



Food security Africa: 32% of crops end up as food waste



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Introduction

Food loss or waste refers to food that was intended for human consumption but was removed from the human food chain for various reasons, even if it is redirected to a non-food use. Globally it is estimated that one-third of the food produced for human consumption is lost or wasted.

This might be the result of losses in the product's value chain as well as consumers' end. Limiting food wastage is suggested to have a positive impact on food security because there would arguably be more food available to feed the population.

Food losses in developed countries are at similar levels to those in developing countries. The key difference is that more than 40% of food losses in developing countries occur at the post-harvest and processing levels while the same percentage of food losses in developed countries occur at the retail and consumer levels. Food waste at consumer level in industrialized countries (222 million tons) is nearly equal to the total net food production in Africa (230 million tons). According to Deloitte, 32% of crops produced in Sub-Saharan Africa are not consumed.

The preliminary research for this article looked at a variety of internet sources, including the [Food and Agriculture Organization](#) (FAO) published research reports on food waste in Sub-Saharan Africa, and news articles about the topic. It's worth noting that in most cases when data relevant to West Africa is insufficient, this study relies on broader research on food waste in Sub-Saharan Africa to provide a picture of the situation in West Africa.

Food Waste at the Retail & Consumer Level

Waste happens primarily in wealthy countries at the store and consumer end of the supply chain, where perfectly edible meals are discarded for what might be considered more trivial reasons such as aesthetics. While on the other hand people in developing regions like West Africa rarely throw food out. However, the quality of edible food deteriorates over the long, circuitous journey from farm to table.

The amount of food wasted in West Africa at the retail and consumer level is largely undocumented and there are few studies on the subject.

While there is no data on Food Waste in West Africa, this research will rely on studies from Sub-Saharan Africa to give context which can be applied to West Africa.

Only a small fraction of the food lost in West Africa can be attributed to the retail and consumer level. Food distribution networks are becoming longer and more complex as rural to urban migration increases in West Africa. The most effective way to increase the amount of food available to feed a growing population is to eliminate inefficiencies and waste in the supply chain.

Food Waste at the Post Harvest Level

In Sub-Saharan Africa (SSA) rural populations depend heavily on food production for their income and food purchases make up a large portion of expenditures in both rural and urban areas. The dialogue in this demographic is most focused around the theme of "post-harvest losses" (PHL). PHL are those that reflect potential consumables that leave farmers' fields but never make their way into consumers' mouths.

While there isn't enough data on PHL in West Africa, Figure 1 indicates that PHL accounts for most of the food waste in Sub-Saharan Africa. According to the data, only around a tenth of per capita food losses and waste occur at the consumer stage of the food supply chain, with the majority occurring between production and retailing.

Solutions to food waste in West Africa

West Africa has made tremendous agricultural improvement during the last three decades although many may be unaware of this progress. According to the [OECD Sahel and West Africa Club](#) production has increased at a 3.8 percent annual rate, outpacing Brazil's (2.4 percent) and China's (1.7 percent). However, supply is only one part of the equation and increased production does not always equate to less hunger. Getting produce to the consumer in good quality is crucial to ensuring food security.

The majority of food losses in Sub-Saharan Africa are attributed to agricultural and post-harvest losses. This can be seen in Figure 2 above showing part of the initial output lost or wasted at different food supply chain stages for cereals in different regions.



This means that in West Africa, the discourse about food waste should focus on food-loss mitigation at the production and post-harvest stages.

As a solution to reducing post-harvest food losses it is crucial for West African governments to invest in high-quality post-harvest technologies in order to mechanize the harvesting process.

Challenges in solving food waste in West Africa

In Africa 80 percent of food is produced by smallholder farmers who cannot afford the latest harvesting technologies and mostly engage in subsistence farming. If they're lucky they will produce just enough to earn a modest income. In comparison to machine-assisted harvesting, manual harvesting is a slow and laborious procedure and leads to more crop damage and losses. Produce that has been mishandled during harvest is more prone to illness and rot while being transported to market.

Take cassava for instance, introduced to Africa by Portuguese traders travelling from Brazil but now serves as the main source of calories and the foundation of many West African diets. The starchy root crop is a year-round crop, and combined with its drought resistance, it is a very attractive option for poor subsistence farmers.

However, one of the major downsides is that the root crop only has a three-day shelf life after harvesting. Blue and brown splotches appear within 24 hours signaling the start of physiological deterioration. In another day or two a variety of fungi and bacteria attack causing the onset of wet and dry rot.

Special pre and post-harvest treatment and handling can help to minimize root damage and delay the deterioration process. The cassava can be kept fresh for up to one month with proper storage, although chemical treatments, waxing, refrigeration, and deep freezing can extend shelf life even further.

However, these solutions might be prohibitively expensive or require stable electricity which is in limited supply and unreliable in rural West Africa. This means that a cassava farmer's productivity is limited, not just by how much land he has, or how much he can grow, but also by storage capacity and quality. Without efficient storage facilities there is no logic in producing more than what can be taken to market within a few days.

Several researchers, from the [Kumasi Institute of Tropical Agriculture](#) in Ghana to [Purdue University](#) in Indiana, are working on developing innovative storage solutions well adapted to the West African context.

Even without the added burden of navigating international borders shipping produce by land is extremely difficult, between roadblocks, checkpoints and demands for payments – all with varying degrees of legitimacy. The poor roads put a further drag on timetables and cause extra wear and tear to transport vehicles.

“Transport costs in West Africa are among the highest in the world,” according to the [Borderless Alliance](#), a private-sector coalition that works to promote greater intra-regional trade by reducing non-tariff barriers. “The high costs mean that farmers and other producers get lower prices for their goods”, and this lost revenue keeps farmers poor, depriving them of critical resources to invest in harvesting and processing machines, storage solutions and better transport options.

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Expert in this Insight

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