

CTA Policy Brief

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POLICY POINTERS

- **Strengthening** national and global policy and legislative frameworks
- **Linking farmers** to markets and improving rural infrastructure
- **Making affordable post-harvest technologies** available to smallholder producers
- **Improving processing opportunities** to prolong shelf-life and add value



Going to waste – missed opportunities in the battle to improve food security

Tackling food loss and waste could make a significant contribution to combating hunger and increasing farm incomes where it is needed most. One-third of all food produced for human consumption worldwide is lost or wasted. That translates into 1.3 billion tonnes, worth nearly one trillion US dollars. The quantity of food thrown out in industrialised countries is the same as the entire amount produced in sub-Saharan Africa. Added to this is the waste of natural resources used to produce food that is subsequently lost or discarded. Food losses occur at all stages of the supply chain, but the causes and impacts vary between North and South. In developing countries, it is estimated that nearly 65% of losses occur at the production, processing and post-harvest stages. In industrialised countries, food waste often occurs at the consumer end of the supply chain, and further waste is caused by retailers whose intolerance of cosmetic 'imperfections' in products causes their suppliers, such as farmers and packers both locally and internationally, to waste edible food.

At a Brussels Development Briefing on *Addressing Food Waste in Times of Crisis*¹, held in June 2012, experts called for greater focus on an issue which has been largely neglected in the food security debate. Solutions to address food loss included making affordable post-harvest and processing technologies available to producers and adopting a stronger value chain approach, since better access to markets means less waste for farmers. Options for tackling needless food waste include legislation. It is also important to engage the private sector, especially supermarkets, and educate consumers on the implications of squandering valuable food.



Food losses occur at all stages of the supply chain.

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THE SCALE OF LOST AND WASTED FOOD

Food loss and waste accounts for roughly US\$680 billion in industrialised countries and US\$310 billion in developing countries. Recent studies commissioned by FAO estimate annual food losses and waste at about 30% for cereals, 40 to 50% for root crops, 30% for fish and 20% for oilseeds and meat

and dairy products. On a global scale, just 43% of the fruit and vegetables produced is consumed. The remaining 57% is wasted. Post-harvest losses in the South, and discarded foodstuffs in the North, are also a waste of the resources used in food production, such as fertiliser, pesticides, land, water and labour. The water used globally for irrigation to grow food that is wasted would meet the domestic needs of 9 billion people. Rot-

¹ Organised by CTA, the European Commission (DG DEVCO), the Secretariat of the ACP Group of States and Concord, the European NGO Confederation for Relief and Development. Brussels, June 2012. <http://brusselsbriefings.net>.



© Godwin Aiser

Local processing can reduce losses - processing cassava into gari in Nigeria.

**“
Food is wasted
from field to fork,
at every step of
the food chain.”**

*Dr. Silvia Gaiani,
University of Bologna,
Italy*

ting food is a major creator of methane, one of the most harmful greenhouse gases.

Much food loss and waste is avoidable, although the causes may differ widely. In developing countries, more than 40% of food losses occur at post-harvest and processing levels, while in industrialised countries, more than 40% of losses occur at the retail and consumer stages. Saving even one-quarter of the food currently lost or wasted would be enough to feed 900 million people in the world, according to FAO.

In the South, small-scale farmers and fishers are the hardest hit by food losses, which are caused by inadequate production and post-harvest techniques, as well as poor storage, processing, cooling, transport and distribution facilities. The problem is especially acute for perishable products, which deteriorate rapidly in the hot and humid conditions of many ACP countries, when storage or refrigeration facilities are lacking.

Depending on the crop, between 15 and 35% of food may be lost in the field due to poor agricultural techniques and other factors. Pests and diseases such as *Quelea* birds and *Striga* weeds, can devastate a farmer's output

even before harvest. Aside from food that is actually lost or discarded, many products also suffer from a decline in quality, leading to a drop in economic and nutritional value. Natural disasters, such as extreme weather events, are a major cause of food loss in some ACP countries. Cyclones can wipe out an entire crop, with catastrophic consequences. Food loss and waste have repercussions on food security, income generation and economic growth. While 935 million people go hungry, mainly in the South, there are unprecedented food surpluses in the North. In industrialised countries, supermarket standards that go beyond straightforward food safety requirements lead to massive quantities of food being removed from the supply chain, even though it is still fit for human consumption. Misshapen potatoes or bananas, bread crusts not required for sandwiches and food products that are approaching their expiry date are all needlessly discarded. Consumer patterns, reinforced by an increasingly 'throwaway' mindset and inadequate purchase planning, also promote unnecessary waste. Affluent consumers have developed different dietary patterns, shunning cuts of meat, such as offal, that previous generations would have eaten. In Europe and North America, per capita waste by consumers is 95 -115 kg per year, while in sub-Saharan Africa the figure is 6-11 kg. Research shows that consumers in emerging and middle income countries, such as some Caribbean states, are already adopting more wasteful practices, and this trend is expected to accelerate in the rapidly growing urban areas of the South.

POLICIES TO MINIMISE LOSSES

Bridging the knowledge gap

In spite of the acute damage caused by post-harvest losses and food waste, these challenges have not received much attention, with the focus mainly on encouraging farmers to increase production. An important first step in tackling the problem will be creating greater awareness among all actors

“Part of the solution to food in security is ensuring that we reduce our food wastage along the value chain to a bare minimum.”

*Onya Akonopeesa,
Uganda National
Farmers Federation*

in the food supply chain. Understanding the scale and the location of post-harvest losses is crucial, especially in remote areas, such as the Pacific islands, where scant information is available. One initiative, the African Postharvest Losses Information System (APHLIS), is providing weight loss estimates of cereal grains in sub-Saharan Africa according to cereal, country and province, so that food loss strategies can be targeted.

More research is needed on post-harvest techniques, packaging and policies likely to provide an incentive to cutting losses and waste. Producers need more information about sound post-harvest practices. In Kenya, Malawi and Tanzania, where grain losses are massive, farmer field schools are teaching producers to identify different pests and how best to manage them. More support for developing indigenous knowledge systems for food preservation could lead to less spoilage. In Sudan, the *zeer* pot is a simple fridge made of one earthenware pot set inside another, with a layer of wet sand in between. As the moisture evaporates, it cools the inner pot, keeping up to 12 kg of produce fresh for up to 3 weeks.

Adding value and better marketing

Local processing can reduce losses. Solar drying, salting, pickling, sugaring and smoking can all prolong shelf-life and add value to food products. Mango wastage in Kenya has fallen from 30% to 10% due to value added processing. In the Caribbean and Pacific, initiatives to transform root crops into chips, flour and bread, and fruit and vegetables into juices, jams and chutneys are reducing spoilage and forming the basis of lucrative value chains.

Organising smallholder farmers into producer associations can improve the efficiency of food supply chains, thereby sidestepping the risk of gluts, spoilage and low prices. Marketing cooperatives provide a central point for assembling, storing and distributing food produce from small-scale farmers. Warehouse Receipts Systems have proved successful in providing farmers with improved storage facilities, while ICTs, especially mobile phones,

can help to improve market access and develop a more streamlined food supply chain.

It is important that political and institutional frameworks support efficient food storage and marketing systems, with appropriate legislation, taxation, quality regulations and incentives to keep waste to a minimum. Investment in infrastructure, especially roads, transport and cooling facilities, will help to reduce post-harvest losses. Developing contract farmer linkages between producers and processors can be an effective way of strengthening the value chain and reducing food loss.

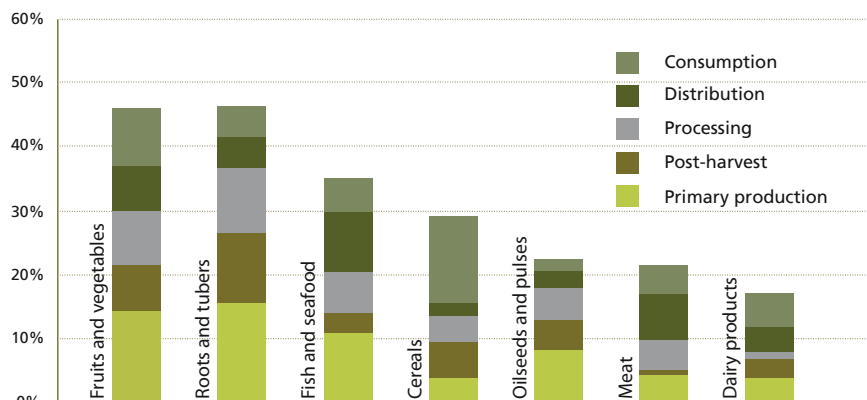
Planning is essential. It may make sense to limit production of highly perishable products, such as tomatoes and leafy vegetables, or trade more locally. Remote and resource poor rural communities might do better to switch to shelf stable produce such as onions, that do not require refrigeration. In Kenya, the well organised green bean sector redirects the 25% rejected for export to local markets and the remainder for cattle fodder. As a result, actual losses are limited to 10%.

The price of affluence

In the North, where massive quantities of food are squandered, there is a need to engage the retail sector in reducing waste within the supply chain, improving labelling and charitably redistributing food that is still fit for consumption. Organisations such as Fares-Share and Feeding the 5000 in the UK work to divert surplus food from the supply chain, to ensure it reaches people in need. The Last Minute Market food recovery programme in Italy links shops and restaurants which have unsold food with charities and people in need. Much discarded food could be fed to livestock. As a last resort, food waste can be converted into compost, or recycled to produce renewable energy.

Changing consumer behaviour is also essential. In some European countries, campaigns are encouraging shoppers to buy smaller quantities and keep what they buy at its best. There is also wide scope for new marketing and pricing strategies for cosmetically imper-

© FAO, 2012. Global initiative on food loss and waste reduction, Rome.



Part of the initial global production lost or wasted, at different stages of the supply chain, for different commodity groups.

“Consumers have the power to demand that the food business and governments take responsibility for reducing food waste in their own supply chains”

Tristram Stuart, food waste researcher and campaigner

AUTHOR

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PEER-REVIEWER

Tristram Stuart



Further reading

CTA Briefing no. 28. *Addressing Food Waste in Times of Crisis*. A Reader. Boto I., Biasca R. & Brasco F. 2012.

<http://brusselsbriefings.net>

Global Food Losses and Food Waste

Cederberg C., Gustavsson J., Meybeck A., van Otterdijk R. & Sonesson U. 2011. FAO

<http://tinyurl.com/ca84yux>

INphO, an information network on postharvest operations

www.fao.org/inpho

Save Food

www.save-food.org

The African Postharvest Losses Information System (APHLIS) www.aphlis.net

fect food or products that are approaching their expiry date, so long as they are safe. Not all consumers demand perfectly straight carrots, and potatoes with a cleft in them taste just as good as those that are perfectly shaped.

RESPECT FOR FOOD

Improving food security is not just a question of increasing production. It is also a matter of improving distribution and ensuring that the food that is produced is used to the best effect. Global agricultural production could provide enough food for the 9 billion people predicted to live on this planet in 2050, and have plenty left over. Real progress in reducing needless food loss and waste will require a change of policies at national, regional and international level.

The whole issue of food loss in the South and squandered food in the North calls for a rethink of focusing all the effort on increasing agricultural productivity while so much food goes to waste. ■

Waste and Resources Action Programme (WRAP)

www.lovefoodhatewaste.com

Waste: Uncovering the Global Food Scandal Stuart, T. 2009

www.tristramstuart.co.uk

Feeding the 5000

www.feeding5k.org

Missing Food: The Case of Postharvest Grain Losses in Sub-Saharan Africa.

The World Bank/FAO. 2011

<http://tinyurl.com/3kmbd2>