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## Research Article

# Effect of Drip Fertigation on Yield, Water Use Efficiency and Water Productivity of Mint (*Mentha arvensis* L.)

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## ABSTRACT

Field experiments were conducted on a sandy loam soil to study the effect of drip irrigation and fertilizer on herbage and oil yields, water use efficiency, water productivity and consumptive use of water by mint (*Mentha arvensis* L.) in rice based cropping system. The experiment was laid in a factorial randomized block design and was replicated thrice. The treatments consisted of three irrigation regimes (I<sub>1</sub>- drip irrigation at 100% pan evaporation (PE); I<sub>2</sub> at 80% PE; and I<sub>3</sub> at 60% PE) combined with three fertility levels (F<sub>1</sub>-100, F<sub>2</sub>-75 and F<sub>3</sub> - 50% recommended dose of NPK), and a control with surface irrigation and soil application of fertilizer. The soil was acidic (pH 5.7), low in organic carbon and nitrogen; medium in available phosphorus and potassium. The highest herbage (35,798 kg ha<sup>-1</sup>) and oil yields (260 kg ha<sup>-1</sup>) of mint were obtained with fertigation at 100% PE and 100% NPK application. The crop used 777 mm of water with the use efficiency of 0.338 kg ha<sup>-1</sup>cm<sup>-1</sup>.