Potential of Thai Farmers to Produce Off-Season Mangoes

Rationale:

Producing mangoes is based on season. During the harvesting season, supply has been exceeding market demand and depressing market prices. Farmers can no longer tolerate poor income resulting from excessive supply. A major cause is farmers frequently ignoring the concept of market led production.

Characteristics of off-season produce

- Marketing strategy for fruit production
- Relatively high investment
- Risk: weather, pest, and disease
- Expectation of relatively high price due to limited supply

Objective:

- To prove the potential of limited resource farmers for producing off-season mangoes
- To propose the illustration of market led production

Methodology:

- Overview of the country
- Analyze by focusing on 2 case studies two representatives of farmers, one in the average level of resources and management skill (Mr Phrom), the other was below the average level (Mr Jan).

Production:

- Thailand is capable of producing mangoes all over the region with production totalling 1.1 million tons
- Production enters the market which peaks from May to July, most production is in northern region
- The major problems are low yield per rai and poor quality Mango orchards lack water and area faced with antracnose disease



Area and production of mango in Thailand, 1995.

Province	Total planted area (ha)	Production area (ha)	Total production (ton)
Chachoengsao	16,610	13,139	103,381
Chon Buri	10,326	7,076	44,720
Phetchaburi	7,354	4,861	40,699
Nakhon Pathom	4,896	3,655	34,679
Suphan Buri	9,358	5,215	33,589
Prachin Buri	4,261	3,339	29,636
Rayong	5,835	3,819	28,913
Prachuap Khiri Khan	4,864	3,755	23,872
Loeit	7,836	4,711	22,292
Ang Thong	4,694	3,152	21,497
Udon Thani	5,116	3,201	19,199
Ayutthaya	5,527	3,748	18,103
Ratchaburi	4,727	3,010	18,100
Saraburi	3,721	2,557	12,778
Surin	5,113	2,831	8,778
Chiang Mai*	9,659	6,446	19,069
Other	162,101	108,199	647,189
Total	271,997	182,714	1,126,512

Marketing and Problems

- The mango market is very narrow, most markets of fresh mangoes are specific to domestic markets only.
- 3 Major marketing problems are:
 - Lower quality of exported mangoes
 - No marketing service to reduce damage to mangoes during distribution
 - No grouping formation (as similar to other crops)



Production goals under ma	ango deve	lopment pl	an 1997 -	-2001	
Entry	1997	1998	1999	2000	2001
Total planted area (1000 ha) Total production (1000 ton) Yield (kg/ha) And raise quality by 50%	284.7 1,437 6,906	292.8 4,509 7,000	297.6 1,645 7,156	301.6 1,740 7,312	304.8 1,844 7,500
Source : OAE, 1996.					

Case Study:

Chiang Mai is one area producing mangoes for export. Farmers formed a group themselves, called "The Group of Off-Season Mango Producers" to empower the negotiation.



Landscape of the village

The Group of Off-Season Mango Producers

- Founded in 1992 with 30 members
- There are 105 members today
- Grow mangoes for export
 - Their objectives are to
 - Reduce the risk from fruit flies and storm during harvesting
 Avoid low prices
 - Avoid low prices
 improve quality of mangoes for exporting
- Lonne and

Source : DOAE, cited by OAE, 1996.

* Chiang Mai Agriculture Office., 1997

Agricultural Case Study:

- The cultivation is in upland area and irrigated from Mae Kuang dam1
- The 2 representative farmers are different in socioeconomic background.

 Their patterns of cultivation are diverse by having mangoes as the major fruit grown, whereas other fruit and vegetables are minor crops.





Appearance of agricultural diversification

Mango trees surround fish pond (Mr. Prohm's orchard)

Off-Season Mango:

- Even though the most important exporting variety of mango is Nangklangwan, today many farmers have switched to cultivate Choke Anand.
- Off-season mango cultivation is dissimilar to normal cultivation, even within the same growing area. Normally, farmers apply the least amount of fertilizers and pesticides.
- The cultivation of the 2 representative farmers (Mr. Prohm and Mr. Jan) are diverse. Mr. Prohm utilized more factors of production and gained more returns than Mr. Jan.
- Mr. Phrom is wealthier, more skillful and experienced and a harder worker than Mr. Jan

Production management of Nang Klang Wan



Note: US\$1 = 40 Baht, 1 ha = 0.25 rai

Crop margins per ha of Nang Kang Wan, 1997/98

	Farmer Prom			Farmer Chan		
Farm activity	Qty	Value/unit	US\$	Qty	Value/unit	US\$
Production (ton)						
In season	12.50	450.00	5,625.00	Na.	Na.	1302.08
Off-season1	6.25	512.50	3,203.13			
Off-season2						
Total gross output			8,828.13			1302.08
Inputs						
Fertilizer1 (kg)	1,250.00	0.24000	300.00	442.65	0.195	86.32
Manure (kg)	2,500.00	0.03750	93.75	735.29	0.037	27.21
Chemicals (cc.)	13,875.00	0.00719	99.81	1469.77	0.005	7.35
Hormone 1 (cc.)	7,500.00	0.00575	43.13	18.38	0.300	5.51
Hormone 2 (cc.)	7,500.00	0.00700	52.50	1470.57	0.0041	6.03
Thiourea and paclobutrazol(kg) Etherine (kg)	37.50	6.00	225.00	6.67	5.000	33.33
other inputs						
Fuel and oil (litre)	1974	0.23750	468.83			
Transportation	572.69	0.30001	171.81			
Labor input :						
Family labor (day) Hired labor (day)	178.91 93.75	4.56 4.15	815.63 389.06	227.25 45.40	0.325 3.000	73.86 136.19
Total variable costs			2,659.52	1 3		375.79
Gross margin (Without family labour	costs)		6,984.24			1062.48
Gross margin per hour family labour			4.31	15		2.93
Gross margin per ha			6,1 <mark>68.61</mark>	1	12	926.29
						100
Total labour costs on the case study far	m :		1,204.69			136.19

Patterns of Production:

- Mr Prohm'spolicy is "market led production. His production pattern is flexible and rapidly adjusted to the market fluctuations. Grading and selling have been processed through the farmers' group.
- Mr Jan, on the other hand, expected relatively high price by cultivating off-season mangoes. Nevertheless, his mango quality is below the group standard, thus making ungraded selling is one way to commerce the inferior quality, and it resulted low sales price.

The Effects of Producing Off-Season Mangoes:



Abnormality of the plant due to

utilization of blossom stimulant

chemical is possible though very

- Reduce amount of pesticides used
- High production cost
- Utilizing paclobutrazol reduce production seldom. risk. Apparently, this could be seen fruithe impact of El Nino in 1998.



Suggestion:

Lacking appropriate treatment would deteriorate the tree

- Off-season mango production provided good returns
- Farmers' group should be given of technical training
 Farmers group has played a major role in transfering some of the production techniques and marketing management.
- Farmers need to be credited approximately10,000 baht/ rai
- Farmers still want some information to support their planning
- Supporting off-season mango cultivation in suitable cultivated areas is one effective policy to reduce poverty level.
- Precision production ought to be seriously improved and encouraged for off-season mango production.

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 OAE. Guideline for Mango Development in the 8th National Socio-Economic Development Plan (1997-2001). Ministry of Agriculture. Document no. 103/2539., 1996.

