

Abstract

Agricultural intensification is one of the main reasons for the decline of biodiversity and ecosystem services in agricultural landscape. One of the ecosystem services is pollination, which helps to preserve the biodiversity of wild plants in cultural landscape and is also vital for production of food, especially fruits and vegetables. Decreasing management intensity could be one of the potential solutions for maintaining sufficient level of pollination in the agricultural landscape. This can be achieved at least on parts of agricultural land. Also, certain areas of cultivated land can be excluded from production in exchange for subsidies for farmers who agree to implement this method. For this reason, the European Union has introduced organic farming and agri-environmental schemes.

The aim of the study was to determine whether currently applied low-intensity management is sufficiently effective to protect wild plants, pollinators and their mutual relations. And if so, whether it is due to the decreased management intensity or due to the floral sources available. Another question dealt with is how the effects of organic farming depend on the landscape structure. Results of various studies dealing with this topic were qualitatively compared.

Current studies show that organic farming has positive impact on pollinators in most cases. Another fact established by the studies is the heavy dependence of pollinators on the availability of floral resources. The proportion of semi-natural habitats was also found to be crucial for the overall effect of organic farming and agri-environmental schemes. It seems that low-intensity management and conservation of semi-natural habitats as well as their proper structuring are essential for the preservation of biodiversity and ecosystem services in agricultural landscape.

Key words: agricultural intensification, biodiversity, organic farming, pollination