PROJECT INFORMATION SHEET

Miscanthus as an alternative bedding source

Purchased straw for bedding is a major variable cost in upland livestock systems within Wales. The environmental costs and related impacts on the overall carbon-footprint are also high, as material is often transported considerable distances. Straw has also become a less readily available commodity in recent years due to changes in cereal varieties, growing practices and increasing demand for it as biofuel. Miscanthus is a perennial rhizomatous grass originating from Eastern Asia that has potential for very high rates of growth returned from very low inputs. As a crop it takes 2-3 years to reach maturity, but has a production life of 15-20 years.

Miscanthus is popular as an alternative bedding material in the equine and poultry industries, but its use in ruminant systems has to date been limited. Locally -produced or home-grown Miscanthus as a source of bedding offers an opportunity for grassland-based livestock farmers to reduce production costs and/or diversify income streams. There are also a range of potential environmental benefits associated with growing Miscanthus. Reductions in greenhouse gas emissions will be made from lower transport costs, lower amounts of fertiliser usage, and through crop longevity. In addition, growing Miscanthus could benefit ecosystem service delivery from livestock farms by contributing to better water management, reduced nitrate leaching, increased carbon storage, and greater habitat diversity.

IBERS-led research across Europe tested the ability of a range of newly developed Miscanthus hybrids to tolerate a wider range of environmental stresses and established that they grow well on a range of land types, including more marginal agricultural land. These findings are reflected in the excellent establishment and early yield results for trial plots of these new hybrids at Pwllpeiran.

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