



USDA Foreign Agricultural Service

# GAIN Report

Global Agriculture Information Network

Template Version 2.09

Voluntary Report - public distribution

**Date:** 3/29/2006

**GAIN Report Number:** CB6001

## Cambodia

### Grain and Feed

### Grain Industry In Cambodia

### 2006

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**Report Highlights:**

Upward trends in rice and corn production in Cambodia could pose some measure of threat to U.S. export opportunities in the region in the future.

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Includes PSD Changes: No  
Includes Trade Matrix: No  
Unscheduled Report  
Bangkok [TH1]  
[CB]

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**EXECUTIVE SUMMARY**

Rice and corn production in Cambodia has increased rapidly in the past decade due mainly to improved productivities and area expansion. Cambodia has developed into a net exporter of rice and corn, and nearly all exports are unofficial border trade with Vietnam and Thailand.

Cambodia has a high potential to further increase rice and corn production because it still has a lot of idle land that can be converted to cultivated area and there is room to increase productivity through increased use of fertilizer and improved irrigation systems.

Cambodia is currently an indirect U.S. competitor in the world rice market in the sense that it exports paddy (unmilled) rice for milling in Vietnam, which is then re-exported onto the world market. Cambodia is expected to play a more important role in the global market in the next decade when improved yields and area expansion will efficiently reduce the costs of its exportable surplus. Meanwhile, trade development between Cambodia and Thailand under the Ayeyarwady-Chao Phaya-Mekong Economic Cooperation Strategy (ACMECS) is likely to encourage an increase in Cambodian corn exports to Thailand, and may pose some threat to U.S. exports to the Thai market.

## I. Rice Section

**PSD Table**

Country Commodity	Cambodia Rice, Milled						UOM
	2004 USDA Official Estimate	Revised 01/2005	2005 USDA Official Estimate	Estimate 01/2006	2006 USDA Official Estimate	Forecast 01/2007	
Market Year Begin	(1000 HA)		(1000 MT)		(1000 MT)		
Area Harvested	2150	2100	2200	2150	0	2200	(1000 HA)
Beginning Stocks	0	100	0	60	0	45	(1000 MT)
Milled Production	2600	2330	2725	2835	0	3025	(1000 MT)
Rough Production	4127	3698	4325	4500	0	4802	(1000 MT)
MILLING RATE (.9999)	6300	6300	6300	6300	0	6300	(1000 MT)
TOTAL Imports	125	350	65	150	0	150	(1000 MT)
Jan-Dec Imports	125	350	65	150	0	150	(1000 MT)
Jan-Dec Import U.S.	1	0	0	0	0	0	(1000 MT)
TOTAL SUPPLY	2725	2780	2790	3045	0	3220	(1000 MT)
TOTAL Exports	100	100	100	350	0	450	(1000 MT)
Jan-Dec Exports	100	100	100	350	0	450	(1000 MT)
TOTAL Dom. Consumptic	2625	2620	2690	2650	0	2700	(1000 MT)
Ending Stocks	0	60	0	45	0	70	(1000 MT)
TOTAL DISTRIBUTION	2725	2780	2790	3045	0	3220	(1000 MT)

**PRODUCTION**

Cambodia was a major rice-exporting nation in the 1960's during a period of political stability following independence from the French in 1953. In MY 1964/65 rice exports exceeded 500,000 tons and Cambodia was considered one of the rice bowls of South East Asia. The encouraging production trend of increasing yields and growing area was reversed when the country became embroiled in the war against communism. By 1975, when Phnom Penh, the country's capital, finally fell to the communist Khmer Rouge, the rice-growing area had declined by 77 percent and rice production had decreased 84 percent from the 1970 level. During the Pol Pot (Khmer Rouge) era (1975-1979) the country was further devastated through mass dislocation of the population and persecution of intellectuals and agriculturalists. As a result, Cambodia faced annual rice shortfalls of 100-200,000 tons per annum during the 1980's. Cambodia missed the wave of the green revolution almost totally. In the 1980's, nearly all Cambodian farmers continued to use traditional farming practices as they had for over a thousand years. Pol Pot's policy of dislocating farmers from their homelands also resulted in the loss of many traditional rice varieties. Cambodia desperately needed access to improved technology when the country's political situation became more stable in the mid 1990's.

During the past decade, there was an influx of international aid to relieve food shortages and poverty among Cambodians. Some international support efforts aimed to improve productivity in rice cultivation, the staple sustenance and primary income earner of rural people. The Government of Cambodia (GOC), in cooperation with several International Organizations (IOs) and Non-Government Organizations (NGOs), implemented rice productivity programs utilizing different approaches and strategies to increase rice yields in small farm operations. Some approaches, for example, introduced improved high-yielding varieties, fertilizer split applications, or improved farming practices of newly developed

techniques called "System of Rice Intensification (SRI)," integrated pest management (IPM), etc.

As a result, paddy production has increased steadily in the past two decades. The country turned from being a less than self-sufficient producer with paddy production only at 2.5-2.8 million tons in the early 1980's to reaching self-sufficiency in 1985, with 3.2 million tons of production, and finally becoming a net exporter in more recent years, with 4.0-4.3 million tons per annum. This increase is attributed to an expansion of growing area and significantly improved yields. Average paddy yields rose from 1.3-1.4 tons/hectare in early 1990's to a current 2.0-2.1 tons/hectare. However, Cambodia's average paddy yields are among the lowest in Asia, especially compared to neighboring rice-exporting countries like Thailand (which registers about 2.7 tons/hectare) and Vietnam (4.3 tons/hectare). There is still room to increase paddy-growing area and productivity if the GOC can manage to increase irrigation systems (now covering only 8 percent of total agricultural area), improve access to high-yielding varieties, increase fertilizer utilization in poor-quality soil areas, and introduce improved farming practices.

The paddy growing area in Cambodia is currently 2.2 million hectares, which occupies about 90 percent of the total cultivated land. Major growing areas in Cambodia are Battambang, Siem Reap, Banteay Meanchey, Prey Veng, Kandal, and Kampong Speu. The rice growing pattern is divided into 4 groups, including 1) rain fed lowland rice; 2) rain fed upland rice; 3) deepwater/floating rice; and 4) dry season irrigated rice.

According to a recent report, rain fed lowland and rain fed uplands rice represents 86% and 2% of the total rice area, respectively. Rain fed rice belongs to a monsoon-season crop, which is seeded in May-June and harvested in November-December. Dry season accounts for 8% of total rice area, which planted in around November in areas close to major rivers and their floodplains. Short-period rice varieties are normally grown for this crop that take only about 3 months from planting to harvest. Deepwater or floating rice is a very unique crop in Cambodia, occupying about 4% of the total rice area. Farmers plant paddy in April-May in areas around Tonle Sap Lake when the water recedes but still covers the soil adequately to permit planting without soil preparation.

Nearly all of Cambodian rice farmers acquire paddy seed by collecting grains from their own fields. Although there are thousands of local rice varieties, most farmers are using rice varieties co-developed by the Cambodian Agricultural Research and Development Institute (CARDI) and the International Rice Research Institute (IRRI). In addition, rice farmers apply very small amounts of fertilizer and pesticides to their paddy fields.

Paddy production in MY 2005/06 is estimated at 4.5 million tons, a sharp increase from 3.7 million tons in MY 2004/05 when production was seriously affected by dry weather conditions. Paddy production is forecasted to reach 5 million tons in the next few years due mainly to increased use of high-yielding seed varieties and improved farming practices.

## CONSUMPTION

Rice is the main staple for Cambodians, accounting for 70 percent of daily calorie intake while the rest is from other foods (such as fish, corn, root crops, fruits and vegetables). According to the Food and Agriculture Organization (FAO)'s recent report, a national surplus in rice production since 1995 does not imply that all Cambodians have enough rice to eat. The country suffers the highest prevalence of chronic child malnutrition in Southeast Asia, while 21 percent of women of childbearing age have low body mass index, and women are especially affected by multiple problems of micronutrient deficiency. These problems are

caused by poverty, a poor marketing/distribution system, price variation, poor transportation infrastructures, and a lack of off-farm employment opportunities to generate income.

Per capita rice consumption in 2005 is 189 kilograms, which is among the highest countries in Asia. Like other developing countries, per capita rice consumption in Cambodia should decline in the next decade when growing urbanization that accompanies economic growth lead to changes in food habits and an increase in the practice of eating away from home.

All rice farmers keep a portion of unmilled rice for their own home consumption. This paddy rice is normally milled at home by using traditional manual mills or at nearby small-scale rice millers. Farmers sell their surplus of unmilled rice to local traders or nearby rice millers for milling. Milled rice is sold to rice wholesalers in districts or provinces, who then distribute it to retail marketers.

Prices for unmilled rice and rice has reportedly been on the rise in recent years due to increased local demand and an upward trend in global rice prices. Based on a recent survey, prices for MY 2005/06 main crop paddy rice were in a range of 500-600 Riels/kilogram (approx. US\$ 140/ton). Wholesale prices for milled white rice are currently 900-1,100 Riels/kilogram (approx. US\$ 250/ton).

## TRADE

Liberalization policies plus successes in improving productivity have pushed up the rice supply considerably over the past decade. These production increases allowed Cambodia to achieve self-sufficiency and to export rice.

Cambodia has a competitive advantage in rice relative to other regional and international rice producers due mainly to relatively low costs of labor and land. However, opportunities to increase rice exports are currently limited by a few factors, including an inferior rice processing sector and a lack of good infrastructure in the country.

The rice processing sector is relatively less developed and internationally uncompetitive. Despite some 3,000 milling plants scattered across the country, nearly all of them are small-scale operations. Rice millers reportedly have monopsony power, allowing them to capture high margins from their business. Reliance on obsolete milling equipment results in high levels of broken rice and other processing losses. A lack of working capital among rice millers and the high costs of credit limit their ability to buy paddy from farmers and update their machinery. This encourages the unofficial export of paddy to Vietnam and Thailand and prevents the country from capturing the value added from rice milling. Rice millers have limited access to foreign markets, given their inability to produce consistent amounts of standard varieties of milled rice and their lack of information about foreign market conditions. A recent survey found that there are only a few modern rice millers that are able to export milled rice to overseas markets.

Prevailing poor infrastructure, especially roads, ports, and electrical power, raises the marketing costs of various agents in the chain, thus reducing the volume of trade and margins. In addition, there are also other transactions costs in Cambodia such as illegal fees while transporting rice from farm-gate to port.

The official record on exports of paddy and milled rice in Cambodia is low because of high prevailing under-reported and/or illegal exports. The official exports in the last several years have been far behind the estimated actual exports. For example, the reported export of milled rice reported by the Customs and Excise Department in 2003 was merely US\$ 0.6

million, while unofficial exports estimated by the Economic Institute of Cambodia reached US\$ 111 million.

Based on an interview with one of the largest rice miller/exporter's in Phnom Penh, Cambodia's exports of milled rice for MY 2005/06 were pegged at about 40-50,000 tons. Major markets for Cambodian milled rice are Japan and the EU countries. Exports in MY 2004/05 were reportedly low, about 15,000-20,000 tons due to a severe drought in the country. Exports of paddy rice are totally illegal border-trade, which are shipped to only Vietnam and Thailand. Trade sources reported that paddy rice exports may reach to 500-600,000 tons in MY 2005/06, about 90 percent of total exports to Vietnam and the rest to Thailand.

Cambodia also imports paddy rice from Vietnam when there is short supply at the end of market year or when disaster strikes Cambodian rice production. Meanwhile, Cambodia imports an unrecorded amount of high-quality milled rice from Thailand to meet the need of high-income consumers in large cities like Phnom Penh, Poi Pet, etc.

## **POLICY**

Cambodia's rice trade policy has been changing from a planned economy model into an open market model since Cambodia joined Association of Southeast Asian Nations (ASEAN) in 1999 and World Trade Organization (WTO) in 2004.

Cambodia no longer implements any quantity restrictions on rice imports and exports. Current import duties on milled rice are 7 percent plus a 10 percent of value-added tax (VAT).

The Government of Cambodia (GOC) has made some efforts to improve rice productivities through its establishment of the Cambodian Agricultural Research and Development Institute (CARDI) as an agricultural research center (financially supported by the Australian Government) and by increasing irrigation systems. However, on the marketing side, the GOC does not offer any price support or intervention programs for paddy or milled rice.

There are no clear measures or food security policy to establish a national reserve of rice or putting a distribution in place for poor or disaster-affected citizens.

## **MARKETING**

There are no opportunities for U.S. rice in Cambodia at the moment due to its relatively higher prices. Also, high-quality rice from Thailand as well as the prevailing preference for local varieties among Cambodian consumers makes it a tough market to enter. On the other hand, Cambodia is currently an indirect U.S. competitor in the world rice market in the sense that it exports paddy rice to Vietnam for milling, which in turn is re-exported onto the world market. Cambodia is expected to play a more important role in the global market in the next decade when improved yields and area expansion will efficiently reduce the costs of its exportable surplus.

## II. Corn Section

**PSD Table**

Country Commodity	Cambodia		Corn				UOM
	2004	Revised	2005	Estimate	2006	Forecast	
Market Year Begin	USDA Official	Estimate	USDA Official	Estimate	USDA Official	Estimate	MM/YYYY
	07/2004	07/2004	07/2005	07/2005	07/2006	07/2006	
Area Harvested	90	80	80	67	0	70	(1000 HA)
Beginning Stocks	0	0	0	0	0	0	(1000 MT)
Production	180	320	160	270	0	290	(1000 MT)
TOTAL Mkt. Yr. Imports	0	0	0	0	0	0	(1000 MT)
Oct-Sep Imports	0	0	0	0	0	0	(1000 MT)
Oct-Sep Import U.S.	0	0	0	0	0	0	(1000 MT)
TOTAL SUPPLY	180	320	160	270	0	290	(1000 MT)
TOTAL Mkt. Yr. Exports	0	280	0	220	0	230	(1000 MT)
Oct-Sep Exports	0	280	0	0	0	0	(1000 MT)
Feed Dom. Consumption	0	40	0	50	0	60	(1000 MT)
TOTAL Dom. Consumptic	180	40	160	50	0	60	(1000 MT)
Ending Stocks	0	0	0	0	0	0	(1000 MT)
TOTAL DISTRIBUTION	180	320	160	270	0	290	(1000 MT)

**PRODUCTION**

Cambodia's corn production has grown rapidly in the past decade from about 50-100,000 tons in the late 1990's to 320,000 tons in MY 2004/05. Production in MY 2005/06 is estimated to drop from the 2004/05 level to 270,000 tons, due mainly to unfavorable weather conditions in Pailyn, Battambang, and Banteay Meanchey Provinces, which are the major growing corn areas. A lack of rainfall in July-August 2005 wiped out some portions of these major growing areas while average yields dropped from the previous season.

Based on a recent survey, increased cassava acreage is likely to replace a portion of corn area in 2006, especially in the provinces along the Thailand-Cambodian border. As a result, the growing area for corn is forecast to decline in MY 2006/07. However, given normal weather conditions, harvested area for corn and average yields in MY 2006/07 are forecast to increase from the 2005/06 levels.

The corn area in Cambodia is centered in three provinces along Thailand-Cambodia border, including Pailyn, Battambang, and Banteay Meanchey Provinces. The growing area in these three provinces accounts for 80 percent of the total corn area. The rest of the growing area is located in Kampong Cham and Takeo Provinces along the Mekong River. Although corn production can be divided into three different crops, the main crop is a rainy season crop, which is seeded April-June and harvested in August-October. All growing corn areas in Cambodia are rain fed.

Trade sources reported that Cambodian farmers adopt new agricultural technology very well, especially the use of high-yielding hybrid corn seeds. Charoen Pokphand Group (C.P.) from Thailand has successfully introduced hybrid seeds to Cambodia corn growers. Hybrid seeds dominate about 90-95 percent of the total corn area now. The market share of C.P. hybrid seeds is about 70-80 percent, while the balance goes to hybrid seeds from Vietnam and

other multinational companies. Due to high use of hybrid seeds, average yields of corn grown in Cambodia are about 4.0-4.5 tons/hectare, close to yields in Thailand.

Cambodia has the potential to increase its production to a million tons per annum quite easily in the next 3-5 years because it still has a lot of idle land that can be converted to corn area and there is still room to increase corn productivities through increased use of fertilizer and improved irrigation systems.

## **CONSUMPTION**

Corn is used as feed ingredients for livestock and poultry feeds (hog feed, broiler feed, and duck feed), accounting for about 50 percent in feed rations. Demand for corn for feed processing is limited to 40-50,000 tons per annum because the livestock and poultry sectors in Cambodia are small. Charoen Pokphand Cambodia (C.P. Cambodia) from Thailand is the only commercial feed mill in Cambodia, accounting for 80 percent of total feed production, while the rest belongs to non-commercial feed produced in medium-scale livestock farms (mostly hog farms).

Domestic corn consumption is forecast to grow 10-20 percent per annum during the next few years due to an ongoing emergence of new livestock and poultry farms in Cambodia. C.P. Cambodia has just expanded its production capacity and plans to double their feed production from about 55,000 tons in 2005 to 80-100,000 tons in 2006.

## **TRADE**

Cambodia does not import any corn. Official trade data on corn exports does not reflect actual trade, as most exports are unofficial border-trade. It is estimated that 80-90 percent of the exported corn goes to Thailand, and the rest to Vietnam. In MY 2005/06, Cambodian corn exports is estimated at 220,000 tons.

## **POLICY**

Like rice, the GOC has no any price support nor price intervention programs for corn. Import duties are the same as those for rice (7%) plus 10% value added tax (VAT).

## **MARKETING**

Market opportunities for U.S. corn in Cambodia are minimal due to its small feed market. On the other hand, increased Thai imports of corn under ACMECS' favorable zero-rate tariff from neighboring countries including Cambodia may impose some threat to U.S. exports of corn to Thailand in the future.

End of Report.