

In the Netherlands, a quarter of all food is wasted annually. This must be reduced by half by 2030. In a Top Sector project, various companies have looked for solutions – and successfully.

“Reducing food waste in the production chain is a complex task”, says Joost Snels from Wageningen University & Research (WUR): “Everyone wants to reduce waste. It’s not only a shame that all that food isn’t consumed, it’s also a major expense. Companies lose around €2.5 billion annually due to waste. This huge sum shows how difficult it is to reduce waste.”

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Increasing the value of return flows

The CARVE Top Sector project has shown that this is difficult but not impossible. In this project, companies from various sectors worked together to develop solutions to their most pressing waste problems. For example, the Sonneveld Group, which supplies ingredients to bakeries, investigated uses for unsold bread. Peter Weegels from Sonneveld Group: “Almost a quarter of all bread doesn’t make it to shopping baskets and is eventually turned into animal feed or incinerated. Sustainability is very important to us, and we wanted to find a higher quality solution for this return flow”.

Concrete business case

Sonneveld developed three sustainable alternatives. One of these involves processing the bread returned to produce new raw materials for bread. Weegels: “In this process, enzymes break down the bread into sugars that can be used again to produce gingerbread or normal bread. That way, we can reuse the returned bread to produce food.” Sonneveld has since carried out a test production run at 1000 kg scale with a bakery. Weegels: “We are now making the business

case as concrete as possible so we can attract investors. We believe we will eventually be able to reuse 30% of the returned bread in the Netherlands.”

Smarter ordering

Reusing products is a major step towards sustainability. It would be even better if waste could be avoided in the first place. In a sub-project of the CARVE project, several supermarket chains and dairy producers have investigated whether wastage of unsold desserts can be reduced by adapting the ordering process. Anne-Corine Vlaardingerbroek took part in the project on behalf of Jumbo: “We investigated whether introducing flexible ordering units could reduce losses. It turned out that smaller ordering units can sometimes be effective in reducing waste, but not always. For example, imagine you reduce the ordering quantity from six to four desserts. A branch manager who would normally order six desserts is then faced with the question: ‘Should I order four, with

Preventing food waste with a new approach to production and distribution

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the risk that they may sell out, or should I order six, with the risk that two may be wasted?’ Every branch has its own turnover rate, which means it is hard to determine the optimum ordering quantity. Based on this insight, we decided to bring manufacturers’ packaging quantities used in our own distribution centres in line with the turnover rates of the branches as much as possible. That allows us to reduce losses after all.”

CARVE included a total of seven of these sub-projects. Each of these tackled a different waste-related problem. Snels: “For the participants, the sub-projects led to a major reduction in the quantities of food wasted. But we aren’t finished yet. If companies look beyond their own sectors, even greater improvements are possible. For example, waste flows from bread and dairy production can be combined to produce high-quality new products. Thanks to CARVE, we know exactly which raw materials come from which supply

chains, and that allows us to forge smart connections, avoiding waste and more besides.

The CARVE project was implemented by Albert Heijn, Aldi, the Alliantie Verduurzaming Voedsel (Sustainable Food Alliance), Arla Foods, Duynie Group, Iglo Netherlands, Jumbo, LambWeston, Plus, Royal A-Ware, FrieslandCampina, Sonneveld Group and Wageningen University & Research.

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More information