

Note

This is a holding file for the following article and associated data. The article and data will be made available when peer-review and publication are complete.

Working title: Grassland vegetation from three conservation measures

Authors: Daire Ó hUallacháin, John A Finn, Blathnaid Keogh, Rochelle Finch, Helen Sheridan

Journal: Irish Journal of Agricultural and Food Research

Keywords: agri-environment scheme, grassland botanical diversity, grassland conservation, seminatural grassland, high nature value farmland.

Abstract

Semi-natural grassland habitats have declined significantly throughout Europe. To halt the decline, grassland conservation measures have been included in most European agri-environment schemes. This is the first study to compare the botanical composition of grassland habitats managed under the Irish Agri Environment Options Scheme (AEOS). Sixty fields on dry stock pastoral farms in receipt of agri-environment payments for grassland conservation were surveyed, with twenty fields being enrolled in each of the following AEOS options: Traditional Hay Meadow (THM), Species Rich Grassland (SRG) and Natura 2000 species rich grassland (Natura).

The vegetation quality of sites enrolled in the Natura measure was higher than those enrolled in the THM and SRG measures. Natura sites had the greatest species richness with a mean > 40 species per site, which included approximately 17 species indicative of high botanical quality. Traditional Hay Meadow sites had the lowest species richness (mean 29 species per site) and were dominated by species associated with improved grassland. Some THM sites had good levels of botanical richness and were similar in composition to Natura sites, with some Natura sites having a lower vegetation quality, more similar to that of THM sites. Species Rich Grassland had a botanical richness that was intermediate between THM and Natura sites. A thorough assessment of the effectiveness of these measures was confounded by a lack of quantitative objectives for the target community composition to be attained. We discuss limitations and potential opportunities regarding the design, targeting, implementation and cost-effectiveness of these agri-environment measures.