CONTEXT PROFILE

IRELAND

FARMER
Michael Gowen

INNOVATION
Perennial ryegrass variety selection for reseeding using the Irish Pasture Profit Index (PPI)

Video

MAIN DOMAIN OF THE INNOVATION
Improvement of grassland management

SOIL TYPE
Loam

FINANCE/INVESTMENT
Mid

AGROCLIMATIC AREA
Atlantic north

MANAGEMENT
Pasture dairy

MARKET
Local-rural

CLIMATE
Moderate rainfall

TECHNICAL
Computer-based

SOCIAL
Full-time farmer

All contents of this document are expert opinions of the G4AE Scientific Technical Working Group

CONTEXT PROFILE

IRELAND

Case Study: IE_08	Agroclimatic Zone								
Item (Key Innovation Elements)	**Alpine**	**Atlantic Central**	**Atlantic North**	**Atlantic South**	**Boreal**	**Continental North**	**Continental South**	**Mediterranean North**	**Mediterranean South**
Renovation of permanent grasslands (oversowing/disc plough of perennial ryegrass): 10-15% of the surface every year	++	++	+++	++	++	++	++	+++	+++
Weekly measurement of grass	++	++	+++	++	++	++	++	+++	+++
On-farm comparison between diploid vs tetraploid varieties of perennial ryegrass	++	++	+++	++	++	++	++	++	++
Incorporation of white clover	++	++	+++	++	++	++	++	++	++
Incorporation of plantain	++	++	+++	++	++	++	++	+++	+++

+++ **Strong transferability**

++ **Slightly limited transferability**

\+ **Very limited transferability**

× **Generic information/not relevant**

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Implementation Gaps

- Wouldn't be applicable in the dryer areas of Atlantic central however for the Netherlands, UK and Denmark the climate for using this system is fine

Research Gaps

- Persistence of permanent grasslands;
- Availability of legumes to improve pasture productivity and/or legumes to extend grazing in summer;
- Requirements of plantain to produce large amount of seeds
- Productivity and soil quality in old grasslands vs renovated grasslands

Suggestions to Adapt

- In many regions, training for farmers to measure grass and adapt the stocking rate is needed
- In some dry regions, white clover is used like lucerne to produce hay or under irrigation to extend grazing season in summer. Pure crops are preferred. Farmers use the var. Giganteum in the Mediterranean area. Not commonly used on farm.
- Permanent grasslands should be established using the adapted species (cocksfoot, festuca arundinacea) and clovers
- For dryer climates, more grasses/clovers which can resist droughts and still be productive.

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COST-BENEFIT ANALYSIS

INVESTMENT COSTS

Total initial investment costs at start up:	mid
• Initial authorisation costs (e.g. sanitary, veterinary, etc.)	not applicable/not known
• Initial advisory costs	low
• Initial buildings and machineries	mid
• Initial certification costs	not applicable/not known
• Initial working capital (personal qualification, marketing and promotion, etc.)	mid

ON-GOING COSTS

On-going advisory costs	not applicable/not known
On-going certification costs	not applicable/not known
On-going buildings and machinery costs	mid
On-going working capital	not applicable/not known

BENEFITS RELATIVE TO ORIGINAL SYSTEM

- **Economic**

Reduction in energy consumption (electricity; fuel consumption)	high
Reduction in input use (fertilizers; pesticides; feed) etc.	high
Payback period	mid
Product value added	not applicable/not known
Additional farm income through agroecological/agri-environmental payment schemes	not applicable/not known

- **Environmental**

Animal feed self-sufficiency increase	high
Biodiversity increase	high
Improved nitrogen cycling	mid
Soil regeneration	high
Animal health and welfare improvement	mid

- **Social**

Workload reduction	mid
Engagement of young generation	not applicable/not known

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Literature

English

- Restoration of plant diversity in permanent grassland by seeding: Assessing the limiting factors along land-use gradients - Freitag - 2021 - Journal of Applied Ecology - Wiley Online Library
- Iepema, G. & Deru, Joachim & Bloem, Jaap & Hoekstra, Nyncke & R. G. M., Goede & Brussaard, Lijbert & van Eekeren, Nick. (2020). Productivity and Topsoil Quality of Young and Old Permanent Grassland: An On-Farm Comparison. Sustainability. 12. 2600. 10.3390/su12072600. Productivity and Topsoil Quality of Young and Old Permanent Grassland: An On-Farm Comparison
- Etienne Gaujour, Bernard Amiaud, Catherine Mignolet, Sylvain Plantureux. Factors and processes affecting plant biodiversity in permanent grasslands. A review. Agronomy for Sustainable Development, 2012, 32 (1), pp.133-160. ⟨10.1007/s13593-011-0015-3⟩. ⟨hal-00930482⟩

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