

food waste & the supply chain



As with almost everything methodological regarding food waste, there is no coherent methodology for measuring food waste at any point along the food chain. Studies, reports and reviews of such works agree on this one point: It is highly complicated to define food waste and even more so to measure it coherently and concisely. What is food waste? Is it potentially edible or inedible or even avoidable? The study of several sources stress that it is important to take each stage of the food chain into account when discussing food waste:

STAGE 1: PRODUCTION



Pre-harvest and production food losses are unavoidable given resource limitations (spills, spoils, post-harvest ripening, items that incur an abnormal reduction in quality), which are generally higher in low-income countries and often occur pre-import. Food waste, in this case, is food of good quality and fit for human consumption but does not get consumed because it does not meet commercial aesthetic standards. This food waste gets discarded by farmers or wholesalers who assume and argue that consumers won't buy bruised food. Consumers, however, are only used to, and limited to, what is available in the store. Some global reports completely ignore production waste due to methodological issues, which means the food being lost and wasted is mostly higher than reported.

STAGE 2: PROCESSING



Much of primary produce does not reach the consumer directly but is diverted to the industrial production of processed food products. The biggest impact from this sector is not visible in its own waste numbers, namely the "best before" date labels, which are set by the processing- and packaging industry. These labels lead to huge amounts of unnecessary waste further down the line in retail and households. Even though "best before" is not a measure of food safety, according to one survey 30% of people reported habitually throwing away foodstuffs simply because of an "expired" date.

STAGE 3: WHOLESALE AND LOGISTICS



The biggest cause of food waste at the point of wholesalers is natural deterioration (e.g. internal rot and insect damage) and handling damage (e.g. transportation) of goods. A major issue is that secrecy on behalf of the wholesalers, due to data protection, limits the availability of reliable data which hinders the implementation of regulations to reduce food waste. It is often only the wholesale companies that see benefits in reducing food waste which share their official data with governmental institutions.

STAGE 4: RETAIL



Considerable waste is created by all food stores when they reject produce upon delivery. This means that stores might generate around twice as much waste as official estimates show, but lack the economic motivation to reduce a big share of the waste they are responsible for. Modern marketing techniques, including strategic product placement in the store and sales offers, have been shown to cause impulsive- and overbuying by consumers. Retail level food waste is understudied compared to, for example, household waste, largely because waste levels are considered to be "sensitive business information" by supermarket chains and other corporate actors.

STAGE 5: CONSUMPTION



This stage includes two groups on consumption: households and food services. Households are often held responsible for producing the biggest share of the total food waste. However, a large amount of the waste produced at this stage has root causes further up the chain, for example the encouragement to overbuy (through supposedly cheaper offers when buying more) and the use of date labels which are often seen as expiration dates by consumers. The second group of consumers generating food waste are food services, for example restaurants and kitchens in schools. Waste at this stage includes both food that is purchased but not processed and food that is cooked but not eaten (e.g. leftovers from buffets).

Production: 98000t
Consumption: Households: 917000t
Processing: 45000t
Wholesale & Retail: 100000t
Food services: 148000t



Beyond the numbers:

Company secrecy —

All wholesale- and retail companies refer to data protection laws that prevent them from reporting public waste figures. In 2020, the retail companies finally started supplying waste figures to Swedish authorities, and the official figure for retail waste more than tripled! That is, the previous estimate was found to underreport. At the same time, up until now, the underestimated earlier figure has been used by the very same companies in marketing their "environmental efforts" even though they would have known it to be wrong, thus downplaying their amount of waste Company secrecy at all stages of the supply chain lead to misreporting of food waste and blinding of consumers.

Food waste lost along the line —

The rejection of edible goods upon arrival at retail stores in Sweden is often not included in statistical reports of food waste and left unreported. Reports have shown that this so-called pre-store waste outnumbers in-store waste by about 3:1. But the real question here is, who is accountable for this perfectly avoidable waste?

Food sovereignty —

Food sovereignty describes the process of people who produce, distribute, and consume food receiving more control over the mechanisms and policies of food production and distribution. The lack of food sovereignty is a driver of food waste in itself.

Think-box —

food waste vs. food loss • food sovereignty • edible vs. inedible waste • avoidable vs. unavoidable waste • consumer culture • aesthetics • environmental impact • methodological coherency • sustainable living • overbuying • consumption-recommendation labels

Sources:
(1) Fusión (2014). Review of food waste reporting methodology and practice. (2) Naturönsket (2020). Etappmål för förädlingsavfall av utfall. Minskad matsvinn och ökad återanvändning av förpackningar. (3) Bagherzadeh, M., H. Inamura and H. Jeong (2014). Food Waste Along the Food Chain.