

# Whey valorization from cheese manufacturing in Switzerland

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## Abstract

Around 45% of the whey produced in Switzerland is used for pig fattening, which could be replaced by plant-based feed. Despite its current use, whey is a valuable source of protein for direct human nutrition. Direct human consumption would bring not only economic (through the valorization of by-products), but also ecological (localized food systems, reduction of food waste) and social (societal commitment) benefits. The following reasons prevent whey from being processed primarily for direct human consumption: Firstly, cheese production in Switzerland is dominated by decentralized small and medium-sized production units, which means that small quantities of whey have to be transported over long distances for industrial processing. Secondly, the quality of the whey is very heterogeneous, which makes processing a process engineering challenge. Finally, even if the taste of whey products is widely accepted by consumers, in reality whey is still perceived as a waste product. In this project, we analyze local market structures in the context of dairies in Switzerland. In a participatory process, we develop the basis for setting up food hubs for the aggregation, distribution and marketing of whey products locally.

**Keywords:** Bioeconomy, circular economy, whey valorization