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## China, Peoples Republic of

### Frozen Potato Products

### Potato and Frozen Potato Products Annual

### 2009

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**Report Highlights:**

China's fresh potato production in MY08/09 is forecast at 65 million metric tons (MMT), not much change from the previous year. In the past two years, about 10 percent of China's potato acreage shifted to other plantings due to the growth in grains production. Processed potato products are forecast to increase by 10 percent due to the rapid expansion of western style and fast food outlets. Frozen french fry (FFF) consumption is estimated to increase 10 percent in MY08/09 and another 15 percent in MY09/10. Imported FFF in MY07/08 is estimated at 57,200 metric tons (MT) while FFF production is estimated to account for over half of China's total domestic consumption in MY07/08.

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## Executive Summary

China's fresh potato production in MY08/09 is forecast at 65 MMT. In MY08/09 potato production became a viable source of income for many grain, coarse grain, and oilseed farmers. Although the growing conditions are not optimal for potato production, processors have continued increasing the amount of contracts for processing potatoes. Contract farming represents the industrial sector's commanding influence in China's farm production. Local governments have played an encouraging role, in response to strengthened consumer demand, by establishing support policies that favor the expansion of the potato planted area. Compared to grain crops, potato production receives much less government support at the national level and relies much more on market prices and provincial (including local or county and village-level) government support.

Potatoes are one of several varieties of starch consumed in China. Historically, potatoes were used to supplement food rations; however, they are not considered as an essential part of an average Chinese consumer's diet. The expansion of Western fast food chains such as McDonald's and Kentucky Fried Chicken and the growth in snack food consumption such as potato chips, has led to an increase in potato consumption in China. The processing sector is the main driver behind the expansion in production.

## Production

### Fresh potatoes

#### China's potato production remains stable in past years

According to MOA's latest Regional Priority for Potato Development Planning (2008-2015), by 2015, China plans to expand its potato acreage to eight million hectares, with total production at 150 MMT, 25 percent of production devoted to the processing sector, and with storage spoilage rates that do not exceed 10 percent of total production.

China's potato output has not significantly grown in the last four years even though the planted area has increased by 12 percent. Soil quality problems due to blight infested harvests are a result of late annual rainfall have hampered yields. Notwithstanding, China remains the world's largest potato producer, with output in MY07/08 of 64.7 MMT, or more than 20 percent of the global harvest. Although China's potato output is lower than corn and sweet potato production, more than 80 percent of corn and 40 percent of the sweet potato production are used as animal feed.

The vast majority of potato production is on marginal land, mainly mountainous areas with poor soil conditions, though some larger scale production operations can now be found in more fertile areas of northeast and south central China. The major potato producing provinces are Inner Mongolia, Gansu, Yunnan, Guizhou, Sichuan, and Heilongjiang. In northeast China's Inner Mongolia and Shanxi provinces, potato sales account for more than half of total rural household earnings. The potato production and harvested area have increased over the last 20 years with a slight leveling off in the past four years. Yields have been more erratic over the last twenty years possibly because potatoes are not a staple crop that is supported by government policy and is often grown on marginal lands with fewer inputs.

#### Local governments support potato processing sectors

At the municipal level, many local governments have shown support for potato production. If the local governments invest in the development of storage facilities, irrigation systems, and local infrastructure development, processors are more likely to maintain contracts in a particular village. In the long run, Post foresees China's potato processing industry engaging in a growing number of joint cooperation projects with local governments to support

infrastructure development and to strengthen the marketing channels in exchange for investment, job creation, and greater tax revenue generation.

According to MOA, in 2007, about one million ha of potato acreage were contracted by processors. Contracted land for commercial potato production ranges from 1.2 to 6.67 ha per household. These are relatively large land contracts compared to those seen on Post's field visits where average contracts ranged from 0.67 to 1 ha per household. This is because of greater land availability in certain northeast provinces such as Inner Mongolia and Hebei.

Farmer organizations such as cooperatives are not yet prevalent in most of China even though legislation was passed to support user-owned and controlled supply cooperatives in October 2006. When the legislation was recently adopted, there were high expectations from many agricultural experts in China and abroad about the implications this new policy would have on agricultural production. Many believed the law would open doors to farmers by allowing them to control prices and become independent producers. Unfortunately, Post's visits throughout rural China confirmed that the legislation has had little impact on the number of operational cooperatives mainly because farmers are still not in a position to control investment and supply. China's potato farmers ultimately lack the storage facilities to market to outside channels. According to MOA, there were over 300 potato specialized cooperatives in China as of 2007.

## **Processed potatoes**

### **China's potato processing sectors are expected to develop quickly in coming years**

Processed potatoes account for about eight percent of total production, with starch, chips, FFF, and dehydrated potatoes as the most prominent products. Starch milling accounts for about five percent of total processed potatoes; however, the decline in corn prices and the growing demand for processed potatoes will result in a decline in potatoes destined for starch production.

Post's market intelligence indicates that China's potato processing enterprises amount to about 5,000, among which about 140 are large and integrated processing enterprises. China's potato starch processing capacity is estimated at 600,000 MT per year, with about 70 enterprises' capacity at over 10,000 MT. These enterprises are mainly located in Heilongjiang, Inner Mongolia, Ningxia, Gansu, Yunnan, and Guizhou provinces. Dehydrated potatoes processing capacity is at 100,000 MT, with 12 processors, mainly located in Inner Mongolia, Gansu, and Shanxi provinces. There are four FFF processing lines in China with processing capacity at about 100,000 MT, mainly located in Beijing, Heilongjiang, Shanxi, and Gansu provinces. Potato chips processing capacity is at 160,000 MT, mainly located in Fujian, Guangdong, Jiangsu, Shanghai, and Sichuan provinces.

### **FFF production is forecast to increase 8 percent to 70,000 MT in 2008/09**

Post forecasts China's FFF production at 70,000 MT, an eight-percent increase from the previous year due to strong consumer demand. There are a total of four FFF production lines located in the Beijing Municipality, Heilongjiang, Shanxi, and Gansu Provinces with a possible addition in mid-2009. Although FFF production capacity exceeds 100,000 MT annually, these plants are operating at only 50 percent capacity due to poor storage facilities and quality issues. However, even with strong demand, and favorable returns for potato growers, outstanding issues continue to limit the processing season to approximately four months out of the calendar year.

### **Potato chip production is estimated at 80,000 MT**

According to industry sources, in MY2008/09, there are approximately 20 potato chip production plants in China generating over 80,000 MT of fried potato chips. Processors are

interested in maintaining consistent characteristics from most of their top chip producers, and seldom make purchases from independent growers or growing regions. Industry leaders contend that consistency in chips and FFF is more important than reducing spoilage. Potatoes used for potato chip and FFF production have specific requirements that include variety, starch/sugar content, size, and shape. Such quality-specific potatoes require tailored growing conditions and regimented irrigation and fertilizer applications. Industry analysts believe that contractual demands will encourage consolidation and scaled production. Contract farming represents the industrial sector's commanding influence in China's farm production.

### **China's potato starch processing sector is developing rapidly**

China's starch production has expanded greatly since February 2007 when an antidumping duty was placed on all European potato starch imports (see Trade section). Industry estimates total starch production capacity at 600,000 MT as of 2008, and actual production at around 350,000 MT in MY2007/08. China has thousands of starch plants of varying sizes, five of which produce at capacities over 30,000 MT. The central government has provided guidance to the food processing sector via an 11<sup>th</sup> Five-year Plan during 2006-2010. This direction was interpreted by the China Starch Industry Association to include a 20-percent annual increase in the production goals. Potato starch production demand is strongly supported by the food processing sector and other industrial sectors such as textiles, paper milling, chemical, and pharmaceutical products.

In the food processing sector, potato starch is used to produce vermicelli noodles, a popular local dish especially used in "hot pot" dishes. Instant noodle manufacturers are also a major potato starch consumer; however, this industry tends to switch to alternative feedstock when potato prices run high. Potato starch is commonly used in the bakery sector to increase and retain moisture content in addition to increasing the product's shelf life.

### **Dehydrated potato production is estimated to increase 30 percent to 40,000 MT in MY2008/09**

Dehydrated potato production in MY2008/09 is estimated at 40,000 MT, a 30-percent increase from the previous year mainly attributed to the growth in consumer demand for compressed chips. Dehydrated potato is also used in other snack foods and in Western-style dishes like mashed potatoes. According to industry sources, the increase in popularity of Western-style fast food restaurants is driving the demand for dehydrated potato, expanding the sector on average 20 to 25 percent annually since 2004.

### **Prices and costs**

#### **China's fresh potato prices have been increasing since 2005**

Since 2005 fresh potato prices have strengthened and the expectation is that the trend will continue appreciating at a six to nine percent rate throughout 2009 and 2010. Growing demand, increasing input costs (oil and fertilizer) that trickle down to marketing and transportation costs are the main contributors to the increase in prices.

#### **A simultaneous increase also occurs on costs**

Fixed assets for potato production are limited; a simple hand tractor is often the only machine owned by the majority of growers. The hand tractor is a convenient and inexpensive means for farmers to transport their product from the field to their homes or local markets. The small number of fixed assets hints at two features of potato production. First, most potato growers have limited capital for purchasing equipment, and secondly, the majority of production is harvested manually and only requires limited equipment.

Interviews with potato suppliers from Inner Mongolia Province were conducted by Post in 2008 to better understand per ton costs of potatoes sold in wholesale markets in Beijing. According to these brokers, the most significant costs were in marketing and transportation. Fuel prices, which are determined by the central government, have increased about 18 percent since these interviews were conducted. The central government recognizes the burden of increased fuel prices on producers and consumers in urban areas and thus subsidizes highway toll fees for trucks transporting agricultural commodities.

Table 1: Wholesaler Potato Supply Costs: Inner Mongolia to Beijing U.S. \$/ton (RMB/ton)

Activity	U.S. \$/ton	(RMB/ton)
Purchase Price	102.34	700
Broker Fee	2.92	20
Transportation	21.93	150
Labor Costs	2.92	20
Market Tax	1.46	10
Other expenditures	8.04	55
Total Cost	139.62	955
Wholesale Price	146.20	1,000
Profit	6.58	45

Source: Market Research, Beijing, October 2007

In 2007, the average annual income gained from selling potatoes was \$790.77 (5,404.88RMB) per household. After costs were deducted, the average net income per household was \$145.35 (994.17RMB).

## Consumption

The China Potato Association estimates that about 30 percent of fresh potatoes are produced for table consumption, 30 percent for feed, 22 percent used as feedstock for further processing, 10 percent for other usage, and eight percent for seed potato. Post believes that while these estimates are not official figures, they are the most accurate information available for this market. Additionally, about 15 to 20 percent of total production is lost to waste due to lack of cold storage infrastructure (including transportation). Proper storage is a major limiting factor for the processing industry to expand production.

While U.S. frozen potato products dominate the Chinese market with nearly a 75 percent market share, competition is strong from both third country and domestic producers. However, locally produced potatoes are not ideal for processing and freezing because they possess lower solid content combined with a higher water content compared to imported frozen products. With an increase in sales of 10-30 percent annually for major international processed potato manufacturers with facilities in China, confidence in the market remains high for importers. New shapes and varieties are increasingly being introduced to the market, reflecting progressively more sophisticated consumer demands. Shapes such as twister, cross-cut, and wedges continue selling well, but the classic shoestring cut remains a favorite. All of these trends have created a wider variety of dining choices for consumers.

### FFF consumption is expected to increase

During MY07/08, China's domestic FFF consumption increased an estimated 15 percent to 112,000 MT. Western style food outlets are the largest FFF consumers in China, accounting for 75 percent of total consumption. In addition to the quick expansion of the leading foreign fast food suppliers like KFC and McDonalds, local chain fast food service outlets have also grown at a rapid pace. The remainder is marketed through HRI outlets and retail stores (20 and 5 percent, respectively).

**Potato chips are becoming a popular snack food in China**

The use of potatoes for chips is evolving quickly as the snack food market strengthens. Deep-fried snacks are increasingly popular items in China for all generations, especially the young. Crispy texture and diverse flavorings make potato chips a good fit for this snack food niche. Major international potato chip makers are still the leading players, while local producers have limited market share and product variety. With Chinese consumers possessing greater disposable incomes, working longer hours and having less free time, portable snack foods such as potato chips are gaining popularity especially among those below age 35. One drawback to potato chip consumption compared to other snacks is the use of deep frying and treatment with MSG and preservatives to prolong shelf life. To keep potato snacks competitive, major international manufacturers are developing baked products instead, which would reduce fat content by more than 10 percent. One potato chip company is also introducing an enriched snack food product line that can be consumed for breakfast and claims to have reached a high sales volume, expecting 10-percent annual growth in sales.

**Demand for starch and dehydrated potatoes continue to rise**

Dehydrated potato consumption continues to climb and are widely used in food processing, baking, mashed potatoes, and snacks. Although the price-driven Quick Service Restaurants (QSR) demands low-cost inputs, international QSR chains such as KFC are not usually willing to compromise product quality, and therefore continue to seek imported alternatives to the low-quality domestic dehydrate potato products.

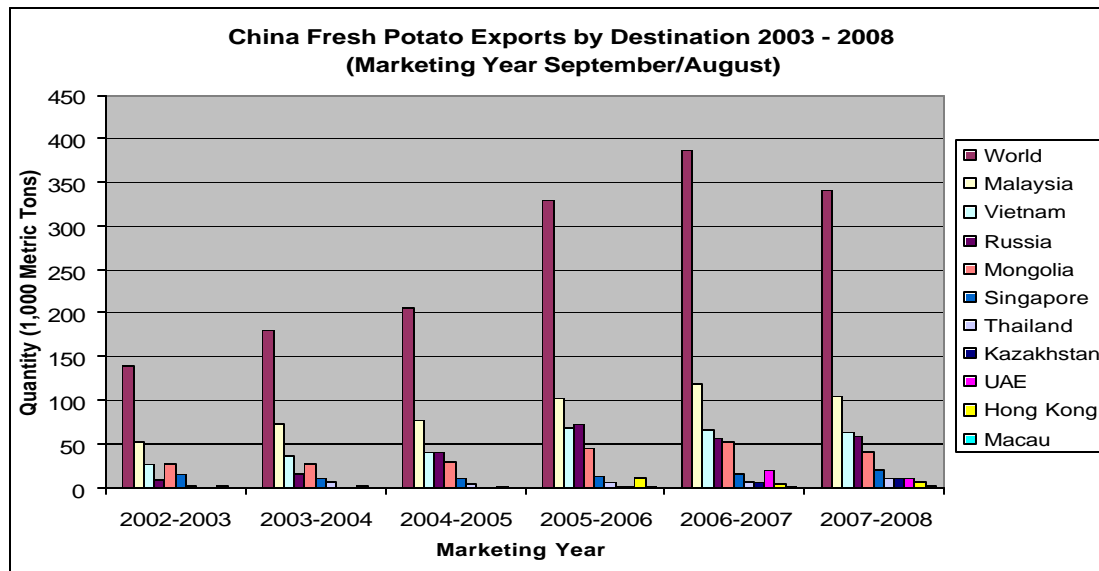
**Trade****No market access for fresh potato imports**

Market access for all fresh potatoes (table stock and chipping potatoes) is a top priority for the United States potato industry. The U.S. potato industry is seeking market access for the northwest (Idaho, Washington, and Oregon) potatoes. In 2006, the U.S. potato industry requested China's quarantine and inspection authorities conduct a pest risk assessment on U.S. fresh potatoes. Although technical discussions are ongoing, China's foot-dragging on this market access request has greatly limited progress.

**Fresh potato exports leveled off at around 350,000 MT in the past three years**

Malaysia, Vietnam, and Russia are the three largest export markets which account for about 65 percent of China's fresh potato exports. Compared to the 65 MMT for domestic production, China's fresh potato exports although small, are growing.

Figure 1: Fresh Potato Exports by Destination 2003 - 2008



**China's FFF imports in MY2008/09 are forecast to increase 8 percent to 62,000 MT, and exports are forecast at 10,000 MT**

China's FFF(H.S. Code: 20041000) imports in MY2008/09 are forecast at 62,000 MT, an eight-percent increase from the previous year due to the rapid expansion of western style and fast food outlets. Industry contacts believe that China's FFF market will continue its moderate expansion over the next few years. The United States still dominates China's imported FFF market, accounting for about 80 percent of China's total imported frozen potatoes in MY2007/08. Canada and Belgium take the other 20 percent market share.

China's FFF exports in MY2008/2009 are forecast at 10,000 MT. China exported 9,584 MT of FFF in MY2007/08, of which, 94 percent went to Japan. Industry contacts indicate that the majority of China's exported FFF is still sourced from imported products.

**China's potato starch imports declined sharply since 2007**

China's potato starch (H.S. code: 11081300) imports declined sharply from 95,839 MT in MY2005/06 to 18,798 MT in MY2006/07 and 13,307 MT in MY2007/08 due to China's anti-dumping duties on imported starch from EU countries in February 2007. The Netherlands, North Korea, and Germany are major suppliers of potato starch to China, accounting for about 90 percent of China's total potato starch imports in MY2007/08. Industry sources indicate that China's domestic potato starch production expanded rapidly in the past two years to meet strong demand from the food processing, textile, and paper milling industries.

Table 2 China's Tariff Rates

China Tariff Rates			Trade Agreement Partner Nations				
HS Code	Potato Imports	MFN*	ASEAN	Pakistan	Chile	GEN*	VAT*
0701.1000	<b>Fresh</b> , (including seed) (KG)	13.00%	0.00%	10.90%	0.00%	70.00%	13.00%
0701.9000	<b>Fresh</b> (not elsewhere specified (NESOI), except seed) (KG)	13.00%	T3**	9.00%	0.00%	70.00%	13.00%
0710.1000	<b>Frozen</b> un/cooked by steaming or	13.00%	T3**	10.90%	0.00%	70.00%	13.00%



	boiled in water (KG)						
2004.1000	<b>Frozen</b> (prepared or preserved (not by vinegar or acetic acid)) <i>*includes FFF</i>	13.00%	T3**	10.90%	9.10%	70.00%	17.00%
1105.1000	<b>Flour</b> , meal and powder	15.00%	8.00%	14.10%	6.00%	50.00%	17.00%
1105.2000	<b>Flakes</b> , granules and pellets	15.00%	8.00%	14.10%	10.50%	50.00%	17.00%
1108.1300	<b>Starch</b>	15.00%	8.00%	14.10%	6.00%	50.00%	17.00%
2005.2000	<b>Chips</b> prepared or preserved other than by vinegar or acetic acid, not frozen).	15.00%	T3**	14.10%	10.50%	70.00%	17.00%

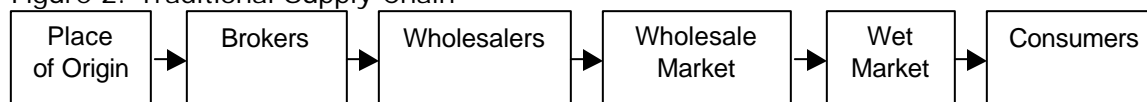
\*MFN, Most Favored Nation; GEN, General; VAT, Value-Added Tax  
 \*\*T3, various tax rates apply to the 10 ASEAN countries.  
 Source:

**Marketing**

**Fresh potato’s supply chain**

Potatoes enter the domestic market through traditional or modern supply chains. The traditional supply chain can be categorized into five sections: production, collection at place of origin, transportation, target city wholesale market, and retail (see Figure 2). In the main production area, a broker plays the role of agent between the farmers and potato purchasers. Most brokers are farmers from the production area. Brokers earn commissions for facilitating a sale, packing the product, and loading the product onto the buyer’s truck. The modern supply chain is simply to purchase product directly from the place of origin and sell to hypermarkets or other end retailers.

Figure 2: Traditional Supply Chain



In order to better understand how potatoes move through the supply chain to wholesale markets, Post commissioned a survey of twenty randomly selected wholesalers at Beijing’s Xinfadi wholesale market. The data collected included: 1) the origin of the potatoes; 2) quantity purchased; 3) how they were purchased (producer’s own goods, purchased at place of production, or purchased from a broker); 4) the broker fee paid; 5) transportation costs; 6) purchase price; and 7) wholesale market price. The wholesale price varies from 0.10\$/kg to 0.18\$/kg, however, there is no corresponding trend connecting how the product was purchased and the selling price. Transportation costs varied slightly but the majority of suppliers paid 0.03 \$/kg. The provinces supplying potatoes to Beijing include Hebei (borders Beijing municipality), Inner Mongolia, and Shanxi Provinces.

**Spoilage is one of the major concerns for China’s fresh potato distribution**

Concerned with spoilage for the development of the supply chain, Chinese researchers have focused on developing disease-tolerant potatoes for processing. However, growing conditions vary from region to region, and some new hybrid varieties respond differently even for the two main varieties for FFF and potato chip processing varieties: Atlantic and

Shepody. Seed research is mainly conducted by universities and research centers. Most of the major processing companies have set-up regional growing centers or stations to ensure a steady supply of feedstock can be produced. Production region stations provide technical support to farmers and also conduct research on developing new varieties that can withstand lower temperatures, light irrigation, high yielding, high starch content, and other attributes.

Researchers also toil over innovative ways to reduce spoilage and improve growing conditions. Presently, the processing industry hedged against spoilage ratios in the short term by expanding production contracts by 10 to 15 percent annually on average. By expanding production, processors can guarantee an adequate supply, eliminating a sudden spike in market prices due to limited supplies, thus removing the incentive for farmers to sell off their crop (partially or entirely) in the open market rather than honor the contractual obligation with processors.

Industry sources revealed that China's seed potato storage capacity in 2008 was at about two MMT, mainly in Inner Mongolia, Heilongjiang, Hebei, and Gansu Provinces. Processing potato storage capacity is estimated at about one MMT, mainly built by large processing enterprises.

### **Processed potato products marketing intelligence**

International Quick Service Restaurant (QSR) chains have been the main drivers for frozen potato sales in China, together with hotels, restaurants, and bars. For longer-term development, the addition of China-based QSRs should provide more opportunities for incorporating frozen, dehydrated, and chipping potatoes into their menus. With the increasing expansion of QSRs in China, market opportunities arise for 2nd, 3rd, and even 4th tier cities. KFC, one of the largest QSR brands, has been opening a new store at the rate of an outlet per day since 2006. At the same time, other international QSRs such as Pizza Hut and McDonalds were also increasing store coverage in China – all of which directly support the consumption of imported FFF.

Developing consistency in taste and quality should be a priority for FFF and chip retailers. Although the Chinese consumer has yet to reach the level of sophistication of other regional markets in North Asia, a new wave of young consumers with a preference for convenient and Western-style diets is being shaped. Western lifestyles frequently portrayed in Western (mostly U.S.) media including music, fashion, television, and movies, are extremely popular with China's youth and also highly influential in developing a market for processed potato products. According to an industry source, developing unique tastes that consumers can distinguish is fundamental to their marketing strategy.

While FFF are available at certain retail outlets, at-home consumption of FFF is still negligible. At-home dehydrated potato consumption could increase significantly but from a very small base. Industry marketing campaigns should target middle class groups with greater exposure to Western media and younger generations that prefer convenient foods and are therefore more likely to incorporate western style food into their diets.

PR and media activities: nutrition campaigns and seminars, HRI sector activities, including chef training in Western as well as Chinese cuisine, and menu promotions are all effective tools for reaching out to local consumers. Additionally, participating in trade shows like Food and Hotel China (FHC) and SIAL (held annually in Shanghai) is a good way to reach importers, traders, distributors, and establish company, and product brand image. Chefs and food service operators are delivering to consumers the message of healthiness, safety, nutrition, and the versatile uses for U.S. imported potato products.

Sampling products in a retail format is a direct and effective way to reach out to consumers and educate them about possible applications and varieties. Rising disposable incomes, longer working hours and shrinking free time are all factors influencing consumer choices. In addition, dietary habits vary regionally, and effective marketing must take these differences into account. For example, in potato chip products, new flavors such as barbeque, red meat, salty foods, seafood (shrimp flavor in particular), and spaghetti are local favorites.

Among the many emerging city markets (ECM), some are identified as having extremely favorable conditions for imported potato products: Wuhan, Chengdu, Chongqing, Nanjing, Hangzhou, Zhengzhou, Harbin, and Shenyang. For U.S. exporters to thrive in the China market, reliable distribution channels are necessary to maintain the integrity of high value products during transport. Frozen potatoes and potato chips require special care to ensure quality. Depending on their location, destinations in Central and West China are usually far from ports and can take longer to reach, thus driving up product costs.

Cold chain logistics and proper product handling are critical areas for imported frozen potato products. Road conditions, temperature, and distance are all factors that can affect product quality, outlook, and final costs. Inviting importers and distributors to participate in a seminar may be beneficial to improving service efficiency and product reliability. The North China market has been traditionally dominated by Beijing and Tianjin, but new market opportunities are arising in Inner Mongolia, Shandong, and Shanxi provinces. Other ECMs in north China also have market potential because many local consumers in those regions favor fried foods.

The industry is yet to be significantly impacted by the financial crisis, as of the time of this report, but some predict that the market will feel the strain by the end of this year, leading to a slow down in demand for high-value products and a rise in demand for low cost items. However, most manufacturers are confident that the current market conditions will continue and that domestic demand will continue to increase.

## Statistics tables

Table 3. Fresh Potato PS&amp;D Table

Country	China, Peoples Republic of								
Fresh Potatoes							(HA)(1000 MT)		
	2006	Revised		2007	Estimate		2008	Estimate	
	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New	USDA Official	Post Estimate	Post Estimate New
Market Year Begin		09-2006	09-2006		09-2007	09-2007		09-2008	09-2008
Area Planted	0	512500	5015700	0		4430300	0	0	4500000
Area Harvested	0	512500	5015700	0	0	4430300	0	0	4500000
Beginning Stocks	0	0	0	0	0	0	0	0	0
Production, Commercial	0	72000	74355	0	0	64790	0	0	65000
Imports	0	0	0	0	0	0	0	0	0
Total Supply	0	72000	74355	0	0	64790	0	0	65000
Exports, Fresh	0	400	400	0	0	300	0	0	300
Processing	0	4320	7400	0	0	6450	0	0	6470
Domestic Fresh Market	0	35700	37000	0	0	32250	0	0	32350
Feed Waste	0	25200	29555	0	0	25790	0	0	25880
Total Dom. Consumption	0	71600	73955	0	0	64490	0	0	64700
Ending Stocks	0	0	0	0	0	0	0	0	0
Total Distribution	0	72000	74355	0	0	64790	0	0	65000

Table 4. Frozen Potato Products PS&amp;D Table

Potato Products, Frozen China	2006			2007			2008		
	2006/2007			2007/2008			2008/2009		
	Market Year Begin: Sep 2006			Market Year Begin: Sep 2007			Market Year Begin: Sep 2008		
	Annual Data Displayed		New Post	Annual Data Displayed		New Post	Annual Data Displayed		Jan
			Data			Data			Data
Beginning Stocks	0	0	0		0	0		0	
Production	45,000	45,000	63,000		50,000	65,000		70,000	
Imports	54,000	55,000	56,800		58,000	57,200		62,000	
Total Supply	99,000	100,000	119,800		108,000	122,200		132,000	
Exports	13,000	15,500	11,900		16,000	9,600		10,000	
Domestic	86,000	84,500	107,900		92,000	112,600		122,000	

Consumption								
Ending Stocks	0	0	0		0	0		0
Total Distribution	99,000	100,000	119,800		108,000	122,200		132,000

Table 5: Processed Potato Imports Including Potato Chips

China: Processed Potato Imports Including Potato Chips								
Marketing Year: September/August								
HS: 200520								
Quantity (MT) Value (U.S.\$ millions)								
Country	2004 - 2005		2005 - 2006		2006 - 2007		2007 - 2008	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
World	73.46	0.116636	48.25	0.194842	189.54	0.441413	76.96	0.384896
United States	43.08	0.063731	22.63	0.103436	152.60	0.295175	36.25	0.182008
Germany	0.59	0.002758	17.71	0.066233	26.13	0.10159	29.04	0.132746
Italy	5.43	0.013218	0.00	0	5.04	0.01265	5.00	0.024824
Poland	0.00	0	0.00	0	1.67	0.010882	1.96	0.015062
Taiwan	0.00	0.010654	0.43	0.006656	0.97	0.004001	0.96	0.005568
Korea, South	20.89	0	2.94	0.001964	0.00	0.004249	0.86	0.0052
Austria	0.00	0	0.00	0	0.00	0	0.83	0.004722
Australia	2.24	0	1.82	0	1.07	0	0.77	0.004719
Japan	0.56	0.002005	0.30	0.002756	0.43	0.003928	0.51	0.004139
Spain	0.00	0.023543	0.00	0.007203	0.00	0	0.35	0.002258

Source: China Customs

Table 6: Potato Starch Imports

China: Potato Starch Imports								
Marketing Year: September/August								
HS: 110813								
Quantity (MT) Value (U.S.\$ millions)								
Country	2004 - 2005		2005 - 2006		2006 - 2007		2007 - 2008	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
World	43,126	18.3083	95,839	35.6889	18,798	8.5482	13,307	9.2603
Netherlands	16,790	6.9540	37,862	14.4189	8,557	3.9214	6,102	4.5289
Korea, North	651	4.8862	676	10.6993	2,226	2.3028	3,021	2.2970
Germany	10,637	0.1361	29,395	0.1352	4,867	0.4904	2,742	1.0241
Denmark	6,551	2.8433	10,762	4.2123	1,562	0.8507	744	0.5615
Japan	251	0.2201	285	0.2035	538	0.4687	474	0.4178
Poland	3,504	0.0000	7,064	0.0154	55	0.0217	84	0.2872
France	2,938	1.2744	8,538	2.8914	406	0.2021	64	0.0582
United Kingdom	0	1.2852	6	2.5779	6	0.0287	49	0.0476
Hong Kong	0	0.0000	0	0.0000	20	0.0220	20	0.0205
Taiwan	0.2	0.0002	0.5	0.0636	6	0.0071	5	0.0096

Source: China Customs

Table 7: Potato Flour, Meal, and Flake Imports

China: Potato Flour, Meal, and Flake Imports								
Marketing Year: September/August								
HS: 1105								
Quantity (MT) Value (U.S.\$ millions)								
Country	2004 - 2005		2005 - 2006		2006 - 2007		2007 - 2008	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
World	2,121	2.065	3,813	3.765	1,295	1.758	1,917	2.865
United States	185	0.228	951	1.296	540	0.777	615	0.887
Germany	1,594	1.457	1,282	1.220	380	0.386	518	0.690
Poland	0	0.000	270	0.315	264	0.390	353	0.614
Netherlands	270	0.290	210	0.236	40	0.044	322	0.494
Thailand	10	0.004	5	0.001	0	0.000	99	0.152
Spain	29	0.062	29	0.058	67	0.152	10	0.025
France	0	0.000	600	0.204	0.546	0.001	0.294	0.001
Belgium	0	0.000	170	0.156	0.798	0.002	0.1	0.000
Denmark	18	0.017	252	0.238	0	0.000	0.05	0.000
Italy	0.07	0.000	0	0.000	0	0.000	0.034	0.000

Source: China Customs

Table 8: Frozen Potato Imports Including FFF

China: Frozen Potato Imports Including FFF								
Marketing Year: September/August								
HS: 200410								
Quantity (MT) Value (U.S.\$ millions)								
Country	2004 - 2005		2005 - 2006		2006 - 2007		2007 - 2008	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
World	61,782	45.90	54,782	40.85	56,788	52.06	57,193	56.07
United States	41,453	31.69	33,662	25.79	38,524	35.51	46,562	45.78
Canada	13,131	9.49	16,147	11.60	15,418	14.01	7,495	7.54
Belgium	1,773	1.20	1,635	1.17	713	0.65	2,475	2.11
Netherlands	151	0.09	282	0.21	107	0.11	497	0.41
Japan	0.1	0.00	40	0.03	111	0.14	136	0.19
Egypt	525	0.29	504	0.28	479	0.42	24	0.02
France	0.108	0.00	0.972	0.00	8	0.04	3	0.02
Germany	84	0.06	0.204	0.00	1	0.00	1	0.00
United Kingdom	0	0.00	0	0.00	0	0.00	0.067	0.00
Italy	0	0.00	0	0.00	0	0.00	0	0.00

Source: China Customs