Overview of Food Rescue project results

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Collaboration between the Dutch Embassy in Tallinn and WUR as part of their FLW strategy.

Purpose is to detect opportunities for food saving or side activities.

Other projects already started in Estonia to gain more attention to the topic of food rescue.

Food rescue audits as inspiration for companies to have a look at their processes.
Aim is to give two Estonian food companies (from food production till and including retail) the opportunity to gain insight in their food resource use efficiency.

- Quantification of their processes and side streams
- Identifying opportunities for FLW prevention, reduction and/or valorisation.
Methodology

- Determining the scope for the food rescue audit.
- Identifying all processes for the company for the scoped products.
- Defining the side streams and their destinations for the different processes.
- Quantifying all side streams based on company data.
- Finding possibilities for food rescuing.
- Reporting and disseminating the results.
Companies and scope

- 2 companies took part in the Food Rescue Audits.
- Food processor - Siidrikoda
  - Scope: Main raw products that arrive at their processing facility.
  - Process apples and other fruits into products like apple cider.
- Retailer – COOP Eesti
  - Scope: All food products that arrive at their warehouses or retail stores.
  - 2 warehouses and 3 retail stores were included.
Inputs contain apples and other fruits.

Pressing is the main activity where side streams occur.

Side stream includes pomace.

From 2021 apple puree will be a new product made from part of the pomace.
Results: apple processor

Possibilities for valorisation: Keep food for human consumption.

- Apple brandy or ‘calvados’.
  - Dutch brand known that made apple brandy from side streams.

- Baking ingredients.
  - Semi finished products for industry.
  - Specialities like biscuits and bars with apple flavour.

- Apple fiber for consumers
  - To add in shakes, smoothies, juice of yogurt.
Possibilities for valorisation: Food to feed and other products.

- Animal feed (and petfood).
  - Organic feed for bovines and pigs.
  - Feed specialities like healthy horse treats.

- Biorefinery.
  - Fiber, pectin, molasses, ethanol, anti-oxidants.
  - Fiber: Paper or leather enhanced with apple fiber.
  - Anti-oxidants: anti-oxidants in apple may have a possible positive effect on the shelf-life of processed meat.

Results: apple processor
Results: retailer

- Input contains all type of products arriving at the warehouse or retailer shop.
- Unsold and exceeding expiration date is the main reason of side streams.
- Side streams include all type of products, but mainly fruits and vegetables.
- Already implemented several measures to reduce the amount of side streams,
  - like planning and forecasting, and
  - discounting food products.
Possibilities for prevention.

- Good monitoring of stock and have a good ordering system. To reduce waste often the best strategy is smaller orders and more frequent deliveries.

- Eliminate flaws in the cold chain. Make sure products are chilled during the whole supply chain. Standing some hours in a warm environment can affect a product to become wasted.

- Donation foodbank
Possibilities for prevention.

- Use of platforms.
  - To Good To Go: A platform where shops can sell ‘surprise’ boxes of (left-over) food at the end of the day for a cheap price.
  - No food wasted: A platform where customers can find products that reach the end of the labelling date in their local shops.

- Additional promotion.
  - ‘Wonky’ vegetables: Supermarkets sell and promote consuming fresh ‘deformed’ fruits and vegetables.
  - ‘Waste shelf’: A special shelf at supermarket where you can find all discounted products for that day.
Results: retailer

Possibilities for valorisation.

- Large-scale processing into new food products.
  - External processors that process ugly and low quality vegetables into soup and sauces. Products are sold in the supermarkets.
  - Internal facility to cook with leftover products → make bread, banana bread, soups and sauces.
  - Restaurant that prepares meals and products from leftover food from distribution centres.
Possibilities for valorisation.

- Small-scale external processing start-ups.
  - Day-old bread is collected and used to make grilled cheese sandwich, garlic bread, crostini, crackers and croutons.
  - Leftover bread or leftover potato is processed into beer.

- Animal feed.
  - Collect ‘old’ bread and valorise it to chicken feed.
Conclusion

- Food waste prevention and reduction:
  - Increase economic profit.
  - Reduce the environmental footprint.
  - Meet corporate social responsibility.
Thank you for your attention!

To explore the potential of nature to improve the quality of life

In collaboration with Siidrikoda and COOP Eesti.

Partner institute: Stockholm Environment Institute

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