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Yield, fruit quality and water productivity of drip fertigated Assam Lemon (*Citrus limon*)

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■ **ABSTRACT :** Yield , fruit quality, economic feasibility and water productivity of 4 years old Assam lemon plants were evaluated through a field experiment conducted on old alluvial sandy loam soils of Jorhat, Assam, India for 3 consecutive years (2010 to 2012). Four levels of fertilizer application *i.e.* 120%, 100% and 80% of recommended dose of fertilizer through drip-fertigation and 100% recommended dose of fertilizer through soil application with 50µm thick black plastic film mulching was studied through a 4x2 factorial experiment in RBD. Results showed significant yield increase due to drip fertigation. Yield and quality of fruit varied with fertligation level and higher doses resulted in better values. WUE and water productivity also varied with fertigation levels in mulched treatments. Best benefit to cost ratio and fertilizer use efficiency was observed for the treatment where 80% of recommended dose of fertilizer was applied through drip-fertigation and plants were not mulched. The study reveals that drip-fertigation can play a positive role in increasing yield, WUE and water productivity of Assam lemon plants with additional benefit of saving in fertilizer cost, fruit quality improvement and better return on investment.

■ **KEY WORDS :** Assam Lemon, Benefit cost ratio, Drip-fertigation, Water productivity

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