

NEU.RIND - DIGITAL FARM ASSISTANT FOR ASSESSING SUSTAINABILITY, EFFICIENCY AND ENVIRONMENTAL IMPACT ON THE DAIRY FARM

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In order to reduce the environmental impact of the Austrian cattle farming and to improve sustainability, farm-specific recommendations for action are essential. However, these can only be provided if meaningful key figures and information on the potential of possible measures are known for the individual farm. Representative and comparable key figures with benchmarking are essential for this. In collaboration with representatives from research, farmer representatives, recording organisations, consultancies, dairy processing and marketing organisations, needs and requirements were elaborated. We use as much as possible pre-collected data to assess highly important sustainability aspects on a dairy farm-specific but internationally comparable level. These data come from the central cattle database and interfaces to other official and relevant data, e.g. farms' land use (from the Integrated Administration and Control System, IACS) or economic parameters.

Existing data is supplemented with on-farm primary data to calculate eight aggregated indicators, which are based on life cycle assessment methods in the environmental dimension. Indicators cover global warming potential, food-feed-competition, ammonia emissions, primary energy demand, biodiversity aspects and are complemented by animal health aspects and economic key figures. Functional units are kg milk, hectare and farm. Sensitivity analyses have been conducted to assess the most important data and changes of accuracy due to minimised additional farm data records. Currently, we use a prototype for data collection to analyse 200 dairy farms, representing different environmental conditions and production systems. Based on that information, we will elaborate a final user-friendly version of the digital farm assistant for routine use.