

Wildflower meadows as a genetic resource

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The rich flora of HNV meadows and pastures was valued by farmers in times past, but is not always appreciated today, certainly by those who drive agricultural policy. HNV grassland habitats have created intimate links between farming communities, biodiversity and high quality food production, and delivers an impressive set of sometimes intangible ecological ‘goods and services’. These include protection of water and soil quality, prevention of soil erosion and water runoff, facilitation of carbon storage, provision of habitats for animals, including pollinators and pest predators, and maintenance of traditional and cultural landscapes. Above all, HNV meadows are valuable living gene banks of native and domesticated plant diversity, including grasses, legumes and other forage plants, medical and dye plants, and other plant species such as those of horticultural value or which are relatives of crops and other cultivated plants. Most widespread plants exhibit phenotypic variation, and observation and experimental evidence elsewhere in Europe have revealed distinctive meadow variants within several species known to occur in Transylvania. At least some meadow species exhibit morphological variation in Transylvania that may have a genetic basis and confer a level of ecological adaptation, and future molecular research will undoubtedly demonstrate further genetic variation. The protection of this resource of native diversity is vital for long-term conservation of the grassland flora and vegetation, and has practical applications in plant breeding, species recovery programmes, restocking and enhancement of species and vegetation, and ecological restoration projects such as landscaping new road-verges. The scientific and economic value of ecological and geographical variation in the Transylvanian meadow flora provides a powerful argument for conservation.