The role of sustainability assessment tools in enhancing dialogue and joint learning in transdisciplinary research on dairy farming.

Evelien M. de Olde a,b, Frank W. Oudshoorn a,c, Claus A.G. Sørensen a

- ^a Aarhus University, Department of Engineering, Inge Lehmanns Gade 10, 8000 Aarhus, Denmark
- ^b Animal Production Systems group, Wageningen University, P.O. Box 338, 6700 AH Wageningen, the Netherlands
- °SEGES, Agro Food Park 15, 8200 Aarhus N., Denmark

Keywords: Sustainability assessment tool; context specificity; automatic milking; international research collaboration; grazing; sustainability indicators

Abstract

Dairy farming is confronted with a wide range of environmental, economic and social challenges. To address these challenges, a transdisciplinary approach in which researchers and practitioners collaborate is needed. In the AUTOGRASSMILK project, researchers, farmers and farmers' organizations collaborated to address current challenges in European dairy farming. By combining a scientific background with the practical context, the project aimed to develop and implement strategies and technologies to combine grazing and AMS in dairy farms appropriate to the different European regions. An indicator-based sustainability assessment tool was developed to assess the sustainability performance of dairy farms. Results from using the tool on 26 dairy farms in six European countries illustrated current economic challenges in dairy farming.

The collaborative development of the tool supported participants to engage in dialogue on what constitutes sustainable dairy farming. Developing the tool improved understanding of regional differences in dairy production, and challenges involved in defining generic strategies and policies to improve sustainability in dairy farming. The development of a sustainability assessment tool involves decisions on sustainability themes, indicators and reference values and brings forward differences in perspectives and values on sustainability. As such, the process of developing a sustainability assessment tool can enhance dialogue and learning in transdisciplinary projects.