

NITROGEN LEACHING ON INTENSIVE VEGETABLE PRODUCTION AREA OF GIAO THUY DISTRICT, NAM DINH PROVINCE

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Summary

This research was conducted in the vegetable cultivation area of Giao Thuy district, Nam Dinh province to assess the current status of nitrogen fertilizer application and to calculate the NH_4^+ and NO_3^- leaching from the root zone through one year of cultivation. Main research methods included (i) household interview and inventory on current status of nitrogen fertilizer application in the farms; and (ii) Self-Integrating Accumulators (SIA) to quantify NH_4^+ and NO_3^- leaching during cultivation. The results show that average fertilizer application in pure vegetable system was 707 kg N/ha/year. Average level of fertilizer application in the rotational vegetable – rice system was 843 kg N/ha/year. The rate of N leaching per application on pure vegetable fields and rotational fields was 39.1% and 16.8%, respectively. The amount of N leaching was mainly NO_3^- -N, accounting for 97.2% of the pure vegetable and 99.6% of the rotational vegetable – rice system compared to the total N leaching.

Keywords: *Fertilizer application, nitrogen fertilizer, leaching.*