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Bioenergy as a biodiversity management tool and the potential of a mixed species feedstock for bioenergy production in Wales

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Abstract A cutting management regime maintains high levels of biodiversity in semi-natural habitats across Europe. We utilise three years of annual yield data from Welsh semi-natural areas to calculate the mean feedstock production from cutting management to be 1.05×10^6 t DM annum⁻¹. Using formulae based upon Fischer Tropsch (FT) fuel process models, we predict that 2.12×10^5 t of FT fuel annum⁻¹ could be produced. That represents 38% of the Welsh transport sector's green house gas (GHG) reduction target for 2020. Alternatively, predictive formulae reveal that methane yields from anaerobic digestion of the feedstock could reduce GHG emissions by 11% of the domestic sector's reduction target for 2020. Electricity generation from methane is also explored. The results presented encourage further investigation into the contribution of this resource to sustainable domestic energy supply. Furthermore, the proposed system

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