

Kingdom of Cambodia

Nation Religion King



Ministry of Agriculture, Forestry and Fisheries
General Directorate of Agriculture
Department of Agricultural Cooperative Promotion



Japan International Cooperation
Agency

Report survey prices of agricultural products and inputs between Vietnam and Cambodia border

Prepared by: Project for Establishing Business-Oriented Agricultural Cooperative Models (BPAC)
Supported by: Japan International Cooperation Agency (JICA)

September 2015

Report survey prices of agricultural products and inputs between Vietnam and Cambodia border

Printed in September 2015

Published by Department of Agricultural Cooperative Promotion of General Directorate for Agriculture (MAFF)

The project for Establishing Business-oriented Agricultural Cooperative Models (BPAC)

Address: # 54B/49F, St. 395-656, Sangkat Toeuk Laak 3, Khan Toul Kok, Phnom Penh, Cambodia
Phone: (023) 883 427, Fax: (023) 883 427

© The project for Establishing Business-oriented Agricultural Cooperative Models

REPORT

Survey prices of agricultural products and inputs between Vietnam and Cambodia border

I. Back ground and research design

1. Background

The Japan International Cooperation Agency (JICA) funded to Cambodia the five years project called “The Project for Establishing Business-Oriented Agricultural Cooperative Models”(PBAC). Implementing Agency of PBAC is Department of Agricultural Extension (DAE) and Department of Agricultural Cooperative Promotion (DACP), Ministry of Agriculture, Forestry and Fisheries (MAFF). PBAC and MAFF agree to select Takeo, Kampong Cham, Svay Rieng and Kampong Speu as target provinces.

PBAC aims to Business-oriented agricultural cooperative models in the target areas. Therefore, PBAC want to survey price in market channel of agricultural products and inputs between Vietnam and Cambodia. The goal of the survey is that PBAC provides market information to AC in target provinces and AC can start to do business as project’s goals.

Vietnam and Cambodia are neighboring countries that share the 1,000 km long common border. Cambodia has nine provinces bordering with 10 provinces of Vietnam. The two nations have 10 international border gates, 12 national border gates, 25 subsidiary gates and 100 trails which are good conditions to facilitate bilateral trade.

Cambodia's main exports to Vietnam were agricultural products as paddy rice, mango, vegetable, fish, cassava, cashew and wooden products and its main imports from Vietnam were inputs for agriculture as fertilizer, pesticide, farm tools, livelihood commodities, fruits, vegetable, and other products as chemicals, plastic and other industrial products.

However, most of agricultural producers in Cambodia lack of for market

information from Vietnam as price, distribution places, process and final buyers. Cambodia farmers depend on information from the middlemen in Cambodia and they can't negotiate with middlemen. This issue reduces profit for Cambodia farmers when they sell to Vietnam agricultural products and import from Vietnam commodities and agricultural inputs.

The Project for Establishing Business-Oriented Agricultural Cooperative Models (PBAC) aims to enhance the capacity of Agricultural Cooperative (AC), an organization with many small scale farmers, in marketing and business. The project goals to provide market information of paddy rice, commodes, agricultural products and inputs to AC and their members. Then, AC can organize some services as joint market, joint purchase business for members and AC can participate into market chain of import or export agricultural product between Vietnam and Cambodia.

2. Research objectives

- Survey price of paddy rice and main agricultural products and inputs export and import between border of Cambodia and Vietnam
- Find out characteristics and market information relate export and import paddy rice and main agricultural products and inputs between border of Vietnam and Cambodia

3. Research Area

We conduct pre-test survey belong border line between Vietnam and Cambodia including Kampot, Takeo, Kandal, Prey Veng, Svay Rieng provinces of Cambodia and Kien Giang, An Giang, Dong Thap and Long An provinces of Vietnam.

Then, we selected to conduct survey at border line of Takeo and Svay Rieng (Cambodia)-An Giang and Long An (Vietnam) due to limitation of time and budget.

Table 1 shows name of border gate between Vietnam and Cambodia where the study conduct data.



Table 1: Surveyed border gates			Level of Border Gate(*)	Name of District		Name of Province	
#	Vietnam	Cambodia		Road or Ship	Vietnam	Cambodia	Vietnam
1	Tinh Bien	Phnom Den	1	Road	Tinh Bien	Kirivong	An Giang
2	Duong Su 21, An Nong Village	Tarun, Tham Dung village	3	Road	Tinh Bien	Kirivong	An Giang
3	Vinh Gia		3	Road	Tri Tôn		An Giang
4	Song Trang	Svay Angong	2	Road	Tan Hung	Kampong Trabaek	Long An
5	Ben Pho	Crua village	3	Road	Tan Hung	Svay chrom	Long An
6	Long Khot	SamVanong	3	Road	Tan Hung	Svay chrom	Long An
7	Binh Hiep	Prey Voir	1	Road	Moc Hoa	Kampong Rou	Long An
							Svay Rieng

(*) 1: International border gate
 2: Main border gate (provincial border gate)
 3: Sub-border gate

II. Research Results

A. Cambodia agricultural product exports to Vietnam

1. Paddy rice

- Paddy rice is the main product which accounts for the biggest output of products exported to Vietnam.

- Short-term paddy rice (mainly IR504) is produced in provinces as Kampot, Takeo, Kandal, Prey Veng Svay Rieng, Kampong Cham and Kampong Speu. Therein, Takeo has the biggest output due to farming short-term paddy rice (IR504) and farming 2-3 crops/year. Short-term paddy rice imported from Cambodia is mainly used to process to export.

- Long-term paddy rice (Malis or Soc) is produced in upland or high land areas and far away from Vietnam border area such as Kamphong Speu, Pursat, Kampong Chhnang, Battambang, Siem reap, Kampong cham and some provinces nearly bordering with Laos such as Stung Treng.

Long-term paddy rice imported from Cambodia is mainly used for domestic customers in Vietnam. The demands of using Malis rice or Soc rice in Vietnam has been rising. Middle-class and high-class customers in Vietnam like Malis rice and Soc rice because their quality is better than Vietnamese rice and because Vietnamese customers think that long term rice cultivate as natural rice or organic rice and farmers use less fertilizer and plant protecting products¹. Vietnam used to

¹ The study interviewed Mr Danh LDong in Stung Treng province, he cultivates 3.5 ha of a long term rice called Malis in 2014, he used 150kg (three bags) of NPK fertilizer and non-pesticides for 3.5 ha. It means that he use 5kg of fertilizer for a 1,000 m²/crop .

cultivate long term rice before 1990 and many Vietnamese recognize quality of long term rice.

According to wholesaler/market intermediary, who were surveyed, output of IR504 rice exported to Vietnam has been decreasing because exporting market of low quality rice in Vietnam is reducing. In addition, Cambodia government has invested many processing rice industry zones in Cambodia since 2013, some of processing factories has been worked since 2013.

2. Mango

Cambodia mango or green mangos, Vietnamese call “xoai keo”, are exported to Vietnam with large amount to meet the demands of eating green mangos in Vietnam because the quality of this type of green mango is better than that of the other mangos in Vietnam.

The study finds out that Cambodia mango export to Vietnam for not only consumers in Mekong Delta and Ho Chi Minh city, but also for consumer in Ha Noi.



Picture 1: Cambodia green mango-Xoài Keo

3. Cattle (cows and buffalos)

Along the border between Vietnam and Cambodia, there are many “Cattle markets” which are organized spontaneously in the side of Vietnam border, but the most markets are in Takeo, Prey Veng and Svay Rieng.

Usually, in the side of Vietnam border, people organize cattle markets (usually in a vacant land near the border, prepared with foods and drinks for cows, and there is a person who is in



Figure 2: Cattle market between Takeo An Giang

In addition, Mr LDong harvested total 9.6 tons of paddy rice, it means that yield of Malis is 2.75 tons/ha. He sold at 1,200 KHR/kg (~6,000 đ/kg).

charge of controlling and interpreting). Many cow and buffalo brokers gather cows and buffalos in Cambodia and take them to cattle markets in Vietnam border to sell both young and adult cows, young and adult buffalos.

Cattle markets run very busily and the amount of trading is from 200-500 heads/day. Today, need of buying young cows and small adult cows in Vietnam is very large because the need of beef in Vietnam increases very fast and many Vietnamese farmers are successful in buying young cows from Cambodia to fatten.

4. Some agricultural products produced in Thailand are transited to Cambodia before exporting to Vietnam including: Thailand tamarind, durians, mangos teens, langsts, gingers, and sticky rice.

The survey result discovers that Thailand sticky rice output exported to Vietnam trends to go down, instead, sticky rice produced in Vietnam (An Giang province and Long An province) is exported to border areas and then people use Thailand package (with Thailand label) to contain and sell back to Vietnam.

5. Research find out, some Cambodia agricultural products sold to Vietnam depending on seasons such as: white beans, red beans, and some naturally-hunted animals such as: rice field rats, snails and fish.

Cambodia traders sell rice field rat to Vietnam from November to August at a large amount of rat a day. In the contrast, Cambodia traders sell natural fish to Vietnam during flood season in Cambodia from August to November and buy from Vietnam many kinds of fish from December to July.

B. Vietnam agricultural products and commodities export to Cambodia

1. Vegetables serving daily consumption

Many types of vegetables produced in Vietnam and sold to Cambodia every day in large amount are cucumbers, watermelon, tomatoes, pineapples, cabbages, chillis, pumkins, chayotes, blue gingers, carrots, courgettes, bitter melons,



to Svay Rieng

gourds, young corns, spring onions, purple onions, pak choy, okras, eggplant... Among them, cucumbers, watermelon, cabbages, courgettes, pumpkins and chillis account for about 50% total output of vegetable traded. Beside border gates surveyed, Vietnamese vegetable are sold to Cambodia in many places along the border and many Vietnamese daily street vendors sell vegetable to Cambodia. Among them, 2 border gates concentrated the most people are Tinh Bien (An Giang)-Phnom Denh (Takeo) and Binh Hiep(Long An)-Prey Voir (Svay Rieng).



Picture 4: Vegetable from Vietnam sells to Takeo

Beside vegetables produced in An Giang, Can Tho, Vinh Long, Dong Thap, Long An, the survey discovers some types of vegetable produced in Da Lat (Lam Dong province, Central highland of Vietnam, it is 280 km western from Ho Chi Minh.) such as: carrots, potatoes, tomatoes, cauliflowers. Specially, the study finds out that some kinds of China fruits and vegetables including organ, apple, grape, carrot and potato sell to Cambodia

It depends on season, Cambodia trader buy many kinds of fruits and vegetables from Vietnam for daily consumption.

2. Tropical Fruits

Some fruits planted in Vietnam are also sold to Cambodia depending on seasons such as: rambutans, longans, Hoa Loc Mango, dragon fruits, litchi, mandarin orange, etc.

The survey result also shows that a large amount of fruits comes from China and are packaged with Vietnamese labels by Chinese traders to sell to Cambodia such as: oranges, kiwis, grapes, apples, and a small organ fruit like mikan fruit in Japan. China fruit is hard to sell in Vietnam market now because many cases of poisons from China fruits have been recorded since 2010 and Vietnamese consumers have reduced consumption of China fruit. In turn, those fruits are sold more in Cambodia because the price is cheaper from 30-40% comparing with the fruits planted in Vietnam.

3. Fertilizers and agricultural inputs, cattle foods serving agricultural production.

The study shows that many Khmer farmers along border buy fertilizers, pesticides, farm tools, diesel oil and gasoline² from Vietnam. There are two ways that Khmer farmers can buy fertilizers and plant protecting chemicals (here called pesticide) and cattle foods in Vietnam:

Khmer farmers, who live around 10-20 km to the border, have large farm land area and have financial ability, prefer to buy directly fertilizer and pesticides from Vietnam stores. Because farmers can buy at good quality products and receive instruction how to use products.

Other Khmer farmers usually buy fertilizers and pesticides from stores in Cambodia.

The research faces with many challenge when survey price of fertilizer and pesticide. Many of stores owners don't want to provide information or they give incorrect information because this business in border area is sensitive issue and a strong competes among stores along border line.

C. Organization, Structure and Distribution channels of the Market Chain

1. Paddy rice

1) Rice business time line

- Takeo province is the main place of trading short term rice-IR504³ rice cultivated from Takeo, Kampot , Kampong speu and Kampong Chhnang to Vietnam. Otherwise, Long term rice-Malis⁴ rice from Kampong Thom, Battam Bang, Siem Riep, Pursat... transport through Takeo province.

IR504 rice usually plants two crops⁵ a year in Takeo and some areas nearby Vietnam plants

² Diesel oil and gasoline forbid to export, but they usually trade at subsidiary point in border area.

³ Short-term rice, 90 days a season, short gain and gain chalkiness.

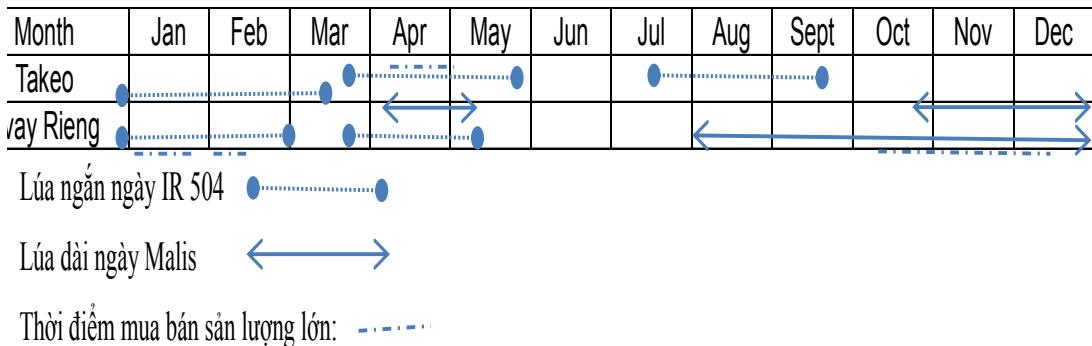
⁴ Long-term rice, 120-150 days a season, long gain, white.

⁵ Many wholesale in Tinh Bien report, Cambodia farmer produce IR504 at any area where farmer can get water, Cambodia farmers find many ways get water for rice cultivation including surface water and underground water.

three crops a year.

- Svay Rieng province trade haft time in year of IR 504 rice and other time for Malis rice

Table 1: Business time line in Takeo and Svay Rieng



2) Price of product in market chain

Table 2: Average price of IR504 rice in Takeo and Svay Rieng

	ĐVT	(1)	(2)	(3)	(4)	(5)	(6)	(7)
IR504 rice	VND/Kg	3,200	3,400	4,100	4,200	4600	6,350	7,990
	KHR/kg	640	680	820	860	920	1,270	1,598
Transportation & labor cost	VND/Kg		80	350	50	200	1,400	650
Other fee	VND/Kg			200	20	0	0	200
Net profit	VND/Kg		120	150	30	200	350	790
	KHR/kg		24	30	6	40	70	158

Source: Survey from Jan 6-Feb 12, 2015 in Takeo and Svay Rieng

Note

(1) Khmer farmer	(3) Khmer collector/transporter	(5) Vietnam trader
(2) Local collector	(4) Vietnam Wholesaler	(6) Rice processing zone
		(7) Export company (HCM)

Long-term rice as Malis or Soc average 2,500 VND (~500KHR) higher than IR504 produced in Cambodia. Example, IR504 paddy rice in Svay Rieng on Jan 12, 2015 is 3,500 VND/kg (~700KHR/kg) compare with Malis rice from Stung Treng is 6,300 VND/kg (~1,260 KHR/kg)

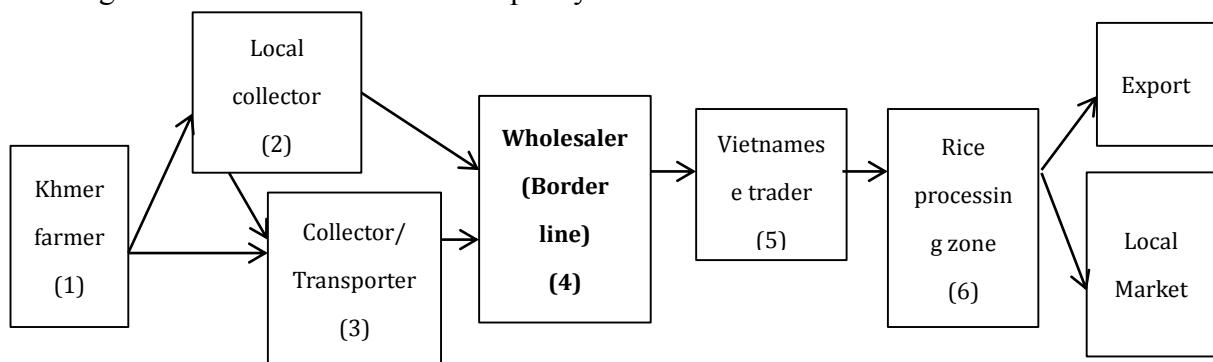
- Price of IR504 paddy rice in Svay Rieng is often 100-200 VND/kg (~20-

⁶ Long term rice-Malis rice usually sowing in May or June and harvests in from October to December. Khmer farmers have Malis rice sell in other time because they storage Malis rice after harvest.

40KHR/kg) higher than IR504 rice of Vietnam. Otherwise, price of IR504 rice in Takeo is often 50-100 VND/kg (~10-20KHR/kg) lower than IR504 paddy rice of Vietnam. According to traders, farmers in Svay Rieng use less chemicals and fertilizers to push up quantity than farmers in Takeo do, they also use less fertilizers and so the productivity is lower but the rice quality is better (using less exciting chemicals causes high rate of intact rice) and better post-harvest technology (clean rice). On the contract, price of IR504 paddy rice in Takeo is lower than that of IR504 paddy rice in Vietnam because the rate of impurity and seedless is high, the color of rice is not shining, bad after-harvest technology (rice contains impurities) and damage by insect.

2) Distribution chain of paddy rice

Diagram 1: Distribution channel of paddy rice from Cambodia to Vietnam



* Note:

- Some areas distance to border line with Vietnam from 1-10 km, local collectors (2) usually sell directly to wholesaler/market intermediary (4).
- Some Vietnamese traders (5) buy long-term rice (Malis rice) for domestic market, they usually process rice at a local miller around 40 km from border line instead of at a rice processing zone. So, they don't transport rice to processing zone where is far away from border line.

3) Organize and characteristic of paddy rice market channel

- (1) Cambodia farmers sell wet paddy rice (selling right after harvesting) and sell dry paddy rice (selling after harvesting and drying). However, today Cambodia farmers and collectors trend to sell and to buy wet paddy rice.
- Farmers who have less than 1 ha land or their land near Vietnam border (around 1-10kms) often choose to sell paddy rice to local collectors (2).
- (2) Local collectors are people who live in the same commune as farmers and

often have primitive vehicles (capacity from 1-5 tons/van), often have close relationship with farmers and used to lend farmers money to farm.

- 80% output of local collectors is gathered in their houses or in permanent warehouses from 2-5 days, then they sell to collectors/transporter (3), about 20% output of local collectors(2) who live near Vietnam border used to sell paddy rice to wholesalers (4)

(3) Collectors/transporters both collect and transport short-term and long-term paddy rice, often have trucks with capacity from 20-40 tons/truck in order to transport in long distance from 100-400kms, they have acquainted relation with many wholesalers in many place along the border.

Collectors/transporters owner (the boss) doesn't often deliver products, just stays at home and makes calls to manage from collecting, surveying prices in Vietnam and choosing places to sell. Moreover, to fulfill the roles of (4) requires the boss to have "wide relationship with local government and know the implicit rules in business". That is because the trucks often transport over its capacity (average transportation is 30tons /truck, in Takeo is 40tons/truck), or over the capacity moving in the street, bridge. Therefore, whatever capital, trucks, business plan and outside helps a agricultural cooperative has, it is not sure that agricultural cooperative can do business successfully at border with Vietnam.

Normally, people do not use cash for payment in border areas (using cash in case selling in small amount or sell to strange buyers). After selling (3) and (4) conclude the amount each other and pay by transferring through the banks or through representatives.

Among the actors in rice market chain, this is the agent making the highest profit (average profit about 300 VND/kg ~ 6KHR/kg paddy rice) but also facing the most risks because they "buy out and sell out" paddy rice with farmers and local collectors. If the price in Vietnam increase, they make high profit, in turn, they make loss. Furthermore, they must pay many charges along the street in Cambodia (every station has different fee depending on the relationship.) and also pay a fee for parking in Vietnam (200VND/kg ~ 40KHR/kg)

(4) Wholesaler is the person who has a business place in the area of border line, has many paddy rice warehouses, many parking lots or berths, has strong finance, many relations with buyers in the large areas of rice processing of Vietnam (Chau Thanh-An Giang; Thot Not-Can Tho; Sadec, Lap Vo-Dong Thap; Vinh Long, Cai Lay-Tien Giang), has close relationship with government agencies in the border

between two nations.

The survey result shows that 50% wholesalers are Vietnamese, 20% are Vietnamese but get married to Cambodians who are working in government system and 30% are households of Cambodia officers who directly do business.

Wholesalers have knowledge of all information, regulations in the business zone, information about the true boss of buyers and sellers in Cambodia and VN. Therefore the Cambodia transporters (3) or Vietnamese traders (5) believe in trading (even mustn't pay cash)

Every province has 3-5 places of purchasing paddy rice with many wholesalers in the border area, there is often the biggest place buying about 60-70% paddy rice output of the province

+ Takeo province, Kirivong district, Thamdung ward, Tarun hamlet (bordering Tan Bien, An Nong ward, Tinh Bien district, An Giang province) is the biggest paddy rice purchasing place. There are 7 big wholesalers, every day they trade 1,000-2,500 tons in the busy season and 300-500 tons in the low

season, about 70% paddy rice traded is short-term rice IR504. In the dry season (December – July)

purchasing places situate in Vietnam and in flooding season (August- November), purchasing places are moved to Cambodia land about 1km from Vietnamese border.

+ Svay Rieng province, Kampong Rou district, Prey Voir ward (bordering Binh Hiep ward, Moc Hoa district, Long An province) is the biggest place of consuming 60% paddy rice output of Svay Rieng (The second biggest trading place is Crua ward, Svay Chrom district, Svay Rieng province (bordering 1st hamlet, Hung Dien A ward, Vinh Hung district, Long An province). There are 4 paddy rice wholesalers Prey Voir-Svay Rieng, every day they trade 1,000-2,000 tons of paddy rice in the busy season and 100-600 tons in the low season. About 50% paddy rice traded is short-term rice IR504 and 50% is long-term paddy rice with many types of Malis, Soc varieties paddy rice.



Picture 5: The largest paddy rice wholesale market

Kiriving-Takeo-An Giang-Tinh Bien

Different from Takeo, paddy rice trading places in Svay Rieng run less busily in the IR504 harvest season, but run regularly and continuously because 50% output traded is long-term rice Malis, Vietnamese customers prefer buying Malis with always high price to serve domestic consumption needs in Vietnam.

Wholesaler's profit is not high and has small fluctuation and does not depend much on market price. Net profit comes around 20-50 VND/kg ~ 4-10 KHR /kg). However, business return of wholesaler is very high because of large quantity.

The survey result also reveals get some information from wholesalers that Malis rice from Cambodia use not only for domestic consumption but also use for export. However, we could not find out any information on secondary data show that Malis rice from Cambodia use for exporting. We found a lot of information that Malis rice from Cambodia sell to customers in Mekong Delta region, Ho chi Minh city and Ha Noi city (North of Vietnam).

(5) Paddy rice traders (Vietnamese)

- They have means to transport paddy rice by shipment (20-100 ton a ship and 200-500 ton barges), 100% are Vietnamese, their main business is buying paddy rice from different places and ship to rice processing zone of Mekong Delta to sell paddy rice or milling out husk and sell brown rice to processing and exporting companies. Some years from 2013, they often buy paddy rice and ship to processing zone, mill brown rice to sell to processing and exporting companies. The reason is because they can sell by-product of rice such as husk, bran with higher price than years before or they can be paid 20-30 VND/kg by the milling factory (they keep husk and bran instead)

Table 3: Exported rice milling, processing zones in Mekong Delta and the distance from the border of Takeo and Svay Rieng

Name of rice processing zone	Distance from Takeo border (km)	Distance from Savay Rieng border (km)
Châu Thành - tỉnh An Giang	70	
Tan Chau - An Giang province	60	
Thot not - TP Can tho province	90	
Lap vo - Dong Thap province	90	
Sa dec - Dong Thap province	(*)110	150
Cai be - Tien Giang province	(**)170	(*)100
Cai lay - Tien Giang province	190	110
Moc hoa - Long An province		60
Tân An-Long An		(**)130

(Source: Survey result Jan 2015 in Takeo and Svay Rieng)

(*), (**): Places where many people bring paddy rice to mill or sell.

The survey result shows that, the margin price between buying and selling price of Vietnamese traders from border to rice processing zones is large. However the main reason is due to shipment and porters fee. Average net profit is about 200 VND/kg (~40KHR/kg) and the risk is also very high because of market price fluctuation.

The study shows that 90% Vietnamese traders who were surveyed state that they prefer buying Malis rice from Cambodia because of its good quality, delicious rice, high rate of intact rice and stable price. In addition, 80% Vietnamese traders who were surveyed state that they prefer buying IR504 from Cambodia because the rate of chalkiness of rice is less than that of IR504 produced in Vietnam, moreover, the moisture of rice is low and there is less broken rice.

(6) Exporters

- Large exporter's rice in Vietnam buy IR504 paddy rice from Cambodia and process to white rice for mainly export low market of rice as China and African market, a small quantity of white rice sell in domestic markets.
- Some small companies or rice milling factories in Vietnam often buy Malis rice from Cambodia to mill and sell in domestic markets in Vietnam (mainly in Mekong Delta region and Ho Chi Minh City) and a small part is packaged in attractive bags to export to difficult markets such as Arab Emirates and Europe.

Note:

The study finds out that white rice with variety of ST5, OM1490 sometimes export back to Cambodia through Takeo, Kandal, Prey veng and Svay Rieng. We find reason export white to Cambodia that Vietnamese white rice does not use for Cambodia consumption, it use to sell to Thailand.

2. Mangos

1) Price of mango

Table 3: Average Price of mango from Cambodia

	Unit	(1)	(2)	(3)	(4)	(5)
Xoài keo/Cambodia Mango	VND/Kg	4,500	6,500	15,000	17,500	19,000
	KHR/kg	900	1,300	3,000	3,500	3,800
Transportation cost	VND/Kg		100	200	100	
Labor cost	VND/Kg		30	400	0	
Other fee	VND/Kg		30	100		0
Net profit	VND/Kg		240	1,000	400	
	KHR/kg		48	200	80	

Note:

Source: survey in Jan 2015 in Takeo and Svay Rieng

(1) Khmer farmer

(2) Khmer collector/transporter

(3) Vietnam Wholesaler

(4) Vietnam trader

(5) Vietnam customer

Note

- Many Vietnamese retailers said that price of Cambodia mango from September to December is very high because the new school year in Vietnam from September and Vietnam mango is low harvest season. In addition, they have shipped Cambodia mango to North of Vietnam (Hanoi) and they can sell very high price because skin of Cambodia mango is hard, it is easy to transport long distance.

2) Mango distribution channel from Cambodia to Vietnam

- According to figures from Customs of Tinh Bien international border gate⁷, there is about 35 tons of mangos from Takeo sold to Vietnam everyday. However, the actual figure is higher (at least 90 tons mangos/day in Takeo) because the customs can only record the trucks transporting mangos through the main border gate while a large amount of mangos are transported along the border by traders' primitive vehicles without reporting.

- Takeo (Phnom Denh border gate, Kirivoing district) sell the most mangos to Vietnam because most of consumers live in Mekong Delta Region and Ho Chi

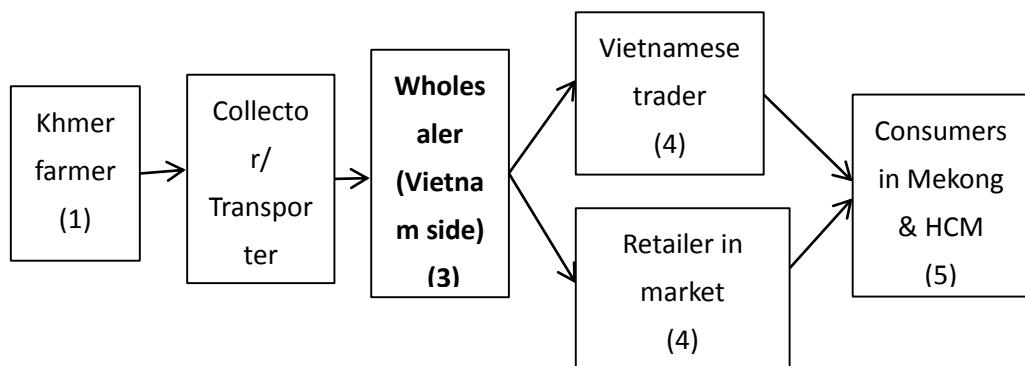
⁷ Border gate with Phnom Denh, Kirivong district, takeo.

Minh City. Moreover, many fruits and vegetables traders like to use the Phnom Denh-Tinh Bien⁸ border gate for business because this is the only one border gate opening longer than other gates. In addition, Takeo government allows oversize truck transport goods through Takeo to Phnom Penh.

- Svay Rieng also sells mangos to Vietnam everyday through many places along the border so the actual figures cannot be recorded. Most of mango from Svay Rieng sell to Vietnam for Long An and Ho Chi Minh city markets.

- Cambodia mangos sold to Vietnam in term of buckets⁹ so the price is usually cheap.

Diagram 2: Distribution channel of mango from Cambodia to Vietnam.



3) Organize and characteristic of mango market channel

(1) Khmer produce mango

The study shows that most of Khmer farmers have a small scale farm size of mango. It is 0.1-0.5 ha/farm in Takeo and is 0.1-0.3 ha/farmer in Svay Rieng

Khmer farmers usually harvest all mangos and sell to collector/transporter in term of buckets. Mango's price is 800-1,300 KHR/kg depend on market.

(2) Collector/transporter

They are Cambodian, who knows about mango area, harvest season and quantity. They use a mini truck capacity 3-5 tons and run around villages for collecting mango. Then, they transport mango to bordering with Vietnam and sold to Vietnam wholesaler in term of buckets like they buy from Khmer farmer.

⁸ Since Feb 2, 2015, An Giang People Committee and Takeo province agree to open border gate from 5:00 Am to 22:00 PM instead of opening from 5:00 AM to 18:00 Pm.

⁹ Big or small, bad or good, green or ripe mangos are mixed to sell

After sold mango, they usually transport back to Cambodia other kind of fruits or vegetable produce in Vietnam.

(3) Wholesaler

They are Vietnamese and have a business place nearby border gate or border line. From 2013, wholesaler not only buy Cambodia mango from Cambodia but also buy Cambodia mango plant in Tinh Bien and Tri Ton¹⁰ district of An Giang Province, Vietnam

After buying Cambodia as buckets, wholesaler classify, clean, packet and sell. Three kinds of mango including: i) The first kind of mango: a mango weighs over 500gr, skin is green and hard, light yellow on head, clean of insect damage; ii) The second kind of mango: a mango weighs from 300grm- 500gr, skin is green and hard, light yellow on head, having some dots of insect damage; iii) The third kind of mango: a mango weighs under 300grm, skin is yellow and soft and skin damaged by insect. Mango of the first kind usually ship to Ho Chi Minh city, the second kind usually sell to provincial market in Mekong Delta and the third kind usually sell small market in rural area.

Result of survey find out that wholesaler sometime package and ship Cambodia mango to China. However, China market is seldom and wholesalers are not interested because domestic market in Vietnam is big. In addition, we could not find out any wholesaler of mango in Svay Rieng, most of mango from Svay Rieng sell to Vietnam through Vietnamese street venders, who daily bring vegetable, Vietnamese fruit, fish, meat, commodities... from Vietnam to Cambodia by motor cycles and transport back from Cambodia mango and other fruits.

Wholesalers earn the most profit in mango distribution channel because they buy in term of bucket from Cambodia and sell in term of classify, clean, package and labels on product. Therefore, they earn high value add in value chain of mango.

(4) Vietnamese traders or retailers in market, who buy mango from wholesalers and sell to customers. Their business is far away from border line from 60-200km, they travel to border area buy not only mangos but also buy other products produced

¹⁰ Tinh Bien and Tri ton district share border line with Takeo province, it is a mountant land, it is similar to land in Cambodia. Many Vietnamese farmers come to Cambodia buy Cambodia mango seed/tree and planted since 2009. Many farms have harvested since 2013. Quality of Cambodia mango planted in Vietnam as same as plant in Cambodia.

from Thailand as tamarind, durian, langsats and other

3. Vegetables

1) Price of popular vegetable

The study find out that Cambodia buy in everyday a large amount are cucumbers, watermelon, tomatoes, pineapples, cabbages, chillis, pumkins, chayotes, blue gingers, carrots, courgettes, bitter melons, gourds, young corns, spring onions, purple onions, pak choy, okras, eggplant, corn, baby corn... We were surprise that Cambodia import many kind of vegetables which it easy plants in Cambodia such as: corn, lemon grass, blue ginger, water melon, cucumber....

The research faces with some challenges during collect and compare price of vegetables because vegetable market is so flection.

We find out that margin price of vegetables from Vietnam to Cambodia is very high. Vietnamese vegetable farmer sell at low price, while Cambodian consumers buy at very high price. However, most of cost is transportation cost, labor cost, cost at border area and damage of vegetable.

Table 4 : Price of popular vegetables export from Vietnam to Cambodia

Vegetable	Unit	(1)	(2)	(3)	(4)	(5)	(6)
Cucumber	VND/Kg	2,500	3,000	4,500	7,000	10,000	12,500
	REIL/kg	500	600	900	1,400	2,000	2,500
Chili	VND/Kg	17,000	19,000	22,000	29,000	33,000	38,000
	REIL/kg	3,400	3,800	4,400	5,800	6,600	7,600
Cabbage	VND/Kg	2,800	3,500	4,500	6,000	7,500	8,500
	REIL/kg	560	700	900	1,200	1,500	1,700
Tomato	VND/Kg	3,500	4,500	5,500	8,000	10,500	14,000
	REIL/kg	700	900	1,100	1,600	2,100	2,800
Water melon	VND/Kg	2,000	3,500	5,000	7,000	8,000	9,000
	REIL/kg	400	700	1,000	1,400	1,600	1,800

Source: Field survey in Jan

Note

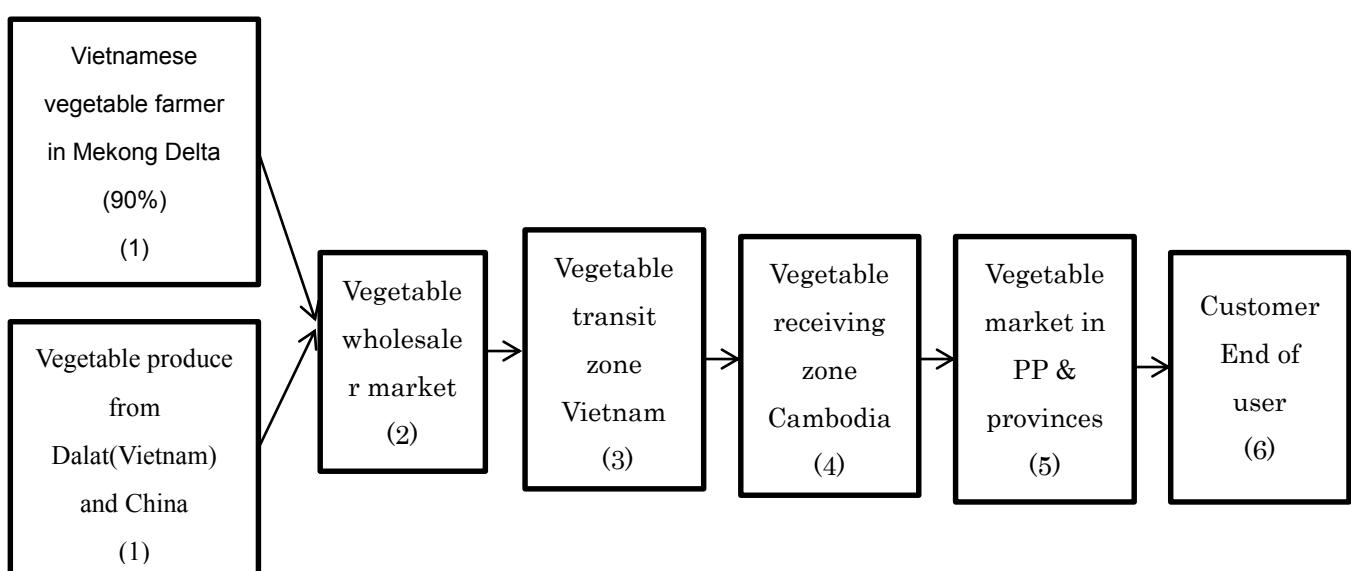
- (1) Vietnamese farmer
- (2) Vegetable Wholesale market
- (3) Vegetable transit zone (Vietnam side)
- (4) Vegetable receiving zone (Cambodia side)
- (5) Vegetable central market in Phnom Penh/Province
- (6) End of user/Khmer customers

2) Vegetables distribution channel from Vietnam to Cambodia

(1) Vietnamese vegetable farmer in Mekong Delta

The study find out that nearly 90% of vegetables export to Cambodia produced in Mekong Delta provinces near Cambodia such as An Giang (10-40km to border with Takeo), Can tho (60km to border with takeo), Dong Thap (50 km to border with Svay Rieng), Long An (20-40 km to border with Svay Rieng). Other 10% vegetable produced from Dalat city (a famous and high quality vegetable produced in Vietnam) and some kind of China vegetables such as carrot and potato

Diagram 3: Distribution channel of Vegetables from Vietnam Cambodia



(2) There are many vegetable wholesale markets in Mekong Delta, where people trade many kind of vegetable.

+ Chau Doc¹¹ vegetable wholesale market is the main place export vegetables to Cambodia through Takeo province.

+ Hong Ngu¹² vegetable wholesale market is the main place export



Picture 3: Vegetable wholesale market at border line to transit zone at border line by truck

¹¹ Chau Doc city, An Giang province, it is 16km to Phnom Denh international border gate with Takeo

¹² Hong Ngu town, Dong Thap province, it is 40 km to Svay Rieng, distance is 1 km to Kandal province and 17km to Prey Veng province.

vegetables to Cambodia through Svay Rieng and Prey Veng provinces.

- Most of Khmer trader owners or their relative come to Chau Doc and Hong Ngu markets for selecting and buying vegetables every day. Then they transport vegetables by truck or van to transit zone (3) in border line and hire local residents transport vegetable cross border line.

(3) Vegetable transit zone is a place that Khmer trader's hire local worker bring vegetables cross border line because local residents at border line can exchange product under 2 million VND(~400,000 KHR) free of tax. Therefore, Khmer trader's part a big truck in Cambodia side and hire local residents transport vegetable from Vietnam side to Cambodia side, they don't need pay tax both Vietnam and Cambodia.



Picture 7: Vegetable transport cross to border line by moto bike

Many of Khmer traders do not come to Vietnam, they order vegetable directly to Vietnamese traders. Therefore, vegetable transit zone is a place Vietnamese traders hire local people transit vegetable to Cambodia side.

(4) Vegetable receiving zone

It is a parking area where many oversize truck¹³ receive vegetable and other Vietnam product and transport to Phnom Penh. It usually is in Cambodia side and is nearby border line.

(5) Vegetable central market (in Cambodia)

It is a place near Phnom Penh where traders gather many kinds of vegetables and agricultural products from Vietnam and domestic products. Then, traders will distribute vegetables to local market in Phnom Penh and provinces.

There is one place inside Phnom Penh city for distributing vegetable to market around Phnom Penh city and the other place is 11 km outside of Phnom Penh

¹³ A limited load of a truck is 16 tons, but Khmer trader design a truck become over size truck and it can carry 30-45 tons of rice or 10-15 tons of vegetables and fruits.

where vegetables and agricultural products will ship to provinces of Cambodia.

4. Fertilizer and pesticide products

1) Price of fertilizers and pesticides

The survey result explores that the market of fertilizers and pesticide are very complicated, traded in many intermediate agents, unclear information...before sold to Khmer farmers. Most of disadvantages focus on Khmer farmers because they completely depend on sellers' information.

Ex: UREA fertilizer sold to Cambodia made in America, China, Philippines, and 3 fertilizer manufacturers in Vietnam including Đầu Trâu (buffalo head), Đạm Phú Mỹ (Phu My UREA), Việt Nhật (Vietnam-Japan fertilizer). Fertilizers which have different origins will have different quality and the prices from 70,000 to 120,000 VND/ bag of 50 kg (~280-480 KHR/kg). Khmer farmers don't recognize origin of fertilizer. So, Khmer farmers cannot compare price and the quality of fertilizers.

Ex: Pesticides/Plant protecting chemicals which are the same types, have the same package and affects but contain different percentage of chemicals/package will have different prices. However, Khmer farmers don't know it because packages are in Vietnamese language and Khmer farmers depend on information of Khmer sellers.

Table 5 shows price of popular fertilizer that Vietnam and Khmer farmers usually use and the study can follow exactly kind of product from Vietnam to Cambodia. Other kind of fertilizers and pesticides cannot describe flowing price because of incorrect information from trader belong border areas.

Table 5 : Price of popular fertilizer in Vietnam and Cambodia

	Unit	(1)	(2)	(3)	(4)	(5)
NPK 20-20-15 (Buffalo head) or NPK Bình Điền-Đầu Trâu	VND/bag	470,000	495,000	550,000	650,000	800,000
	KHR/bag	94,000	99,000	110,000	130,000	160,000
UREA (Phú Mỹ-Vietnam)	VND/bag	366,000	375,000	385,000	400,000	480,000
	KHR/bag	73,200	75,000	77,000	80,000	96,000
Kali 30%	VND/bag	580,000	610,000	660,000	700,000	790,000
	KHR/bag	116,000	122,000	132,000	140,000	158,000

Source: Survey in Feb 2015

Note: 1 bag of fertilizer is 50 kg net.

(3) Agency Level 2

(1)Factory in Vietnam

(4) Farmers in Vietnam (border area)

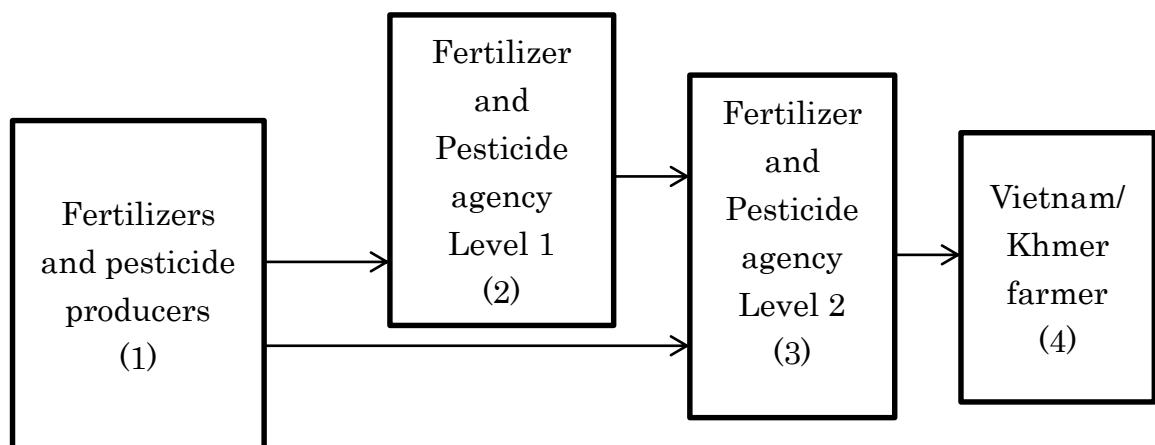
(2) Agency Level 1

(5) Farmer in Takeo and Svay Rieng

According to table 5, single fertilizer such as UREA (Nitrogen) and Kali have a small margin price, farmer purchase at fix price for a bag of fertilizer. In the contrast, mix fertilizer as NPK 20-20-15 has a large margin price, farmers have to pay at very high price for a bag of fertilizer.

The study finds oft that most of Vietnamese farmers use single fertilizer because it is cheap and it requires high technical cultivation from farmer. On the other hand, Khmer farmers prefer to use mix fertilizer because it is convenient, Khmer farmers don't need to mix with many kid of single fertilizer before they use. But Khmer farmers have to pay at very high price for a bag of fertilizer.

Diagram 4: Distribution channel of fertilizer and pesticides from Vietnam Cambodia



(1) Fertilizers and pesticides producers

Vietnam almost produces enough fertilizer for Vietnam farmers and export to Laos and Cambodia¹⁴. The most famous fertilizer both in Vietnam and Cambodia is “Bình Diên fertilizer company” with a logo of a buffalo head-Đầu Trâu on package. Bình diên fertilizer produces many



kind of single and mx fertilizer, Bình Diên has many agencies in Cambodia and Laos with a logo of a fertilizer company-

¹⁴ Vietnam exported 553,000 tons of fertilizers during the first six months of 2014, among which 215,000 exported to Cambodia market with value is over 80 million USD.

Source: http://agro.gov.vn/news/tID23879_Phan-bon-tru-vung-thi-truong-Campuchia.htm

buffalo head.

Fertilizers and pesticides companies don't sell directly product to farmers. They usually sell to agency of Level 1, most of agency level 1 sell product to agency level 2 at the same price of company and get 5-7% for commission fee.

The best seller fertilizer to Cambodia is NPK 20-20-15 produced by many fertilizer and NPK 20-20-15 of Bình Điền is the most popular in Cambodia because of marketing strategy from company.

The company has never sell product directly to agency of level 2 and farmers because of small quantity of an order

Many plant protection and pesticides companies from Vietnam open business in Cambodia. Among of them, An Giang Plant Protection Service (AGPPS), the most largest pesticides company in Vietnam, open many branch of business in Cambodia and they organize staff of Khmer extension for guidance farmers in farm. This strategy has been success in Vietnam and AGPPS has invested this model in Phnom Srouch district, Kampong Speu province.



Picture 9: NPK 20-20-15

from Bình Dien fertilizer sell to Cambodia



Picture 10: Logo of AGPPS

(2) Fertilizers and Pesticides agency Level 1

They are Vietnamese and Khmer, they receive product from company. Then, they sell to agency of level 2 at the same price of company and get commission fee from company. Their responsibility is storage fertilizers and pesticides, distribute to agency of Level 2, collect money from agency level 2 and payment to company. The most risk is that if agency level 2 doesn't pay, agency of level 1 must pay to company.

The fertilizers and pesticides company usually organize 2- 3 agency of level 1 at a provinces. However, many fertilizers and pesticides sell to Cambodia through another Khmer partner because they are afraid of unfair in business and many kind of fee when transport products on road in Cambodia.

(3) Agency of level 2

They are businesses who have a store in district and village; they buy fertilizers and pesticides from agency of level 1 and sell to farmers. Most of them are government officer in Cambodia or they must very rich in the community.

They usually buy many kinds of fertilizers and pesticides from different companies because farmers demand is diversify.

They sell products to farmers in cash or payment at the end of harvest with 3% interested fee.

They play a role of instructed to farmers how to used product, many of Khmer farmers depend on instruction from agency of level 2. They usually introduce to Khmer farmers a mix fertilizer of NPK 20-20-15, it is easy to use for farmers but it is so profits for Fertilizer Company.

(4) and (5) Vietnam and Khmer farmers.

The study cannot find exactly agencies in market channel of fertilizers and pesticides in Cambodia because of limitation of sample and receiving incorrect information at border line. However, the study states that marketing channel of fertilizers and pesticides in Cambodia is longer than that of in Vietnam and Khmer farmers pay so far higher price for the same product compare with in Vietnam.

The study find out that farmers in Takeo use more fertilizers and pesticides than farmers in Svay Rieng. Many of seller agencies state that Takeo has larger area of IR504 rice than Svay Rieng.

III. Conclusions and Recommendations

1) Paddy rice

a) Conclusions

- Cambodia sold to Vietnam numerous short-term paddy rice (IR 504) and long-term paddy rice (Malis, Sóc). Vietnam bought short-term paddy rice produced and exported for low level markets, while long-term paddy rice (Malis) used for domestic market of Vietnam. Rice output from Takeo province sold to Vietnam several times larger than that of in the Svay Rieng province sold to Vietnam.

- Rice distribution from Cambodia to Vietnam has specific characteristic, it is only suitable for people who have close relative with Cambodia government. So, it is so hard for agricultural cooperative to participate in the marketing channel of pay rice.

Although Agricultural cooperative is supported of finance, facilities and business skills, but we are not so sure on the success of agricultural cooperative business in pappy rice.

b) Recommendations

- Agricultural cooperative in Cambodia should pay attention to product long-term paddy rice (Malis and Soc varieties) to provide for domestic market in Viet Nam because Vietnamese consumers have a large demand of Long term rice.. What is more, Agriculture infrastructure in Vietnam use for short term rice cultivation, Vietnam is difficulty for producing long term rice like what Vietnamese used to produce in the past. This is reason why, Cambodia agricultural cooperative should focus to cultivate on long-term rice as high quality rice with standards as cleanliness, organic and good label in product.
- For sustainable strategy, Cambodia should invest a rice miller system for process paddy rice to brown rice and sell to Vietnam as product of brown rice instead of selling paddy rice. The miller system for process brown rice is not high investment and doesn't require high skills of using. Agricultural cooperative can use rice husk for making firewood stick¹⁵ and sell to Vietnam at high price. In addition, Vietnam has many private millers nearby border of Cambodia, the distance is about 10-20 km from border.
- Selling IR504 paddy rice to Vietnam is unsustainable strategy, Cambodia should increase capacity of process for exporting rice as the goal of Cambodia state government and Cambodia should not increase area cultivation of short term rice as IR 504. There are many reasons, demand of IR504 paddy rice from Vietnam will strong reduce in the near future, because China shares 54%, and African countries share 30% quantity of low quality rice export market of Vietnam. In the recently, there are many reasons of correlate political with China and competitive of low quality rice from India and Burma the World market of short term rice from Vietnam will be decrease and Vietnam government has. a plan to reduce the areas of IR504 rice instead of long-tern paddy rice cultivation.

¹⁵ Vietnamese farmer's made a simple machine for pressing rice husk to a firewood stick, the firewood stick is easy transport and sells at high price because many companies and heat power plant use for heating.

2/ Mango

Vietnamese consumers like green mango from Cambodia so much, demand of Cambodia green mango has been high since 2000. However, this study forecast that exporting mango from Cambodia to Vietnam will face with challenges in the near future because mango which the same quality is produced by many districts along in the border with Cambodia. Besides that, there is a large area of Cambodia mango was planted in Mekong Delta region and it will harvest within 2-3 next years. It addition, Vietnamese farmers have ability to produce mango at any time in the year, farmers can estimate harvest time for highest price and take care mango farm and they can harvest almost correct time as their plan.

3) Cattles

Most of Cambodia farmers raise cattle including cow and buffalo with a few cattle in a family, most of Khmer farmers raise cow and few of them raise buffalo. Farmers usually sell cattle to “a cattle intermediary” in community. Number of cows and buffalos sell to Vietnam is large and tends to increase very high around 1 month before New Year time in Cambodia.¹⁶

Margin price between buying and selling of cattle is very far and most of profit goes to cattle intermediary in Khmer because they buy cows at low price in Cambodia and sell in Vietnam at cattle market as auction method at high price.

Demand of big cattle for meat and small cattle for raise in Vietnam is very high and tends to increase because Vietnam government encourage to develop number heads of cow in provinces belong with Cambodia. Therefore, this research encourage Cambodia agricultural cooperatives do a “Joint Cattle Marketing” service, cooperative can collect cows and buffalos from members and farmers and transport to cattle market in border and sell as auction method in Vietnam. This business is profit both Khmer farmers and Vietnam farmers. This business is simple, easy and benefit to members. In addition, government of Vietnam and Cambodia support this business, so, cooperatives don’t need to pay many kinds of fee at border area.

¹⁶ Number of cow and buffalo come to Vietnam increase very high everyday from March to middle of April, among of cows, many of them are a small cow for raising. Many trader said that Khmer famer sell small cow because they need cash for New Year and many holidays in march and April.

4) Vegetables and fruits

a) Conclusion

Cambodia imports a large amount of vegetables and fruits from Vietnam for daily consumption. Most of vegetables and fruits transport from Vietnam to Cambodia by road in Takeo, Prey Veng, Svay Rieng and in Kandal by boat.

Most of vegetables and fruits sell to Cambodia produce in Mekong Delta region with bordering provinces as An Giang, Dong Thap, Long An and Can Tho. However, the study finds out that a large amount of China vegetables (Carrot and potato) and fruits (Orange, apple, grape) sell to Cambodia under label of Vietnamese products.

Margin price between buying and selling of vegetables and fruits from Vietnam to Cambodia is high because of transportation fee and damage of vegetables during transport time.

b) Recommendation

Cambodia agricultural cooperative and local government should encourage and educate farmer cultivate some kind of main vegetables for daily consumption as cucumber, tomato, pumpkin, bitter melon, leave opinion and water melon. However, cultivation of vegetable requires good seed, skills of care and habit of farmers. Agricultural cooperative needs to assist from outside on seed and skills of take vegetables because cultivation of vegetable is so far different from cultivation rice as Khmer farmers habit.

5) Fertilizers and pesticides

Fertilizers and pesticides market from border area with Cambodia to Cambodia are not transparency, most of fertilizers and pesticides stores dominate and control information. Khmer farmers lack of many information on products. Therefore, they have to purchase at higher price for the same product as farmers in Vietnam. Many of Khmer farmers use mix fertilizers because of easy to use but this fertilizers is very expensive and main product in business of fertilizer store in Cambodia.

The demand of fertilizers and pesticides from Khmer farmers will increase because many provinces in Cambodia want to change from long term rice to short term rice as Vietnam.

Agricultural cooperatives should organize a “Joint Purchase Business” service for

members and farmers. Cooperatives can buy directly fertilizers and pesticides from branch of a good Vietnam fertilizers and pesticides in Cambodia such as: Binh Dien (Buffalo head fertilizer), An Giang Plant Protect Service (AGPPS pesticide). They are good company in Vietnam in term of quality, price, guide, and social responsibility and they have branch in Cambodia. Joint Purchase Business will benefit to Agricultural cooperative, members, farmers and protect environment.

Reported by

Dr Hai Tran
An Giang University, Vietnam
March 6, 2015

Report survey prices of agricultural products and inputs between Vietnam and Cambodia border

Printed in September 2015

Published by Department of Agricultural Cooperative Promotion of General Directorate for Agriculture (MAFF)

The project for Establishing Business-oriented Agricultural Cooperative Models (BPAC)

Address: # 54B/49F, St. 395-656, Sangkat Toeuk Laak 3, Khan Toul Kok, Phnom Penh, Cambodia
Phone: (023) 883 427, Fax: (023) 883 427

© The project for Establishing Business-oriented Agricultural Cooperative Models