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Impacts of Reducing Food Losses across the Value Chain

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Value Chain Analysis



Food Losses:

Losses in production (including PHL), distribution, and processing.

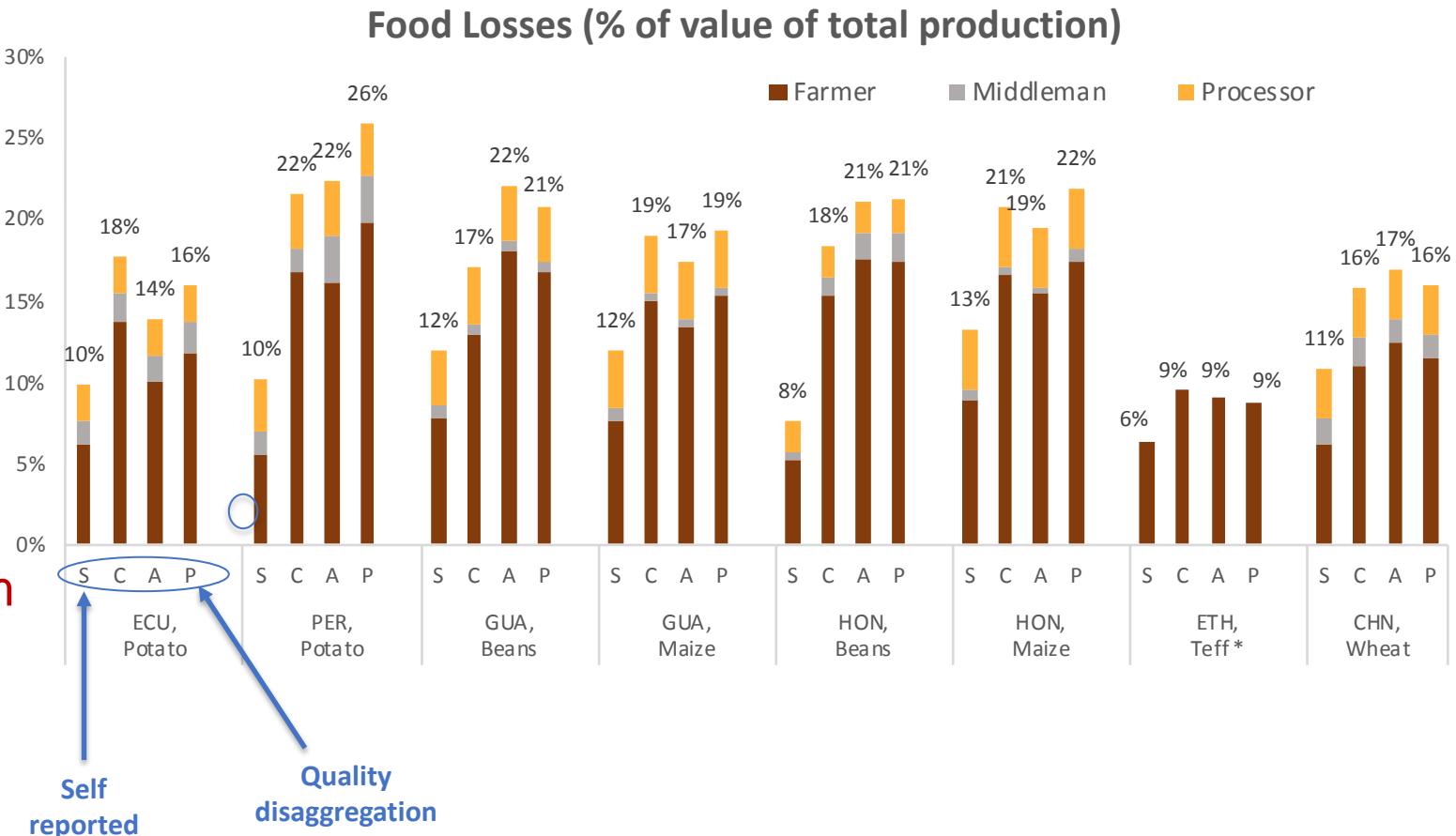
- More prevalent in developing countries
- Representative samples of farmers, middlemen and processors

Food
Waste

- More prevalent in developed countries
- Not covered

Evidence from China, Ecuador, Ethiopia, Guatemala, Honduras and Peru

- Food losses are substantial (6% - 26% of production)
- Especially when we account for quality losses
- Most of the losses occur at the farm level (56% - 86% of losses)

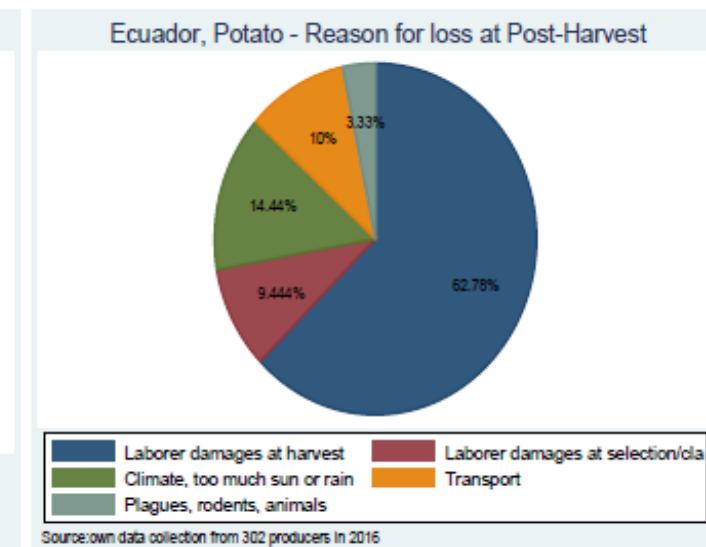
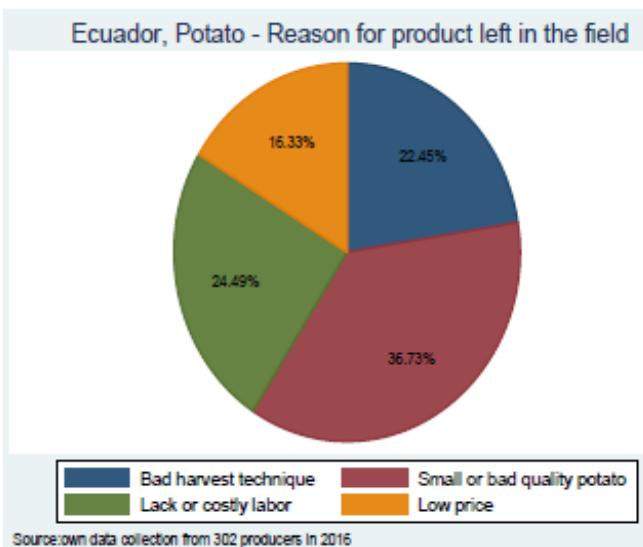
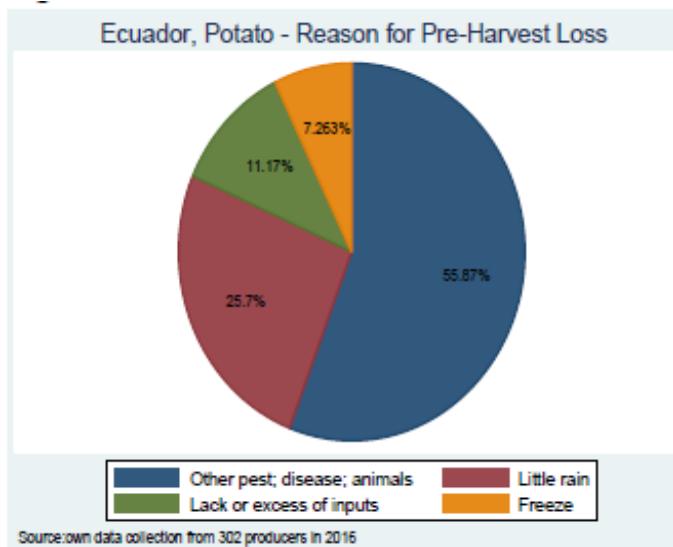


Source: Delgado, L., M. Torero and M. Schuster (2017). The reality of food losses: A new measurement methodology. IFPRI Discussion Paper 01686. Washington, DC: International Food Policy Research Institute.

Determinants vary by crop, context, and production stage

Main determinants:

- **weather**
- poor knowledge of how to avoid pests & plagues
- poor technology (no mechanization, low quality seeds)
- **poor infrastructure** (storage, transportation, processing)
- **low and volatile prices**



Less food loss = higher farm income?

- **Yes:**
 - by definition if preventing food loss as quality loss (lower value)
 - much, if not most of losses happen at the farm level
- **Depends:**
 - If “saved” food can be sold in market (without price loss)
 - More likely if food loss prevention through
 - improved handling, packaging on farm (sealed bags, crates, etc.)
 - adequate storage (dry and cold chains)
 - adequate transportation
 - greater processing capacity
 - certification of food quality/safety and contractual arrangements
 - Even more so, above also helps reduce market price volatility
- **But:**
 - Cost of technologies/interventions should not be prohibitive
 - Thinks need to work along the entire supply chain



Less food loss = crop substitution?

- **We do not know**
- Little evidence about patterns of crop substitution in response to reductions in food loss
- **Depends on**
- the extent of adoption of new technology and demand elasticity of crop
- shift to higher value added crops (e.g. fruits and vegetables) more likely if also cold chains are also developed



Less food waste = lower prices and farm incomes?

- **We do not know**
- Little evidence
- **YES**
- If significant food waste reduction, prices would drop and farm incomes may drop for that food product (*ceteris paribus*)
- **BUT**
- Consumer purchasing power would rise and demand could shift to higher value added foods
- Impacts on **nutrition** outcomes could be **ambiguous**
- Impacts on **environmental pressures** could be **ambiguous**



Reducing food loss cannot be sole focus

- There are **simple solutions** reducing food loss, but benefits not always around the corner
 - Farm level benefits require **full value chain development** and market access
 - Income and nutritional gains will depend on **broader food system improvements**
 - Environmental gains not achieved by just reducing food loss; **agriculture and food systems at large** need to be made sustainable