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Tropical Fruits: Food, Nutrition and Income Sources for the Poor

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Presentation Outline

- ☐ Market and trade overview
- ☐ Are the market and trade benefits reaching the poor?
- ☐ Policy implications



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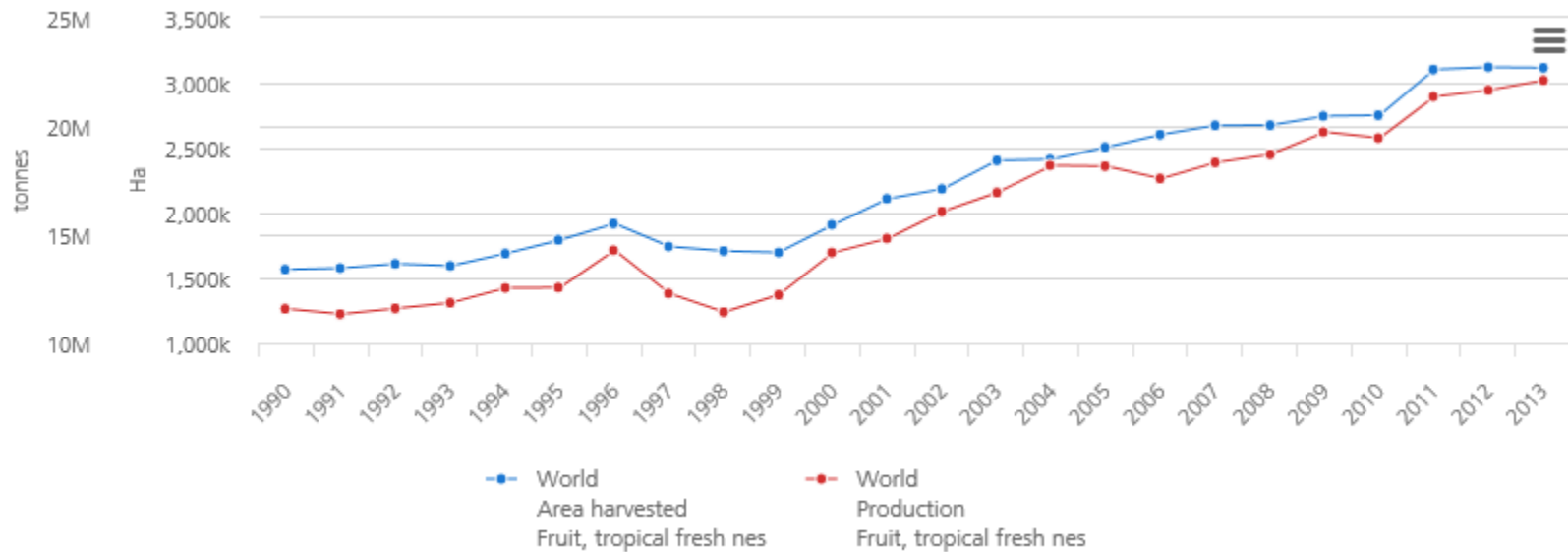
Market and Trade Overview



Rising Production and Trade

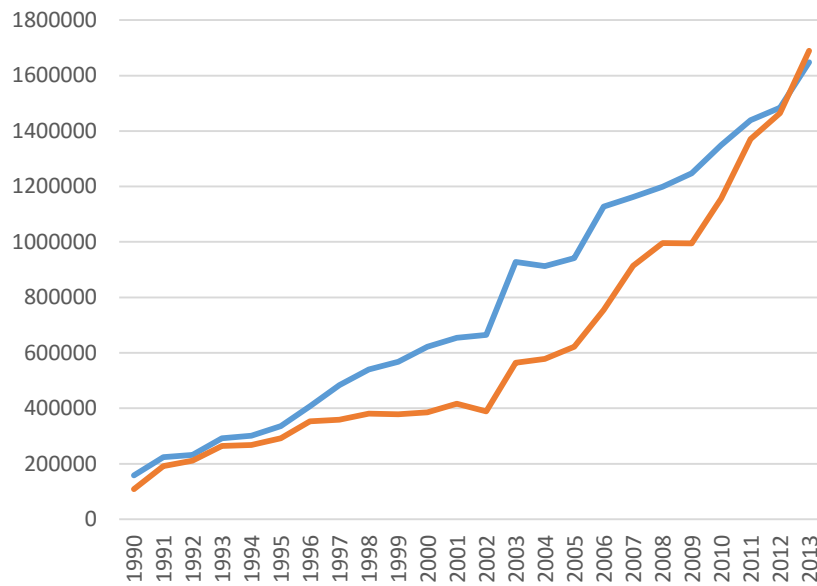
- Global production
 - Rising productivity, land areas (especially in Asia, Latin America)
 - Increased access to inputs/nb.of commercial farms
- Global trade
 - Trade negotiation aiming to reduce trade costs, and protection
 - Increased demand by larger importers
- Global prices
 - Increased demand: mango, avocado, pineapple

Tropical Fruits (excl. bananas): Production, area trends



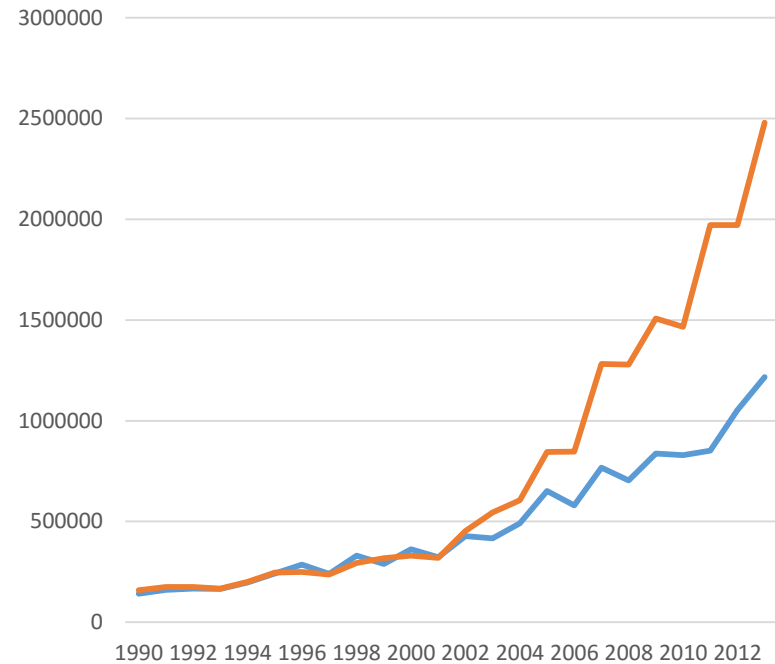
Tropical Fruits: Export Trends

Mango



— Global Mango Export Quantity tonnes
— Global Mango Export Value 1000 US\$

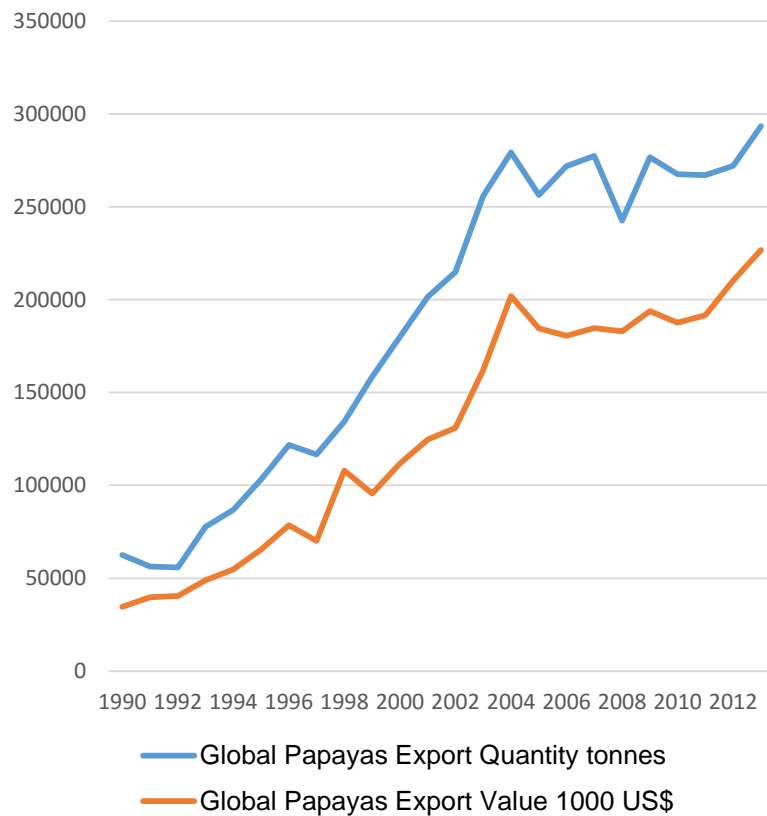
Avocado



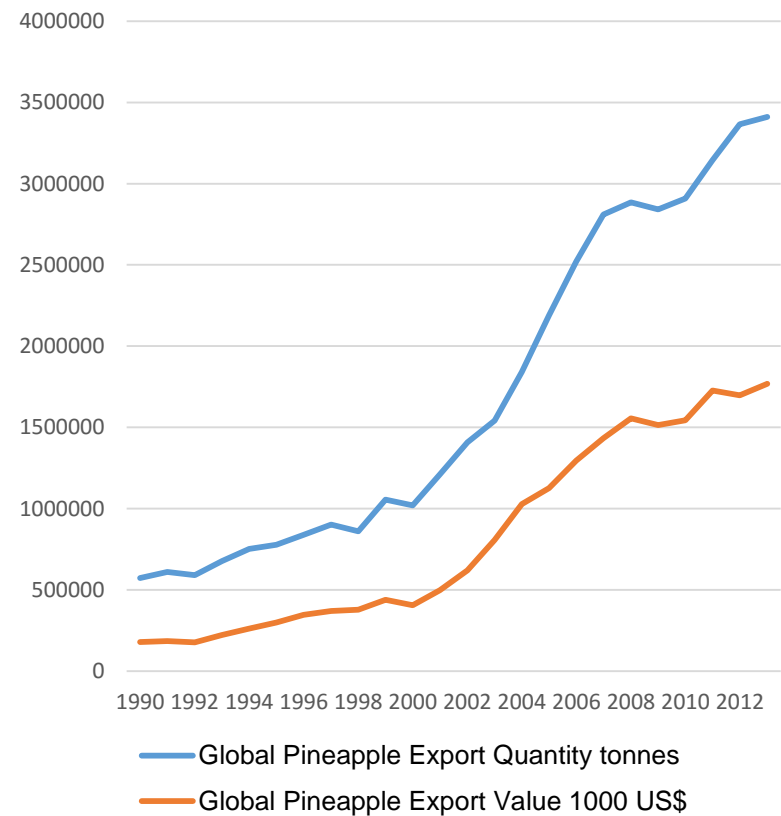
— Global Avocado Export Quantity tonnes
— Global Avocado Export Value 1000 US\$

Tropical Fruits: Export Trends

Papaya



Pineapple





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Rising Consumption

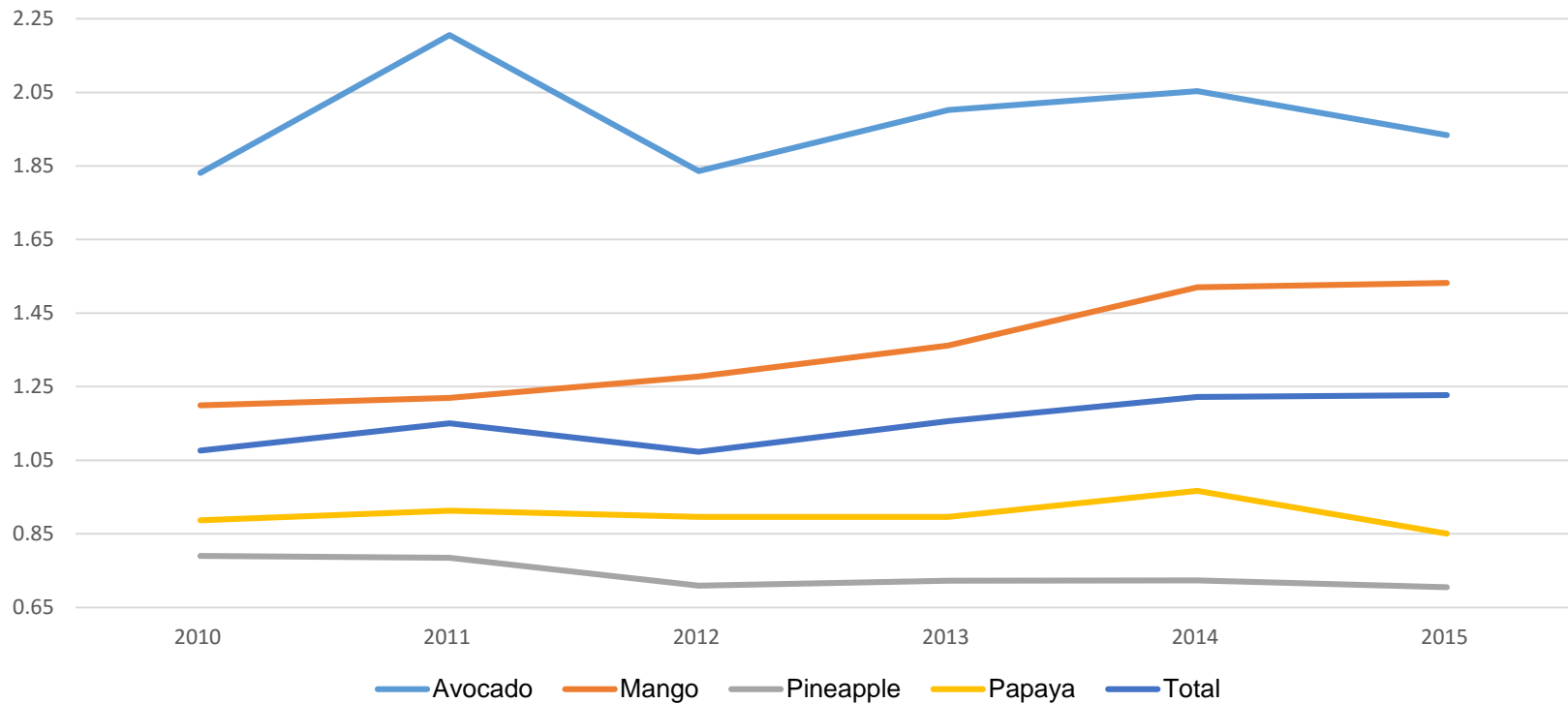
- ☐ Health and nutrition awareness
 - Consumer education
 - Mainstreaming of fruits in diet, supplement
- ☐ Urbanization: changing diets (preferences)
- ☐ Income increase
 - Increased demand in large importing countries



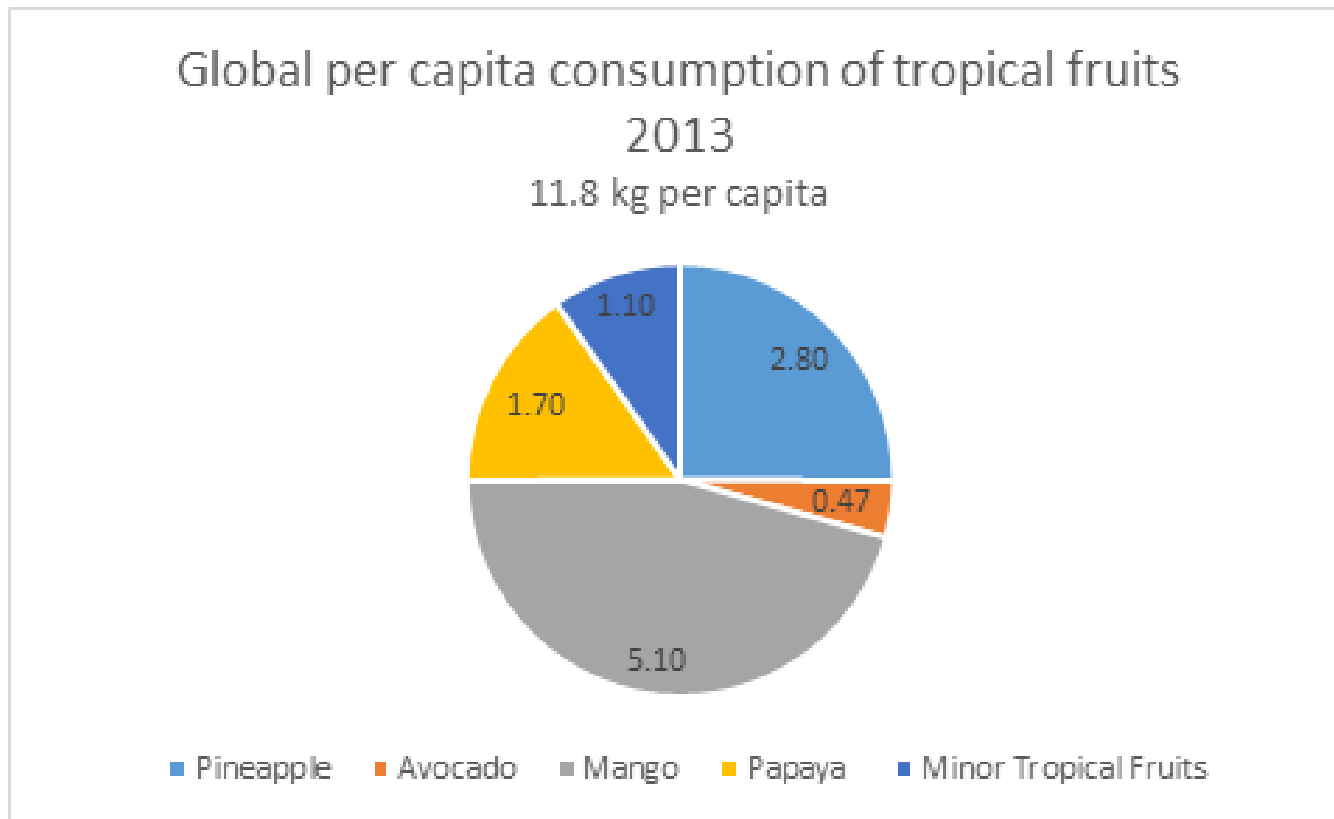
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Real Prices: slightly increasing trends

Import Prices of Selected Tropical Fruits
(US Dollars per kg, CPI deflated, 2010=100)



Consumption Share





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Are the Market and Trade Benefits Reaching the Poor?



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Our focus (the poor)

- ☐ Small input owners
 - Growers
 - Farm and factory workers (less skilled)
- ☐ Small firms
 - Traders, transporters, processors, collectors



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Objective

- ☐ Determine the size and distribution of trade benefits
- ☐ Identify constraints at each link of the chains



Approach

- ☐ Perform case studies in Asia and Africa
- ☐ Identify trade benefit indicators
- ☐ Conduct surveys from trading (processing) firms to producers and farmers:
 - Organization and behavior of the industry
 - Characteristics of firms, farms, input owners (less educated)
- ☐ Obtain information from other actors (public, private actors of the industry)
 - Traders, transporters, processors, collectors

Hypothesis

Trade benefit indicator

=

f{ Prices; age of the firms or exposure to trade; level of competition (concentration of the industry); interaction between firms (bargaining power); human capital stock; operating (fix and variable) costs; location; domestic sale; foreign sale; domestic and border policies (tariff, tax), regulation etc.}



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FAO survey summary

	Ghana	Indonesia	Philippines	U.R. Tanzania
Trading Industry	Pineapple	Horticulture (fruits and vegetables)	Mango	Cashew
Main trade shock	Export demand: varietal shift from Smooth Cayenne to MD2 variety	- Export promotion: (China, Thailand, Singapore markets)	- World price decline (simulation)	New policy
Impact Indicators	-Entry and exits -Export volume, values, market share -Output per worker	- Export volume, values; market share	-Revenue per unit (profit) -Export volume and market share	-Export volume, values, market share; employment
Nb. firms surveyed	30	25	46	20 From Primary data from latest Cashew Board Survey
Structure (production)	-90% of production by 14 commercial farms; vertical integration mostly	- Mostly by small farms - Contract farming, vertical linkages	- Mostly by smallholders - Contract farming, vertical linkages	Oligopsony: Cashew Board and Exporters
Structure (export)	55% by 3 firms the rest by 5 firms	50% by 10 large firms among the 300	85% by two dominant processors/exporters	Double market power of exporters

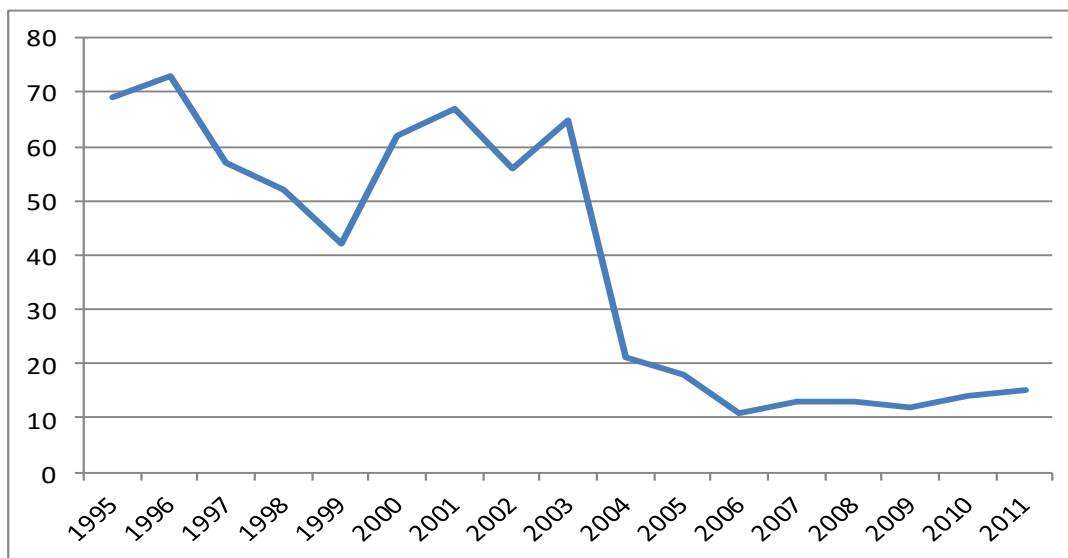


Main Results

- Asymmetric distribution of trade benefits
 - High concentration of trading firms (cooperative behavior)
 - Low margins/profits for small firms, farm workers, land owners
- Concerns and limitations
 - Assets: very low for small farms, small firms
 - Supply of raw materials: low quality, irregular
 - Policy: distorting, ineffective
 - Competitiveness: low



Number of Fresh Pineapple Exporters from Ghana



*Switch from Smooth Cayenne to MD2 in 2006



Mango: Net margins by stage of marketing chain

		Price (P/kg)	Net Margins (P/kg)
Davao City	Farmer	21.66	2.83
	Wholesaler	40.00	14.96
	Retailer	50.00	19.72
Digos City	Farmer	22.83	6.35
	Wholesaler	35.00	17.35
	Retailer	52.50	16.15
IGACOS	Farmer	20.60	8.93
	Wholesaler	n/a	n/a
	Retailer	45.00	4.41

Source: Sarmiento et al (2012).



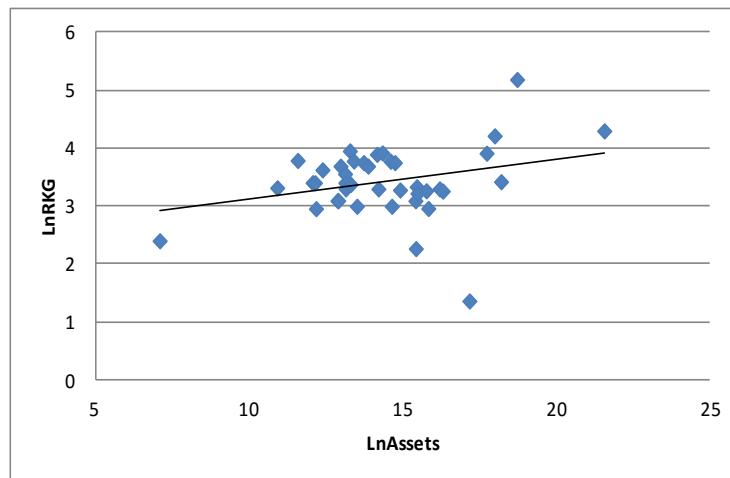
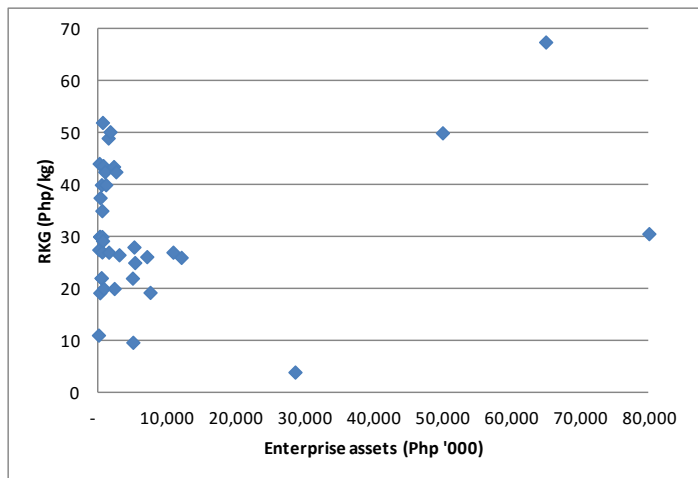
Average production cost of mango in the Philippines

	Cost per kg, in pesos	Share in total (percent)
Total cost	14.7	100.0
Cash cost	8.8	59.8
Farm inputs	4.8	32.9
Workers	2.5	16.7
Fuel, utilities	0.4	2.8
Other fees	1.1	7.4
Non-cash costs	1.0	6.7
Imputed costs	4.9	33.5
Family labor	1.1	7.5
Others	3.8	26.1

Note: yield = 4,359 kg per ha; farmgate price is P24.76 per kg. In 2010 the exchange rate averaged 45.11 pesos



Unit revenue (RKG) and enterprise assets





Major concerns of farmers

Issues	Banana	Pineapple	Mango	Total
	Percentage Reporting	Percentage Reporting	Percentage Reporting	Percentage Reporting
High cost of input	93	100	80	93
Low yield	80	75	60	75
Lack of capital	100	88	60	89
Low buying price	80	75	60	75
High interest rate	17	50	40	32
Poor equipment	53	25	20	39
Lack of information on market and technology	60	25	0	39
No collateral to offer for bank loans	53	88	20	75
Unfavorable climate	73	63	100	75
Conversion of agricultural land to residential	13	63	0	25



Major concerns of Exporters

- Irregularity of quantity and quality of raw materials
 - for stability and quality of the supply of raw materials
- Policy distortion, non-tariff barriers
 - MRL, tracing



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Are trade and market benefits reaching the poor?

No, not quite, not yet !

- ❖ Low or no trickle down to the poor
- ❖ Rosy on the surface but bleak still for the poor



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Policy Implications



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Increase the fruit pie for all

- Address access to credit
 - for increased access to essential inputs
 - for stability and quality of the supply of raw materials
- Design a mechanism
 - to offer lending opportunity for farmers and incentives to lenders (e.g. to devise agreeable collateral etc.)
 - to improve contract enforcement
- Reduce, eliminate bottlenecks (policy, trade costs, technical barriers)



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Increase the pie share of the poorest

- Strengthen partnership with private sector
 - review and improve contract farming
 - Improve job market outlook
- Increase assets of the poor
 - enhance skills, improve education, extension
 - offer lending opportunity, risk management tools, not subsidy
 - solve land issues
 - diversification or specialization
- Review distribution
 - reduce direct, indirect taxes



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Thank You!

Find out more at

<http://www.fao.org/3/a-i5130e.pdf>



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Appendix

Major Issues in Lending by Key Informants

Major Issues	Cooperatives	Bank	Trader	Input Supplier
No viable cooperative in the area		1		
Lack of funds for lending operation	2			1
Crop failure/unfavorable climate	2	1	1	1
Collection problem	1	1	1	1
No collateral/unacceptability of agri lands as collateral	2	1		
Lacks required documents		1		

Distribution of Farmers by Source of Income and Annual Average Income, (2014-2015)

	Banana	Pineapple	Mango	Total
	Percentage Distribution (n=15)	Percentage Distribution (n=8)	Percentage Distribution (n=5)	Percentage Distribution (n=28)
Borrowers	73	63	60	68
Non-borrowers	27	38	40	32
Sources of Loan				
Formal	37		33	26
Informal	45	100		53
Both	18		66	21
Specific Sources				
Cooperative	55	-	-	32
MFI	18	-	33	16
Bank	-	-	33	5
Input Supplier	27	20	33	26
Trader	45	20	-	32
Friends/Neighbors	18	40	33	26
Relatives	27	20	67	36
Loan Purpose				
Crop Production	100	80	67	89
Working capital/livelihood	45	40	33	42
Consumption	27	20	-	21
Emergency	9	-	-	5
Loan repayment	-	20	33	11
Acquisition of farmland	-	-	33	5
Acquisition of farm tools/equipment	9	-	33	11

Incidence of Borrowing, Loan Source, Loan Purpose & Amount of Loan by Commodity, (2014-2015)

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Loan repayment	-	20	33	11
Acquisition of farmland	-	-	33	5
Acquisition of farm tools/equipment	9	-	33	11
Acquisition of vehicle	18	20	-	16
House repair	33	-	33	11
Amount of Loan (US\$)				
< 23.00	18	40	-	21
24 – 114	18	40	-	21



Export Volumes of Sea and Air-freighted Pineapples from Ghana (Tons)

