Design and evaluation of check basin irrigation system using SURDEV software model

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■ **ABSTRACT :** For efficient and judicious use of water resources, an accurate design and high quality optimization of the check basin irrigation system is necessary. BASDEV of SURDEV model was used to evaluate the check basin irrigation system of size 30 m × 45 m for medium soils in Bapatla, Guntur District, Andhra Pradesh, India, for an irrigation application depth of 75 mm with a stream size of 10, 20, 30, 40, 50, 60, 70, 80 and 90 lps. To optimize the efficiency of the design, the model was run varying the basin design dimensions and cutoff times. The outputs of BASDEV, is intended to improve the overall efficiency of basin irrigation system, provided optimum field dimensions for border irrigation in medium textured soils.