

CASE STUDY 1

Tackling Food Loss and Waste

Understanding post-harvest loss of rice in Nigeria and palm oil in Gabon

One third of food produced is never consumed: this represents 8% of global GHG and a quarter of the water used in agriculture, as well as crop-land the size of China. Strong business, social and environmental drivers to tackle post-harvest loss and food waste include reducing nutritional loss across the key value chain stages from production to consumption, financial savings, resource use efficiency, higher

performance and contribution to climate targets, food availability and better returns on investments for actors involved.

WBCSD is collating this series of case studies to scale private-sector action that tackles food loss and waste through fostering more knowledge-sharing and peer-learning.

Case studies will be made available at www.wbcscd.org



The context

Established in 1989, Olam is today a leading global agri-business operating from seed to shelf, supplying food and industrial raw materials to over 23,000 customers worldwide. The company's purpose is to re-imagine global agriculture and food systems and drive transformation in the sector by delivering on the following three outcomes: creating prosperous farmers and farming systems; enabling thriving communities; and re-generating the living world.



Commitments and targets

Olam's CEO, Sunny Verghese, is part of Champions 12.3 and has committed to the Global Agribusiness Alliance's Food Loss Resolution - both coalitions are focused on reducing losses by 50% by 2030. Olam also acts as co-lead of the WBCSD Food Loss and Waste workstream with the purpose to foster value-chain collaboration and peer learning on best practice and practical implementation of post-harvest loss and food waste strategies. Olam's Corporate Responsibility and Sustainability (CR&S) function is responsible for developing the climate targets and strategic focus around post-harvest loss.

By 2030, Olam aims to have reduced post-harvest loss by 50% in its own operations, as well as in Olam-managed farmer programs. The company also set a target to utilize 100% of the by-products generated in its operation by 2024. To achieve those targets, the CR&S function engages internally with Olam businesses to look at the opportunity loss across its operations and supply chains.

Mapping rice losses in non-mechanized smallholder value chains

In 2018, as part of a project with Sustainable Food Lab and Wageningen Research Centre, Olam measured post-harvest loss across 80 smallholder rice farms in Nigeria, from the point of harvest to the procurement warehouse. The study involved farmer surveys, field observations, and direct value chain measurements. Pilot findings shed light on the critical loss points, which were identified in the initial harvesting and handling stages and accounting for 35% losses. A value that equates to an income loss estimated at USD \$520 per hectare for the farmers.



Direct measurements across 80 rice farms in Nigeria estimated post-harvest losses at around 35%. That's a farmer income loss of about USD \$520 per hectare.



Improving yield recovery and oil extraction rate in Olam Palm Gabon operations

As part of its focus on implementing practices to optimize productivity, Olam's palm oil operation in Gabon – Olam Palm Gabon (OPG) - quantified losses to establish a baseline across its directly managed operations, which include plantation production, transportation from plantation to mill, and mill processing. This was an opportunity to demonstrate the recovery efficiency for palm oil across all three stages.

In 2017, total OPG plantation crop losses were estimated at 0.4t/ha/year or approximately 8.7% of produced yield over 20,080 hectares of early maturing fields. On a large-scale plantation, a block represents on average 30 hectares so it is not only time-consuming to identify where the backlog is located when information is just logged manually without exact GPS coordinates, but it can also lead to crop losses that could be prevented.

In 2018, OPG developed Agripal, a mobile app designed to drastically reduce crop losses by recording real-time data on harvested, evacuated and uncollected bunches with a geotagging functionality traced back to individual harvesters and exact location of backlogs (uncollected bunches).

Lessons learned and key challenges

In the last decade, campaigns around food waste have been successful and the issue is now well understood from consumers and retailers. A similar level of advocacy and attention has to shift upstream around the subject of post-harvest loss to benefit agriculture and food systems as a whole. One of the ways the private sector can see the opportunities and develop the solutions the sector needs is by closing the information gap on critical hotspots around post-harvest loss.

On the ground, Olam has a good outreach, employing sustainability field coordinators from local farming communities to continuously engage farmers on good agricultural practices and deliver training to improve post-harvest practices and prevent quality deterioration. Yet initiating direct farm measurements to quantify post-harvest loss in smallholder value chains remains challenging, due to the number of commodities supply chains Olam is sourcing from its wide network of 4.8 million farmers. While measurement pilots are relatively easy to implement to generate business insight on actual volume losses, measurement pilots can often be seen as too costly to implement for smallholder value chains.

This is where private sector collaboration can play a role. More baseline studies on post-harvest loss in commercial value chains should be made publicly available, so that companies operating in the same sourcing regions might be able to rely on each others' data as benchmark to make the business case internally and speed-up interventions in their own supply chains.



We need more insights so that the business can take action. There is no inaction when there is solid awareness of the scale of problem.

Vanessa Maire
Corporate Responsibility
and Sustainability Manager.
Olam International



WBCSD

WBCSD is a global, CEO-led organization of over 200 leading businesses working together to accelerate the transition to a sustainable world.

We help make our member companies more successful and sustainable by focusing on the maximum positive impact for shareholders, the environment and societies.

Our member companies come from all business sectors and all major economies, representing a combined revenue of more than USD \$8.5 trillion and with 19 million employees.

Our Global Network of almost 70 national business councils gives our members unparalleled reach across the globe. WBCSD is uniquely positioned to work with member companies along and across value chains to deliver high-impact business solutions to the most challenging sustainability issues.

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