



Practice Abstract #6: What the mass flow of tomatoes tells us



WASTEWISE
Waste Avoidance Strategies for
Environmental Sustainability

Researchers from the WASTEWISE project have conducted a mass flow analysis of unprocessed and processed tomatoes in Italy. The reference time was the annual average for the years 2018-2020. It was distinguished between tomatoes produced on open fields and in greenhouses. For the food loss and waste (FLW) rates at the processing stage, the rates from a study on tomato sauce were applied to all processing tomatoes. Moreover, for the sake of simplicity and due to a lack of better knowledge, it was assumed that all tomatoes produced on open fields go to processing. Further, tomatoes were considered to be composed of only edible parts.

For open field tomatoes, a clearly higher loss rate was assumed at primary production than for greenhouse-grown tomatoes. For fresh tomatoes, the FLW quantity was highest for the retail stage, while it was similarly high for the consumption stages in households and in restaurants and food services.

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However, highest were the losses at the processing and manufacturing stage for processing tomatoes. The losses from the tomato processing were composed mostly of peels and pits. For tomato sauce it can be discussed whether they should be classified as edible since their exclusion from the product might be unavoidable due to marketing reasons. In the current analysis, it was assumed that these peels and pits are disposed of. The results would clearly change if peels and pits were used for food or feed production. Hence, the tomato mass flow analysis showed that there is a high leverage in utilizing by-products from the processing industry.

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