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Agricultural and Food Science - abstract



Vol. 11 (2002), No. 1, p. 59-74

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Efficiency of split nitrogen fertilization with adjusted irrigation on potato

Keywords irrigation, nitrogen, potatoes, *Solanum tuberosum*, fertilizers,

Abstract

The split application of fertilizer nitrogen and adjusted irrigation were studied at Potato Research Institute in Lammi in 1993. Independent of year, variety or irrigation, the split application of nitrogen had no benefit on yield or yield quality compared to the highest dose at planting on the levels of recommended nitrogen fertilization. The highest yields were received with the highest dose 110 kg N given all at planting, followed by 80, 50+30+30, 50+30 and 50 kg ha⁻¹ N. The yields without fertilizer nitrogen averaged 24.8 t ha⁻¹. Adjusted irrigation increased tuber yields 17%. The utilization of fertilizer and organic soil nitrogen was good on potato crop when water supply was taken care of. Some values of apparent fertilizer nitrogen recovery exceeded 1.0 thus suggesting that the moderate irrigation improved the ability of potato crop to utilize the natural nitrogen sources in soils.

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Update 3.6.2002.

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