THE NITROGEN AND PHOSPHORUS BALANCE IN AGRICULTURE OF POLAND

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Summary

Agriculture substantially interferes into natural nutrient cycling, mainly by the intensification of production. One of the most serious threats generated by agriculture is nitrogen and phosphorus compounds. Nitrogen and phosphorus balances, as an agri-environmental indicators, are very important source of information on the influence of agriculture on environment conditions. Above mentioned balances are prepared at different levels of territorial and administrative integration i.e. from single field through farm to water bodies, provinces and countries.

Among UE and OECD countries, Poland belongs to the group with the lowest balances of nitrogen and phosphorus. Higher balances were noted in some countries on the Baltic Sea coast, particularly in Germany and Denmark with their intensive agricultural practices.

A assessment of nutrient balances indicates their considerable differentiation caused by climate and soil conditions and by technical and organizational level of agriculture in Poland. Generally, the highest nitrogen surpluses were determined in provinces with intensive agriculture, localized mainly in the catchments of the Oder and Pomeranian rivers. No significant differences were observed in phosphorus balance between the catchments of the main rivers in Poland. However, greater differences, reflecting appropriate phosphorus management, were noted at provincial (administrative) level.

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