DairyMix: sustainable and circular mixed farming systems for dairy production

Introduction

DairyMix (<u>www.dairymix.eu</u>) represents a significant step forward in achieving greenhouse gas and nitrogen emission mitigation and circularity between crop and dairy production systems (DPS) by applying flexible and context-specific concepts in Europe and Latin America. Among the main objectives, DairyMix aims to assess different scenarios for the integration between dairy and crop and/or crop-forestry systems. This analysis will allow to identify and evaluate the effect of novel options, concepts and strategies to reduce emissions and nutrient losses, assessing their environmental, economic and social sustainability. DairyMix will develop nutrient circularity concepts across a wide range of systems, with special focus on providing information for consumers and the public for improving sustainability of mixed farming systems for dairy production.

The DairyMix Project

Project work started in March 2022, and the kick-off meeting of the project was held at the Norwegian Institute of Bioeconomy Research (NIBIO) in Tjøtta (Norway) in June 2022. This meeting was attended in person and online by a broad representation of DairyMix partners. The attendees had the opportunity to see first-hand the NIBIO research facilities in Tjøtta and to visit some of their case study dairy farms, receiving extensive explanations of the ongoing projects with the aim of fostering synergies. The partners and coordinator of DairyMix express their gratitude to the NIBIO team for the perfect organization of such a fruitful meeting.

This meeting helped to establish the future lines of work and to analyze in detail the intense work ahead of the DairyMix partners in the coming years. DairyMix partners will soon to start to collect real farm data from a wide range of different DPS after having agreed on suitable circularity indicators to be applied in DairyMix. This will serve as input for identifying the multiple synergies, trade-offs and interactions between dairy and crop production systems (including agroforestry systems) and help implement policies and concepts aimed at fostering circularity between systems. These results will be available to a broad audience through the MilKey/DairyMix multi-actor platform, that will follow up on the work already initiated in the MilKey project (www.milkey-project.eu). This novel tool will present relevant results for farmers, consumers and other stakeholders interested in investigating circularity concepts applied to mixed dairy and crop production systems in Europe and Latin America.



Figure 1: Group photo taken during the technical visit to a dairy cattle farm. Credits: Siv Helen Sigerstad (NIBIO)