

Grassland and avian biodiversity within Irish agriculture

B.J. McMahon and J. Whelan

Ag-Biota Project, Dept. Environmental Resource Management, Faculty of Agriculture, UCD, Dublin 4, Ireland,
Email: barry.mcmahon@ucd.ie

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Introduction In the last quarter of the 20th century, populations of farmland birds have declined markedly, representing a severe threat to biodiversity (Donald et al., 2001). Because the vast majority of Irish farmland is devoted to intensive grassland, it is important to establish what quality of habitat this provides for biodiversity, especially avian. This study aimed to establish the avian species on the selected sites, compared with the total number of species that have been recorded on Irish farmland in recent years, as documented by the Complete Guide to Irish Birds (Dempsey & O'Clery, 2002).

Methods Five intensive grassland sites were selected as part of the Ag-Biota project. One site was in Co. Meath (Grange (GR)); 2 were in Co. Wexford (Johnstown Castle (JC) and an associated commercial site (JCC)) and 2 were in Co. Tipperary (Solohead (SH) and an associated commercial site (SHC)). The total species richness was recorded using line transects (Bibby et al., 2000) across agricultural grassland during 4 resamples in summer. The cumulative species richness was calculated for the 5 sites and this was compared to the total species richness found on Irish farmland as recorded in the Complete guide to Irish Birds (Dempsey & O'Clery, 2002).

Results The total number of species recorded on Irish grassland is 56. The number of species recorded in this study varied from 24 (SH, SHC) to 28 (JC). Figure 1 shows (as percentages) the total possible species richness compared to the recorded species richness over the 5 sites.

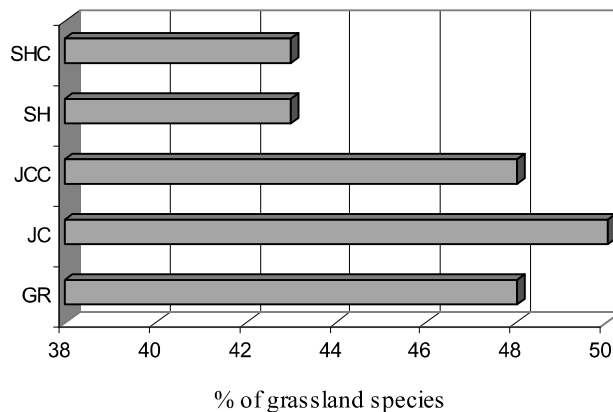


Figure 1 Total species richness (%) compared to recorded species richness

Conclusions This study highlights that intensive grassland is a sub-optimal habitat for many farmland bird species. Further research is needed on how to optimise bird species richness and diversity on Irish grassland in a way that does not significantly impinge on agricultural production.

References

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