YIELD OF POTATO AND NITROGEN FERTILIZER USE EFFICIENCY AS INFLUENCED BY NITRIFICATION INHIBITORS

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ABSTRACT

Three field experiments were conducted (two in spring and one in autumn) during 1996-97 to study the effect of application of two nitrification inhibitors (nitrapyrin and wax coated CaC_2 and two N rates, 100 and 250 kg N ha^{-1}) on nitrogen fertilizer use efficiency (NFUE) and yield of potato (Solanum tuberosum L.) and to compare it with split application of N. The results revealed that maximum tuber yield and % NFUE were obtained in all experiments at lower N level (100 kg N ha^{-1}) treated with nitrification inhibitors followed by two split application of 250 kg N ha^{-1} . Nitrogen content of straw and tuber indicated that 100 kg N ha^{-1} plus inhibitors resulted in higher N accumulation which was sufficient to met the requirements of potato crop. Spring season crop utilized relatively higher amount of N as compared to autumn crop.