

Abstract

The Dripsey flux site in Cork, Ireland is a perennial ryegrass (C3 category) pasture and is grazed for approximately 8 to 10 months of the year. The lands are fertilised with approximately 200kg/ha/year of nitrogen. The flux tower monitoring carbon dioxide, water vapour and energy was established in June 2001 and we have continuous data since then. The site also includes streamflow hydrology and stream water chemistry. We present the results and analysis for carbon dioxide and water vapour for the year July 1, 2001 to July 1, 2002. The accumulated evapotranspiration amounts to 522mm/annum compared to 1600mm/annum of rainfall. The one year carbon sequestration is 3.9t/ha. The estimated carbon in the grass and silage is 3.6t/ha. This suggests that the soils in these pastures are a sink for approximately 0.3t carbon per hectare. This work is part of a five year (2002-2006) research project funded by the Irish Environmental Protection Agency.