Re-Livestock
RESILIENT FARMING SYSTEMS

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PRACTICE ABSTRACT 14
Analysing environmental benefits of livestock innovations

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WP5:
Re-Assessment of livestock farm systems

Reducing Meat Production's Carbon Footprint

Food production contributes to about one third of a person's carbon footprints. The production of meat is particularly relevant. **Cattle produce methane** while digesting feed, which is a strong climate gas. In addition, **manure management and feed production largely contribute to the carbon footprint of meat**.

To mitigate climate impacts innovations are needed on both the **supply side**, such as changes in the production, as well as on **demand side**, such as reducing meat consumption and food waste.

In this project, we will analyse how innovations in meat production can lead to a reduced carbon footprint. We calculate environmental impacts across the value chain of livestock systems with the method of "**life cycle assessment**".

In a first step, we address **methodological challenges** of this method such as how to assess **carbon stored on pastures** or how to account for the **fast degradation of methane** in the atmosphere compared to carbon. In a second step, we analyse the **environmental performance** of different **innovations tested in the experiments of Re-Livestock**.

Tested solutions will span from **improved feeds**, not competing with food (Figure 1), to **improved breeds** with lower methane emissions and to **improved farm management** which lower emissions. **Results** will show the **environmental benefits of innovations** and highlight **potential trade-offs** between food production, farmers income and different environment impacts, such as climate change or overfertilization of surface waters.

Analysing environmental impacts of innovations

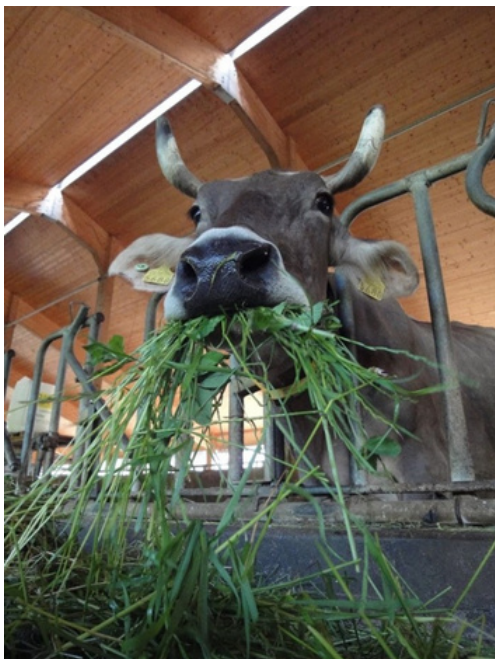

Figure 1. Feed no food: A cow eating grass (Credit: Thomas Alföldi)