



Multi-actor design of low-waste food value chains through the demonstration of innovative solutions to reduce food loss and waste

**LOWINFOOD**

## PRACTICE ABSTRACT No: 9

### Innovating supplier-retailer agreements to avoid waste of bakery products

The supplier-retailer interface is a key hotspot of food waste in the Swedish bakery sector, partly due to the reversed logistic management system applied to a large part of the national bread value chain: “take back agreements” (TBA). This holds the bakeries responsible for forecasting, producing and delivering their products, and also responsible for unsold products from an economic and a waste perspective. As the bread waste is mainly generated in the supermarkets, but currently owned by the bakeries, the retailers have limited mandate and economic incentives to reduce the waste – leading to overproduction and inefficient bread management. By quantifying how much waste is generated at the supplier-retailer interface and simulating the outcome of multiple waste reducing scenarios, we can assess the potential benefits and identify limitations of future waste management options.

Five industry actors, including bakeries, retailers and logistic companies, contributed in stakeholder dialogues through which information was shared about the current and future potentials within the bread supply chain. This was used to quantify the waste of bakery products in Sweden (both savory and sweet) sold under TBA, which will next be simulated alongside the potential benefits of removing the TBA or applying changes to it.

The preliminary results suggest that there was considerable waste reduction potential in innovations such as data sharing and price reduction. This result is valuable for supporting incentives for future waste reduction work, both at bakeries and supermarkets. The outcome of this task can also provide guidance on which waste reduction pathway has the highest potential benefits with respect to source reduction and environmental impact.

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### Additional information

#### The Swedish bakery sector

On average, a total of 75 kg of bread and baked goods is consumed per person each year in Sweden, which on a national level translates to around 762 000 ton of bakery products consumed annually. The Swedish bread supply chain is estimated to generate 80 500 tonnes of bread waste each year. Most of this is generated at the household and retail level. At the bakery level, waste is estimated at 12 000 tonnes per year, which includes waste dough, flour, and other ingredients. Household bread waste is estimated to be 30 000 tonnes per year, accounting for 37% of the total waste of bread. Retailer waste is estimated at 28 000 tonnes, representing 35% of the total, similar to the value found for households. The majority of waste at retail level consisted of prepacked bread sold under TBAs.

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### ABOUT LOWINFOOD

The LOWINFOOD project, launched in 2020 and coordinated by the University of Tuscia, Italy, is working to deploy and improve a set of 14 innovative solutions to the food waste problem, by demonstrating their effectiveness and market potential. The core activities of the project are all focused on the evaluation of the efficacy of these innovations in reducing food losses and waste, in terms of the amount of food waste avoided as well as their environmental and socio-economic impact.

### CONSORTIUM



COORDINATOR



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### Identifiering av nyttan med åtgärder för minskat svinn av bröd och

Samverkan mellan leverantörer och återförsäljare ger idag upphov till en betydande mängd matsvinn inom den svenska bagerisektorn, delvis på grund av det återtagssystem som tillämpas på en stor del av svenskt bröd och bageriprodukter som säljs färdigpackat. Genom att kvantifiera hur mycket svinn som genereras i leverantörer och återförsäljare, och sedan simulera påverkan av olika svinnminskningsinnovationer, kan vi bedöma de potentiella fördelarna och identifiera begränsningar kring hur brödsvinnet kan minska i framtiden.

5 branschaktörer, inklusive bagerier, återförsäljare och logistikföretag, deltog i intressentdialoger där information delades om nuvarande och framtida potentialer inom brödförsörjningskedjan. Detta användes för att kvantifiera flödet av bageriprodukter i Sverige (både matbröd och fikabröd) som omfattas av återtag. Härnäst kommer olika strategier för att minska svinn simuleras, för att identifiera vilken åtgärd som har störst svinnminskningspotential samt störst miljönytta.

De preliminära resultaten tyder på att det finns en betydande nytta med datadelning mellan producenter och återförsäljare, samt även med prissänkning i butik. Dessa resultat bidrar till att stödja framtida incitament för minskat svinn av bröd och bageriprodukter genom att visa på nyttan med olika innovationer. Resultatet kan även ge vägledning kring vilka strategier som har största potentiella fördelarna med avseende på svinnminskning och miljönytta.

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