

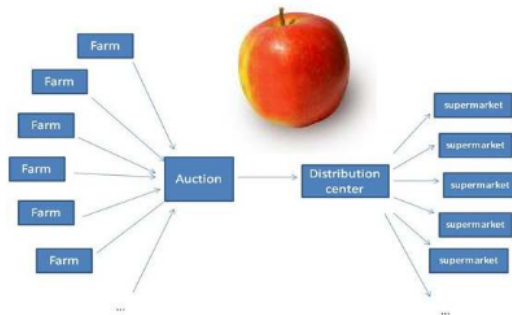
WP3

Comparison of local and global apples, Belgium
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Local and global value chain features

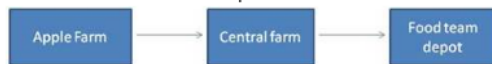
Global chain:

- Apples grown by 400 producers
- Integrated fruit production methods are used
- Apples are collected, sorted, packed and sold through a cooperative auction
- A big retail group transports the apples to national supermarkets



Local chain:

- Organic family farms produce the apples
- The apples are put in baskets together with other fruits and vegetables at a central farm
- Apples are transported to a group of households at short distance of the farms
- Producers and consumers are part of the 'Food team' network.



•Main issues:

- Viability of the farm
- Environmental impacts
- Productivity

Selected attributes

- Affordability
- Creation and distribution of added value
- Efficiency
- Food waste
- Information and communication
- Labour relations
- Resource use
- Pollution
- Food safety
- Traceability
- Fair trade

Main research Questions

- R1: Do farmers within local chains run a more viable business than farmers within global chains?
- R2: What is the difference in efficiency between local chains and global chains in terms of productivity, working hours, profitability and resource use?
- R3: Is there a big difference in pesticide hazard between global and local chains?
- R4: What is the difference in greenhouse gas emissions between both chains?
- R5: Are there important differences in seasonal work conditions for workers in local and global chains?
- R6: How affordable are local organic apples, compared to global apples?

Highlights and remarks

- The local chain has a four times higher added value per tonne apples
- Profit is unfair distributed in the global chain
- Farmers' income in local chain is higher
- Local chain is less efficient in terms of resource use, productivity and pollution
- Global chain is more surface-intense in terms of resource use and pollution
- Seasonal workers in both chains have similar working conditions. This is strictly regulated by the government. Same for food safety.
- Direct relation between consumer and producer in local chain → more transparency
- Scoring of indicators and attributes → still has to be done

	Local chain	Global chain
Contribution to economic development		
➤ Added value	435 euro/tonne apples	101 euro/tonne apples
Fair trade		
➤ Profit distribution	Farm stage: 435 euro/tonne apples	Farm stage: 3,5 euro/tonne apples Auction: 4,49 euro/tonne Retail: 99,968 euro/tonne apples
➤ Net farmers' income per ha year	6648,59 euro	3331,32 euro
➤ Net farmers' income per labour hour	10,65 euro/hour	15,94 euro/hour
Efficiency		
➤ Land productivity	38316 kg/ha	58088 kg/ha
➤ Labour productivity	61,4 kg/hour	277,9 kg/hour
Resource use		
➤ Fossil energy efficiency	1,16 MJ/kg apples	0,70 MJ/kg apples
➤ Fossil energy intensity	23,75 GJ/ha	30,01 GJ/ha
Pollution		
➤ GHG emissions	130,25 g CO2 eq./kg apples	54,7 g CO2 eq./kg apples
➤ Pesticide hazard	No significant difference in EIQ/kg apples or EIQ per hectare	
➤ Acidification potential	0,75g SO2 eq./kg apples	1,09g SO2 eq./kg apples
➤ Eutrophication potential	0,38 g/kg apples	0,21 g/kg apples
Labour relations		
➤ Work contracts	100 %	100 %
➤ Wage payment	100 %	100 %
➤ Working hours	100 %	100 %
Food waste		
➤ Further processing of low quality products	Yes	Yes
➤ Food loss on farm		
Traceability		
➤ Upstream traceability system	Yes	Yes
Transparency		
➤ Information available to consumers		
➤ Information publicly available		
Food safety		
➤ Application and control of food safety standards	Yes	Yes
Affordability		
➤ Price	0,83 Euro/kg (but sold per basket)	1,408 Euro/kg