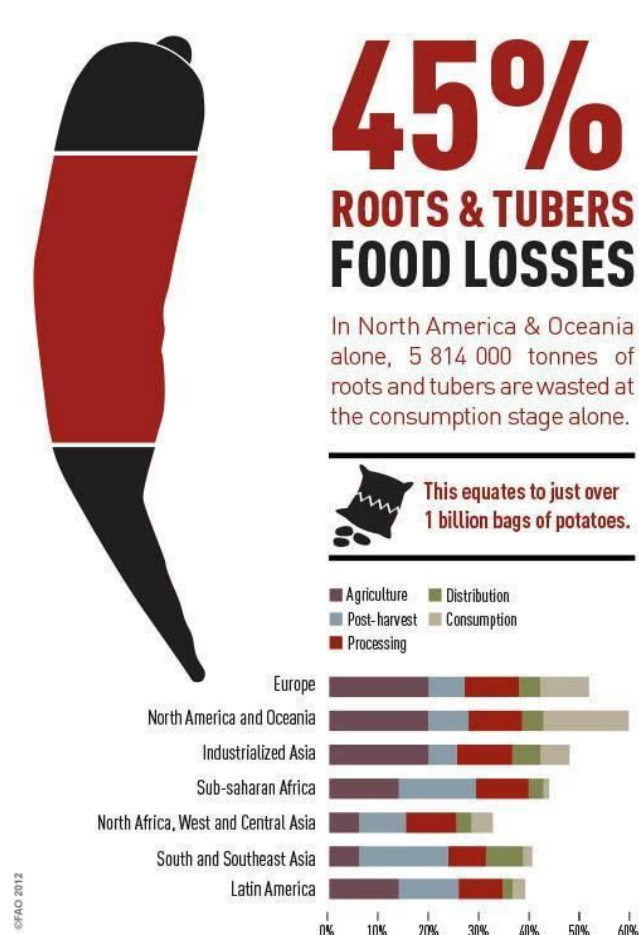


## Food losses, value chain efficiency and food security

*A Wicked World - Bee Collective session on losses in the potato value chain in Kenya*

### Facts & Figures on food losses worldwide



According to the FAO, between one quarter and one third of all food produced worldwide is never consumed. For **roots and tubers**, the estimates even amount to **45% of lost and wasted** food.

Food losses and waste occur at every stage of the value chain including during production, harvest, storage and transportation, processing and retail. Food waste occurring at the end of the chain (at the level of distributors and consumers) is particularly high in medium and high-income countries. This is mainly caused by consumer behaviour and lacking coordination in the supply chain, particularly related to supermarkets and restaurants. In **low-income countries**, the most significant causes of food losses are **financial, managerial and technical limitations** in the harvesting techniques, storage and cooling facilities located in difficult climatic conditions, infrastructure, packaging and marketing systems and related policy environments.

### Food losses and food security

Value chain inefficiencies can negatively impact food security, food quality and safety. It can result in **less food availability** at the consumer level due to losses and in significantly **rising food prices** due to shortages with more **food insecure consumers** as a result. Or in even further circumstances, the financial and nutritional value of food reduces due to too low storage or transport standards.

These chain inefficiencies also often have non-favourable effects on the **environment** and **resource usage**, as well as on **economic development** simply because significant effort and energy is put into processes that do not lead to feeding people. Yet **some actors** in the short term, **contradictory** enough, do **profit from food losses** and as such often do not initiate action to realise less losses. Thus, unravelling interests of all related actors and power relations in the value chain is essential as it can explain various behaviours. Once bottlenecks are defined, drivers for change can be defined in an attempt to start integral change processes.

## The need for context-specific joint integral solutions

The concrete causes of food losses, and the solutions to tackle them, depend on the conditions and context of the specific country or region. For this Wicked World - Bee Collective session, we focus on the **Kenyan** context and zoom in on **losses of roots and tubers**. Integrated value chains or food system approaches with an eye on context-specific circumstances are needed to improve value chains and food systems to counteract food loss. Contributions of **all related actors** are thus more appropriate than numerous freestanding smaller interventions. Think of comprehensive **joint strategies** for proper infrastructure, viable business cases, storage facilities, means of transport, market access and an enabling political and institutional environment at the same time.

## The situation in Kenya

The **potato** is the second most important food crop in Kenya after maize and is mostly cultivated **by smallholder farmers**. The Kenyan government has recognized the critical role horticulture plays in alleviating food shortages and has initiated several national programmes for strategic crops. The reasoning is that fresh fruits and vegetables (amongst which potatoes) **provide higher yields** in comparison to maize (a grain) and are **less affected by climate change**. The issue of food loss reduction is a highly important factor in the Kenyan policy in securing the stable fruit and vegetable production required to combat hunger and raise incomes.

An estimated **50% of all potatoes in Kenya are lost in the chain**, particularly due to inappropriate harvesting tools, an insufficient trained workforce, lack of grading and storage and unfavourable environments. Potato prices rise significantly during the off-season periods due to the unavailability of effective storage facilities. Generally, significant efforts are made at the pre-harvest and harvest levels, while **post-harvest opportunities** receive far less attention. Consequently, benefits reached during the pre-harvest and harvest stages are lost in the post-harvest stages. The question is what is the real deeper problem behind it in Kenya? What different scenarios and solutions are known already?

## So what now?

A large number of projects, programmes and research have been done in Kenya and other countries regarding food losses and this is what we have learned:

- What estimated food losses are
- What are the certain reasons for their occurrence
- Where they occur
- The overall need to reduce them in order to feed nine billion people in 2050

However, many questions remain open, think of:

- How will we together overcome hindrances and dilemmas now?
- How will we invite missing stakeholders who need to participate in co-creating solutions?
- How will we collaborate on real financial and ecological sustainable solutions and taking ownership in joint change?
- How will our solutions support the bigger purpose to enhance food security in Kenya and beyond?

