

EuroDairy – a European thematic network for dairy farming

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Abstract

EuroDairy is a Horizon 2020 Thematic Network to connect dairy farmers wishing to improve the economic, social and environmental performance of their farms, and to provide a more sustainable future for their families. EuroDairy encompasses 40% of dairy farmers, 45% of cows and 60% of EU milk production, drawn from emerging as well as mature milk-producing regions of Europe. The network focusses on four key issues affecting future sustainability: Socio-economic resilience, Resource efficiency, Animal care and Biodiversity. The project follows the interactive model set out by the European Innovation Partnership for Agricultural productivity and Sustainability (EIP-AGRI), putting farmers at the centre of practice-based innovation, adapting and developing new and existing scientific knowledge to produce implementable solutions, which can then be shared across the network. Groups of farmers coming together in the regions (as ‘Operational groups’) are linked, so that good ideas can be captured and exchanged. Pilot farmers operating excellent levels of physical and financial performance, demonstrate best practice, and push boundaries in the application of new knowledge. EuroDairy facilitates intensive interactions, so that innovations identified in one country or region can be shared with another, via a range of media and easily accessible end-user materials.

Keywords: dairy farming, farm network, resource efficiency, communication tools, EIP-AGRI

Introduction

The European Innovation Partnership on Agricultural Productivity and Sustainability (EIP-AGRI) aims to foster competitive and sustainable farming and forestry that ‘achieves more, and better, from less’. It contributes to ensuring a steady supply of food, feed and biomaterials, while respecting the need to work in harmony with the essential natural resources on which farming depends (EIP-AGRI, 2016). The European Rural Development Policy and EU’s research and innovation programme Horizon 2020 are mechanisms for funding agricultural innovation projects. Horizon 2020 funds multi-actor projects and thematic networks involving partners from different EU countries. At the national and regional level, EIP-AGRI embraces an ‘interactive innovation model’ which brings together specific actors (e.g. farmers, advisors, researchers, businesses, etc.) to work together in so-called multi-actor ‘Operational groups’, in order to find solutions to specific problems or to exploit concrete opportunities. Operational groups are funded by Rural Development programmes, as part of CAP’s second pillar budget (Measure 16 – Cooperation).

EuroDairy (www.eurodairy.eu) is one of the early H2020 thematic networks, established to support dairy farmers to improve the economic, social and environmental performance of their farms, and to provide a more sustainable future for their families. EuroDairy connects partners in 14 European countries, encompassing 40% of dairy farmers, 45% of cows and 60% of EU milk production, drawn from emerging as well as mature milk producing regions of Europe. Other H2020 thematic networks include Hennovation (www.hennovation.eu), which started in 2015, with a focus on welfare issues in laying hens. A thematic network on sustainable productivity of grasslands in Europe (Inno4Grass) started early 2017.

Focus on key topics

EuroDairy concentrates on key topics affecting EU dairy farming following the cessation of the milk quota system. It focusses on four key issues affecting future sustainability: Socio-economic resilience, resource efficiency, animal care and biodiversity, aiming to deliver implementable solutions through effective knowledge exchange and increased uptake of innovation and best practice. The challenge is to adopt innovative communication strategies and tools which involve and 'speak to' end-users. The focus is not on research, but on building bridges between research and farmers, business and advisory services. The specific goals are:

- accelerate the uptake of best practice through knowledge exchange;
- capture and stimulate further innovative practices to provide solutions or overcome barriers to effective implementation;
- synthesise scientific and practice-based knowledge;
- produce end-user material;
- disseminate widely to European dairy farmers;
- identify end-user requirements for further R&D.

Within the four topic area, EuroDairy promotes the formation, and cross border connection of over 40 operational groups. In each partner country, a network of innovating pilot farmers (120 in total) has been established, to demonstrate the translation of knowledge and techniques into locally-adapted, best-practice.

Resource efficiency

More efficient use of resources (e.g. feed, fertiliser, fossil fuel, land and labour) is one of the biggest challenges for dairy farming in Europe, directly affecting competitiveness, social acceptability and environmental sustainability (Aarts *et al.*, 2015; Elsaesser *et al.*, 2015). Through the application of best practice, and practice-based innovation, EuroDairy aims to improve the efficiency of dairy farms in the use of resources, in order to increase technical performance, improve profitability and reduce environmentally damaging emissions to air and water. Depending on the quality of management applied, only 20-40% (N) and 30-90% (P) in farm inputs are exported as milk and meat (Dairyman, 2014). Dairy farms have to operate within EU regulations, notably the Nitrates Directive, Water Framework Directive, and National Emission Ceilings Directive. How well these regulations can be met, and conversely, the latitude available to farm within these constraints, are directly related to farmers ability to manage N and P efficiently. Therefore, improving N and P use efficiency is an eco-efficiency priority, and a prerequisite for sustainability of dairy farming. Due to regional differences in the regulatory environment and in approaches to resource management, much can be learned by exchanging information between regions.

Farm N and P balances (farm purchases and exports) will be quantified on the pilot farms, using agreed standard methodologies adapted from Dairyman (Dairyman, 2013). Optimizing the efficient use of home-produced feed (Laidlaw and Šebek, 2012) is an important component of improving resource efficiency on dairy farms. Purchased forages, and particularly concentrates, not only increase cost, but result in the importation of additional nutrients onto the farm system, which subsequently need to be managed if adverse impacts on the environment are to be avoided. The introduction of a permitting system to limit phosphorous loading on dairy farms in the Netherlands is one example of an increasingly challenging regulatory environment and a potent driver for more efficient management practice on dairy farms.

Communication activities

There are around 1 million dairy farmers in Europe – over 400,000 in those countries participating in EuroDairy. They represent a diverse population of potential end-users differing in demographics, formal

agricultural education, business skills, linguistic abilities, preferred communication channels, willingness to adapt to face future challenges, and receptiveness to new and innovative ideas. A study by DairyCo in 2013 segmented Great Britain's dairy farmers into 'Monetisers' (motivated by financial drivers), 'Legacy' (motivated by the desire to leave a viable business to the next generation), 'Diversifiers' (seeking to expand business interests beyond dairy farming), 'Settled' (not looking to change from their current level of performance) and 'Exit' (planning to leave the industry within the next five years). Not only do these segments differ in how they are motivated (which determines how knowledge exchange is best targeted) but also in how they acquire and consume information.

Influencing such a large community brings greater challenges than in some other agricultural sectors, which are smaller and more vertically integrated. To influence maximum numbers of a very diverse stakeholder community, EuroDairy has developed and implemented a comprehensive and multi-layered communication plan. It combines tried and tested approaches with innovative web-based tools and social media. The communications engine within EuroDairy is an 'open working lab' (<http://eurodairy.eu/the-eurodairy-network>). This collaborative tool is multi-actor centred, highly participatory and open sourced. Harnessing the 'wisdom of crowds' (dairy farmers, advisors and scientists) in this way is expected to be an effective and innovative way to capture new and creative ideas from dairy farm practice, and aid the production and refinement of end-user materials.

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