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Policy Brief:
Little Is Lost- Evidence from Nigerian Tomato Farms

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Introduction

As part of the Sustainable Development Goals (SDG) agenda of the United Nations (UN) in September 2015, the UN ambitiously announced a goal of achieving a 50% reduction of worldwide food waste and substantially reducing global food loss by 2030. This pledge has contributed to renewed international attention around reducing the edible losses and waste incurred between farm and fork in the global food system.

Tomato is one of Nigeria's most important horticultural crops, providing a major source of income for smallholder farmers and is an essential ingredient in Nigerian diets (Parkhi et al., 2023; Abdelrahman et al., 2025) In Nigeria, tomato production is approximately 3.6 million tons on a land area of about 0.8 million hectares, with a low yield of about 4.2 tons/ha (FAO, 2022a).

To date, the majority of the literature on food loss is for less perishable crops, such as cereals Ambuko et al., 2025; FAO 2022b; FAO 2024. Among the growing but limited studies on perishable products, such as tomatoes, the majority report loss only as a percentage of total production but do not distinguish between amounts thrown away and amounts downgraded but still sold. In addition, few explain the drivers of loss on farms Emana et al. (2017); Goka et al. (2021); Molelekoa et al. (2025). As part of an effort to support Micro, Small, and Medium-Scale Enterprises (MSMEs) in delivering affordable, safe, and nutritious foods, a study was conducted to estimate the magnitude and drivers of losses along the tomato value chain in two Nigerian States: Oyo and Kaduna. These states were selected to capture major tomato-producing states in Nigeria's north and southern regions (NAERLS,2022).

This policy brief highlights five key findings about the extent and drivers of loss on 800 randomly selected farms from the main tomato-producing communities in the top 2 Local Government Areas (LGAS) of each state. LGAs are the third level of administration in Nigeria's governance structure, equivalent to US counties.

Fact 1: Tomato losses on farms are very low — less than 1% of total harvests.

Across the sample, only 13% of farmers reported any tomato loss, averaging 19 kg out of 6,000 kg harvested (0.3%). The share of farmers reporting losses and the quantities lost are both lower in Kaduna (10% and 0.2% respectively) compared to Oyo (17% and 0.4% respectively).

Fact 2: Most tomato "losses" come from downgraded, not discarded produce.

Among the small quantity of tomatoes classified as lost, more than half (53%) are still sold at reduced prices rather than discarded, leaving only about 0.1% of total harvests actually thrown away.

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Source: Wholesale market survey 2023

Fact 3: The main cause of tomato loss is physical damage before sale, not market delays.
A large majority (83%) of farmers identified damage during harvesting or post-harvest handling as the primary reason for losses, while only 17% attributed it to being unable to sell tomatoes in time.

Fact 4: The causes of loss vary regionally between Kaduna and Oyo.
While the share of farmers reporting loss and the quantity lost is larger in Oyo, the amount thrown away (relative to the amount downgraded but still sold) is lower in Oyo at 46% compared to 54% that is actually thrown away in Kaduna.

In Kaduna, 34% of farmers experienced losses from delayed sales, reflecting market access challenges, while in Oyo, only 8% reported this issue. Instead, 88% of Oyo farmers identified physical damage as their main problem.

Fact 5: Targeted interventions can further reduce already minimal losses.
While overall tomato loss is very low, addressing the small share caused by damage could improve both quality and income. Even minor improvements could yield significant economic gains, given the scale of production.

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Source: Wholesale market survey 2023

Conclusion and Policy Implications

These findings challenge common assumptions about widespread post-harvest loss in Nigeria's tomato sector. Farmers are already managing losses quite effectively, but small, targeted improvements — particularly in harvest and handling practices and market access infrastructure — could lead to even greater efficiency and profitability. Our recommendations to policymakers and donors are to:

1. Maintain and improve the low-loss levels among tomato farmers in Oyo and Kaduna through extension support and monitoring. Strengthening local agricultural advisory services can help farmers prevent potential increases in loss as production expands

2. Reduce damage through training on harvesting techniques, the use of suitable containers, and gentle handling could minimize losses even further. Investments in post-harvest management practices will likely have higher returns than efforts focused solely on accelerating sales.

3. Develop and implement policies that prioritize quality enhancement rather than focusing solely on reducing waste volume. These include improving grading, packaging, and value chain linkages.

4. Target interventions based on local needs. Kaduna could benefit from improved market logistics, cold chain development, and storage infrastructure, while Oyo requires targeted capacity building on harvest timing and handling practices.

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5. Continue to collect and analyze data (extending to other nodes of the tomato postharvest value chain) on agricultural losses to inform policy decisions and ensure that interventions are effective and appropriately targeted.

Acknowledgment:
This publication is based on research funded in part by the Gates Foundation. The findings and conclusions contained within are those of the authors and do not necessarily reflect positions or policies of the Gates Foundation.

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Goka et al. (2021) found that decay, mechanical damage, and blotchiness were common causes of postharvest losses in tomato production.

Molelekoa et al. (2025) identified insect damage, diseases, and mechanical damage as significant causes of tomato losses.

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