

Global Perspective to Reducing Food Waste from a Spoilage/ Shelflife Standpoint

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- Hunger is caused by poverty and inequality, not scarcity.
- For the past two decades, the rate of global food production has increased faster than the rate of global population growth.
- The world produces $> 1 \frac{1}{2}$ times enough food to feed everyone on the planet. That's enough to feed 10 billion people, the population peak we expect by 2050.
- But the people making less than \$2 a day -- most of whom are resource-poor farmers cultivating unviably small plots of land -- can't afford to buy this food.

Reasons

- Production
- Technology
- Climate
- Financial
- Corruption
- Geographical distribution
- Culture
- Education
- Preference

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“Our prime purpose in this life is to help others. And if you can't help them, at least don't hurt them.”

~ Dalai Lama

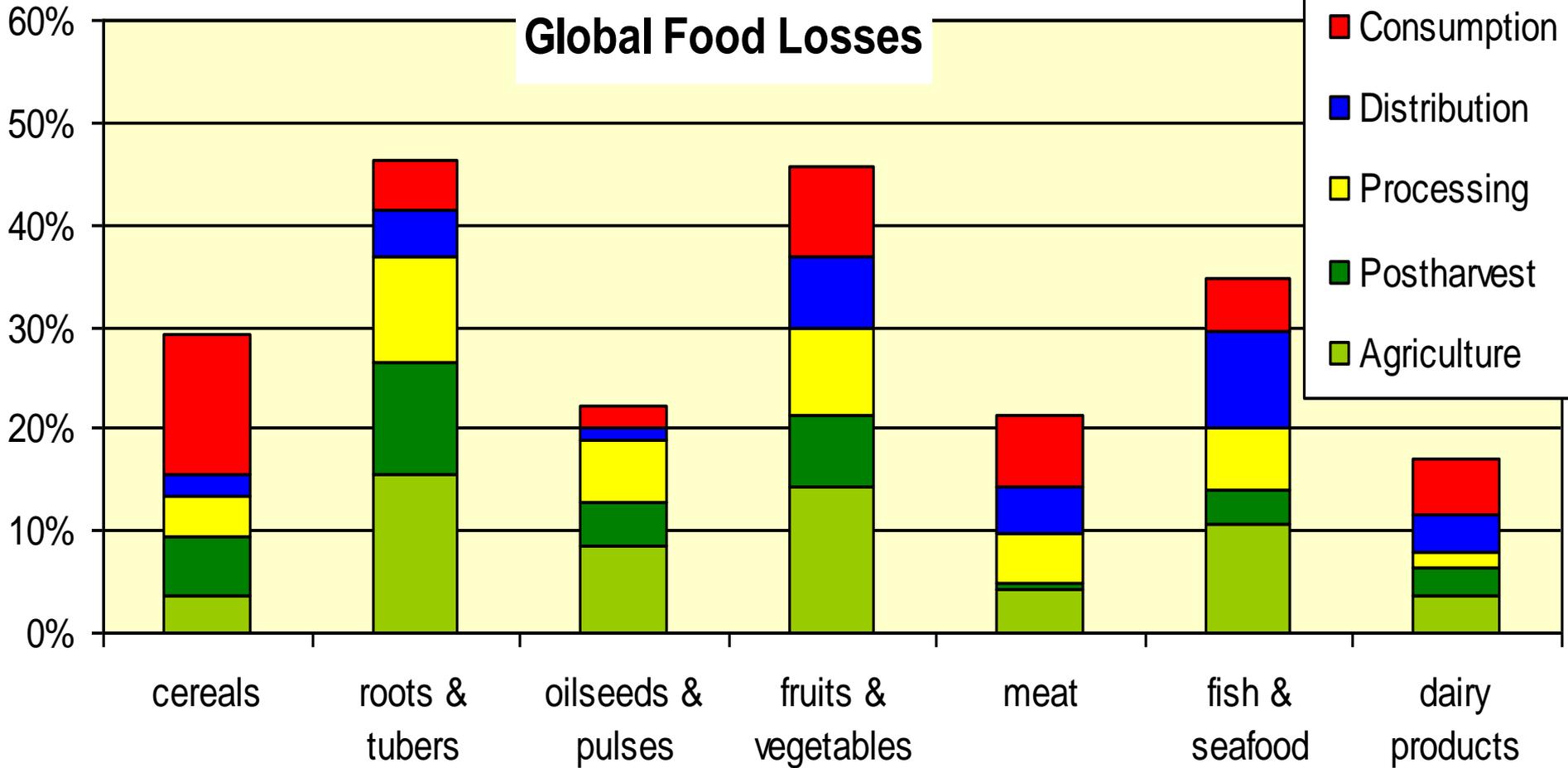
Total food losses globally have been estimated at 1.3 billion tons per year.

- Food losses take place at production, postharvest and processing stages in the food supply chain. Food losses occurring at the end of the food supply chain are rather called “food waste”, as it basically relates to the behavior of retailers and consumers.
- Food losses and their prevention have an impact on the use of scarce resources (water, land, energy), the environment, food security for poor people, food quality and safety, and the economy.









Source: Global Food losses and food waste, FAO (2011)

Figure 1. Production volumes of each commodity group, per region (million tonnes)

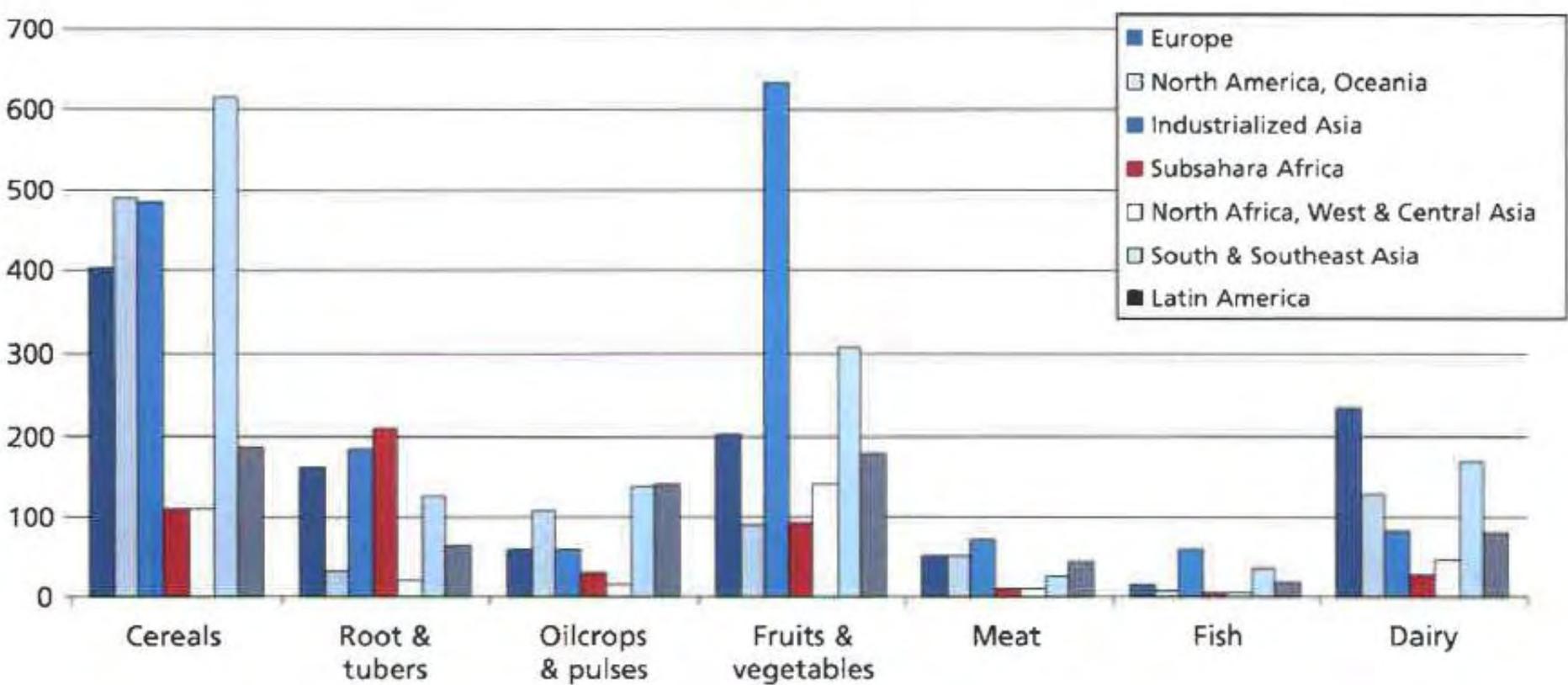


Figure 2. Per capita food losses and waste, at consumption and pre-consumptions stages, in different regions

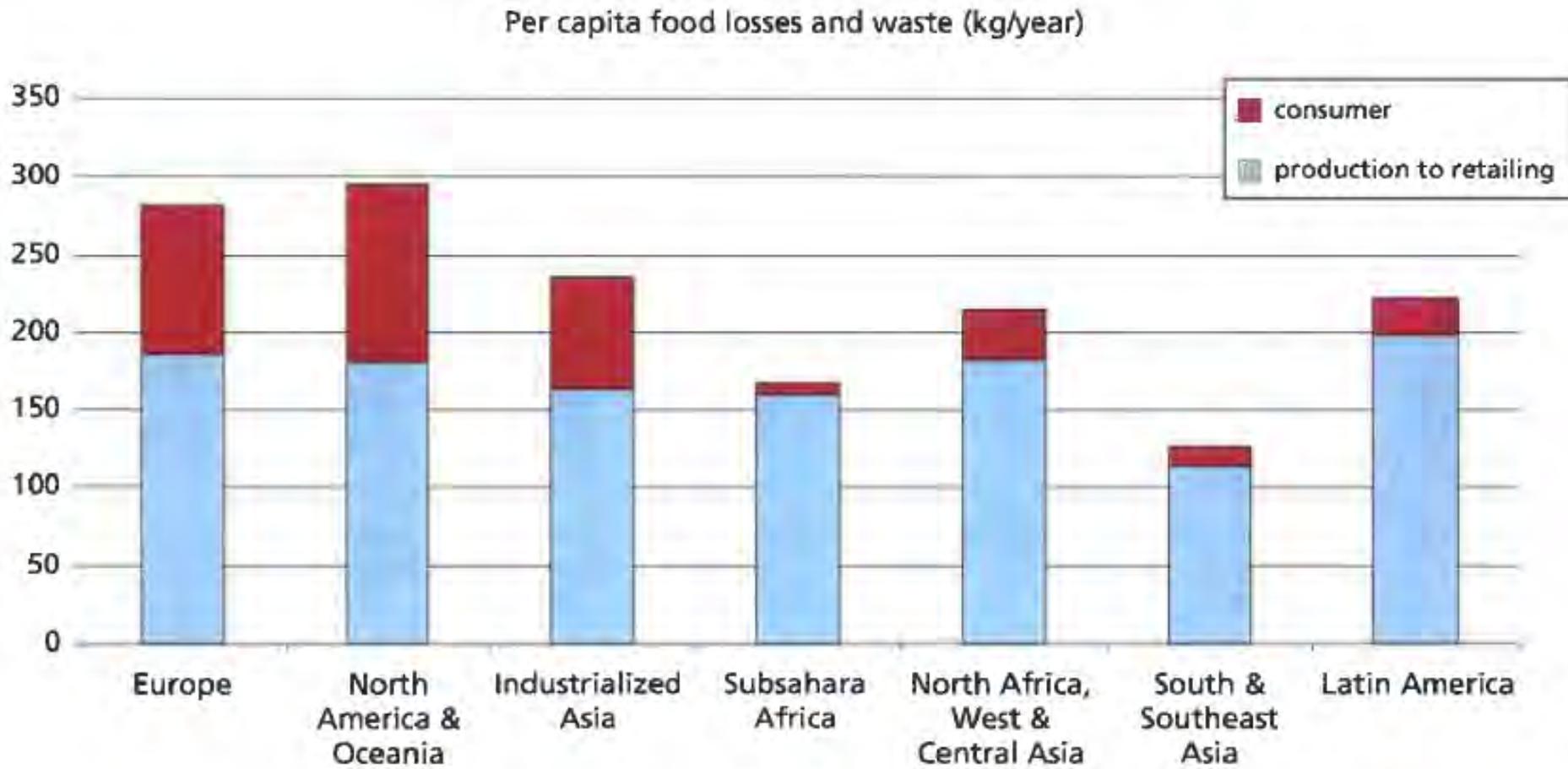


Figure 3. Part of the initial production lost or wasted, at different FSC stages, for cereals in different regions

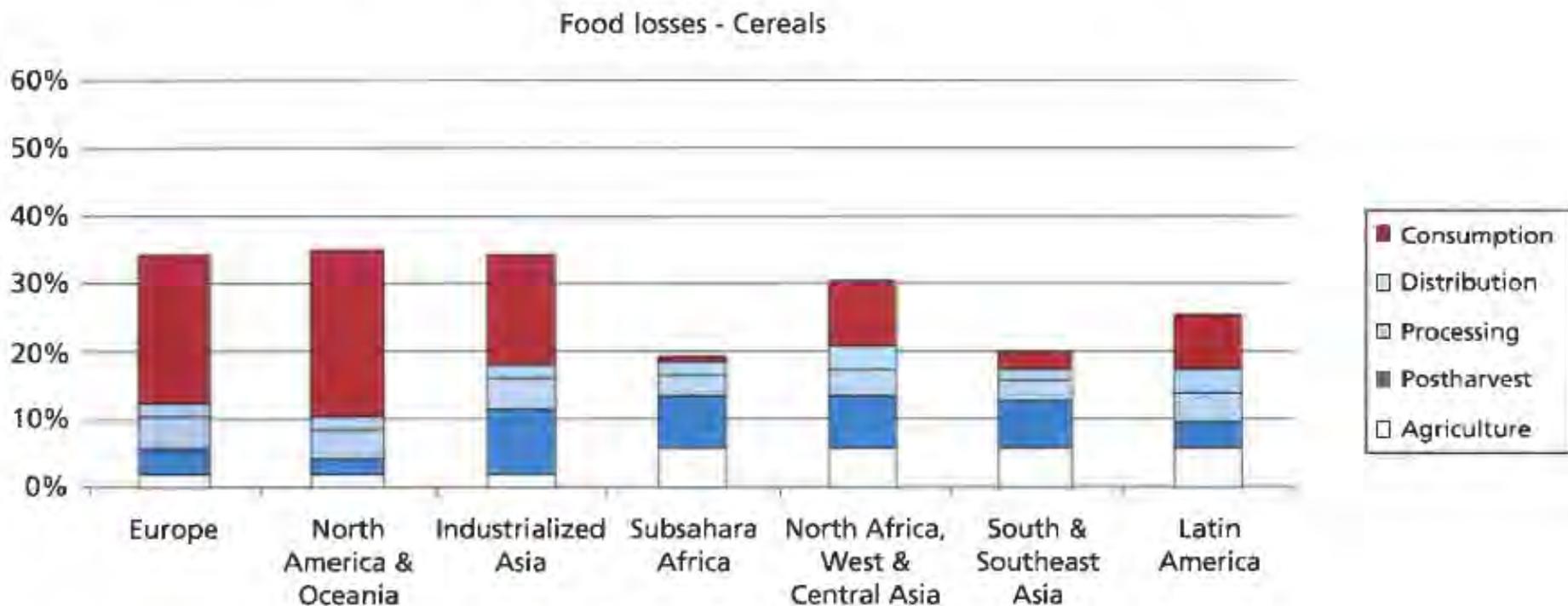


Figure 4. Part of the initial production lost or wasted at different stages of the FSC for root and tuber crops in different region

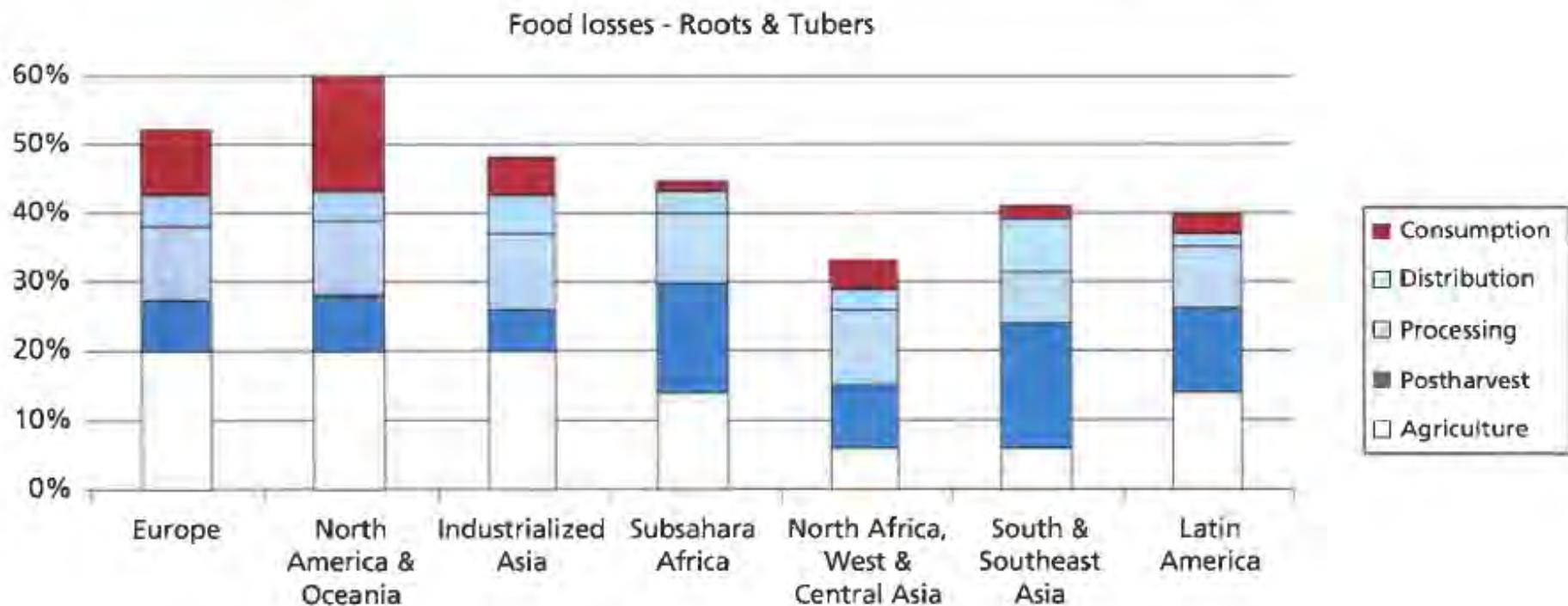


Figure 5. Part of the initial production lost or wasted at different stages in the FSC for oilseeds and pulses in different regions

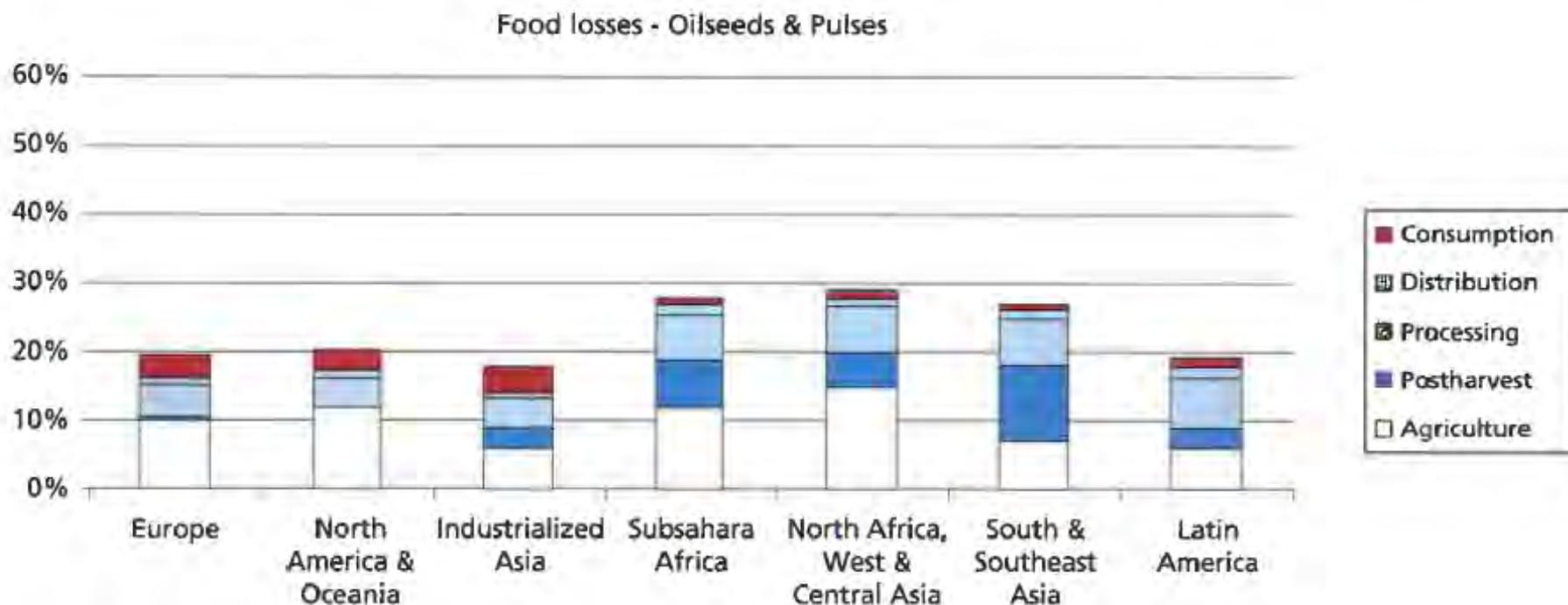


Figure 6. Part of the initial production lost or wasted at different stages of the FSC for fruits and vegetables in different regions

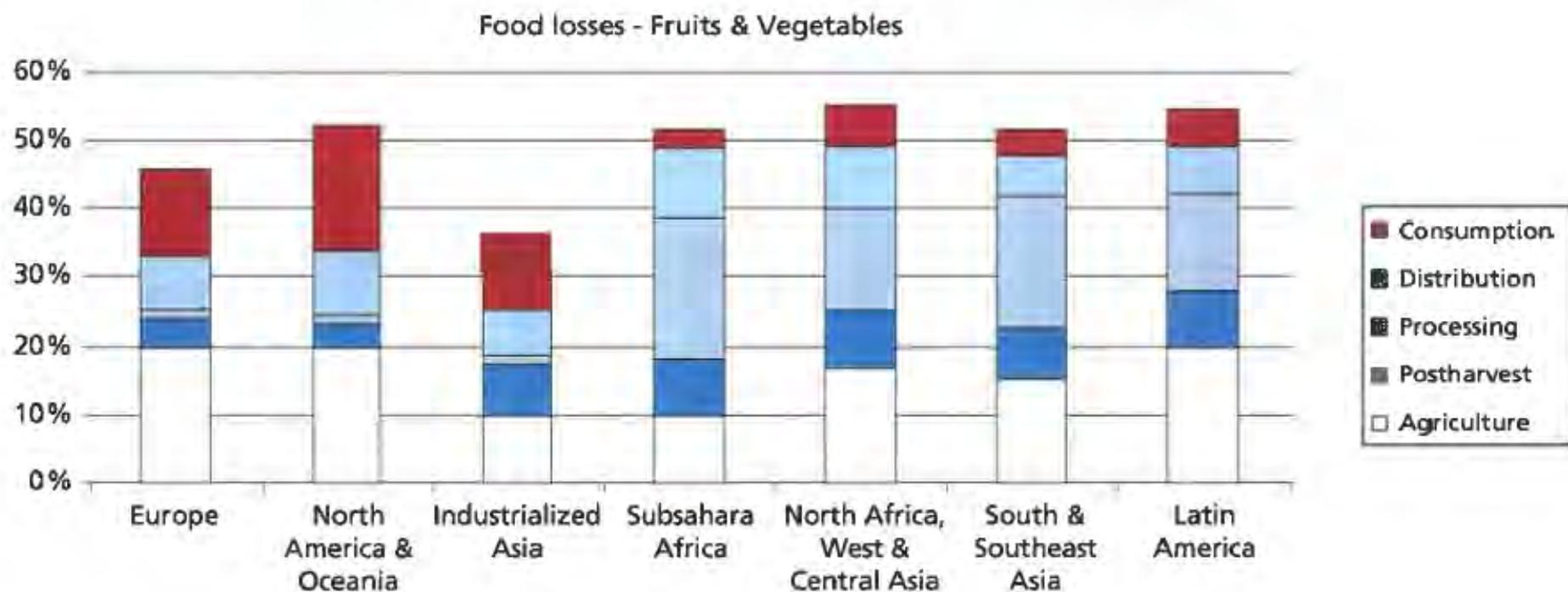


Figure 7. Part of the initial production lost or wasted for meat products at different stages in the FSC in different regions

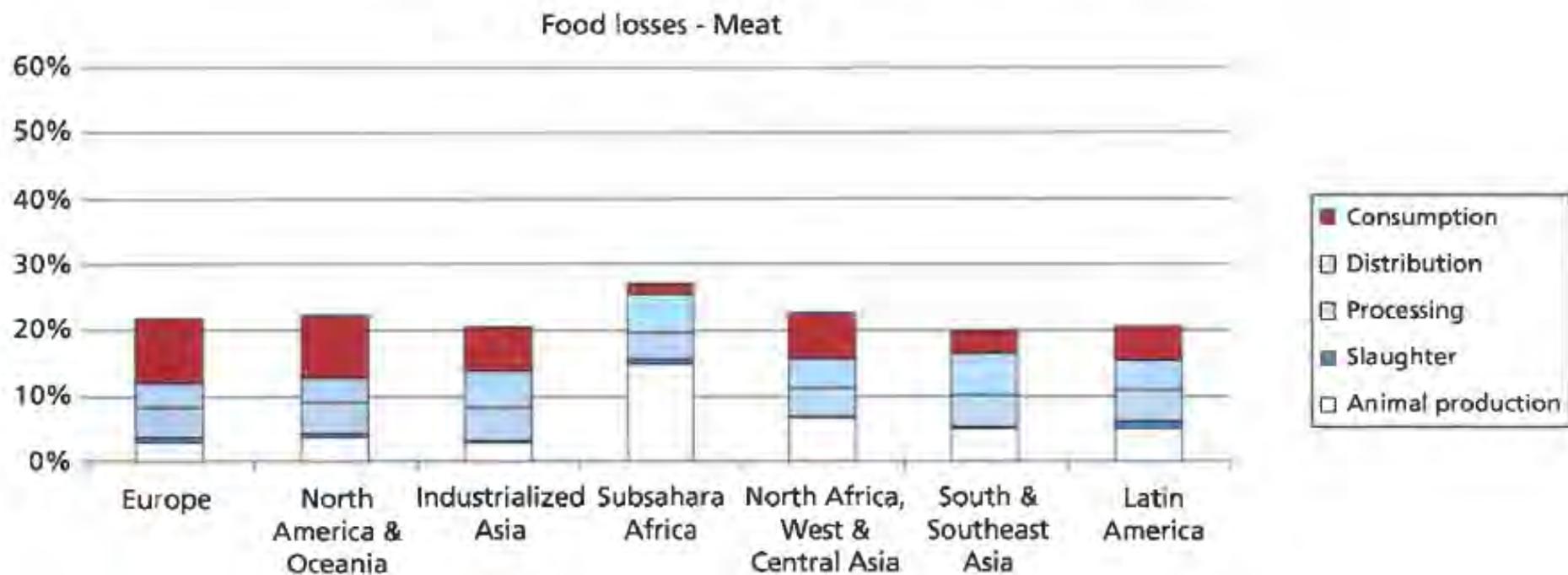


Figure 8. Part of the initial catchings (fish and seafood harvested) discarded, lost and wasted in different regions and at different stages in the FSC.

Food losses - Fish & Seafood

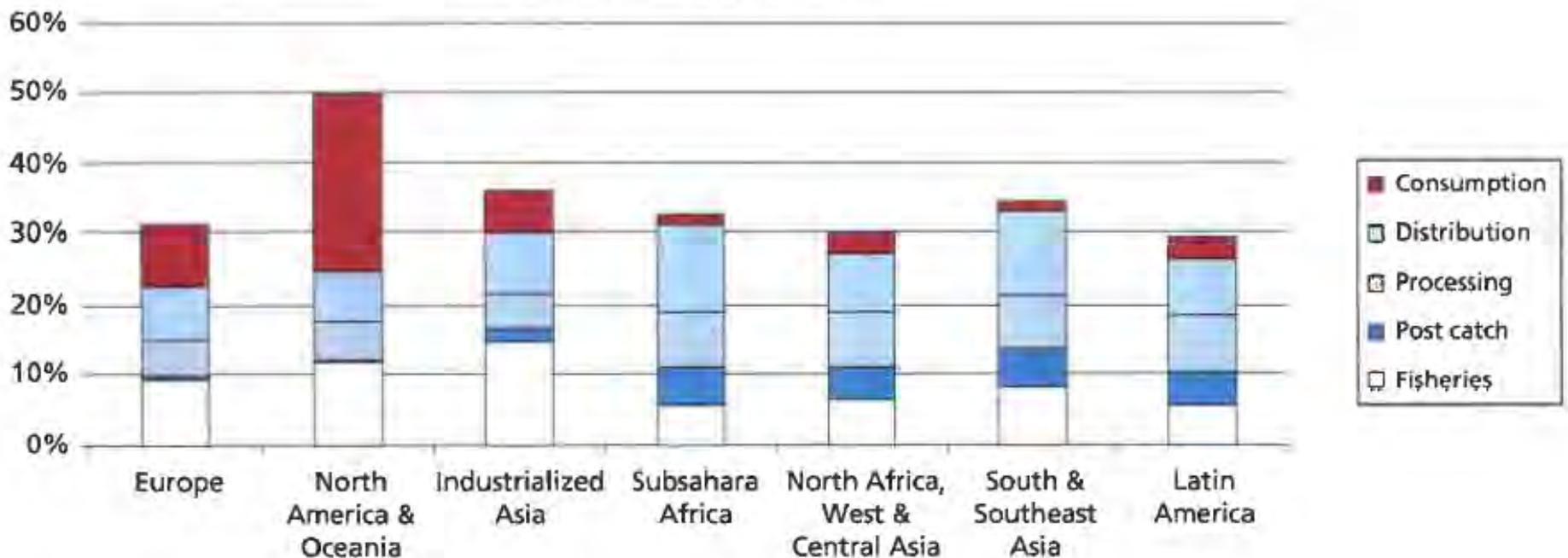
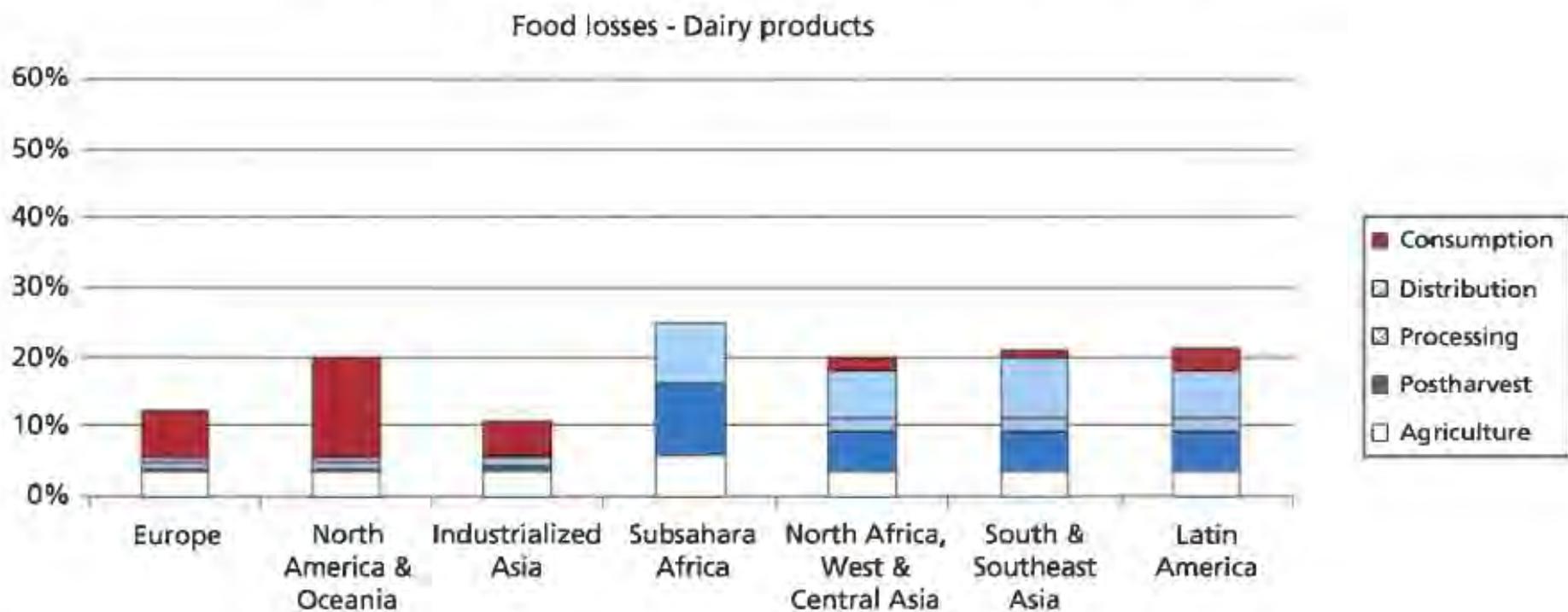
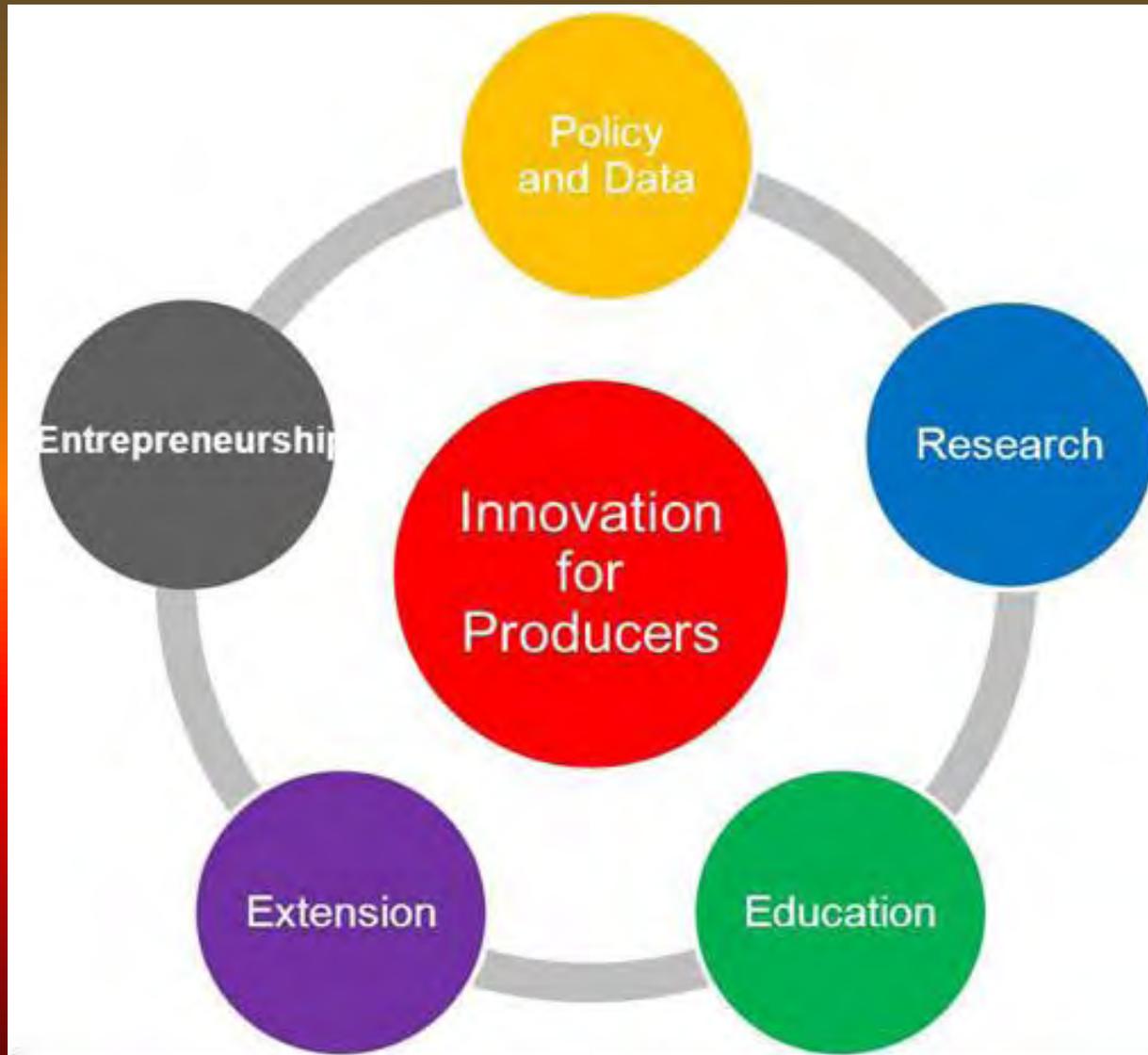


Figure 9. Part of the initial milk and dairy production lost or wasted for each region at different stages in the FSC



Agriculture Innovation System





FAO's Programme under 'Save Food'

- FAO's new Food Loss Reduction Strategy has resulted in its programme for the 2012-13 biennium entitled 'The global initiative on food loss and waste reduction'. The priority action areas include:
 - Detailed food loss assessments and solution finding, focusing on selected food supply chains in developing regions;
 - A world-wide media campaign for awareness creation on food losses and waste, and information dissemination;
 - Regional Save Food Congresses.



- Rarely acknowledged, half the food in the world is produced by 1.5 billion farmers working small plots for which monocultures are unsustainable.
- Non-commercial poly-cultures are better for balancing diets and reducing risk, and can thrive without agrochemicals. Agroecological methods that emphasize rich crop diversity in time and space conserve soils and water and have proven to produce the most rapid and sustainable results.
- In areas in which soils have already been degraded by conventional agriculture's chemical "packages", agroecological methods can increase productivity by 100-300 percent

- Can conventional agriculture provide the yields we need to feed 10 billion people by 2050?.....Given climate change, the answer is an unsustainable "maybe."
- The question is, at what social and environmental cost? To end hunger we must end poverty and inequality..... For this challenge, agroecological approaches and structural reforms that ensure that resource-poor farmers have the land and resources they need for sustainable livelihoods are the best way forward.

- The Regional Conference of the World Food and Agricultural Organisation FAO for the Near East has therefore announced the target of halving avoidable food losses within ten years at its meeting in Rome in May.
- To reach this target the processing chain of rural economies in the Near East states, in particular, must become more professional. The Chairman of the Regional Conference, the Iraqi Agricultural Minister Ezzulddin Abdalla Al Dawla, made it clear in Rome: This is impossible to achieve without both public and private investment.

- Post-harvest losses are partly a function of the technology available in a country, as well as the extent to which markets have developed for agricultural produce.
- Urbanization and the contraction of the agricultural sector. The proportion of the world's population employed in agriculture has declined in recent decades and 50 per cent of the world's population now lives in urban environments. This proportion is expected to rise to 70 per cent by 2050 (United Nations 2008).

- Overall, on a per-capita basis, much more food is wasted in the industrialised world than in developing countries. We estimate that the per capita food waste by consumers in Europe and North-America is 95-115 kg/year, while this figure in Sub-Saharan Africa and South/Southeast Asia is only 6-11 kg/year.

- Food is lost or wasted throughout the supply chain, from initial agricultural production down to final household consumption.
- In medium- and high-income countries food is to a significant extent wasted at the consumption stage, meaning that it is discarded even if it is still suitable for human consumption.
- Significant losses also occur early in the food supply chains in the industrialised regions. In low-income countries food is lost mostly during the early and middle stages of the food supply chain; much less food is wasted at the consumer level.

Types of Food Losses / Waste

Five system boundaries were distinguished in the food supply chains (FSC) of vegetable and animal commodities. Food loss/ waste were estimated for each of these segments of the FSC. The following aspects were considered:

- Agricultural production
- Postharvest handling and storage
- Processing
- Distribution
- Consumption

- The causes of food losses and waste in low-income countries are mainly connected to financial, managerial and technical limitations in harvesting techniques, storage and cooling facilities in difficult climatic conditions, infrastructure, packaging and marketing systems.
- Given that many smallholder farmers in developing countries live on the margins of food insecurity, a reduction in food losses could have an immediate and significant impact on their livelihoods.

- The causes of food losses and waste in medium/high-income countries mainly relate to consumer behaviour as well as to a lack of coordination between different actors in the supply chain.
- Farmer-buyer sales agreements may contribute to quantities of farm crops being wasted.
- Food can be wasted due to quality standards, which reject food items not perfect in shape or appearance.

- At the consumer level, insufficient purchase planning and expiring 'best-before-dates' also cause large amounts of waste, in combination with the careless attitude of those consumers who can afford to waste food.



Do all the
good you can,

by all the means you can, in all the ways
you can, in all the places you can, to all
the people you can, as long as you ever can.

Balance and Moderation

- Native American spirituality speaks to living life and giving back, especially to mother earth, as much as we take. In essence, we should live in the world such that our existence finds balance on the Red Road and that if we do impact the world, it is for the better.

WE ARE ALL IN THIS



TOGETHER