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Nitrogen loss in small tile-drained catchments in the Czech Republic

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Agriculture is one of the major sources of nitrogen that contributes to the eutrophication of the inland waters. Seven tile-drained subcatchments within three small agricultural catchments (Jenínský stream, Kopaninský stream and Dehtáře) were observed. Attention was focused on the annual total inorganic nitrogen (TIN) loss, TIN loss during extreme runoff events (and its proportion compared to the annual TIN loss) and contribution of nitrate, nitrite and ammonium ion to the TIN loss in these subcatchments. The results varied from less than 10 kg.ha^{-1}.year^{-1} up to 70 kg.ha^{-1}.year^{-1} depending on the place and year of observation. Nitrate nitrogen loss in individual years makes up at most 99.8% of the total inorganic nitrogen loss. Furthermore, subcatchments in the Jenínský stream catchment (now used as grasslands) were observed as well in the mid-1980s, at the time when the areas were used as tile-drained arable land and the results were compared.