DEVELOPMENT OF PLANT COMMUNITIES ON PEAT-MOORSH SOIL
AFTER THE ABANDONMENT OF LONG-LASTING FIELD CROPS

Key words: mineral fertilisation, peatmoorsh soils, plant succession, selfsodding, terrain depressions left after field crops

Summary

The study was aimed at analysing plant communities developing in wet depressions left after long lasting field crops on peatmoorsh soil. Selfsodding and spontaneous plant succession was estimated in unmanaged plots and after sowing multi-component grass mixtures. The study was carried out in a long term field experiment in the Experimental Farm Biebrza.

Fallow lands left after field crops became, at least partly, overgrown but further development of plant communities was different from that after sowing multi-component mixture of grasses. In sites long unfertilised or fertilised only with potassium plant succession led to the development of dense willow-birch thickets (Salix cinerea-Betula pubescens). Semiruderal phytocoenoses dominated by trailing grasses and nitrophilous herbs with Urtica dioica L. formed in sites previously fertilised and rich in phosphorus, potassium and nitrogen.

Sowing grass mixtures and 2-cut utilisation effected in the development of wet meadows with a greater share of species typical for soils of low porosity, mainly such characteristic for the order Trifolio fragiferae-Agrostietalia stoloniferae. A lack of mineral fertilisation hampered the development of tall and medium grasses but was favourable for mosses. Fertilisation with potassium in-creased the contribution of rushes and bog plants in the sward while fertilisation with NP and K favoured the dominance of grasses, mainly Agrostis gigantea Roth., Phleum pratense L. and Festuca arundinacea Schreb.

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