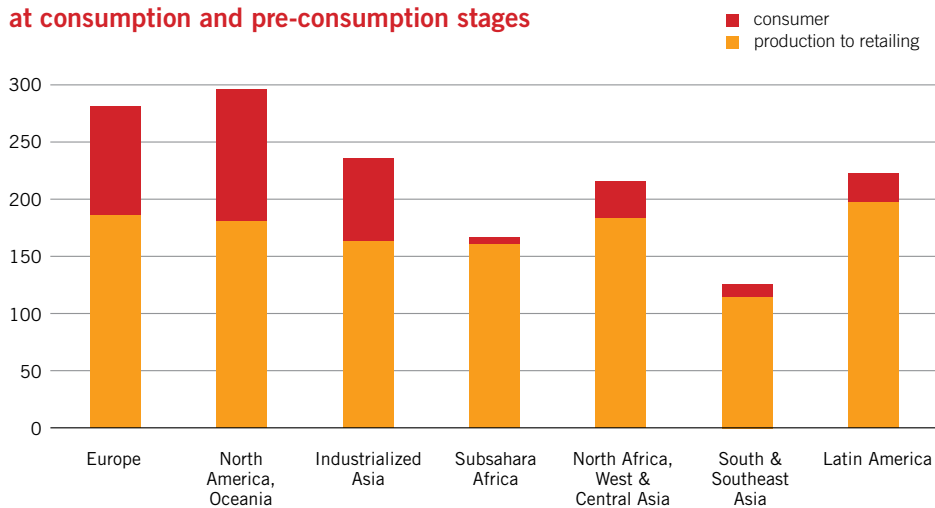


The role of producer organizations in reducing food loss and waste



Every year, an estimated 1.3 billion tonnes – roughly one-third – of the food produced for human consumption worldwide is lost or wasted.¹ The following figure shows that in industrialized countries, significant waste occurs at the consumption stage, while in low-income countries, food losses take place primarily during the early and middle stages of the supply chain (FAO, 2011).

Per capita food losses and waste (kg/year), at consumption and pre-consumption stages



1 Food losses refer to the decrease in edible food mass available for human consumption throughout the different segments of the supply chain. In addition to quantitative losses, food products can also face a deterioration of quality, leading to a loss of economic and nutritional value. Food waste refers to food losses resulting from decisions to discard food that still has value. Food waste is most often associated with the behaviour of retailers, the food service sector and consumers, but food waste and losses take place all along food supply chains.

The losses incurred in developing countries are largely due to infrastructural constraints related to poor transport, storage, processing and packaging facilities, in addition to capacity gaps that result in inefficient production, harvesting, processing and transport of food. Depending on the commodity and the local context, these activities – which are key to reducing losses – are often carried out by smallholder farmers or other actors operating close to the farm-gate, such as traders, collectors, agroprocessors and marketing cooperatives.

It is difficult for smallholders to ensure efficient delivery of produce to buyers because of their small-sized operations and their vulnerability when faced with environmental and market fluctuations. This situation contributes not only to food loss, but also to higher transaction costs, loss of income and increased food insecurity, reinforcing the overall argument for supporting producer organizations that foster the collective capacity of smallholder operations.

FAO has been working closely with various forms of producer organizations at the federation and district levels across Africa, the Caribbean and the Pacific regions, to develop different mechanisms and tools for reducing losses early in the supply chain. The following recommendations draw on the success factors and good practices for addressing food losses that have emerged from this work.



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Smallholders' warehouse receipt system contributes to loss reduction in the Niger

BOX 1

The FAO-supported Warehouse Receipt Systems Project in the Niger promotes the safe storage of food surpluses produced in Maradi and Dosso departments. The system ensures that food is stored properly so that losses are reduced, and enables smallholders to profit from changes in the value of stock, which can increase by as much as 30 to 40 percent four to six months after harvest. The mechanism

involves producer associations borrowing on behalf of farmers, against the farmers' stored produce; local financial institutes lending to the farmer organizations, based on the value of the produce stored; and local warehouse managers/operators providing storage facilities. A fee is deducted from farmers' loans to cover the costs of transactions.



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Recommendations

- **Sustained dialogue with buyers:** Remaining in constant dialogue with buyers not only helps agro-enterprises to manage the risks they face when buying from smallholders,¹ but also contributes to producer organizations' understanding of buyers' sourcing decisions (FAO, 2012). As well as increasing business between the parties, sustained dialogue also helps to reduce product rejection by buyers.

Reducing post-harvest losses of oil-palm in Cameroon

BOX 2

One of the causes of Pamol Plantations' high rejection rates of smallholder-supplied fresh oil-palm fruit was substandard quality due to premature harvesting. As part of an initiative to upgrade the business model, the company – in collaboration with local producer organizations and supported by FAO – trained smallholder suppliers in good harvest

and post-harvest practices, and addressed smallholders' grievances over late payments by introducing monthly payment schemes through local microfinance institutes. This initiative has resulted in fewer rejections and improved income for smallholders.

Reducing post-harvest losses and improving smallholders' income from cassava in Cameroon

BOX 3

The fragmentation of smallholder supplies to the market was identified as one of the bottlenecks that needed to be addressed to improve competitiveness of the cassava chain in Cameroon. Following the establishment of quality control and logistics mechanisms – run by local producer organizations with support from FAO – wholesalers can now use

public transport to pick up graded produce and make payments at agreed stops along the Akonolinga-Yaoundé highway. These mechanisms have resulted in improved quality control, fewer product rejections by wholesalers and increased income for both producers and buyers.

- **Coordination of supply to the market:** Producer organizations can help smallholders to reduce losses by coordinating production planning across farms and staggering production and harvesting schedules according to market needs. Box 1 provides an example of a warehouse receipt system, which can address market price fluctuations related to seasonal variations in supply and demand, resulting in fewer losses.
- **Coordination of financial service provision to avoid premature harvesting:** Financial need often forces poor farmers to harvest produce early, lowering the nutritional and economic value of the crop. As described in Box 2, producer organizations can help reduce farmers' need to harvest prematurely by identifying and coordinating financial services for households and farms.
- **Organizational innovations for low-cost value addition:** Producer organizations can play an important role in adding value to and reducing losses of their members' produce through organizational and management innovations, supporting activities such as production planning, sorting, grading and logistics (FAO, 2012). An example of this type of innovation is described in Box 3.
- **Improved storage facilities, infrastructure and cold chains:** Producer organizations have a crucial role in lobbying both the private and public sectors for investments in local food processing services, dry and cold transportation and storage facilities that facilitate the safe preservation of fresh produce such as fruits, vegetables, meat and fish.
- **Capacity building in food standards:** Failure to comply with minimum food safety standards can lead to food losses and, in extreme cases, impacts on health and countries' food security status. A range of factors can result in food becoming unsafe, such as naturally occurring toxins, contaminated water, unsafe use of pesticides, veterinary drug residues, and unhygienic handling and storage conditions. Producer organizations have a central role in disseminating good on- and off-farm practices for maintaining minimum food safety standards and reducing losses.



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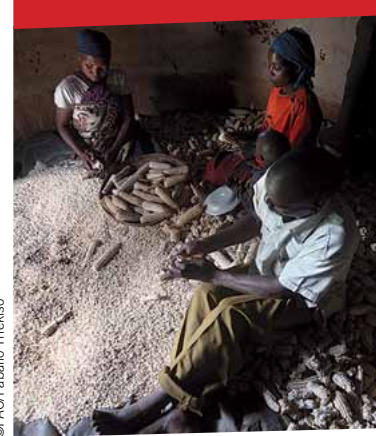
Policy guidance principles

- **Support to institutional capacity building on the prevention of food losses for producer organizations:** In collaboration with other private sector food industry actors, producer organizations are key to the development of strategies and action plans for reducing food loss and should be regarded as full partners of the State, which should provide support through institutional capacity building.
- **Development of national and intraregional markets:** Intraregional exports of agricultural products in Africa (1996 to 2000) were worth more than three times as much as exports to non-African markets, and are expected to be the largest single source of demand growth for African agrofood over the next 20 years (UNIDO, 2011). These closer-to-home markets have similar consumer preferences and place fewer requirements on producers to conform to the standards demanded by consumers in industrialized countries, thereby reducing possible rates of rejection compared with higher-value export markets. Apex producer organizations need to collaborate with ministries of agriculture,



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- regional economic platforms – the Economic Community of West African States (ECOWAS), the Common Market for Eastern and Southern Africa (COMESA), the West African Economic and Monetary Union (EMUWA), the Southern Common Market (MERCOSUR) – and industry associations to guide developing country farmers in responding to these closer-to-home markets.
- **Creation of an enabling environment for local agricultural service provision:** Local producer organizations often lack the expertise, resources or infrastructure to carry out many of the harvest and post-harvest activities that farmers need for reducing losses – such as pesticide spraying, transport, cold storage, and warehouse services. Many of these services can be outsourced to local companies, if the right local business-enabling environment exists. To this end, making it easier for business service providers to operate locally can contribute to more efficient supply chains and reduced food losses.
- **Support for the creation of national platforms on food losses:** Only some industrialized countries – such as Denmark,¹ the United Kingdom of Great Britain and Northern Ireland² and Germany³ – have national initiatives that bring together producer organizations, food industry representatives and research and technology institutes in a coordinated effort to reduce food loss and waste. Tools and lessons from these initiatives can be incorporated into developing countries' efforts to create platforms on reducing food losses and improving food security (FAO, 2011).
- **Market development for multi-graded products:** Farmers supplying higher-value markets incur a lot of waste after grading has taken place, with food being discarded because of blemishes or size and shape issues that do not necessarily render products unsafe or less nutritious to eat. In collaboration with research institutes and the public and private sectors, producer organizations can support the development of markets for multi-graded produce, which includes goods that are less than perfect aesthetically, but safe and nutritious (SEPA, 2008, referred to in FAO, 2011).
- **Support to local technology innovation for food loss reduction:** Public support is required for the institutional strengthening of primary producer organizations and local service providers on technical skills for combating food losses – such as good agriculture and manufacturing practices, combined with the locating of agroprocessing facilities as close as possible to the farm gate.



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- 3 Stop Wasting Food.
www.stopspildafmad.dk/inenglish.html
- 4 Love Food Hate Waste.
www.lovefoodhatewaste.com/
- 5 Zu gut für die Tonne.
www.zugutfuerdietonne.de

References

- FAO.** 2011. *Global food losses and food waste: extent, causes and prevention*, by J. Gustavsson, C. Cederberg, U. Sonesson, R. van Otterdijk and A. Meybeck. Rome. www.fao.org/docrep/014/mb060e/mb060e00.pdf
- FAO.** 2012. *Smallholder business models for agribusiness-led development: Good practice and policy guidance*, by S. Kelly. Rome. www.fao.org/docrep/015/md923e/md923e00.pdf
- FAO & World Bank.** 2010. *FAO/World Bank workshop on Reducing post-harvest losses in grain supply chains in Africa: Lessons learned and practical guidelines*. Rome and Washington, DC. www.fao.org/fileadmin/user_upload/ags/publications/fao_wb_ph_web.pdf
- Miller, C. & Jones, L.** 2010. *Agricultural value chain finance: Tools and lessons*. Rugby, UK, Practical Action Publishing in association with FAO.
- SEPA.** 2008. *Svinn I livsmedelskedjan – möjligheter till minskade mängder*. Swedish Environmental Protection Agency (SEPA), Bromma, Sweden.
- UNIDO.** 2011. *Agribusiness for Africa's prosperity*. Vienna. www.unido.org/fileadmin/user_media/services/agro-industries/agribusiness_for_africas_prosperity_e-book_new.pdf



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For information on SAVE FOOD (Global Initiative on Food Losses and Food Waste Reduction) and how to join as a private or public partner, please visit: www.fao.org/save-food

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