DEGRADATION OF MEADOW SWARD AT OPTIMUM SOIL MOISTURE AND DIFFERENT FERTILISATION

Key words: degradation, mineral fertilisers, natural fertilisers, permanent meadow

Summary

The study was carried out in the years 2006–2011 in a plot experiment on permanent sprinkled meadow situated on mineral soil in Falenty. The effect of fertilisation with mineral fertilisers and liquid manure on botanical composition and yield of meadow sward was compared. The experiment was performed in two stages: the first in the years 2006–2008, the second – in 2009 to 2011. In the first stage a higher level of fertilisation was applied than in the second. Reduced fertilisation from 2009 did not affect negatively the yields of corresponding experimental objects. Meadow yielding was positively correlated with the level of fertilisation. Apart from fertilisation, the yield and composition of meadow sward were affected by a high rainfall in the years 2010–2011. It was found that the applied methods of fertilisation increased the proportion of herbs and weeds and decreased the share of grasses and legumes irrespective of fertilisation rate. The common meadow grass (Poa pratensis L.) dominated in most experimental objects. At extensive fertilisation, the red fescue (Festuca rubra L.) constituted a large proportion of the sward. Under intensive nitrogen fertilisation a large part of the sward was occupied by the cock’s-foot (Dactylis glomerata L.) and couch grass (Elymus repens (L.) Gould). Increasing rate of nitrogen fertilisation increased the share of dicotyledonous weeds in the sward, especially the common sorrel (Rumex acetosa L.), common dandelion (Taraxacum officinale F.H. Wigg.) and broad-leaved dock (R. obtusifolius L.) and resulted in significant thinning and faster degradation of the sward.