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O6 - EVALUATION OF GRASSLAND RESTORATION SUCCESS – A METHOD FOR MULTIPLE PROJECT APPLICATION

S. Dullau¹ & S. Tischew¹

¹*Anhalt University of Applied Sciences, Department of Agriculture, Ecotrophology and Landscape Development, Bernburg, Germany
(corresponding author: s.dullau@loel.hs-anhalt.de)*

During recent decades restoration of species-rich grasslands with active plant species introduction has been tested and implemented using a great variety of restoration methods either on bare soil or in different species-poor grassland types. In most cases the evaluation of restoration success is exclusively project-specific and the variety of indices and indicators used to evaluate restoration success hampers comparisons between studies.

Since 1993 grasslands of high nature conservation value were established or restored by plant species introduction on several study sites in Saxony-Anhalt. Seeding of site-specific seed mixtures, transfer of green hay or threshing material and their combinations were tested. For lowland hay meadows (habitat type 6510) and alluvial meadows (habitat type 6440) we developed a system to evaluate grassland restoration success independent of donor site, receptor site (bare soil or existing species-poor grassland) and the method for species introduction.

The evaluation tools are in concert with the restoration targets, i.e. an increase of plant species number, the promotion of rare and endangered grassland species as well as typical species composition of habitat types, balance between grasses, herbs and legumes and a high structural diversity. The evaluation is based on three main criteria: i) target species categories, ii) proportion of grasses, herbs and legumes and iii) habitat structure. We defined reproducible rules to attribute all grassland species of the habitat types 6510 and 6440 to different target species categories: i) first-level priority target species, ii) second-level priority target species, iii) common grassland species, iv) species of disturbed sites and v) non-target species. For the classification of species we used e.g. rareness, endangerment and species conservation status, trends in species abundance, index species for habitat types and plant communities, growth form, Ellenbergs nutrient value and sociological groups and Briemles mowing sensitivity. The implementation of the evaluation tools is presented by examples of different restoration sites.

To compare the evaluation results of restored sites with grasslands of good conservation status, we collected several hundred vegetation relevés from different areas in Saxony-Anhalt. However, different scales used for the estimation of plant species cover required an adaptation procedure which will be also presented. After analyzing the vegetation relevés we identified thresholds to categorize restoration success.

Prospectively, the evaluation tools should be adapted and applied to other grassland types, e. g. mountain meadows and mesobromion grasslands.

O7 - HAY TRANSFER, SOWING OF REGIONAL SEED MIXTURES AND THRESHING MATERIAL: RESULTS FROM TRIALS TO ENRICH SPECIES-POOR MEADOWS

K. May¹, R. Schmiede¹ & A. Baasch¹

¹*Anhalt University of Applied Sciences, Department of Agriculture, Ecotrophology and Landscape Development, Bernburg, Germany
(corresponding author: k.may@loel.hs-anhalt.de)*

Semi-natural grasslands are hot spots of Europe's biodiversity. However, during the last few decades, land use changes have led to a continuous decline in the area of semi-natural grassland rich in biodiversity. Many grasslands located in Natura 2000 sites have been assessed as being in unfavourable conservation status, thus requiring appropriate restoration measures. Hay transfer is one successful method to restore grasslands using local seed material. However, this method requires a sufficient number of adequate donor sites in the surroundings of restoration sites. Therefore large scale restoration projects often works with sowing of propagated species or threshing material.

To optimize practicability and restoration success, we tested different approaches to enrich the floristic composition of floodplain- and lowland hay meadows (natural habitats 6440, 6510) within a number of Natura 2000 sites in Saxony-Anhalt, Germany. From September 2009 onwards we set up experiments in species-poor