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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

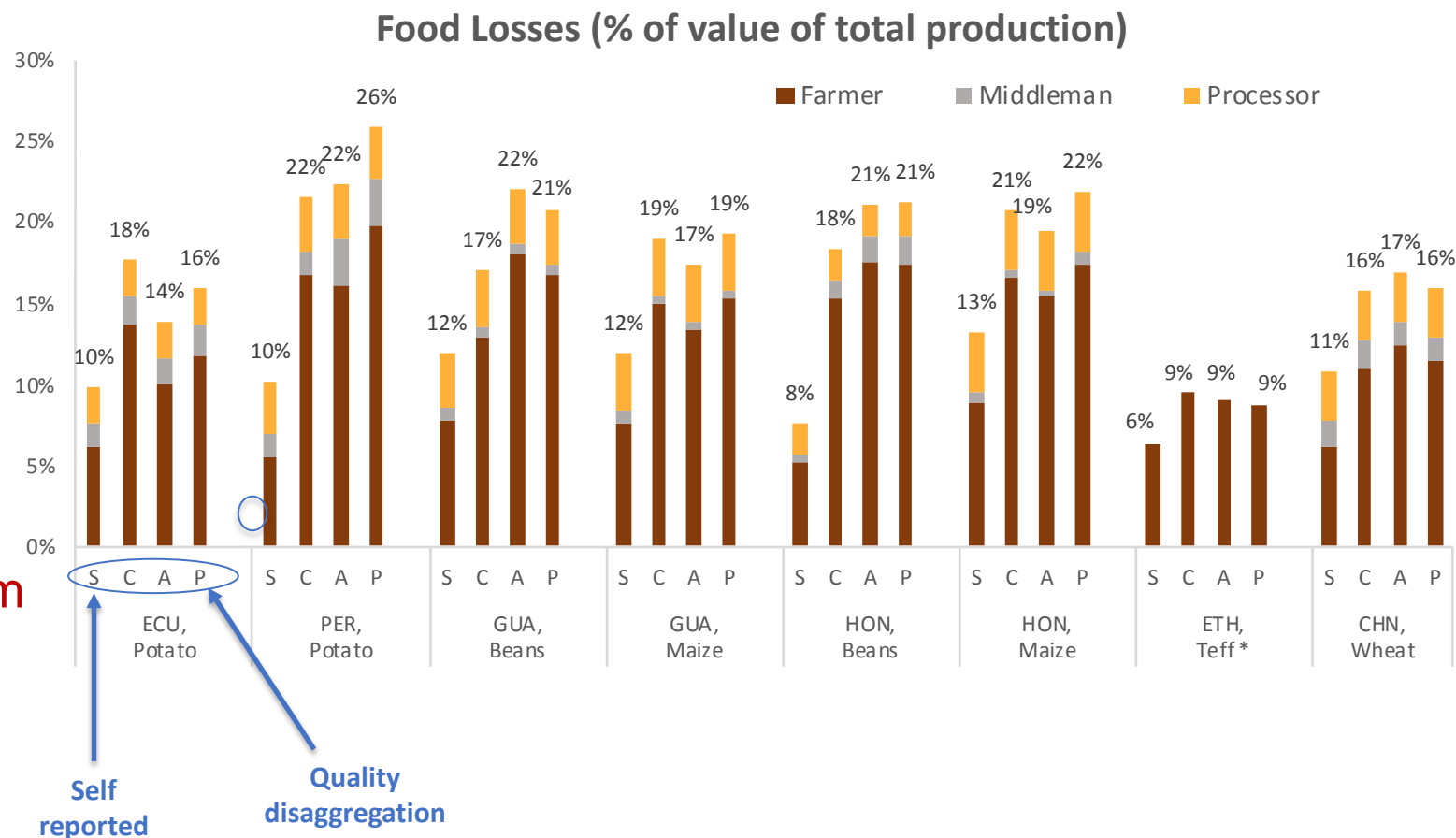
Food Waste

- 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)



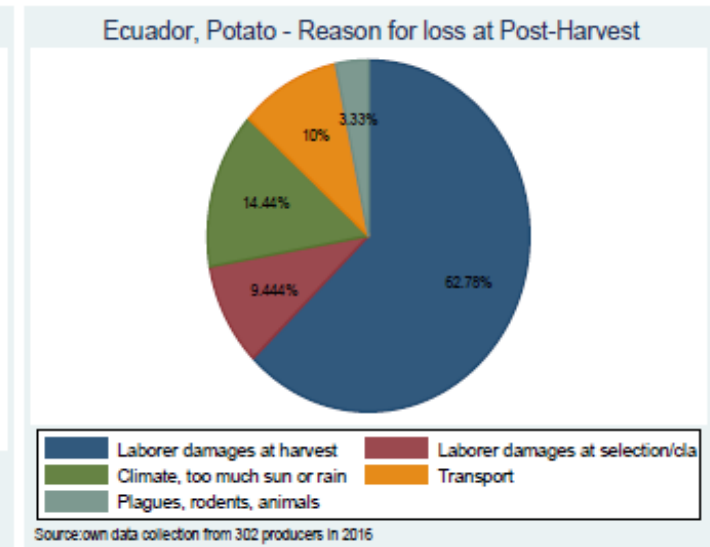
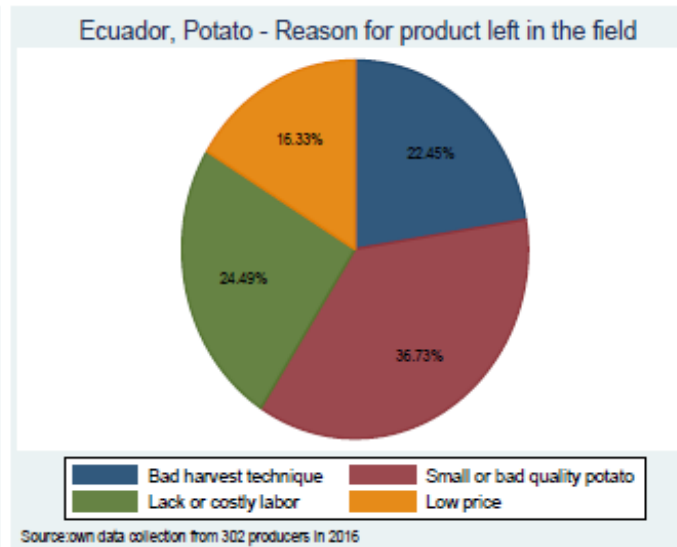
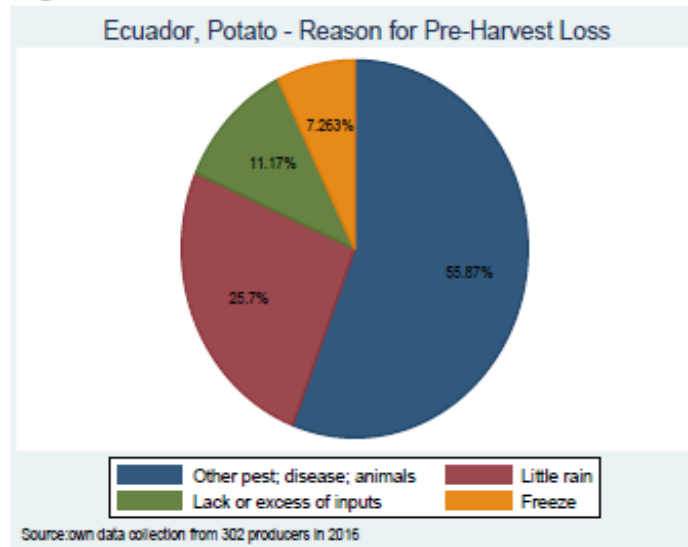
Source: Delgado, L., M. Torero and M. Schuster (2017). The reality of food losses: A new measurement methodology. IFPRI Discussion Paper 01686. Washington, DC: International Food Policy Research Institute.



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**