

The Brignant long-term plots

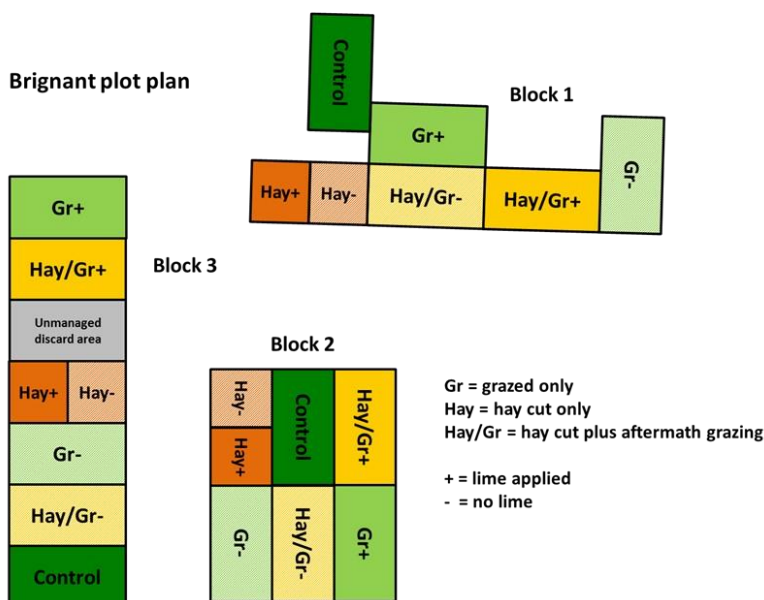
The Brignant plots are a unique experimental resource that was originally set up to test the effectiveness of different management options in achieving reversion of improved permanent pasture to semi-natural vegetation. They were established in 1994 on typical upland permanent pasture that had been last reseeded in 1973, and which had received regular inputs of fertiliser and lime. At the time the plots were created sown grass species still dominated the sward, with ryegrass at 58% cover. A total of seven different management regimes have been imposed in three replicated blocks. The treatments are: sheep grazing, with and



without lime application; hay cutting only, with and without lime application; and hay cutting followed by aftermath sheep grazing, with and without lime application. Control plots continuing the previous site management (i.e. limed, fertilised and grazed by sheep) are also included within each block. These receive an annual application of 60 kg N fertilizer and 30 kg P fertilizer ha⁻¹.

Studies over the years have demonstrated that the most effective management for restoring botanical diversity is hay cutting with aftermath grazing, and that these changes in plant species diversity are linked to changes in insect populations, including pollinators. The latest IBERS projects are using the plots to investigate the long-term impacts of the different management regimes on wider ecosystem services. The results will be used to deliver a comparative assessment of public goods delivery from

pastures under alternative management regimes, with related outputs providing an evidence base for policies relating to this important grassland type. The resource is also available to national and international scientists for the study of all processes and interactions within managed grassland ecosystems, and the meteorological station at the site is part of the UK Environmental Change Network.



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