Summary

In this paper there has been presented a part of complex examinations results referring to seasonal changes of the amounts of nitrogen and phosphorus in the upper organic levels of the two chosen forest ecosystems. The dynamics of nitrogen and phosphorus compounds were to a great extent affected by the humidity of genetic levels. Content changes of nitrogen and phosphorus compounds in the examined organic levels show cyclic seasonal variability. Average contents of nitrogen compounds (T-N) in the examined organic levels remained respectively at the level of 1040.7 mg/100 g d.m. (I) and 1074.8 mg/100 g d.m. (II) in the course of four years. On research plots the content of phosphates was small and remained on average at the similar level. The ratio N: P assumed average values of 9.3 in the case of research plot I and 7.6 in the case of research plot II. In the organic levels of the examined soils there dominate quantitatively ammonia ions over nitrate ions, which is connected with the dominance of ammonization processes over nitrification processes. The biggest amounts of the examined biogenes appear in the organic levels in the periods of autumn and spring as it is connected with the processes of mineralization and poor intake of mineral compounds of nitrogen and phosphorus by plants. The minima of nitrogen and phosphorus compounds are the result of their intensive intake by growing vegetation.