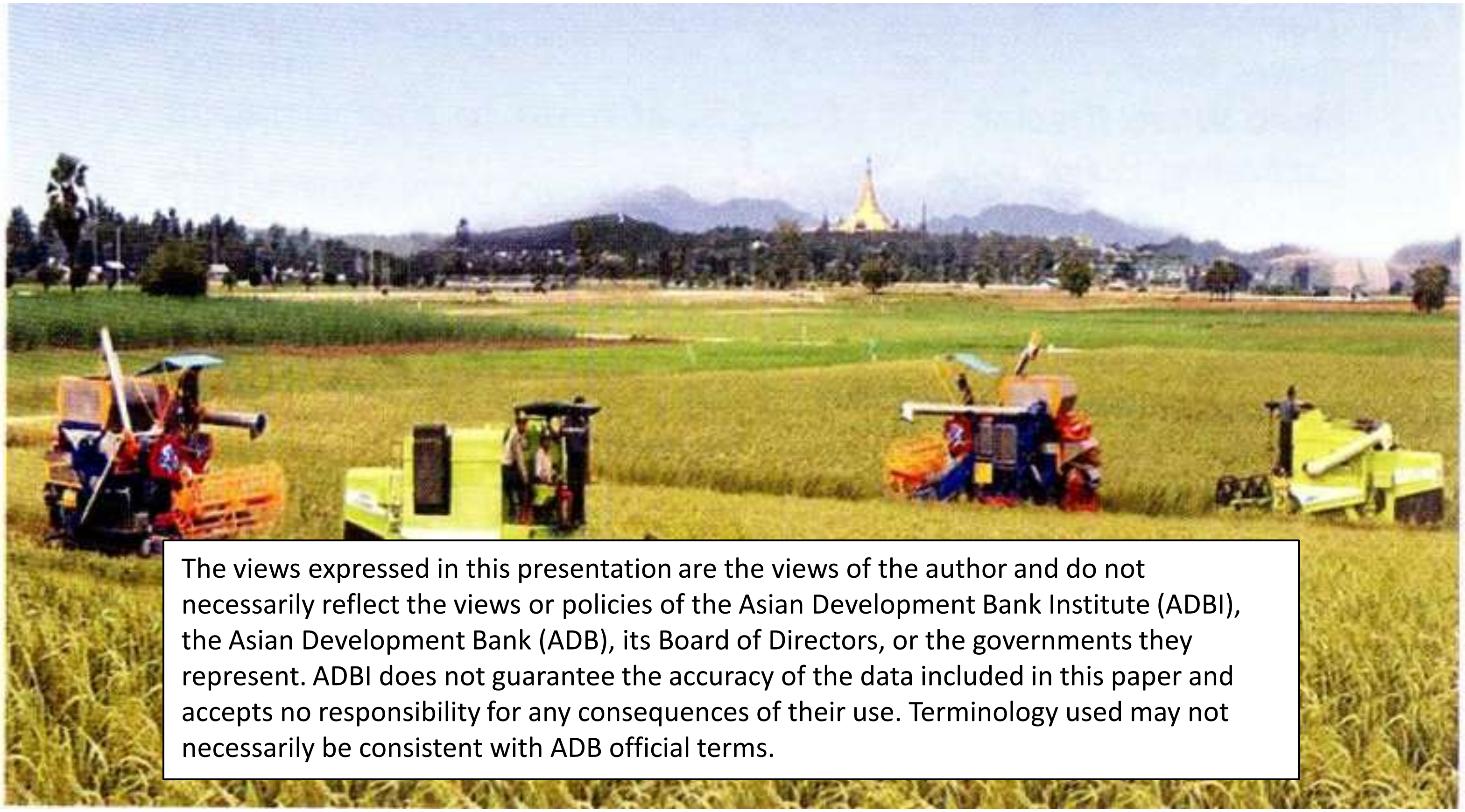
Supply Chain Development in Myanmar (Second Draft)



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Outline

- Overview
- Structure
- Dynamics
- Future Prospects
- Conclusion/Recomendation

Overview

- Main economic sector in Myanmar is agriculture in which rice is the most important commodity to supply growing population and obtain surplus of rice to be exported in order to have national income.
- In 2011/12, total multiple crops sown area was 55.56 million acres.
- The area planted to paddy was amounted to 18.76 million, 34 percent of total multiple crops sown area, followed by largest share of pulses and oil crops sow area were accounted for 10.91 and 9.01 million acres respectively.
- The country's population in 2009-2010 was estimated at **59.13** million with the annual growth rate of 1.29 percent.
- As for next decade, total population is estimated at **67.22** million in 2019-2020 based on 2009-2010 with current annual growth rate.
- To be supplied for growing population and surplus of rice are required for export.

RICE POLICY & LEGISLATION

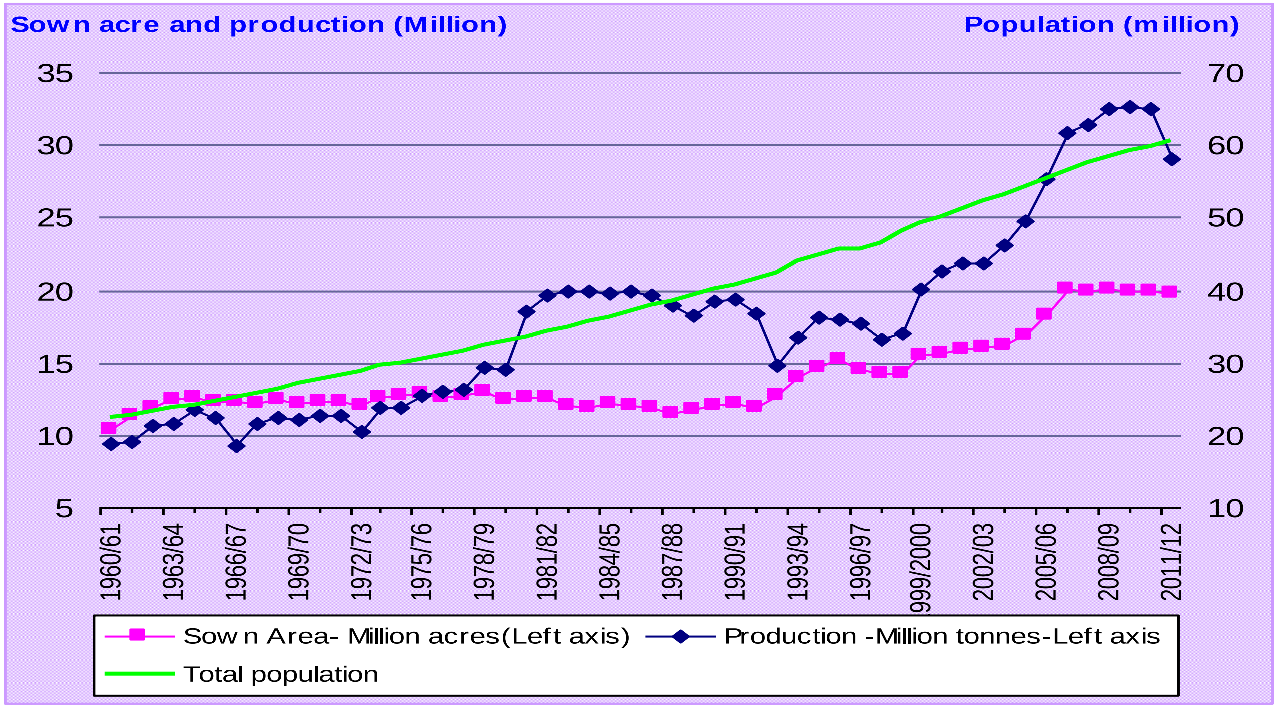
- In 1988-89, centrally planned economic system ended and market oriented economic system was adopted by State.
- Pulses export by private sector was allowed in 1988, rice export remained under State control.
- In 2003, rice export by private sector allowed, MAPT rolled back involvement in rice industry.
- In 2011, export tax on private sector was reduced from 10% to 2%.

- Plant pest quarantine law(1990)
- Pesticide law (1993)
- Fertilizer law (2000)
- Seed law (2013)
- Farmland Law (2012)
- Virgin and Fallow Land Law (2012)

PADDY PRODUCTION IN MYANMAR (2011-2012)

Particular	Sown acre (Million acres)	Harvested acre (Million acres)	Yield per acre (Tonne/acre)	Paddy Production (Million tonnes)	% on total production
Monsoon paddy	16.13	16.07	1.50 (71.91)*	24.1	83
Summer paddy	2.63	2.63	1.86(89.36)*	4.9	17
Total	**18.76**	**18.70**	**1.24 (74.36)***	**29.0**	**100**

* Basket per acre



PADDY PRODUCTION (cont'd)

- In 1992/93, summer paddy (dry season paddy) was introduced in Myanmar with the provision of irrigation facilities in Lower and Central Myanmar.
- The country's rice utilization, export relied on monsoon paddy production before 1992/93.
- Since 1992/93 the country's rice utilization, export and stock relied on monsoon and summer paddy production.
- In Myanmar 83% of paddy is derived from monsoon paddy production and the remainder 17% is supplied from summer paddy production.

SEASONAL PRODUCTION OF RICE IN MYANMAR

Particular	May.	Jun.	Jul	Aug.	Sep.	Oct	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.
Wet season paddy(Monsoon paddy)															
Lowe r Myanmar	S	S/G	S/G	S/G	S/G	G/H	G/H	H	H						
Central Myanmar			S	S/G	S/G	S/G	H	H	H						
Southern Shan		S	S	S/G	S/G	H	H	H							
Dry season paddy(Summer paddy)															
Lower Myanmar						S	S/G	S/G	S/G	H	H	H			
Central Myanmar									S	S/G	S/G	S/H	H	H	
Southern Shan											S	S	G	H	H

S: Sowing, G: Growing, H: Harvesting

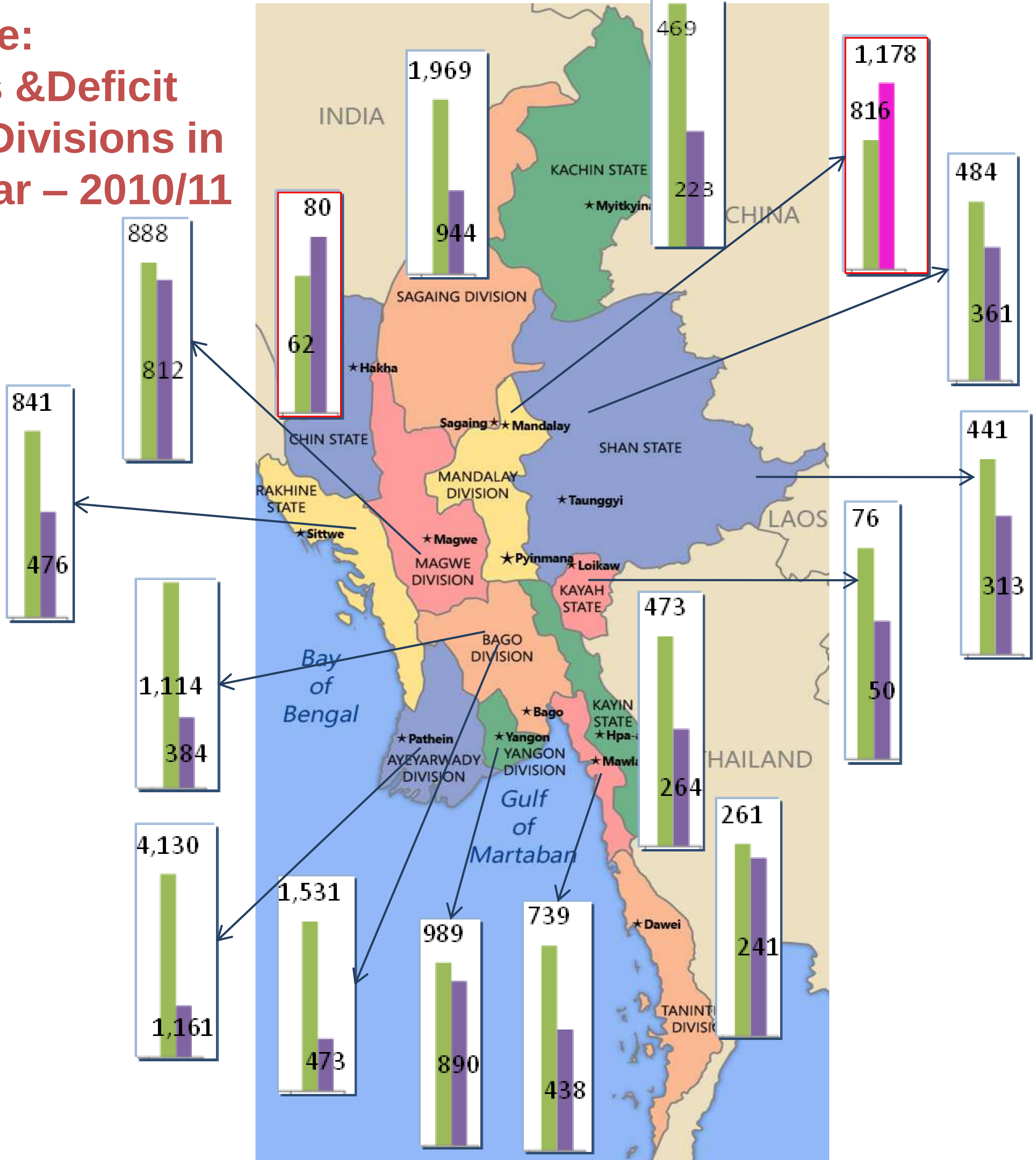
Source: Agricultural marketing in Myanmar (TCP/ MYA/8821), FAO MIS project, Oct. 2000 and DAP

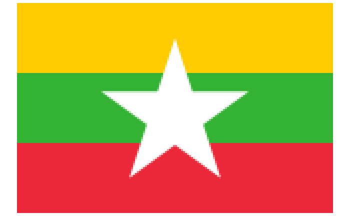
Per capita food use based on FAO rice statistics

Countries	07/08-09/10 Average	2010/11 (estimate)	2011/12 (forecast)
	Per caput food use (kg per year)		
Bangladesh	149.0	153.0	154.2
Thailand	128.7	133.5	136.8
Vietnam	186.2	186.9	187.4
Myanmar	237.9	240.0	239.0

TableA8(b), Rice statistics, page83,Foodoutlook, Global market analysis, FAO,May2012

Example: Surplus &Deficit States/Divisions in Myanmar – 2010/11





RICE SURPLUS AND DEFICIT REGIONS 2011/12

State/ Division	Sown acre	Production	Population	Consumption	Seed for next season	Losses	Total utilization	Self sufficiency based on consumption (%)	Self sufficiency (%) based on total utilization (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9) = (3 /5)	(10)=(3/8)
Nay Pyi taw	185	16045	1161	16104	370	555	17029	100	**94**
Kachin	545	35418	1600	22407	1090	1635	25132	158	141
Kayah	106	6637	361	5100	212	318	5630	130	118
Kayin	652	45633	1837	26658	1304	1956	29918	171	153
Chin	108	4852	563	8079	216	324	8619	60	**56**
Sagaing	2181	187712	6603	95337	4362	6543	106242	197	**177**
Taninthayi	357	24718	1736	24570	714	1071	26355	101	**94**
Bago	3055	216047	6073	86670	6110	9165	101945	249	**212**
- Bago(East)	1911	137135	3995	56676	3822	5733	66231	242	**207**
-Bago(West)	1144	78912	2078	29994	2288	3432	35714	263	**221**
Magway	1055	90368	5682	82056	2110	3165	87331	110	103
Mandalay	789	64491	7352	102753	1578	2367	106698	63	**60**
Mon	911	63028	3168	44424	1822	2733	48979	142	129
Yakhine	1143	76826	3341	48330	2286	3429	54045	159	142
	1383	97376	7104	90312	2766	4149	97227	108	100
Shan	1513	118824	5726	80802	3026	4539	88367	147	134
-South	632	42304	2117	30048	1264	1896	33208	141	127
-North	472	45334	2508	35661	944	1416	38021	127	119
-East	409	31186	1101	15093	818	1227	17138	207	182
Ayeyarwady	4778	342371	8131	117348	9556	14334	141238	292	**242**
	18761	1390346	60438	850950	37522	2780692	944755	163	147

Source: Department of Agriculture, Ministry of Agriculture and Irrigation

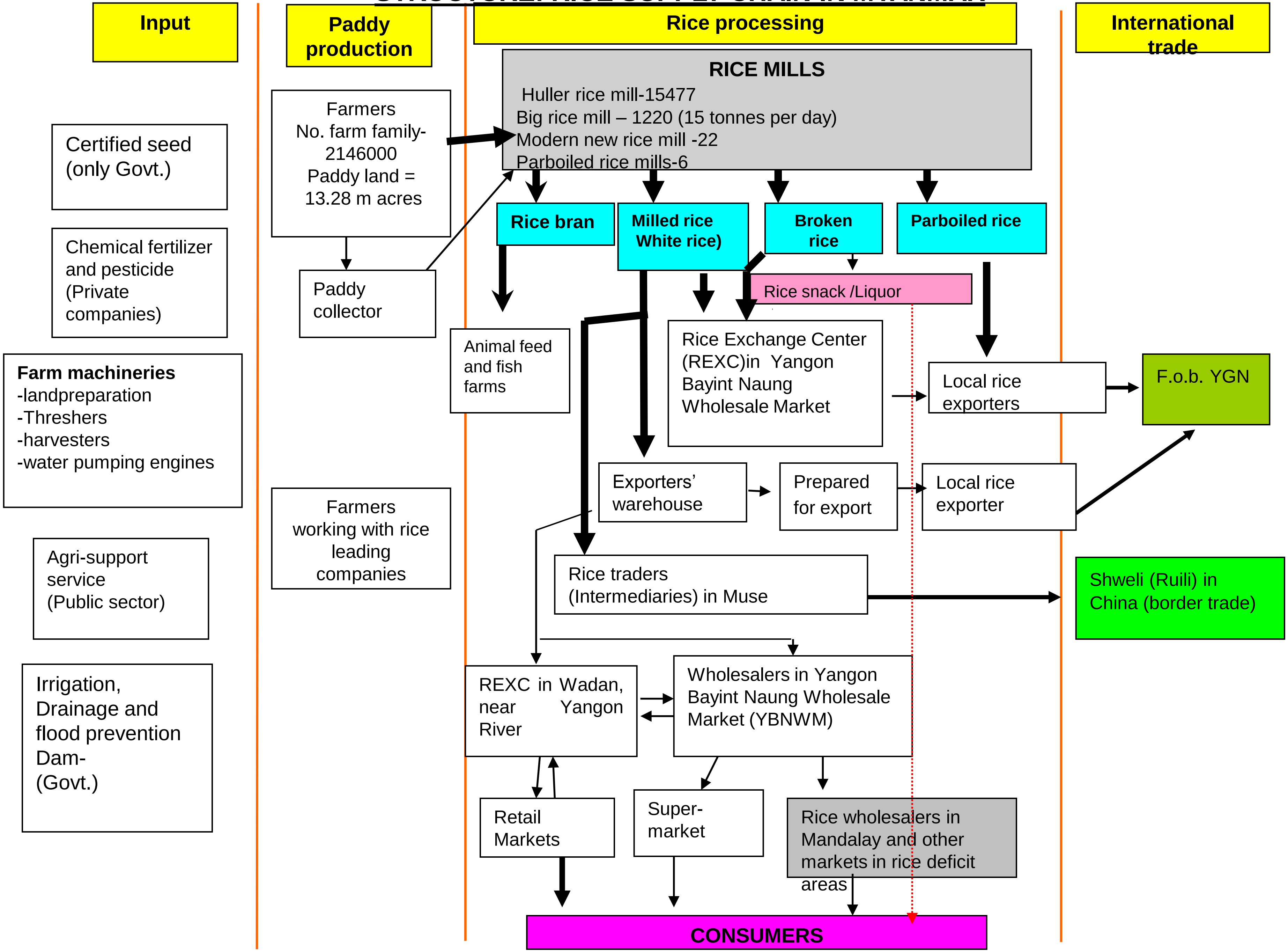
Number of household

Table-16. Farm family and farm holding size in Myanmar(2010/11)							
Land type	**Under 5acre**	**5-10 acre**	**10-20 acre**	**20-50 acre**	**50-100 acre**	**Above100 acre**	**Total**
-------------------------------Million acres----------------							
Paddy land type	3.28	4.69	3.50	1.33	0.15	0.33	**13.28**
Other land type	6.21	5.82	4.54	2.68	0.43	1.49	21.17
Total	**9.49**	10.51	8.04	4.01	0.58	1.82	34.45
---------------Number of farm family (in thousands)---------------							
Paddy land type	1195	654	248	46	2	1	**2146**
Other land type	2504	802	310	91	6	3	3716
Total	**3699**	1456	558	137	8	4	**5862**

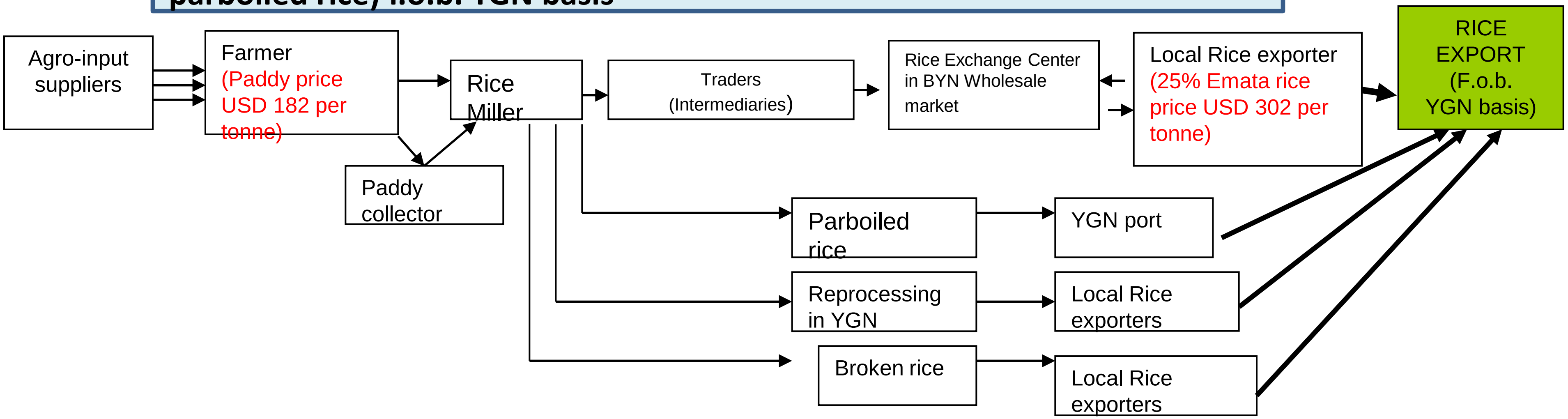
Income

Table 17. Production cost (variable cost), marketing cost, and net margin for monsoon paddy and summer paddy					
Particular	Unit	Monsoon paddy (ks/acre)	%	Summer Paddy (Ks/ acre)	%
1.Hired labour	Ks per acre	72,100	55	84,800	41
2.Agro-input cost	Ks per acre	53,000	41	116,400	56
Total cash cost	Ks per acre	125100	96	201,200	97
3.Farm family labour	**Ks per acre**	**4,800**	**4**	**6,000**	**3**
4. Cost of production	Ks per acre	129,900	100	207,200	
5. Paddy yield per acre	Basket per acre	60		85	
6. Paddy yield per acre	Tonne per acre	1.25		1.77	
7.Break-even price of paddy (4)/(5)	Kyats per basket	2,165		2,438	
8. Marketing cost of paddy to be sold at rice mill	Kyats per basket	250		250	
9.Break-even cost of production and marketing	**Kyatsper basket**	**2415**		**2688**	
8. Selling price at rice mill	Kyats per basket	3600		3550	
10. Net margin for farmers	Kyats per basket	1185		862	
11. Net margin per acre	Kyats per acre	71100		73270	
	USD *per acre	82.67		85.19	
12 . family labour (cost of hired labour)		4,800		6,000	
13. farmer income (11) +(12)	Kyats per acre	75900		79270	
	USD per acre	88		92	

STRUCTURE: RICE SUPPLY CHAIN IN MYANMAR



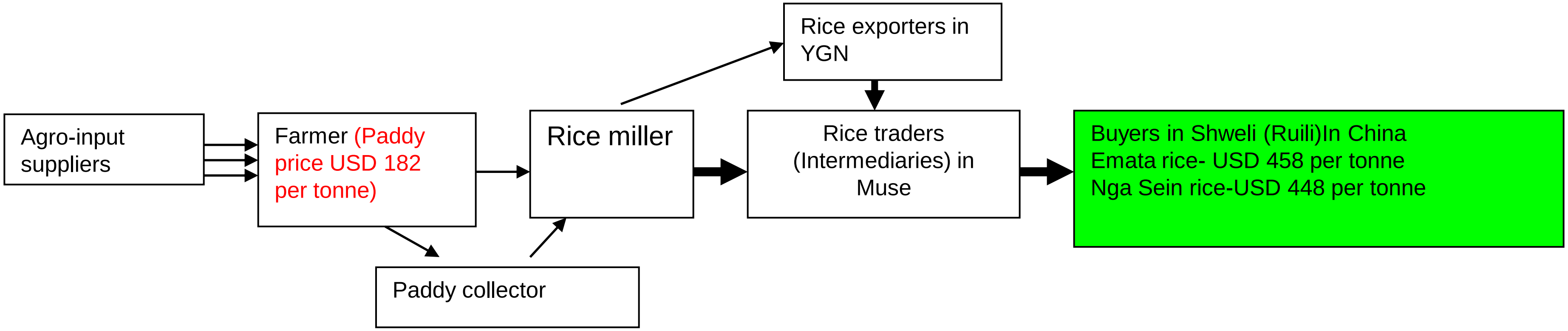
A. SUPPLY CHAIN 1: International trade of rice (white rice, broken rice, and parboiled rice) f.o.b. YGN basis



Price varied from farmers to rice exporters
(25% EMATA RICE EXPORT)

Paddy was sold at rice mills and Collectors purchased paddy and resold to rice millers. Milled rice in Ayeyarwady delta and Bago was shipped to Yangon. Rice exporters purchased in Rice Exchange Center in Yangon Bayint Naung Wholesale Market . Purchase rice 'prepared' to meet export quality specifications. Then it was delivered to Thilawa , YGN port.

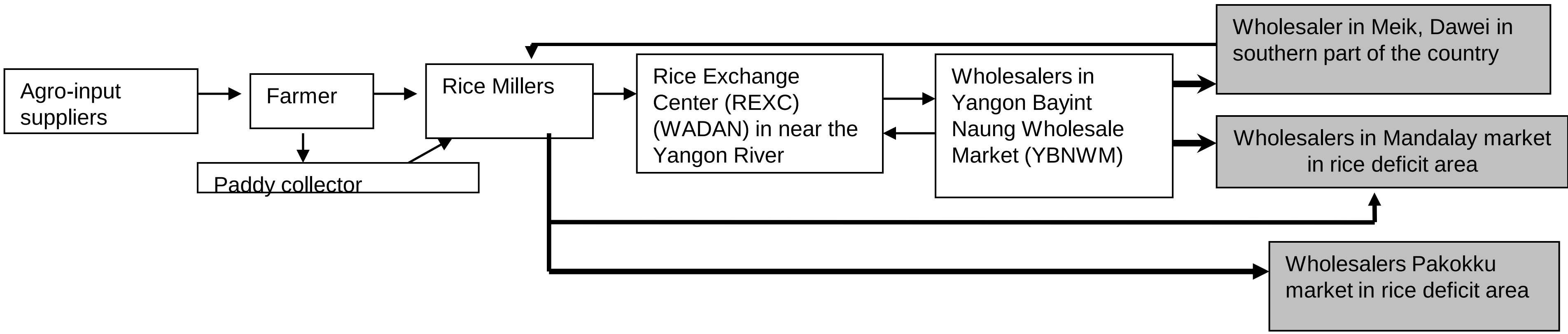
B. Supply chain 2: rice traded through Border e.g. Shweli (Ruili) in China



Rice traded to China , Thailand, and Bangladesh				
Country	2011-2012		2012-2013 (up to November)	
	Export volume (Tonnes)	Export value(USD)	Export volume (Tonnes)	Export value (USD)
China	18950	7,091,150	19362	6,423,364
Thailand	-	-	31662	10,664,265
Bangladesh	28975	11,325,660	-	-

Source: Ministry of Commerce

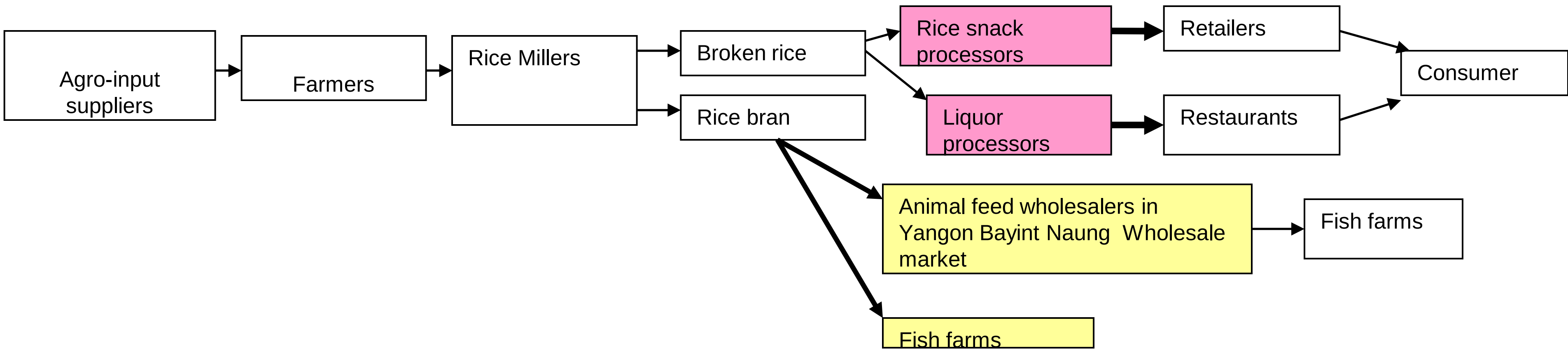
C. Supply chain 3: spatial arbitrage from rice surplus to rice deficit area

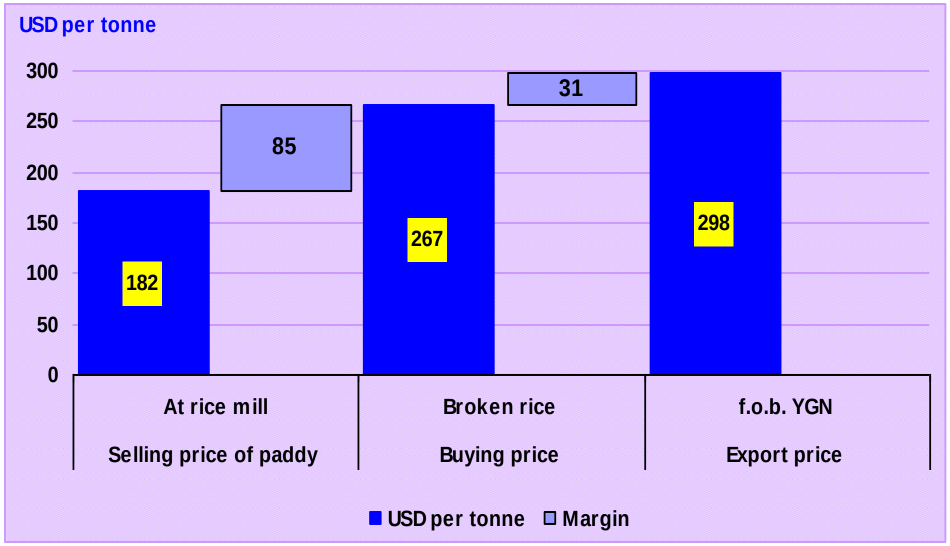


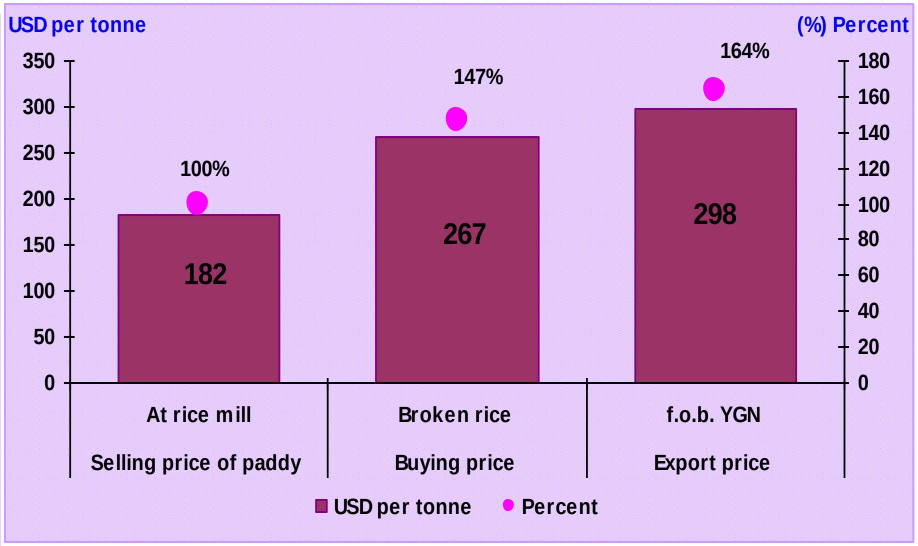
- Rice in Myaung Mya in Ayeyarwady is shipped to Pakokku Market in northern part of Magway.
- Rice in Shwebo is supplied to Pakokku market.
- Rice in Ayeyarwady is shipped to Yangon Bayint Naung Wholesale market (YBNWM).
- Rice in YBNWM is consigned to Myingyan and Mandalay Market where rice was shipped to Pyin-Oo-Lwin, Moegoke, and Muse.
- Pawsan rice in Shwebo is supplied to YBNWM.

SPATIAL ARBITRAGE OF RICE FROM SURPLUS AREAS TO DEFICIT AREAS

D. Supply chain 4: by-products of broken rice and rice bran







Super market and retail outlets of consumers in rice supply chain

Variety of Rice	Kyats / 2 Kg			Kyats/Kg		
	Min	Max	Average	Min	Max	Average
Pawsan	1950	2000	1975	975	1000	988
Basmati	4050	4850	4450	2025	2425	2225
Shan Rice	2600	3000	2800	1300	1500	1400
Brown Rice		2800	2800		1400	1400

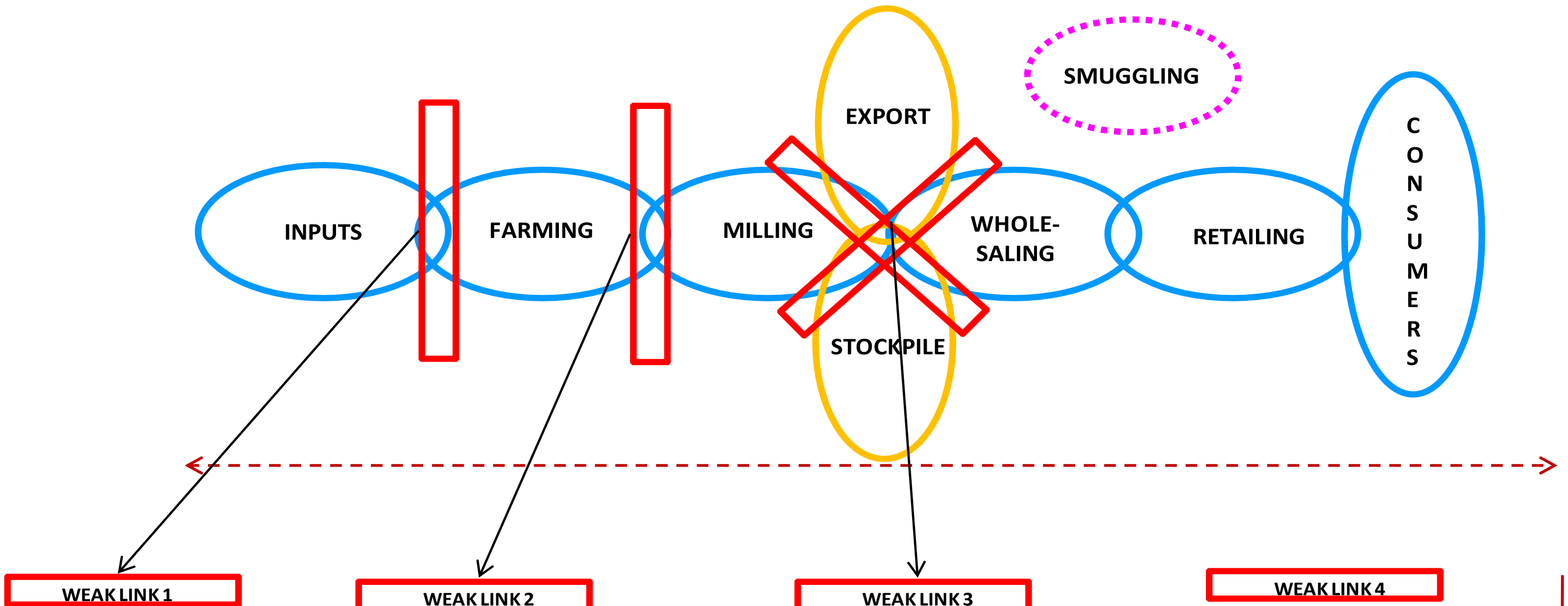
Variety of Rice	Ks/ 2 Kg			Ks/Kg		
	Min	Max	Average	Min	Max	Average
Pawsan First Quality		1400	1400		700	700
Pawsan Ordinary Quality	1200	1300	1250	600	650	625
Pawsan (Origin of Shwebo)	1600	1800	1700	800	900	850
Taungpyan	1100	1300	1200	550	650	600
Manawthukha (HYV rice)		900	900		450	450
Zeera		800	800		400	400
Nga sein		700	700		350	350

2 kg of rice= 1 Pyi (volume basis),

16 Pyi =1 basket of rice used by traditional marketing unit of volume

Weak Links in the Myanmar Rice Supply Chain

(Strength of a chain is determined by the weakest link)



● Agro-support services – 'to get agriculture moving' - input supplies, research, extension, marketing, credit

●Purity of key varieties suspect – need proper Certified Seed Programme – PPP?

● Cultural practice leads to 'sun-cracking' – high brokens

● Lack of proper drying & storage facilities at mills, especially for summer crop

● Lack of development of other end-uses of rice and rice by-products

●Financing issue - most mills operating under capacity – coping mechanism

● Exports – consistency of quality and supply not assured

● Little or no Buffer stocking/Stockpiling – rationale, strategic approach, social obligation

● Parallel market – illegal border trade – price gap/differential – rice to China, paddy to Thailand

● Little or No sharing of data/ information along supply chain - collected and disseminated by different interest groups

⑩ Data quality & consistency problem - from production to per capita consumption

WEAK LINKS

Weak link 1. Input supplies need to be improved –especially seeds and fertilizers . Need PPP in certified seed production. Existing local urea production insufficient - need to invite FDI in this area, given Myanmar's oil & Gas endowment. Agri-support services – research, extension, marketing, credit still weak.

Weak link 2. As to paddy quality, high broken faced by rice millers due to proper post harvest techniques. Similarly purity of paddy varieties were constraint for rice millers interviewed. Proper drying, milling and storage facilities are required. Rice bran oil and other end uses of rice products and by-products very limited.

Weak link 3. Inconsistent quality and supply for exports. Domestic price and supply volatility problematic – require proper rice stock pile doubling as buffer stock (MRF now started initiative – need to nurture). Border trade (legal and informal) not properly monitored and managed.

Weak link 4. Lack of quality, consistency and transparency in even basic data and information along the rice supply chain. Challenging for Policy makers and investors (especially FDI)

Dynamics

- Transformation of supply chains - growing importance of mills as a fulcrum or pivot & P-P-P arrangements – Rice Specialization Companies, MAPCO

- Which of the separate supply chains (domestic surplus to deficit areas, exports through ports; exports through Border (especially to China); others - growing fastest and why?

- Packed and branded rice selling in local owned supermarkets/mini-markets, restaurants, some traditional markets

- Importance of time (temporal - single or double cropping areas - if single cropping, any initiative to plant other crops in off season..rice-based farming system, crop rotation as well as space - which areas more likely to have productivity increases (irrigated areas with multipurpose dams generating electricity to run mills and processing centres).

)

Future Prospects

- Policy issues - strengthening the identified weak links in rice supply chai proper seed industry and coordinated reform and restructuring of rice industry

- Coordinated initiatives to export rice by varieties (as in domestic market) with emphasis on green food (low chemicals, traceable, certified safe, etc) rice

- More organized border trade – especially to China.

RECOMMENDATION

1. **Collaboration between private sector (especially MAPCO and Rice Specialization Companies) with MOAI and Ministry of Commerce to develop and manage Myanmar rice supply chain – from production of certified seeds, provision of mechanization services, post-harvest technology, etc – including promotion ('branding') of Myanmar rice.**

2. **Rice export increasingly by variety, especially for higher grade rice (less percentage brokens) – building on current efforts with Zeeyar, Sinthwelat, Inmayebaw, Theehatayin, 747 of 5%, 10% and 25% to Middle East, Europe, and Malaysia as well as Paw San to Singapore and Hong Kong – leveraging on the fact that sales of rice is already by variety in the domestic market.**

RECOMMENDATION (cont'd)

3.Border trade with neighbor countries. Geographically, Myanmar is bordering five neighboring countries – Bangladesh, India, China, Lao PDR, and Thailand.

- **Myanmar has inherent strategic geo-political and geo- commercial advantage within the context of Association of South East Asian Nations (ASEAN), Greater Mekong Sub region (GMS), Bay of Bengal Initiative for Multi sectorial and Economic Cooperation (BIMSTEC) and Ayeyarwady-Chaopraya-Mekong Economic Cooperation Strategy (ACMECS).**
- **Need to focus on key border crossings that can also be used as spring-board to other countries next to our neighbours in view of the increasing interconnectivity all over continental Asia. This will open new markets over land via intermodal transportation systems integrating road, rail and waterways (rivers and lakes)**

RECOMMENDATION (cont'd)

4. Public-private partnership. MOAI and MOC need to work with MAPCO and other private entities to be quality inputs, including certified seeds; provision of effective agri-support services (transfer of technology, marketing); and other innovative developments along the rice supply chain. Concerted efforts should also be targeted at developing vibrant farmers organization.

5.Supermarket chain. Development of Supermarkets/mini-markets in Myanmar is expected to increase from the major cities to regional growth centers. Given the benefits as well as problems that accompanies the rise of supermarkets in other parts of Asia, and especially in CLMV countries, we should monitor their development as well as the realised benefits and adverse effects closely. This is especially so when foreign-owned or regional supermarkets chains take root in Myanmar.


Thank you!
Discussions are warmly welcome!!