

# Water requirements and irrigation scheduling of maize in Northern Gangetic plains

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■ **ABSTRACT** : The irrigation requirements for different crops varies from climatic conditions and soil types. The study was conducted to determine irrigation requirement and irrigation scheduling for maize. The irrigation efficiency and field efficiency of 80 per cent and 70 per cent were considered for the study, respectively. The average  $ET_0$  calculated was 3.77 and 3.63 mm/day for 2015 and 2016, respectively. The total irrigation requirement for maize was 171 and 118.4 mm for both 50 per cent and 60 per cent critical depletion regarding 2015 and 2016, respectively. The total gross irrigation and net irrigation was 128.9 mm and 90.3 mm for 50 per cent critical depletion and 159.2 mm and 111.4 mm for 60 per cent critical depletion in 2015 while total gross irrigation and net irrigation was 128.6 mm and 90.0 mm for 50 per cent critical depletion and 156.0 mm and 119.2 mm for 60 per cent critical depletion in 2016. The rain efficiency was found 25.6 per cent and 39.4 per cent and by this efficiency, effective rainfall was 179.1 mm and 219.5 mm for 2015 and 2016, respectively.

■ **KEY WORDS** : Maize, Critical depletion, Irrigation requirements, Gangetic plains, Irrigation efficiency

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