

INPUTS OF NITROGEN BY PRECIPITATION INTO THE SOIL IN AGRICULTURAL REGION OF THE SOUTHWESTERN SLOVAKIA

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ABSTRACT

In the years 2005 and 2006 atmospheric precipitation were caught on the experimental base of the Slovak University of Agriculture in Nitra – Dolná Malanta. Concentrations of N-NO_3^- , N-NH_4^+ a N-NO_2^- were evaluated. The experimental base of the Slovak University of Agriculture in Nitra – Dolná Malanta is situated cca 5 000 m east of the area of the SUA Nitra, $48^\circ 19'20''$ of northern latitude and $18^\circ 8'5''$ of eastern longitude. The results were presented in mg.dm^{-3} and inputs of nitrogen into the soil in kg.ha^{-1} . The average concentration of nitrate nitrogen, ammonium nitrogen and nitrite nitrogen were $2,61 \text{ mg.dm}^{-3}$, $1,0 \text{ mg.dm}^{-3}$ and $0,08 \text{ mg.dm}^{-3}$ respectively for the whole monitored period. On the average $14,90 \text{ kg.ha}^{-1}$ of nitrate nitrogen, $6,18 \text{ kg.ha}^{-1}$ of ammonium nitrogen and $0,05 \text{ kg.ha}^{-1}$ of nitrite nitrogen were infiltrated into the soil in the monitored area. The total sum of $\text{N-NO}_3^- + \text{N-NH}_4^+ + \text{N-NO}_2^-$ is made up 71,02 % of N-NO_3^- , 26,78 % N-NH_4^+ and 2,20 % of N-NO_2^- for the whole monitored period. About $21,50 \text{ kg.ha}^{-1}$ of nitrogen was infiltrated into the soil during the years 2005 – 2006.

Key words: atmospheric precipitation, nitrate nitrogen, ammonium nitrogen, nitrite nitrogen, inputs of nitrogen by precipitation into the soil