



Report No. 465

Diversification of Dairy and Beef Production for Climate-smart Agriculture

Authors: Maria Markiewicz-Keszycka, Paul Hynds, Donal O'Brien, Maeve Henchion and Áine Macken-Walsh

Lead organisation: University College Dublin

Identifying pressures

Data reported under the Habitats Directive suggest that, overall, farming has a negative impact on nature and biodiversity, particularly on intensive farms. Climate change and biodiversity loss are expected to have far-reaching market, economic, business and policy impacts on the agricultural sector. If new practices are not implemented, penalties for missing EU carbon reduction targets and lack of sustainability in the agri-food sector could significantly affect farmers' incomes. This desk study sought to develop recommendations for the pro-environmental diversification of dairy and beef farms. The study design encompassed (1) a literature review presenting research on pro-environmental diversification in Ireland, the UK and New Zealand; (2) interviews with innovative farmers from Ireland, the UK and France, which helped to establish their profiles, their motivations and the challenges they encountered; (3) a national online survey of beef and dairy farmers' attitudes towards diversification opportunities; and (4) modelling the environmental impact of diversification scenarios.

Informing policy

The results of this research indicate the following:

- Holistic studies are urgently needed to investigate agroecological farming practices that can decrease greenhouse gas emissions and strengthen biodiversity and ecosystem services on Irish dairy and beef farms.
- Irish, UK and French farmers who have already implemented pro-environmental diversification on their farms follow a new peasant farming model, as opposed to the entrepreneurial model that has been promoted by the Common Agricultural Policy. It is important to promote peasant farming through policies, as this will lead to the creation of a resilient agricultural sector and contribute to achieving EU environmental and climate objectives.
- The national survey results indicate that lack of know-how and lower profits were principal barriers to adopting pro-environmental agriculture among conventional dairy and beef farmers.
- Currently, non-governmental organisations, pro-environmental farmers' associations and organic farming associations are the main
 contributors to promoting knowledge on agroecology and nature-inclusive farming. The increased availability of pro-environmental agricultural
 courses through farming advisory boards, non-profit organisations and agricultural colleges will most likely prove essential for future uptake of
 pro-environmental agricultural diversification activities.

Developing solutions

Promoting diversification of land use is proposed to be one of the measures needed to fulfil the Climate Action Plan 2019 targets. Ireland is committed to promoting the diversification of activities and low-carbon practices at farm level and in the wider rural economy.

CattleDiVersa provides suggestions and solutions that address the challenge of designing environmental schemes that are efficient for nature and attractive for farmers. The results of this project will help policymakers design win—win solutions that make economic sense to farmers by ensuring that their future actions will fully comply with Ireland's duties and commitments concerning environmental legislation and climate policy. All resulting knowledge transfer media are designed to deliver two-way exchanges, allowing both top-down and bottom-up discussions that enhance all stakeholders' understanding of the alternative activities and income streams, and to address limiting factors and issues. Such an approach reduces barriers to uptake at the social, economic and cultural levels.

