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POLICY DIRECTIONS of AGRICULTURAL MARKETING in the UNION of MYANMAR

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Key words; agricultural marketing, marketing efficiency, marketing information, wholesale market, transparency, cooperatives, bargaining power, modernization

ABSTRACT

A review on the current agricultural marketing systems in the Union of Myanmar is made to identify problems of agricultural marketing for major agricultural products, and to suggest future policy directions to improve the agricultural marketing systems. It is necessary to establish an agricultural marketing body at the department level, and government bodies involved in agricultural trading should be privatized. Investment in marketing facilities should be increased, and agricultural cooperatives should play an important role in modernization of agricultural marketing. The wholesale markets in major cities should strengthen functions of wholesale selling.

Ⅰ. Introduction

The Union of Myanmar is the largest country in the Southeast Asian mainland, and is in transit from socialist to market-oriented economy. The bilateral relations between the Union of Myanmar

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and the Republic of Korea seem to be at a beginning stage, but relations between the two countries have grown in areas of business, investment, culture, religion and others. The economies of the two countries are highly complementary, since Myanmar has rich endowments of natural resources and Korea imports mostly industrial raw materials. Therefore, there are great potentials for cooperative trade between the two countries. In this sense it will be fruitful to develop bilateral relations and to expand economic cooperation between the two. For better relations it is necessary to understand both countries, especially economic situations. In addition, a study on the Union of Myanmar will be helpful to understand the North Korean economy and promote inter-Korean economic cooperation since this country is moving towards a market-oriented economy. This paper is focused on the agriculture of the Union of Myanmar. More specifically, it attempted to review the current situation of agricultural marketing systems in the Union of Myanmar, to identify problems in agricultural marketing for major agricultural products, and to suggest future policy directions to improve the agricultural marketing systems.

II. Agricultural Situations

The Union of Myanmar is situated in Southeast Asia, bordering the People's Republic of China to its North and Northeast, with India to the Northwest, Laos to the East, Thailand to the Southeast, and Bangladesh to the West. The total area of the country is about 676,577 square kilometers, about three times larger than the Korean peninsula. Myanmar is a union of 135 ethnic groups that speak different languages and dialects. The population was estimated at about 50 million in 2000, with an annual growth rate of about 1.8 percent. The Union of Myanmar is a developing country, going through an evolution from a one-party socialistic country to a market-oriented society. This country has been at war against opium and narcotic drug trafficking for a long time and thus, the war on drugs is one of the most urgent issues to be solved.

Although every country tries to move toward creating an information-oriented society, Myanmar seems to have barricaded itself to the world, and the introduction of advanced technology has been delayed and regulated. For example, Internet usage is heavily restricted and limited, and the use of personal computers and modems is also regulated. These regulations are obstacles in political, social and economic development in a move toward creating an information-oriented society.

The economy of the Union of Myanmar was market-oriented from 1948 to 1962, when it was a parliamentary democratic country just after it regained independence from Great Britain. However, the economy was under a centrally planned system from 1962 to 1988, which was called the Burmese Way of Socialism. Production and distribution were under centralized control, and major industries were nationalized. But the state-run economy yeilded poor results in every sector of the economy. Economic growth slowed down, and resource allocations were distorted. In response, this country adopted a market-economic system and took measures to open its economy in 1988. Since 1988, government direct interventions have been gradually reduced together with economic reform measures and the role of the private sector has been strongly encouraged in the national economy. The Myanmar economy has experienced rapid changes since 1988, and changes are still progressing.

Agriculture is the biggest contributor to this economy. The share of agriculture over GDP was 38.5 percent in 1988/89, 36.2 percent in 1996/97, and 34.4 percent in 1999/2000. In addition, the share of livestock and fishery sectors was 7 to 8 percent, while that of the forestry sector was around 1 percent. This indicates that the Union of Myanmar is an agricultural country.

The population increased from 39 million in 1988/89 to 50 million in 1999/2000. Employment increased from 16 million to 18 million from 1988/89 to 1997/98. In 1997/98, 18.3 million people employed over the total population of 46.4 million. 65.9 percent of the employed worked in agriculture, implying that agriculture was the largest employer. That is, agriculture is the

main stream of its economy.

Therefore, agriculture-related industries such as fertilizer, agricultural machinery and equipment, as well as others should be strategically developed to improve agricultural productivity and raise farmers' incomes. One of the best ways of achieveing economic development should be engineered by agricultural development, and it must be a engine for economic and rural development.

The economic reforms have significant impacts on the agricultural sector since the reforms included the liberalization of agricultural pricing and marketing policies, with the forced government procurement system upon major crops such as rice. Much of the reform focused on agriculture since Myanmar is an agricultural country. Farmers have the freedom to select cropping patterns, although there are still some informal controls on cropping choice on some paddy lands and special crops which are grown in the vicinity of the state-owned economic enterprises (SEEs). Farmers also have the freedom to sell their products to whom they want to. Therefore, rural markets for agricultural products began to re-assemble, and networks between merchants in both rural and urban areas have been also formed.

Agricultural development policy has been focused on the production side such as development and expansion of new agricultural land, provision of irrigation water, development of modern varieties, support for agricultural mechanization and others. Since fallow and wasteland accounts for about 13.7 percent of the total land area, continuous efforts have been made to expand cultivated land for more production of agricultural products. The yields are relatively low, mainly due to the traditional way of farming. In summary, there are considerable potentials for the expansion of agricultural output by increasing agricultural productivity, and programs to increase productivity are still the main issue for Myanmar agriculture.

The sown area for rice increased from about 5 million hectares in 1990/91 to about 6.3 million hectares in 1999/2000, showing a 27 percent increase. The area for pulses increased

dramatically from 1 million hectares to 2.67 million hectares over the last 10 years. The area for sunflower increased three times and those for cotton, sugarcane and rubber also increased more than twofold. The area for groundnut and sesame was relatively unchanged at the level of 0.5 million and 1.3 million hectares, respectively. However, the area for wheat showed a declining trend from 150 thousand hectares in 1990/91 to 88 thousand hectares in 1997/98, and increased up to 105 thousand hectares in 1999/2000.

The total cultivated area in 1999/2000 was 26.6 million acres, which is equal to 10.8 million hectares. There were 4.6 million peasant families and societies. Therefore, average farm was about 5.8 acres (or 2.3 hectares). The average farming size is not small, compared to the average farm size of 1.37 hectares in Korea. 2.84 million farms, whose holdings were under 5 acres, cultivated 7.1 million acres of farm lands, implying that their average farming size was 2.5 acres (about 1 hectare). But 111.1 thousand peasant families or units whose holdings exceeded 20 acres cultivated 3.96 million acres, implying that their average farming size was 35.6 acres (about 14.4 hectares). The inequality of size holdings is big.

Rice is the most important crop and staple food in the Union of Myanmar. Rice is also an important export crop. Paddy (unpolished rice) production was in a decreasing trend from 1994/95 to 1997/98. But the production in 1999/2000 exceeded 20 million tons for the first time, showing a 15 percent increase over the previous year. Monsoon rice, produced during the monsoon season, was used for domestic consumption and export until 1992-93. Summer rice began cultivation in 1992-93 in order to meet the growing demand for domestic consumption together with the increasing population, and to have more exportable surplus. Per capita consumption of rice is estimated to be at about 190 kilograms which may be the highest level in the world.

Wheat production increased from 89 thousand tons to 117 thousand tons from 1994/95 to 1999/2000, but the production level was below the national requirement. Wheat flour import ranged from 25 thousand tons to 58 thousand tons in the late

1990s. Maize is mainly used as an animal feed and export, and its production was 349 thousand tons in 1999/2000. Maize production showed an increasing trend in the late 1990s, as there is a currently strong demand for maize in China.

Pulses are an important crop as a vegetable protein source. There are several kinds of pulses such as matpe (black gram), pedisein (green gram), chick pea, and pesingon (pigeon pea), and production of both matpe and pedisein accounted for about half of total pulse production. Pulse production increased from 1.2 million tons in 1994/95 to 1.8 million metric tons in 1999/2000. This increase in production was possible partly due to a strong demand in the export market.

Edible oils are considered the second most essential item after rice in the Union of Myanmar. There are many oilseed crops including groundnut, sesame, sunflower, niger, mustard, coconut, and others. Amongst these, groundnut, sesame and sunflower are most important and their production in 1999/2000 was 634, 296 and 160 in thousand metric tons, respectively. Production of groundnut and sesame was relatively stable, while sunflower production varied greatly from 1994/95 to 1999/2000.

Table 1. Land Area Cultivated by Size Class Holdings, 1999/2000

Size Class of Holdings	Number of Peasant Families & Societies(`000)	Percentage in Total Number	Total Area Cultivated (`000 acres)	Percentage in Total Area
Under 5 acres	2,840.5	61.59	7,096.0	26.68
5- 10 acres	1,163.8	25.23	8,482.0	31.89
10- 20 acres	496.6	10.77	7,056.0	26.53
20- 50 acres	107.0	2.32	2,928.7	11.01
50-100 acres	2.4	0.05	157.3	0.59
100 acres and above	1.7	0.04	874.8	3.29
Total	4,612.0	100.00	26,594.8	100.00

Source: Asian Development Bank, Country Economic Report "Myanmar," Volume 2: Statistical Appendixes, 2001.

Major industrial crops include cotton, jute, rubber, and sugarcane with the largest quantity of production being sugarcane. Sugarcane production increased from 2.4 million tons in 1994/95 to 5.5 million tons in 1999/2000. Cotton production was also in an increasing trend from 86 thousand tons to 176 thousand tons over the same period while the production of jute and rubber was stable.

Yield of paddy ranged from 3,168 to 3,241 kilograms per hectare over the period of 1994/95 to 1999/2000. Since the average extraction rate from paddy to rice is about 65 percent in

Table 2. Production of Main Crops, 1994/95-1999/2000

Unit: 1000 M/T

Crops	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00
Cereals						
Paddy	18,195	17,953	17,676	16,654	17,078	20,126
Wheat	89	78	87	92	93	117
Maize	284	275	286	308	303	349
Pulses						
Matpe(black gram)	285	371	328	420	444	428
Pedisein(green gram)	272	337	333	449	464	478
Chick Pea	77	93	90	90	68	84
Pesingon(pesingon pea)	145	145	187	176	160	185
Other Pulses	276	326	330	345	412	496
Oilseeds						
Groundnuts	501	593	559	540	562	634
Sesame	304	304	344	296	210	296
Sunflower	117	164	92	90	189	160
Industrial Crops						
Cotton	86	165	168	164	158	176
Jute	35	43	39	33	33	33
Rubber	27	26	26	27	23	27
Sugarcane	2,357	3,342	4,126	5,213	5,504	5,546

Source: Asian Development Bank, Country Economic Report "Myanmar," Volume 2: Statistical Appendixes, 2001.

mills of the Myanmar Agricultural Produce Trading (MAPT) of the Ministry of Commerce, the average rice yield per hectare seemed to be around 2,000 kilograms in the late 1990s. This level is much lower than yields in Korea. Rice yield reached about 5,000 kilograms per hectare on the basis of polished rice in late 1990s in Korea. The lower yield level was due partly to a lower use of inputs including fertilizers, pesticides and others, and a lack of an appropriate alternative technology. Considering the fact that rice is the most important crop and a lower volume of input is used in rice production, yield of other crops is also believed to be low.

Wheat yield showed an increasing trend from 833 kilograms per hectare in 1994/95 to 1,113 kilograms in 1999/2000, while maize yield remained relatively stable at 1,700 kilograms, peaking at 1,920 kilograms in 1997/98. Among pulses, yield of matpe ranged from 784 kilograms per hectare to 870 kilograms over the above period, while that of pedisein varied from 674 kilograms to 827 kilograms. That is, pedisein was lower in yield than mapte. Yield of other pulses ranged from 600 to 950 kilograms per hectares.

Yield of groundnut was the highest among oilseeds. Its yield was 1,008 kilograms per hectare in 1994/95, 1,211 kilograms in 1997/98, and 1,132 kilograms in 1999/2000. Sesame yield varied from 269 kilograms to 382 kilograms from 1994/95 to 1999/2000, while sunflower yield ranged from 355 kilograms to 787 kilograms over the same period.

Major crops such as paddy, maize and pulses are purchased by the government. Paddy is purchased under a quota system by the MAPT. This system is applied to the monsoon rice which is produced in the monsoon season, and the quota rate is about 10 to 12 baskets per acre. The government procurement amounts were 1.44 million tons in 1990/91, 1.85 million tons in 1995/96 and 2.11 million tons in 1999/2000. The shares of procurement over production were 10.3 percent in both of 1990/91 and 1995/96, and 10.6 percent in 1999/2000. However the share decreased to 5.3 percent in 1997/98.

Government procurement of maize was relatively small, and its share over total production was also low, compared to that of paddy production. Government procurement of pulses increased from 19 thousand tons in 1990/91 to 383 thousand tons in 1997/98, while its share of procurement over production varied from 2.7 percent to 29.7 percent over the above mentioned period. However, this procurement decreased to 17 thousand tons in 1990/2000.

The numbers of cattle, buffalo, sheep/goat, and hog were in an increasing trend in the 1990s. The number of cattle increased from 9.3 million head in 1989/90 to 10.7 million head in 1999/2000, and that of buffalo also increased from 2.1 million head to 2.4 million head over the same period. The count of hog increased from 2.2 million head to 3.7 million, and that of sheep/goat increased from 1.3 million to 1.7 million head over the same period. The number of fowl also increased from 23.2 million to 39.5 million, showing a 70 percent increase.

Production of fresh milk increased from 548.7 thousand tons in 1995/96 to 652.3 thousand tons in 1999/2000, indicating a 19 percent increase. Meat production increased from 239.6 thousand tons to 375.1 thousand tons, showing a 57 percent increase over the above mentioned period. During this period, pork production exceeded beef production. Egg production also increased rapidly.

The agricultural sector developed greatly in the 1990s, compared to the 1980s. Paddy production increased at an annual growth rate of 4.56 percent in the 1990s, while its growth rate was negative 0.57 percent in the 1980s. Maize production had a negative growth rate in the 1980s, but grew to a positive growth rate of 8.21 percent in the 1990s. The production of pulses showed an annual growth rate of 26.06 percent in the 1990s, while it was 1.64 percent in the 1980s. Soybean production was also in a rapidly increasing trend in the 1990s, compared to the 1980s. Its growth rate increased from 7.21 percent in the 1980s to 31.31 percent in the 1990s. Production of seed cotton also had the same trend to that of maize. That is, its growth rate changed

from negative 2.77 percent in the 1980s to a positive value of 15.47 percent in the 1990s. However, production of tobacco leaves remained with a negative growth rate over the last two decades. These increases in agricultural production mean that the agricultural reforms had greatly contributed to agricultural development and thus to the economic development in the 1990s, since agriculture was a basic and the largest sector in the country.

Although the agricultural sector developed greatly in the 1990s, agricultural productivity remains low and the level of technology also remains low. This may be caused by the fact that appropriate alternative technology was not available, and a lack of motivation by farmers to adopt better technology. For example, more chemicals such as fertilizer, pesticide and others should be used to increase production yield, agricultural mechanization should be promoted to increase labor productivity in farming, and irrigation systems should be expanded. In this sense, the transfer of modern technology from developed economies will be helpful to promote agricultural development. Moreover, the poverty of farmers may be another obstacle in

Table 3. Trend of Production Growth of Principle Crops: 1988-98

Unit: %

Crop	1980-90	1990-1998	1980-1998
1. Paddy	-0.57	4.56	1.82
2. Wheat	4.14	-6.48	-4.07
3. Maize	-2.69	8.21	0.98
4. Total Pulses	1.64	26.06	10.25
5. Soybeans	7.21	31.31	14.03
6. Groundnuts	0.04	3.04	-0.66
7. Sesame	1.27	12.90	5.33
8. Seed Cotton	-2.77	15.47	1.48
9. Tobacco Leaves	-0.01	-0.08	-2.06
10. Natural Rubber	-1.33	10.86	3.29

Source: Agricultural Market Information Service, AG:TCP/MYA/8821, FAO, 2000.

promoting agricultural technology because of their low purchasing power, sustaining a vicious circle of poverty in the rural areas.

Presently, the most important issues for agricultural development include shortage of competent human resources in the agricultural research and development activities, lack of financial and physical access of farmers to available input, a need for transfer of appropriate and sustainable technologies which are environmentally friend1y, and availability of genuine and quality seeds, chemicals such as fertilizers, pesticides and agricultural machinery and equipment.

A thirty-year master plan for the period between 2000/0l to 2030/31 has tentatively been drawn up. The targets for some of the major crops for the year 2010 and 2015, which are envisaged in the plan, seem to be over-ambitious. That is, acreage for paddy will be on the increase from 6.4 million hectares to 7.8 million hectares, showing a 21.4 percent increase. But paddy production is to reach 37.65 million metric tons in the year 2015,

Table 4. Anticipated Performance 2000 (actual) and 2010 and 2015

Crop	Acreage (000 ha)			Production (000 M/T)		
	2000	2010	2015	2000	2010	2015
Paddy	6,391	7,425	7,761	20,812	34,390	37,650
Pulses	2,165	3,520	3,642	2,094	3,648	3,919
Edible oil*	2,565	3,076	3,146	394	635	692
Cotton	325	485	566	181	450	576
Sugarcane	139	242	323	5,893	12,000	17,600
Jute	449	526	546	37	54	62
Rubber	181	263	323	36	117	121
Oil palm	-	230	251	-	121	216
Other cereals**	555	769	836	-	-	-
Kitchen crops***	209	256	266	1,109	1,736	1,847
Vegetables	244	329	414	3,256	5,128	7,003
Fruits	312	356	399	5,544	6,379	7,099

* includes groundnut, sesame, sunflower, niger.
** includes wheat, maize, millet.
*** includes chillies, onions, potatoes, garlic.
Source: Myanmar Agriculture in Brief, MOAI, 2002

implying a 81 percent increase from 20.81 million metric tons in year 2000. This means that paddy yield will increase from 3.26 ton to 4.85 ton over the above mentioned period. The annual growth rates for acreage, yield and production are about 1.3 percent, 2.7 percent and 4.0 percent, respectively, for the next 15 years. This implies that an improved productivity will be an engine for the increase in paddy production for the next 15 years. The same phenomena will be shown in other crops. Evidently, the targets will be assisting in the growth of the agricultural sector and thus, the economy of Myanmar.

Ⅲ. Agricultural Marketing Situations

The agricultural marketing systems seem to be at a beginning stage, even though the development stage may be different by crops and by regions. Trading patterns for dried products such as grain including rice, pulses, oilseeds products, and others are based on the samples in the crop exchange centers in major cities. Even forward contracts are made for some crops in some of the crop exchange centers. The transactions seem to be fair and transparent because prices are determined by many buyers and sellers in open places within the centers. In this sense, the marketing for dried products is relatively developed, and operational and pricing efficiencies are relatively high.

However, trading patterns for fresh produce such as fruits and vegetables are not modernized and limited in space. The transactions in the wholesale markets in Yangon and Mandalay are made by direct contacts and on consignment basis between buyers and sellers. Prompt collection and distribution is important for fruits and vegetables, since these products are perishable. However cool/cold storage system is poor. In general, it is safe to assume that the agricultural marketing system for fruits and vegetables is at a beginning stage due to lower marketing efficiencies arising from traditional trading patterns, lack of storage, transportation, roads, and telecommunications facilities, etc.

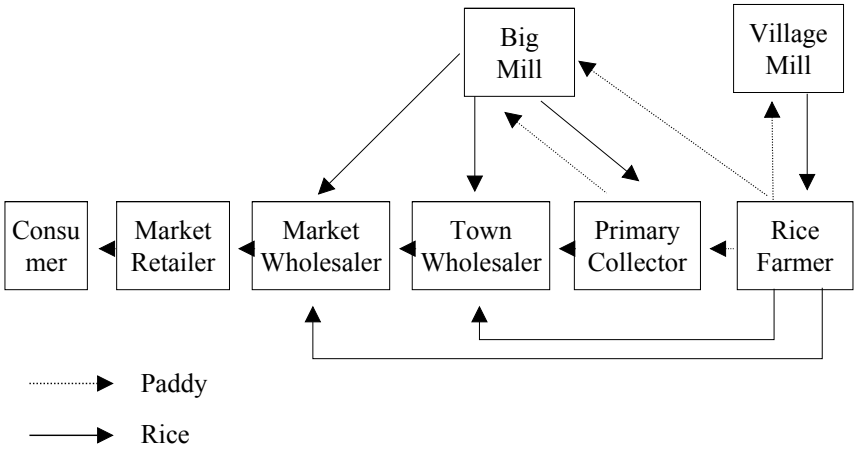
According to the FAO report, agricultural marketing can be summarized as a finely tuned cooperation between farmers, collectors at the village level, town wholesalers in the medium-sized towns, large-scale wholesalers in the bigger cities like Yangon, Mandalay and Monywa, millers (rice, oilseeds, pulses), traditional exporters in Yangon and more recent1y exporters using the overland border trade. The major marketing flows usually follow a well-established pattern. The flow of rice is from the Delta to the dry zone, and pulses and oilseeds in the opposite direction, and vegetables and fruits during the rainy season from Shan and Mon States to major towns throughout the country.

Rice is the staple food as well as an important export crop. Government involvement in the rice market has steadily reduced since 1988. That is, the domestic marketing of rice is partially liberalized, while the export is still in the hands of Government. The MAPT purchases paddy from farmers under a quota system, which is applied to all monsoon rice production at the rate of l0 to 12 baskets per acre. The paddy purchase by the MAPT was about 2.1 million metric tons or 10.6 percent of the total production in 1999/2000. The MAPT owns 67 mills and leases 376 mills from the private sector, while its total capacity is amounted to 10,000 tons of rice per day. The average extraction rate of the MAPT mills is about 65 percent, while that of private mills varies from 48 to 65 percent, depending on the type of mill and quality of paddy. The rice, after milling, is used for supplying Government employees at a subsidized price and also for exports.

Farmers sell their rice (or paddy) to collectors, millers, consumers and wholesalers in that order. Private rice mills can be classified into three groups according to capacity: small, medium and large. The milling charge was 30 to 35 Kyats for one 46-pound basket of paddy in the Yangon division. The marketing channel is "farmers → primary collectors → town wholesalers → market wholesalers → market retailers → consumers". The details are shown in Figure 1.

Primary collectors are the collector in the rural areas and

Figure 1. Flow of Rice Marketing



collects rice directly from farmers. Most town wholesalers collect rice (or paddy) from primary collectors, and do not collect rice directly from farmers. They have market information about the prices in the nearest town and in the Bayint Naung Market in Yangon. The market wholesalers purchase rice from other traders, collectors and town wholesalers, and sell rice mainly to market retailers and some to transit traders. Most of the retailers purchase rice from market wholesalers and town wholesalers, and mainly sell to consumers. The rice prices at each stage of marketing channels vary depending on variety and quality of rice. This marketing channel can be a good example in understanding the marketing channels of other cereal crops, since the marketing channels of other cereal crops are similar with the marketing channel of rice.

Edible oil is the second most essential item after rice. Although oilseed crops such as groundnut, sesame, sunflower, and others are grown in this country, edible oil production is insufficient for the domestic requirement. Therefore, cheaper pa1m oil is imported from Malaysia, Indonesia and others. Groundnut oil is preferred in lower Myanmar, and sesame oil in upper Myanmar. Groundnut oil is normally the most expensive and palm oil the cheapest. Therefore, dishonest merchants can be

tempted by money-profiting through unjust trading. Unfair trading is found in the edible oil market in Yangon area. That is, palm oil is mixed with other edible oil extracted from domestically produced oil crops.

Groundnut is the most important oil crop, followed by sesame and sunflower. About 75 percent of production is from Central Myanmar. Groundnut is consumed as groundnut oil and also used as traditional snack. Sesame is also mainly grown in Central Myanmar. The sesame oil production fluctuates much from year to year. Sesame is marketed in three different ways such as (1) high quality cooking oil, for local consumption, (2) use as traditional snacks, and (3) export as sesame seed.

Culinary crops such as dried chilli, onion, garlic, potato and ginger are important for domestic consumption. They are also important because there is a strong demand for most of the culinary crops from neighbouring countries. Dried chilli is always traded by weight in wholesale transactions, because of weight loss. Onion is a typical cool season crop, grown mainly in the central dry zone and is important for both domestic consumption and export. Demand and price are based on the origin of production and size. Town wholesalers usually purchase onion from primary collectors, and sell mainly through wholesalers in the Yangon market. The wholesalers in Yangon sell the crop on their behalf for a 5-percent commission basis. Garlic is cultivated mainly in Sagaing, Magway and Mandalay Divisions, and is graded on the basis of the origin.

Fruits and vegetables are widely grown in various parts of this country throughout the year, and large quantities are marketed for domestic consumption. As a typical fruit, banana is widely cultivated for domestic consumption. The price is low in the rainy season and increases during the summer season of March and April. Most farmers sell bananas by bunch, and bananas are transported by road and boat as bunches.

Trade on a commission basis are common, which is based on trust between regular partners, although malpractice of various types take place occasionally. The packing method of marketed

crops varies, depending on type and variety of produce. Different types of bags and baskets are also used, and units of measures vary. Prices also vary much, depending on the supply situation by month or season.

A survey of the agricultural marketing system was conducted to encourage market-oriented production and to train extension workers so that they can advise farmers through the development of the market information service system during the period between 1999 to 2000 with the cooperation of the Food and Agricultural Organization of the United Nations (FAO). After completion of the survey, a high priority is given to the establishment of a Market Information Service (MIS) in order to make the agricultural marketing system more competitive and efficient under the market-oriented economy. The major objective of the MIS is to promote market transparency to the advantage of market participants including farmers, collectors, wholesalers, retailers, and retailers. To achieve this objective, proper information about agricultural marketing situations including regional and national prices, world price, supply and demand situations, and others should be collected regularly, and disseminated promptly to market participants.

The MIS Price Bulletin and the Agri-business News have been published on a monthly and weekly basis since late 2000 in order to achieve the MIS objective and to meet the needs of market participants. The News includes information on daily prices in Yangon and Mandalay markets, and information of weekly prices of 14 agricultural markets across the country. The Bulletin and The News are useful to both policy makers and market participants such as wholesalers, traders, exporters, and others. Especially, the Bulletin and the News may be the only source of nation-wide market information to extension workers of the regional offices of the Myanmar Agricultural Service (MAS) of the Ministry of Agriculture and Irrigation (MOAI). It seems that extension workers do not have any alternatives to access this kind of market information, except for The Bulletin and The News.

The Bulletin and The News should be also effectively

used by farmers or farmers' group in order to improve their bargaining positions or bargaining power, because they are the most important target group in developing a marketing information system. However, it is doubtful that farmers fully utilize The Bulletin and The News. Although the Agri-Business News is published and disseminated throughout the whole country, only 6,500 copies are distributed in 2002. Considering the fact that there are more than 300 townships and the Agri-business News is disseminated through the channels of the MAS under the MOAI, The News is not fully circulated among farmers/farmer's group in the rural areas, meaning that The News is not readily available to those who need them the most. Instead, it is highly possible that the News is mainly used by the extension officers of the MAS in local areas for their extension works and services. Therefore, an alternative way of disseminating information contained in the Agri-business News should be developed at both national and regional levels. For example, information can be disseminated by radio-broadcasting under close cooperation with radio broadcasting station(s).

In addition, information contained in The News may be too old to end-users, because it is only published on a weekly basis. That is, the information in the News are prices of several days ago. However, prices in the markets change from hour to hour and the end users including farmers need the most recent price data. Therefore, a new method of distributing market information, which the MOAI collects through the country, must be sought so that the most current information can be conveyed to end users.

According to the price reporters of the Department of Agricultrual Planning, the MOAI, the prices are surveyed once a day for 29 products in the Thiri Mingalar wholesale market, which is the biggest market for fruits and vegetables in Yangon. Products being surveyed include tomato, cabbage, cauliflower, carrot, cucumber, eggplant, green chilli, ginger, banana, mango, orange, mandarin, durian, pomelo, mangosteen, rambutan, okra, buttergourd, choko, radish, long bean, djenkol bean, marrow,

pumpkin, maizecob, pineapple, avocado, plum and apple. The reporter surveys the prices at a time when trading activities are relatively low. Although trading activities in the market are high in the early morning (5 a.m.), the price reporter interviews the wholesalers and brokers after 8 a.m. Presently, no transactions in this market are recorded by the Market Authority Office, in charge of managing the wholesale market. Therefore, a doubt concerning price accuracy problems may be raised.

However, prices formed in this market should be an indicator for nation-wide prices for fruits and vegetables, because Yangon is not only the capital but also the biggest city. The Thiri Mingalar wholesale market is also the biggest and most modernized market for fruit and vegetables in the country. In this sense, prices in the Thiri Mingalar wholesale market play an important role in the process of determining regional prices.

The Thiri Mingalar wholesale market for fruits and vegetables is said to be one of the biggest markets of this kind in southeast Asia. This market was newly constructed at the place of the old market, and opened again in 1997. Presently, about 70 kinds of fruits, vegetables and other green groceries are traded. Although it is called the wholesale market, it is merely a gathering place for a number of (big) retailers and consigners. The transactions in this market are made by direct contacts and on a consignment basis between buyers and sellers, instead of an open auction system. Details of transactions such as price and quantity traded are not recorded by the Market Authority Office. The market wholesalers sell mostly on a commission basis for the suppliers, and often, some sellers abandon their products because of low selling prices which dip lower than their production costs. Presently, data or information on traded volume of commodities in the market are not available and the prices of traded products are also not recorded. In short, transactions in the market are not transparent. However, it is noteworthy that it is open 7 days a week, 24 hours a day, and that Sunday is the busiest day of the week. The number of vehicles coming into the market was roughly about 500 to 1,000 per day in the 1999/2000 survey.

This market also has a mooring place for products to be shipped through the River. The market also plays an important transit function.

The Market Authority Office of the Thiri Mingalar wholesale market does not play a role in collecting agricultural products from the producing areas and increasing marketing efficiency. The Market Authority Office is under the auspicies of the Yangon City Development Council (YCDC). The main function of this office is to collect rentals income from traders and wholesalers, to clean the market areas and to manage parking lot, etc. The same phenomena can be observed in the Kaing-tan market in the city of Mandalay. The Kaing-tan market is managed by the Mandalay City Development Council, and a number of agricultural products including fruits and vegetables, and others are handled in this market. Although one of its main functions is wholesale selling, this market is also a gathering place for a number of retailers and consigners.

Although the cold storage space is under construction in the Thiri Mingalar wholesale market, the facilities relatively poor. For example, there are no designated loading and unloading zones and the parking lot is too small to facilitate all the traffic that enter the market. Traffic is heavy because of its location in the downtown area, and big trucks are unable to enter the market area. However, it is known that revenue collected from the market by the YCDC through the Market Authority Office is huge, but its appropriation to development of the market is small. Therefore, a plan to relocate the markets to the suburban areas should be carefully considered on the basis of accurate reports of expected population, consumption amount of agricultural products, road conditions, city development plans, and so on. The YCDC has made plans to move this market to the area east of Yangon, but further development on the plan seems to have not gone into effect.

The Bayint Naung Market for dry commodities such as rice, pulses, dried chilli and garlic is a large modern wholesale market in Yangon. Its location is strategic with easy access by

truck from all parts of the country, and there are two big truck parking lots and two mooring places for access by boat. The market is 75 acres in size and is also managed by the YCDC. Trading transactions are made by displaying crop samples before any negotiations take place on price and quantity between groups of buyers and groups of sellers. In this sense, trading in this market is relatively transparent and fair, compared with the transactions taking place in the Thiri Mingalar wholesale market. However, the details on trading are not reported and/or recorded in this market.

The trading patterns in the crop exchange center in Mandalay are similar with the Bayint Naung Crop Exchange Center in Yangon, but trading activities are relatively higher in the crop exchange center in Mandalay. Even forward contracts for some crops are made in the crop exchange centers in Monywa, Sagaing Division. In conclusion, the functions of the crop exchange centers are to provide a place for trading and to provide disciplines such as rules and regulations for operations and for trade to be free between groups of buyers and sellers. These transactions would be fair and transparent because prices are determined by many buyers and sellers in open areas. In short, marketing for dried products is relatively developed, and operational and pricing efficiencies are relatively high. However, additional efforts including records of trading activities should be made in order to further develop centers so that the rapidly changing situations of the agricultural and economic environment could be overcome quickly. For example, future trading can be dealt with through a more liberalized economy.

Cooperative movement in Myanmar has a long history, originating from the promulgation of the India Cooperative Credit Societies Act in 1904, and the Cooperative Society Law which was revised and updated several times to promote cooperative movement. Although agricultural cooperatives have had along history in rural areas, their roles in agricultural marketing are not well noted and ambiguous. They have few marketing facilities such as rice-milling, processing and storage in producing areas,

and their roles in improving farmers' bargaining power is not observable. According to the Ministry of Cooperatives, joint shipment by the cooperatives in rural areas is less than 10 percent of farmers' total shipment, and most farmers sell their products to primary collectors in a weaker position of bargaining. This can be cited as evidence that agricultural cooperatives do not play an active role in selling agricultural products to get higher prices for farmers. The main functions of The Ministry of Cooperatives are to supervise, regulate and educate cooperatives. Of course, these functions are important. However, it is also essential to strengthen the roles and functions of agricultural cooperatives to provide methods that will improve the standard of living in rural areas through promotion of farmers' position in bargaining in the process of modernization of agricultural marketing.

Presently, the agricultural marketing systems can be summarized as excessive market intervention of government, less developed marketing structures and marketing facilities, and small-scaled market participants, etc.

Ⅳ. Policy Directions for Agricultural Marketing Modernization

There have been growing concerns over agricultural marketing in recent years in Myanmar, though agricultural marketing policy has been mainly focused on the Market Information Service. Since agricultural marketing systems are at a beginning stage of development, it is important to design the ultimate goal and the right directions for the improvement of marketing efficiency. What is also needed is to address the problem of improving the market structures fundamentally so as to achieve price stabilization and marketing efficiency at the same time.

The role of government in the agricultural sector is different depending on country and according to time. Even in OECD (Organization of Economic Cooperation and Development) countries, the agricultural sector is generally characterized by a high level of government interventions. OECD countries are

committed to reforming agricultural policies, and regulatory reform has been under discussion in the OECD. According to the OECD reports, regulation is defined as a diverse set of instruments by which governments set requirements on enterprises and citizens. Regulations include laws, formal and informal rules issued by all level of government, and rules issued by non-governmental bodies. Regulations can be classified into 3 groups; economic regulations, social regulations and administrative regulations. Economic regulations are related to direct intervention in markets such as pricing, market entry and exit, etc. Social regulations are related to public interest such as health, safety, environmental and social cohesion, and administrative regulations are paperwork and administrative formalities.

Related to above, there are numerous economic, social and administrative regulations in the agricultural marketing systems of the Union of Myanmar, and the public sector plays a significant role in these areas. Therefore, reduction of the regulations is critical to the process of moving toward a market-oriented economy. In addition, government resources should be focused on providing a better environment for business of private firms rather than to compete with the private sector. This is also applied to agriculture and agricultural marketing systems.

The roles of government in agricultural marketing are to stabilize prices of agricultural products by adjusting supply and demand, to reduce marketing margins by enhancing marketing efficiencies, to regulate marketing activities for fair trade and to design and monitor standards of safety and quality assurance.

It is essential in agricultural marketing to adjust supply and demand for agricultural products and to stabilize their prices. However, policies on the agricultural marketing systems are spread to several Ministries in Myanmar. The Ministry of Agriculture and Irrigation (MOAI) is mainly concerned with agricultural production, and there is no department or division with the title of agricultural marketing in the Ministry, which is in charge of agricultural marketing policy. While the Department of Agricultural Planning (DAP) of the MOAI seems to be in

charge of the marketing policy, the DAP does not have an overall plan or blueprint for modernization of the agricultural marketing system. With respect to marketing policy, the DAP began to collect price data from late 2000. The Ministry of Commerce is in charge of procurement and export of agricultural products, mainly rice. The Ministry of Livestock Breeding and Fisheries is concerned with sanitary slaughtering and animal welfare for livestock products. The Ministry of Cooperatives implements a policy on agricultural cooperatives. The Ministry of National Planning and Economic Development plans short-term and long-term economic plans including agriculture. Although there are many Ministries for agricultural marketing, it is unclear which Ministry is ultimately in charge of adjustment for the demand and supply of agricultural products, and price stabilization. Also, it is not clear which Ministry is responsible for reporting the Food Balance Sheet.

In the above sense, a government reform for a full and exact review of functions of each Ministry and its role in agricultural marketing is necessary to implement an effective agricultural marketing policy. As of now it is urgent to establish an agricultural marketing body at the department level, a "Department of Agricultural Marketing", in the MOAI. The role and function of the marketing body includes planning of agricultural marketing policy, adjustment of demand and supply of agricultural products, monitoring of agricultural product prices, fostering of agricultural markets such as wholesale markets throughout the country, raising of price stabilization funds and susequent management, provision of marketing credit, education of market participants, coordination of agricultural marketing policy between/among Ministries, and others. The price stabilization fund would be helpful in stabilizing the food prices under unstable situations of food prices, but its ability to manage the fund should be carefully reviewed and improved, together with budget conditions.

In addition, government bodies and agencies, which are significantly involved in agricultural marketing, should be

privatized, because they do not perform well compared to private enterprises, because of a lack of entrepreneurship. If achieving privatization of these organization is difficult in the near future, they should be reformed as the state-owned corporations in order to induce an efficient management system on the basis of entrepreneurship.

Although agricultural marketing systems seem to be at a beginning stage of development, the DAP has a greater concern to strengthen the market information system rather than planning of agricultural marketing policies and coordination of the policies among Ministries. An even higher priority is given to strengthen the marketing information system. The Department publishes the MIS Price Bulletin and The Agri-Business News on a monthly and weekly basis, focusing on price information. Price information is important in adjusting demand and supply of agricultural products in a market-oriented economy. Therefore, DAP's approach is correct in adjusting demand and supply and stabilizing the prices by strengthening price information system. However, farmers may have difficulty in using The News because of the limited number of copies. A better and wider use of the marketing information by farmers is an important issue that needs to be addressed. That is, the number of copies of Agri-business News published should be drastically increased within a relatively short period of time for more effective use by farmers. Radio-broadcasting of the price information may be a good alternative for the time being (Diffusion rate of television set is very low in rural areas, and electric situations are also poor. Therefore, diffusion of information technology in the rural areas should begin now with a long-term plan).

In addition, another basic problem, which the DAP is faced with, is that the DAP does not have data on the estimates of demand and supply of agricultural products for the current year. The estimates of production for the current year should be summed in the DAP for effective marketing policies as soon as possible, and this job should be transferred to the office in charge of agricultural marketing policy, if established, in the near future.

It is also necessary to establish a governing body within the MOAI to regulate unfair trading, because of unfair trading in the edible oil market in the Yangon area. This kind of unfair trading should be eradicated in its infancy. Unfair trading would bring a distortion(s) of resource allocation, and also create growing mistrust of the domestic products. In addition, consumers and producers can lose out on opportunities in the market.

An effort to reduce marketing margins should be enforced by enhancing marketing efficiencies. Marketing efficiency can be increased by enhancing both operational and pricing efficiencies. Operational efficiency can be obtained by increasing labor productivity in agricultural marketing through large-scale shipment and distribution, promotion of standardization, modernization of loading and unloading systems, reduction of marketing cost by introducing new storage and processing technologies and others. Joint shipment through agricultural cooperatives is a good way to improve operational efficiency. An improvement of social infrastructure such as road construction contributes to an increase in operational efficiency through reduction of transportation cost.

Market transparency should be improved for enhancement of pricing efficiency, since pricing efficiency is concerned with the market systems ability to allocate resources efficiently. Competition plays a key role in pricing efficiency. In order to improve market efficiency, packing systems should be improved and standardization should be promoted. For example, 2 standards which are used in Yangon and Mandalay areas, respectively, should be unified into one standard based on the metric system so as to facilitate transactions between the Yangon and Mandalay areas. Also, accurate market information should be quickly delivered to market participants including producers and consumers.

Efficiency is not the only criterion for performance of agricultural marketing functions. Equity among traders is also important. Farmers are in a weaker position of bargaining and market power, since they are small-scaled and short of market information. Therefore, farmers are at a disadvantage in trading with urban traders, while farming would be unprofitable and

decline in the process of economic development. Therefore, governments should try to establish an order of fair trading.

Investment in marketing facilities in both rural and urban areas should be increased for modernization of agricultural marketing systems. For example, both the Thiri Mingalar wholesale market and the Kaing-tan market are less developed from the view of function. The wholesale market should play functions of pricing formation, adjustment of demand and supply, collection and distribution of information, clearance of accounts, financial transaction and risk diversification, and others. It should also assemble and distribute a large amount of goods at once. If the market does not function well, it will bottle-neck creating a great obstacle to effective marketing. However, the above wholesale markets are too small and crowded to perform as wholesale markets. Marketing facilities such as cold storage are also short. Therefore, a construction of new wholesale markets with modern facilities should be planned, and storage facilities should be expanded.

In order to develop the wholesale markets into modernized and transparent markets, it is necessary to establish wholesale corporations whose main functions are to collect agricultural products and to induce traders and wholesalers to take part in the open auction system which is provided by the wholesale corporation. If the auction system is settled down, the transparency of transaction in these markets would be greatly improved, and price and quantity traded in the markets would be clearer.

The function of agricultural cooperatives should be renovated to improve marketing efficiency and farmers bargaining power. Agricultural cooperatives should play a role in promoting farmers' socioeconomic status and sharing common interests in economic activities. Therefore, the cooperatives should be active in ensuring better prices for farm products produced by farmers, and assisting in establishment of marketing facilities to reduce marketing costs. The cooperatives should also operate various kinds of marketing facilities such as storage and warehouse space, as well as sorting, grading and packaging facilities in

order to promote cooperative marketing. A circuit collecting system by primary cooperatives in Korea can be introduced to help small farmers sell a small amount of farm products. Cooperative syndicates and their unions need to participate in marketing in wholesale markets and retail stores in urban areas. Of course, government support would be necessary to encourage agricultural marketing by cooperatives.

Ⅴ. Summary and Conclusions

The Union of Myanmar is known as the Golden land, because of its uncountable number of golden pagodas and rich endowments of arable land, fresh water, and natural resources. The economy of the Union of Myanmar was under a centrally planned system from 1962 to 1988, under what was known as the Burmese Way of Socialism. However, it adopted a market-economic system and direct government intervention had been gradually reduced together with economic reform measures since 1988. The economic reforms have had a significant impact on agriculture since they included the liberalization of agricultural pricing and marketing policies, with the forced government procurement system of major crops.

Myanmar is an agricultural country and thus, agriculture is the main stream sector of its economy. In 2000, the agricultural sector, including livestock products, contributed about 42.3 percent to the Gross Domestic Product, and employed about two-thirds of the labor force. Export of agricultural product accounted for around 35 percent of total exports. Therefore, the main focus of economic development should be in framework with agricultural development.

Agricultural development policy has been focused on the production side. As a result, the agricultural sector developed greatly in the 1990s. Paddy production increased at an annual growth rate of 4.56 percent in the 1990s, and production of pulses showed a growth rate of 26.06 percent. Soybean production was also in a rapid increasing trend in the 1990s,

showing 31.31 percent of growth rate. Production of other crops also increased remarkably in 1990s. These increases in agricultural production mean that the agricultural reforms have greatly contributed to agricultural development and thus to economic development in the 1990s, since agriculture was the largest sector.

Agricultural development can not be achieved without modernization of the agricultural marketing systems. However, Myanmar's agricultural marketing system is at its initial stage since basic marketing infrastructure is very limited. A high priority is given to the establishment of a Market Information Service (MIS) in order to make the agricultural marketing system more competitive and efficient under the market-oriented economy.

The main objectives of agricultural marketing policies are to adjust supply to market demand of agricultural products and to stabilize their prices. In most countries, a bureau or department in charge of agricultural marketing is established in the Ministry of Agriculture to achieve these objectives. However, there is no department or division with a title of agricultural marketing in any of the Ministries, and it is unclear which Ministry is in charge of the adjustment of demand and supply of agricultural products, report of food balance sheets and price stabilization. In this sense, it is necessary to establish an agricultural marketing body at the department level, such as "Department of Agricultural Marketing", in the MOAI. The role and function of the marketing body should include planning of agricultural marketing policy, adjustment of demand and supply of agricultural products, monitoring of agricultural products price, fostering of agricultural markets such as wholesale markets throughout the country, raising of price stabilization funds and management, provision of marketing credit, education of market participants, and coordination of agricultural marketing policy between/among Ministries. It is also necessary to establish a government body in the MOAI to regulate unfair trading, since it is found in the edible oil market. In addition, government bodies and agencies, significantly involved in agricultural marketing, should be privatized. Their performance

lags behind than the private enterprises, due to a lack of entrepreneurship. If privatization is difficult in the near future, they should be reorganized as state-owned corporations in order to induce an efficient management system. These works should be propelled under the program of government reform.

Market information service should be strengthened by increasing the distribution of the MIS Price Bulletin and Agri-business News and diversifying ways of disseminating the MIS information. This is important, because the information is not readily available to farmers and farmers' group who need them the most.

Investment in marketing facilities in both rural and urban areas should be increased for modernization of agricultural marketing systems. In particular, the Thiri Mingalar wholesale market and the Kaing-tan market in Yangon and Mandalay, respectively, should be relocated, on the basis of careful review of the estimates of future population, consumption amount of agricultural products, roads and traffic conditions, and city development plans, because they are too small and crowded to perform the function of wholesale marketing. In addition, trading patterns in both markets should be changed from commission basis on consignment to an auction system in order to increase the transparency of trading. Facilities for cold/cool storage for perishable products should be expanded both in urban and rural areas, and other marketing infrastructures should also be expanded.

The Market Authority Office, in charge of managing the Thiri Mingalar market, collects rentals for store spaces from traders and wholesalers, cleans the market areas and manags the parking lots. The same work can be observed in the Kaing-tan market in the city of Mandalay. The office should, therefore, expand its work to execute the role of collecting agricultural products into the market from the producing areas, and induce traders and wholesalers to take part in the open auction system. In the long run, the office should be privatized.

Although agricultural cooperatives are organized in rural

areas, their role in agricultural marketing is ambiguous. Furthermore, their role in improving farmers' bargaining power is not observable. Agricultural cooperatives are unable to market properly since they lack fundamental facilities such as rice mills and processing and storage facilities. Joint shipment by the cooperatives in the rural areas seems to be less than 10 percent of farmers' total shipments. In short, agricultural cooperatives only play a minor role in agricultural marketing. Therefore, the function of agricultural cooperatives should be reformed to improve market efficiency and the bargaining power of farmers in rural areas.

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