

YIELD AND NITRATE CONCENTRATION OF RADISH, CARROT AND TOMATO AS AFFECTED BY DIFFERENT LEVELS OF NITROGEN FERTILIZATION

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ABSTRACT

A field experiment was conducted during 1993-94, 1994-95 and 1995-96 to see the effect of higher doses of N application on nitrate (NO₃) accumulation in vegetables. Four levels of N (50, 100, 150 and 200 kg ha⁻¹) were tested on radish, carrot and tomato crops. During first two years of the study, the fresh yield of root vegetables (radish and carrot) was not affected (P > 0.05) by increasing levels of N while during the third year, fresh yield of both the vegetables was increased (P < 0.05) with increasing levels of N application upto 150 kg ha⁻¹. Tomato yield did not show a definite pattern with increasing levels of N. Nitrate-N concentrations in radish and carrot increased significantly by increasing N level but in tomato it increased significantly only during the first year. In general, the NO₃-N concentration in fruit vegetable (tomato) was much less than the root vegetables. It seems that application of higher doses of N may not affect the quality of fruit vegetable (tomato), however, the quality of root vegetables (radish and carrot) may be affected through NO₃ accumulation (at high N application).