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Agricultural and Food Science - abstract



Vol. 16 (2007), No. 4, p. 366-375

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National and regional net nitrogen balances in Finland in 1990
2005

Keywords nitrogen balance, agricultural regions, animal manures,
fertiliser, yield,

Abstract

Nitrogen (N) balance has been identified as a principal agri-environmental indicator. In addition to national N balances, calculation of N balances for different agricultural regions is also recommended. In this study, national and regional net N balances for Finland were calculated. The net N balance is the result of deducting the NH₃-N losses from manure and fertilisers from the gross N balance. The N balance calculation was based on data for Finnish Rural Centres and calculated per cultivated hectare. The main data inputs for the calculations were agricultural and environmental statistics, coefficients of manure excretion and crop N concentrations. Finnish national net N balance decreased from 90 kg ha⁻¹ in 1990 to 50 kg ha⁻¹ in 2005. The decrease in regional N balances was of the same magnitude. The main reason for the lower N balances was reduced use of mineral N fertilisers. Variation in the N balances was due to yield levels varying according to growing season conditions. The Rural Centres with intensive animal production tended to generate the highest N balances.

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Update 11.3.2008.

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