Development Options in Enhancing Participation of Small Scale Producers in the Philippine Cavendish Banana Chain

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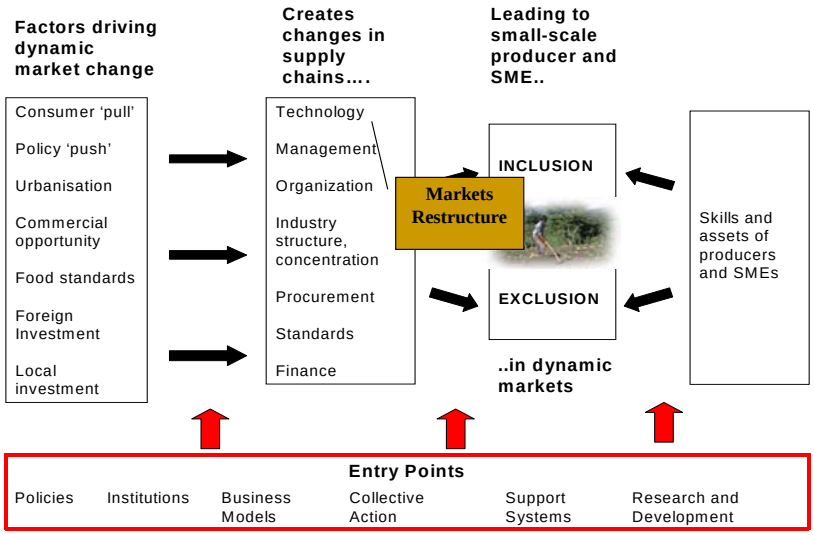
Searca, May 24, 2011

Presentation

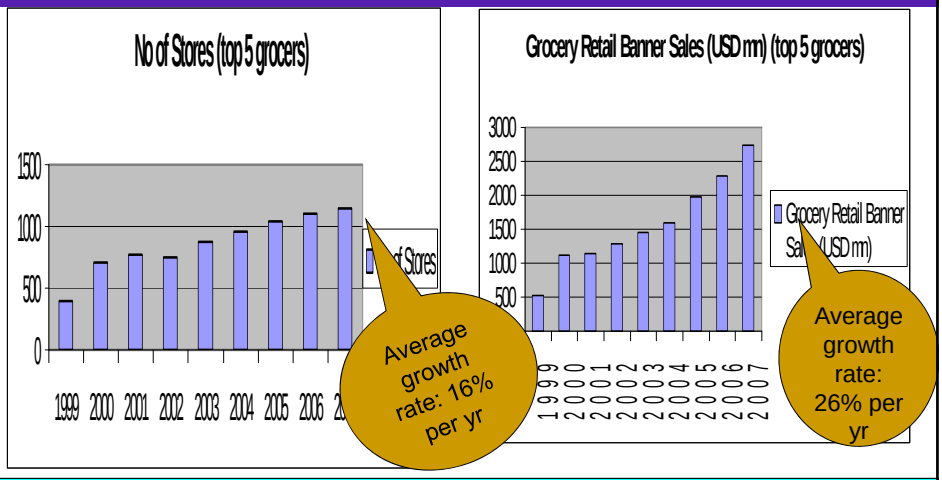
- Framework of analysis: participation of small scale producers in dynamic chains
- Changing Agrifood system: some factors
- Changing Cavendish banana chain: some factors
- Competitive performance of selected agricultural products
- Participation of small producers in the banana chain
- Development Options to enhance participation
- Conclusions

Changing agri-food system & small producers: in or out?



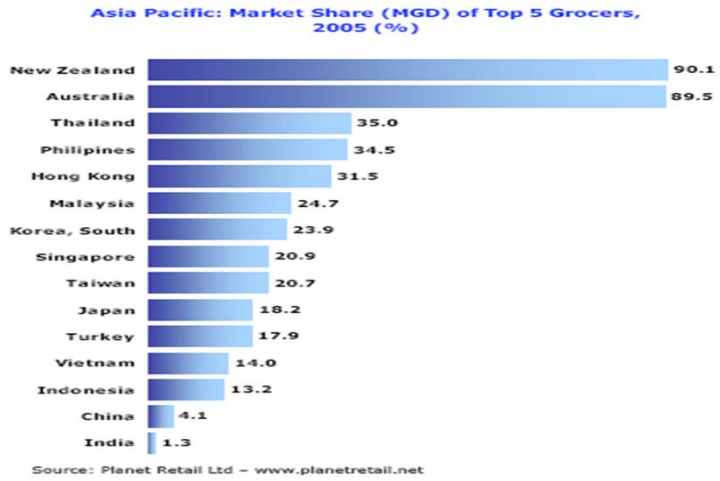
Changing Philippine Agrifood Markets: Some Trends

Trend 1:Expanding High value markets (export and modern retail and fastfood chains)



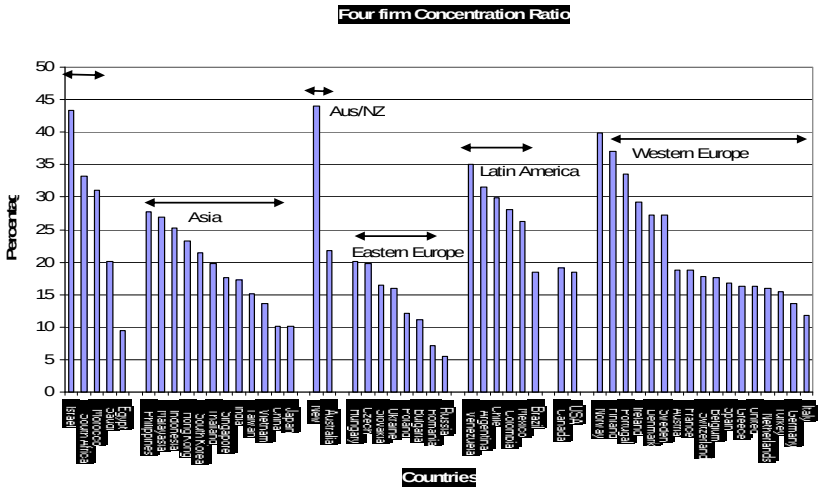
(Source: Planet retail 2008)

Trend 2. Modern retail sector is concentrated



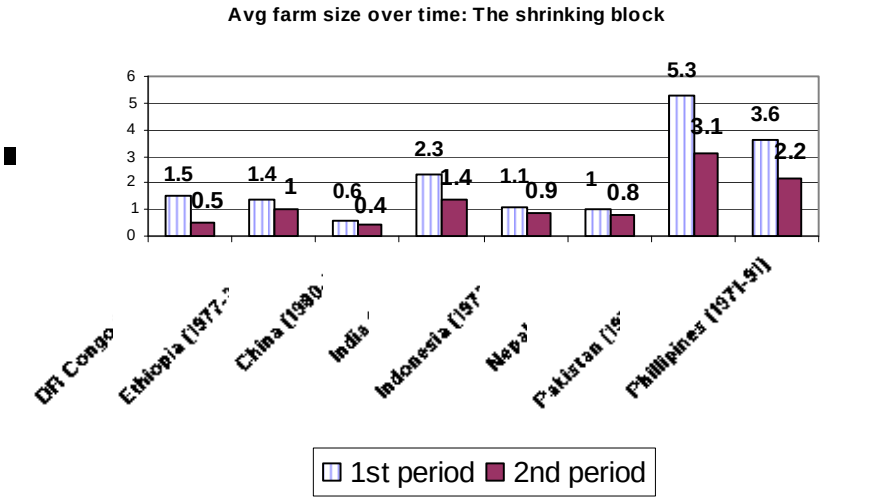
(Source: Planet retail 2008)

Trend 3: Food Processing is concentrated, vertically integrated and into contractual arragements



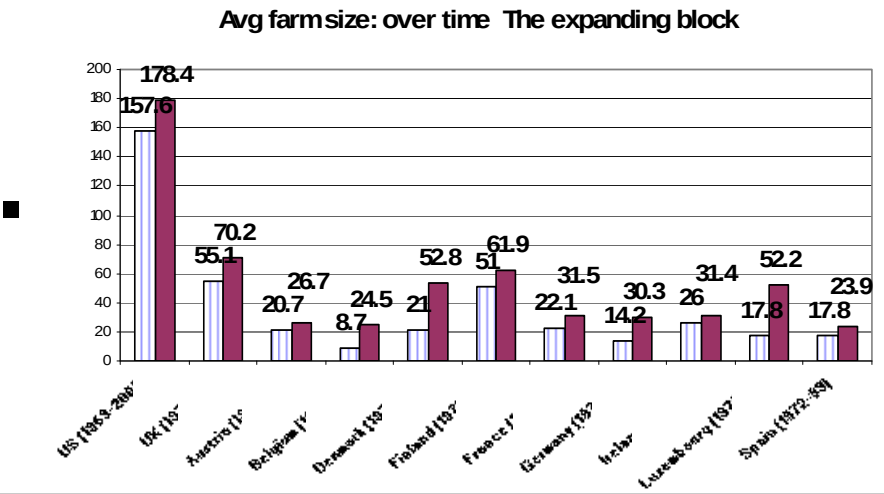
(source: Roy, 2006)

Trend 4: Fragmenting farms in less developed countries



(source: Roy, 2006)

Average Farm size: expanding block



(source: Roy, 2006)

Trend 5:Weak institutions/governance, infrastructure, labor productivity, innovation

	Brunei	Cambodia	Indonesia	Malaysia	Philippines	Singapore	Thailand	Vietnam
GCI 2010-2011	**28**	**109**	**44**	**26**	**85**	**3**	**38**	**59**
Basic Requirements	**20**	**113**	**60**	**33**	**99**	**3**	**48**	**74**
1. Institution	36	94	61	42	125	1	64	74
2. Infrastructure	52	114	82	30	104	5	35	83
3. Macroeconomic environment	1	116	35	41	68	33	46	85
4. Health and primary education	32	110	62	34	90	3	80	64
Efficiency enhancers	**67**	**103**	**51**	**24**	**78**	**1**	**39**	**57**
5. Higher education and training	64	122	66	49	73	5	59	93
6. Goods market efficiency	78	81	49	27	97	1	41	60
7. Labor market efficiency	10	51	84	35	111	1	24	30
8. Financial market development	55	92	62	7	75	2	51	65
9. Technological readiness	49	115	91	40	95	11	68	65
10. Market size	118	96	15	29	37	41	23	35
Innovation and sophistication factors	**72**	**106**	**37**	**25**	**75**	**10**	**49**	**53**
11. Business sophistication	77	106	37	25	60	15	48	64
12. Innovation	69	108	36	24	111	9	52	49

Source: Global Competitiveness Report 2010-11

Dismal performance of the Philippines in Global Competitiveness Survey 2010

Country/Economy	GCI 2010 Rank	GCI 2010 Score	GCI 2009 Rank	Change 2009-2010
Switzerland	1	5.63	1	0
Singapore	3	5.48	3	0
Japan	6	5.37	8	2
Hong Kong SAR	11	5.30	11	0
Taiwan, China	13	5.21	12	-1
Korea, Rep.	22	4.93	19	-3
Malaysia	26	4.88	24	-2
China	27	4.84	29	2
Brunei Darussalam	28	4.75	32	4
Thailand	38	4.51	36	-2
Indonesia	44	4.43	54	10
India	51	4.33	49	-2
Vietnam	59	4.27	75	16
Philippines	**85**	**3.96**	**87**	**2**
Cambodia	109	3.63	110	1
Chad	139	2.73	131	-8

Opportunities and Challenges in Modernizing Agri-food system

Opportunities

- Expanding modern/high value markets

Challenges

- Fragmented production sector but concentrated buyers (eg processing and retail)-costly consolidation and possibility of market power
- Limited resources of small scale producers to respond to market opportunities
- Demanding market requirements: quality, volume and frequency
- Weak enabling environment-institutions/governance, labor efficiency, innovation logistics and infrastructure facilities

How about the cavendish banana industry?

Markets and firms are expanding

1) Firms expanding: a) Sumitomo – P5.5B - agro-industrial ecozone b) Dana Fresh Agri Development – P314.23 m – 250 ha plantation 2) new investors coming in – AgriNurture – investing in banana and organic fertilizer in the Philippines and China 3) market expansion-Vietnam, ME & Australia

Expansion of banana hectarage: opportunity for smallholder participation

Challenges

Banning Aerial Spray: farm size shrinking by 20%, lowering volume, increasing cost per box?

Cavendish Banana Production and Export Industry is The Philippines is Shaken by Banning of Aerial Spraying

Published by otilerotsen on February 12, 2010 in Asia

Tags: banana

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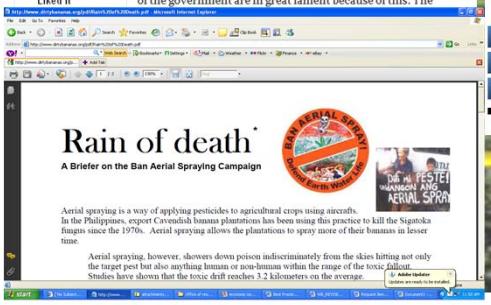
Philippine Cavendish Banana Production and Exporting Industry is shaken by banning of aerial spray. The member of the pro aerial sector consisting of agrarian reform beneficiaries of the government are in great lament because of this. The



Rain of death

A Briefer on the Ban Aerial Spraying Campaign

Aerial spraying is a way of applying pesticides to agricultural crops using aircrafts. In the Philippines, export Cavendish banana plantations has been using this practice to kill the Sigatoka fungus since the 1970s. Aerial spraying allows the plantations to spray more of their bananas in lesser time.

Aerial spraying, however, showers down poison indiscriminately from the skies hitting not only the target pest but also anything human or non-human within the range of the toxic fallout. Studies have shown that the toxic drift reaches 3.2 kilometers on the average.

Polevaulting

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Banana firm complains of 'pole-vaulting' anew

Written by: Francisco , Carmelito Q.

Thursday, 29 July 2010

BANANA companies have complained again about "pole-vaulting" in the industry with one of them, the Lorenzo-owned Lapanday Foods Corp., already filing a case against one of its growers.

Hernani P. Geronimo, head of the company's Human Resources and Shared Services Division, said the pole-vaulting that has hit the company since June 22 has been "large scale and unique," unlike in the past when "consolidators" were only buying when the season for bananas was indicated that prices were high.

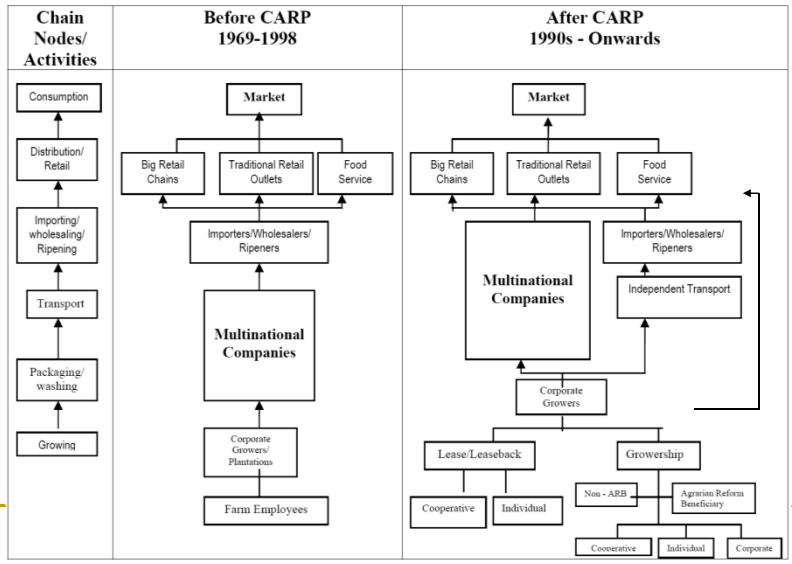
"Obviously, this is (the work) of a mercenary (consolidator)," Mr. Geronimo said, pointing out that the the incident of pole-vaulting was "orchestrated and a targeted activity."

The problem "has become an industry concern," he said. Another official of another company confirmed that pole-vaulting has become prevalent in the industry, unlike in the past when volume was still negligible. "In the past it was just intermittent," Geronimo said.

Plant disease can wipe out local banana industry- Panama wilt

SATURDAY, 17 JANUARY 2009 08:00 RUDY FERNANDEZ

A policy driven opportunity for Smallholder Participation: CARL



Smallholder/Small scale farmers and Poverty

"The poorest of the poor in the Philippines are the indigenous peoples, small-scale farmers who cultivate land received through agrarian reform, landless workers, fishers, people in upland areas and women. Among the causes of rural poverty are a decline in the productivity and profitability of farming, smaller farm sizes.."- International Federation Agricultural Development (IFAD)

Poverty Incidence in Region XI

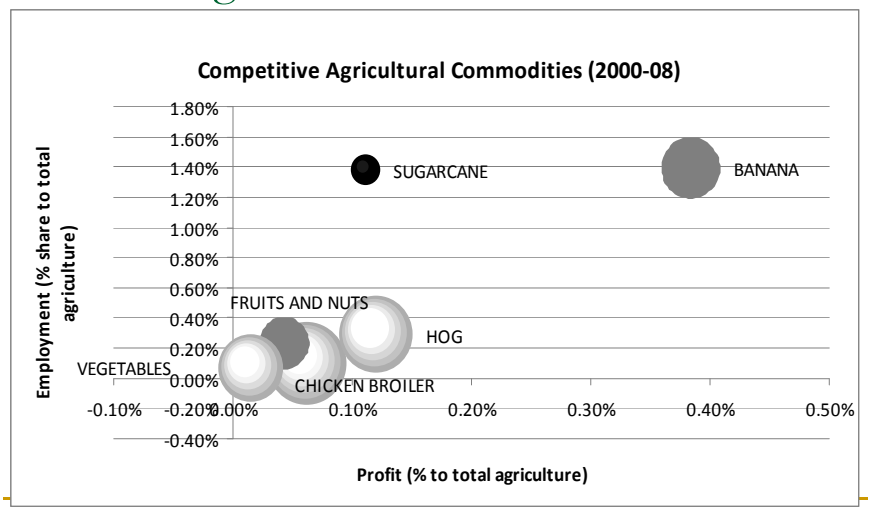
Province	2003			2006			Growth Rate	
	Poverty Incidence	Rank	No. of poor families	Poverty Incidence	Rank	No. of poor families	Poverty incidence	No. of poor families
Davao del Norte	30.3	3	49,251	37.7	3	62,699	24%	27%
Davao del Sur	24.2	4	103,963	23	4	101,644	-5%	-2%
Davao Oriental	37.2	1	33,443	40.8	1	39,088	10%	17%
Compostela Valley	34.4	2	44,410	39.8	2	54,153	16%	22%
Region XI	28.5		231,068	30.6		257,554	7%	11%
Philippines	24.4		4,022,695	26.9		4,677,305	10%	16%

Source: NSCB 2010

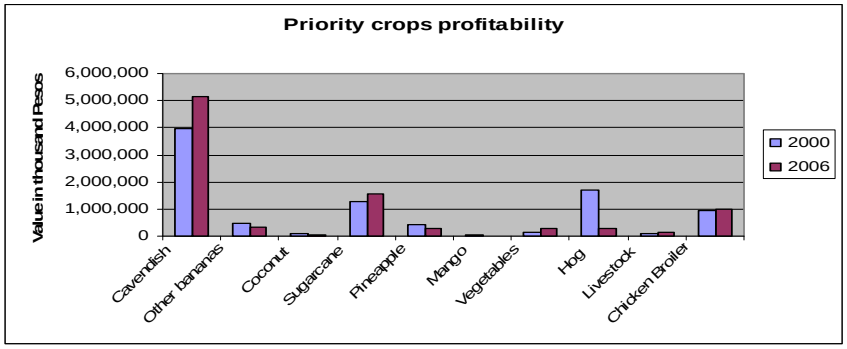
Competitiveness index: agricultural commodity level

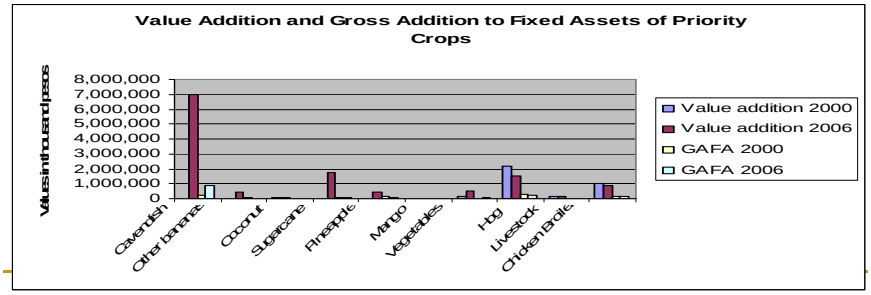
Competitiveness Indicators	Indicators (Internal Factors)	Source of Data
Profitability	Profit	NSO census of establishments (2000, 2006,2008)
Employment Generation	Number of Employees	NSO census of establishments (2000, 2006,2008)
Value Creation	Value Added	NSO census of establishments (2000, 2006,2008)
Innovation	Gross Additions to fixed assets	NSO census of establishments (2000, 2006,2008)
Cost Efficiency	Revenue/cost	NSO census of establishments (2000, 2006,2008)
Labor Productivity	Gross value added/no. of employees	NSO census of establishments (2000, 2006,2008)
Linkage to the economy (Forward & Backward)	Value of input and output (multipliers)	NSCB input-output matrix 2000 and 1994

Competitive performance of selected agricultural commodities



productivity (size of bubbles) and cost-efficiency ratio (color or shade)





Types of Export- small scale grower Linkages	Point of View of Small Scale Grower		
	Participation	**Advantages**	**Disadvantages**
A. Growership			
1. Individual	Entrepreneur	More control by growers Highest potential for increasing income	Lower bargaining power Limited access to resources (eg capital) High risk Unstable income
2. Cooperative	Entrepreneur/ employee via cooperative	High bargaining power for negotiating prices Access to capital High potential for increasing income More control by growers who are under individual farming scheme Quality and production incentives	Risk of mismanagement as control is given to the cooperative Performance is largely dependent on leadership of the cooperative
3. Corporate	Employee	Low risk Stable income	low potential to increase income No control by growers
B. Lease			
1. Individual lease	Employee/ Lessor	Stable income Low risk Option for growers to become growers after a certain period	Low potential to increase income No control by growers
2. Leaseback (corporate)	Employee/lessor via cooperative	Stable income Low risk	Low potential to increase income No control by growers

Net income of grower by type of linkage

Types of export - small scale grower linkage	Net Income/hectare
A. Growership	
1.Individual	120,380
2.Cooperative	58,303
3.Individual Farming (under cooperative system)	94,399
B. Lease	
1.Individual Lease	81,693
2.Leaseback	78,540
3. Leaseback Tadeco	118,526

Source: IFC (2009)

Success and failure factors by type of linkage

Type of linkage	Success Factors	Failure Factors
Individual Growership •Management skills •Access to capital •Discipline to follow production standards	•Daily monitoring and supervision of laborers •Proper usage of equipment •Full utilization of materials withdrawn from the company such as fertilizers, etc and access to credit •Constant follow up and monitoring for disease control •Ensured proper classification of banana during weighing in the packing plant •Followed technical advices of the company •Polevaulting not practiced; loyal •Provides incentives to workers (eg 13th month) •High educational attainment •Innovative-improve echnology provided by buyer •Effective communication system	•Inadequate technical know how in banana production •Inadequate communication with buyers particularly in terms of deductions •Poor soil fertility
Cooperative •Strong leadership and management skills •Discipline to follow production standards	•Strong leadership •Committed workers •Established systems & procedures (eg financial & technical support) •Strong bargaining power with buyers •Decision is independent of the buyer •Trust within coop officers •No polevaulting; follows contract/agreement •Full support of company/buyer •Continuous improvement of capability through attendance on trainings, workshops	•Inadequate management skills of coop officers •Dependent on buyer's decisions •Unclear functions of coop officers •Too much politics

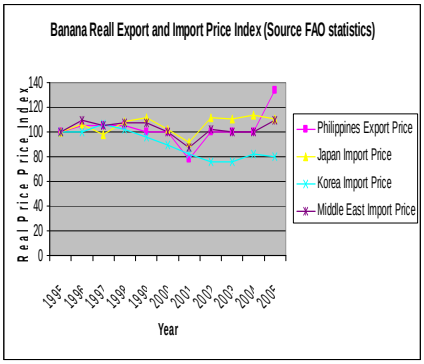
Source: IFC (2009)

Options for Development: Enhancing participation linkages with smallholders

- Getting the bottomline equation right!
- Linkages strengthen as actors benefit
- Profit/Net Benefit=Sales-Cost=
  Price x Quantity-Cost
- Plus the enabling/business environment to make the equation right!

Option 1: improve price

Growers do not have control over price except through quality and product differentiation



Node	Price transmission elasticity
Philippine-Japan	0.94
Philippine-Middle East	0.84
Philippine Korea	0.72

Quality Differentiation	Product Differentiation
Class A is $1 or 48% more expensive than Class B	Price of organic banana is at least 30% higher than non-organic banana
Class A is $2 or 255% more expensive than class C banana	Price per kilogram of cluster packs is about 6% higher than regular

Option 2:Improve productivity

Items	Cost and income per hectare by number of boxes (Pesos)				% to total cost by number of boxes			
	3000	**3500**	**4000**	**4500**	**3000**	**3500**	**4000**	**4500**
Total Pre-Cut Cost (PhP)	244,914	244,914	244,914	244,914	64	61	58	55
Total Direct Cost of Fruit (PhP)	385,267	404,241	423,214	442,188	100	100	100	100
Cost per box (PhP)	128	116	106	98				
Cost per box in USD (1:48PhP)	2.67	2.42	2.21	2.04				
Net income per hectare	**66,000**	**122,000**	**178,000**	**234,000**				

Source: key informant interview (2008)

Income per hectare of grower under cooperative individual and non-individual farming

Item	Cooperative	Individual Farming System	% Difference
Total Gross Sales	351,950	309,520.37	(13.71)
Dividends from Cooperative	654.78	5,189.99	87.55
Salary	76169.16	-	(100.00)
Total Gross Income	428,773.78	314,710.36	
Costs			
Operating cost Cooperative	86,225		
Total Production Cost	265,147		
Total Cost	351,372	220,311.88	(59.49)
Total Net Income	77,401.78	94,398.48	18.00

Source: key informant interview (2008)

Option 3: Reduce cost of production & marketing

Cost*	2005		2008		Growth rate (2005-08)
	Cost/ hectare	% to total	Cost/ Hectare	% to total	
Labor (includes weeding, pruning, harvesting, packing, and other labor cost)	118,300	37	188,512	39	59
Fertilizers	25,500	8	69,747	14	174
Pests and disease control chemicals	89,410	28	96,324	20	8
Propping materials	15,848	5	21,208	4	34
Bagging materials	19,500	6	30,517	6	57
Fuel, oil and lubricants	15,165	5	24,264	5	60
Other cost (eg depreciation)	27,000	8	29,700	6	10
Overhead	10,000	3	16,511	3	65
Total	**320,724**	**100**	**476,783**	**100**	**49**

Source: Key informant interview 2008

Production and Marketing costs (2009 estimate)

Costs	% Share
Fruit production cost	37
Costs to port, loading, documents, administration	4
Carton, packing materials, and palletization	17
Freight rates per box	22
Container rates	21
Total (cost and freight rates)	100

Source: confidential

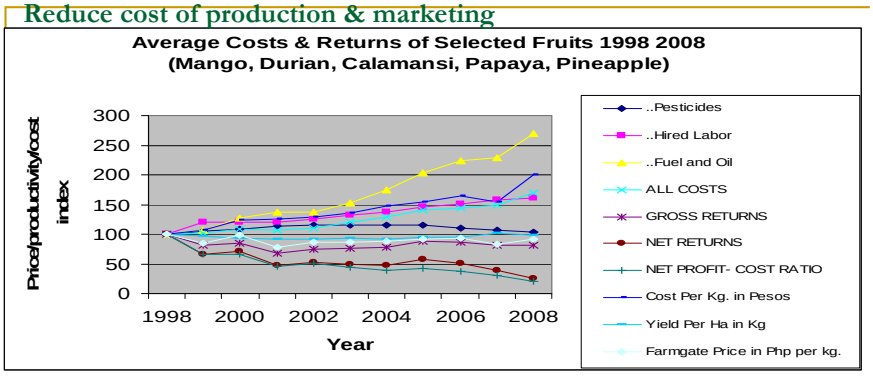
Option 4: Address policy and institutional issues

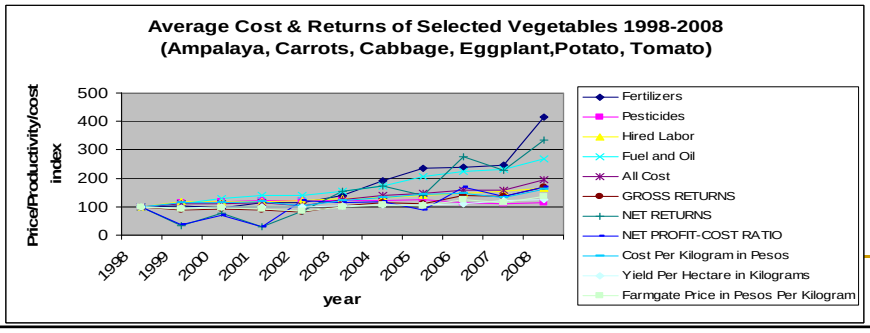
- CARP
  - inefficiencies due to the loss of economies of scale that add costs to production estimated at up to 30%
  - costs include consolidation costs and lower labor efficiency among others
  - Access to credit (low collateral value due to policy constraints)
  - Small holder farmer yields – lower by about 20 per cent compared to well managed larger farms of 200 - 250 hectares
- Aerial spray- decrease area by 20%
- polevaulting- accreditation of farms

Why cavendish banana excelled relative to other agricultural products?

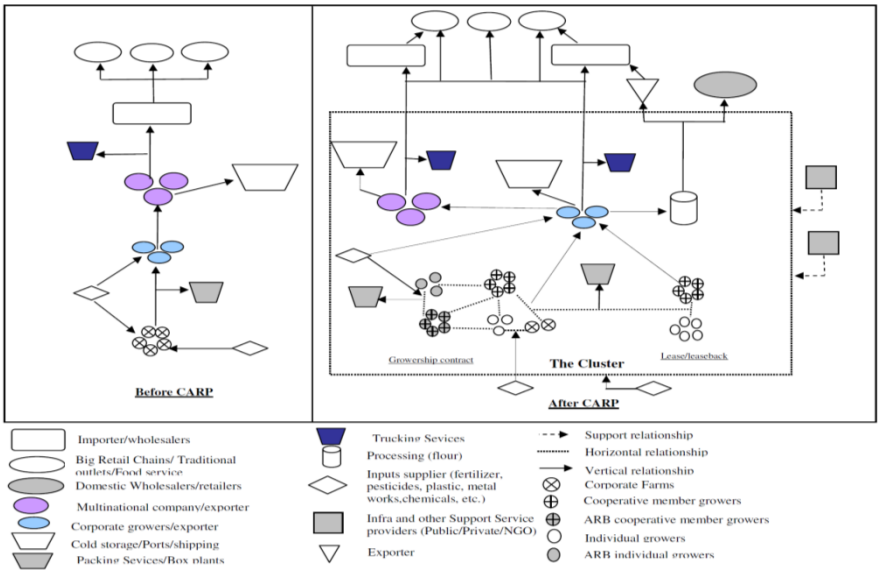
- Better in managing the bottomline equation right: Profit=Sales-Cost= Price x Quantity-Cost through:
  - Influencing price through product quality and differentiation
  - Improving productivity
  - Managing costs
  - Enhancing efficiency: economies of scale,vertical integration, contractual arrangements
  - Fostering a conducive enabling/business environment to make the equation right by being organized
  - **Cluster/value network development is largely private sector driven – vertical and horizontal relationships of chain actors are strong, actors address common challenges and opportunities, "coopetition" and continuous are encouraged/promoted improvement/innovation**

Reduce cost of production & marketing





Degree of competitiveness of an industry is significantly explained by the degree of linkages eg production-processing linkage



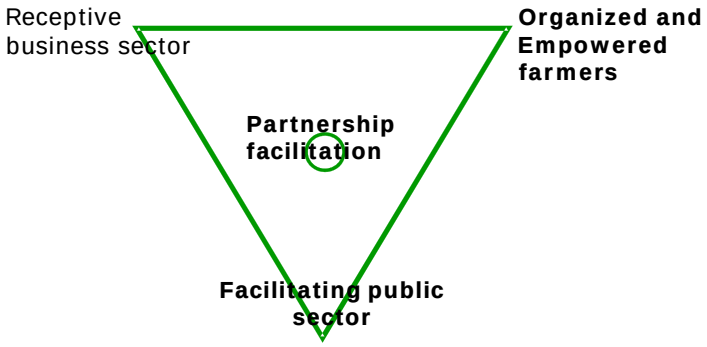
Source: Agro-industry cluster study, World Bank 2011

Economies of scale (firm size) affects competitiveness which can be partly addressed through clustering

Industry	RANK (Competitiveness index) by size of Employment (census 2006)	
	Less than 20 employees	More than 20 employees
Hog farming	1	3
Growing of banana	7	1
Growing of sugarcane, muscovado	5	2
Livestock farming (except hog)	12	8
Growing of vegetables, roots and tuber crops	9	7
Forestry, logging and related service activities	11	11
Growing of coconut and others	8	12

(Agro-industry cluster study, World Bank 2011)

Foundation of success: linking small farmers to high value markets (40 case studies in more than 20 countries)



Examples of clusters at smaller scale: calamansi & Norminveggies

Source: RMP 2008 (Peppelenbos, et al)

Conclusions

- Changing agrifood system in the Philippines- creating opportunities and challenges in the chain for small scale producers
- Cavendish banana is competitive but there is a need to make participation of small scale producers more profitable/equitable
- This can be done through an integrated package of assistance to meet market requirements- to include improving productivity, quality and lowering production and marketing costs, credit, infrastructure and policy support
- Integrated development intervention will be more effective if implemented within a cluster/value chain framework (efficient delivery of service to meet market requirements) where the private sector is the prime mover