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DEVELOPING A FIELD BOUNDARY EVALUATION & GRADING SYSTEM IN IRELAND

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Abstract

The purpose of this study was to develop an ecological evaluation and grading system for the principal field boundaries in Ireland - hedgerows and dry stone walls. In the absence of Irish data, consultation was carried out with prominent landscape ecologists, scientists and environmental consultants and other European bocage surveys were examined. This consultation led to the creation of a draft survey form entitled the Field Boundary Evaluation & Grading System (FBEGS). This was field-tested in four locations in Ireland by several users. Feedback from surveyors led to an amended survey form which was then tested in ten locations nation-wide. It is shown that it is possible to evaluate a field boundary using a simple grading system but the accuracy of such a survey cannot be confirmed due to the lack of baseline data in an Irish context.

Objectives

To address the lack of ecological data on both hedgerows and dry stone walls
To develop an ecological evaluation and grading system specifically designed for Irish field boundaries
To produce a simple, user-friendly survey for both landowner and ecologist
To ensure the new survey can be integrated with existing UK hedgerow surveys

Methodology

A comprehensive review of published literature on the subject of hedgerow and dry stone wall ecology, management status and quality indicated that data relating to Irish field boundaries is sparse at best. It was therefore decided that in order to devise a field boundary ecological evaluation survey sheet a needs analysis should be conducted.

This needs analysis consisted of interviews with 35 professional landscape ecologists, academics and land managers. This enabled a list of potential boundary attributes to be compiled. It was found that these attributes corresponded with the Hedgerow Evaluation & Grading System or HEGS (Clements & Tofts 1992). It was decided that the HEGS could be adapted and augmented in order to become appropriate for Irish field boundaries and, at the same time, this may provide an opportunity for any data comparison. A draft survey form was created - the Field Boundary Evaluation & Grading System (FBEGS).

Five attributes form the basis of the survey (see Figure 1). These attributes are shown to be significant in other countries with bocage landscapes, specifically hedgerow ecology. There are no appreciable data on the ecology of dry stone walls in Ireland.

When completing the survey form, the surveyor allocates a numerical score for the various attributes. This yields an overall score. This score can then be used to identify the ecological value of that field boundary.

Results

After a trial test to confirm ease of usage and appropriateness, the FBEGS survey form was fully tested on 60 hedgerows and 40 dry stone walls in 10 locations throughout Ireland. The locations were chosen for convenience to the volunteer surveyors but individual field boundaries were chosen at random. Surveyors opinion was recorded prior to each field boundary survey and the FBEGS scores were compiled afterwards. Figures 2 and 3 show the resulting FBEGS scores in comparison to the surveyors professional opinion. It is shown that there is a correlation between opinion and FBEGS scores.

Those boundaries where the surveyors opinion was that the ecological value of the boundary was ‘low’, the FBEGS scores are in the low range. Conversely, those boundaries where the surveyor was of the opinion that the boundary was of ‘high’ ecological value have higher FBEGS scores. In both cases there was a degree of professional indecision on the ecological value of boundaries that were in the intermediate range.

From these results, it was possible to devise a draft evaluation grading system. This draft grading system (shown in Figures 4 and 5) was in preliminary form and will require extensive field testing for confirmation. It will also be necessary to carry out more detailed field research so the grades can be confirmed. This may prove too difficult in the absence of data in Ireland.

Conclusions

• FBEGS reflects professional opinion in the absence of Irish data.
• FBEGS requires more extensive testing and complementary research.
• FBEGS is easy to use in the field and therefore may be more widely used.
• FBEGS is compatible with the UK HEGS and therefore other data sources.
• FBEGS can be easily expanded or contracted to suit local conditions.
• FBEGS is ideal for REPS planners and Environmental Impact Assessment.
• FBEGS can be used in the early stages of management planning.

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References


Figure 1. The Field Boundary Evaluation & Grading System survey form. Attributes are graded and icons guide the surveyor when necessary. The rear of the sheet contains information on completing the form.

Figure 2. Surveyors opinion compared to FBEGS scores recorded for dry stone wall boundaries.

Figure 3. Surveyors opinion compared to FBEGS scores recorded for hedgerow field boundaries.

Figure 4. Proposed grading system for dry stone walls.

Figure 5. Proposed grading system for hedgerows.