstract

An experiment was conducted at Punjab Agricultural University, Ludhiana, India during two consecutive years *i.e.,* 2019 and 2020 to study the effect of dates of sowing and pearl millet varieties on productivity and quality of green fodder and thermal utilization by the crop. The field experiment was laid-out in a split plot design with seven dates of sowing (1st April, 15th April, 1st May, 1st June, 15th June, 1st July and 15th July) in main plots and two varieties of pearl millet (PCB 165 and FBC 16) in sub plots with three replicates. Significantly highest green fodder yield (69.3 t/ha) was obtained with 1st June sowing which was probably on account of maximum plant height and number of tillers. The 1st June sown crop also recorded significantly highest dry matter and crude protein yield of 15.0 t/ha and 0.95 t/ha, respectively. Both advanced and delayed sowings recorded significant reduction in green fodder and dry matter yield. The crop sown on 1st May required maximum growing degree days, photo-thermal and helio thermal units at 50% flowering stage and sowing done early as well as late recorded significant reduction in these agro-climatic indices. Across different dates of sowing, PCB 165 registered an increase of 11.9 and 12.4% in green fodder and dry matter yields, respectively over FBC 16 due to higher accumulation of growing degree days, photo-thermal and helio thermal units for 50% flowering stage. The interaction effect showed that PCB 165 sown on 1st May, 1st and 15th June recorded significantly more green fodder yield over FBC 16, while the differences were narrow and non-significant at other dates of sowing.

Keywords: Crude protein, Date of sowing, Green fodder, Pearl millet, Varieties factor