Response of Gram (*Cicer arietinum* L.) to Irrigation Schedules and Sulphur Levels

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ABSTRACT

A field experiment was carried out during *rabi* 2010 -11 to study the growth, yield, moisture extraction pattern, water use efficiency and quality of gram as influenced by irrigation schedules and sulphur levels. The study revealed that higher amount of moisture was extracted from surface layers irrespective of irrigation schedule and depletion of soil moisture increased with increasing frequency of irrigation. Grain yield and water use efficiency were influenced by different levels of irrigation. The highest water use efficiency (WUE) was recorded under farmer's practice and was lowest in irrigation scheduled at 0.9 IW/CPE ratio. The maximum values for all the growth parameters at various stages, yield attributes, grain and stover yield, moisture extraction and consumptive use of water along with net return and B : C ratio were obtained when irrigation was scheduled at an IW/CPE ratio of 0.9 and remained on par with 0.7 IW/CPE ratio. Application of sulphur significantly influenced the growth and yield attributes, yield and quality in gram. Application of 40 kg S ha^{-1} recorded higher grain yield, protein content, net return, and B : C ratio and was at par with 20 kg S ha^{-1}.

Key words : BCR, Gram, Irrigation schedules, Sulphur, WUE.