



USDA Foreign Agricultural Service

GAIN Report

Global Agriculture Information Network

Template Version 2.09

Voluntary Report - Public Distribution

Date: 7/23/2004

GAIN Report Number: TH4082

Thailand

Product Brief

Snack Foods Industry

2004

Approved by:

Russ Nicely, Acting Agricultural Counselor
U.S. Embassy, Bangkok

Prepared by:

AgriSource Co., Ltd., Bangkok, Thailand, and Vladimir Diaz, Marketing Specialist

Report Highlights:

Thailand's snack foods market is currently one of the largest and most diverse in the Asia-Pacific region, with an estimated value of \$280 million and over 2,000 competing brands. Asian style snacks account for 75% of the market and Western style snacks have become more popular in recent years, accounting for the remaining 25% of the market. The market has been growing consistently while consumers taste and preferences are constantly changing and becoming increasingly sophisticated. Resulting in sales opportunities for U.S. exporters in the following market segments: potato chips, extruded snacks, fish snacks, prawn crackers, and peas and nuts. The main factors driving consumers purchasing decisions include: taste and favor, price, and healthy snacks.

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

TABLE OF CONTENTS

Section 1. Market Summary	3
Section 2. Market Sector Opportunities & Threats	4
Section 3. Cost & Prices	32
Section 4. Market Access	33
Section 5. Key Contacts & Further Information	34

SECTION 1. MARKET SUMMARY

Thailand's snack foods market is one of the largest and most diverse in the Asia-Pacific region, with an estimated total value of \$280 million and more than 2,000 competing brands. The market is divided into five main segments: potato chips, extruded snacks, fish snacks, prawn crackers, and peas and nuts. Asian style snacks account for 75% of the market and Western style snacks are becoming increasingly popular, accounting for the remaining 25% of the market. The main factors driving consumers purchasing decisions include: taste and flavor, price and healthier snacks.

Thailand's snack market has strong potential for growth. Estimated per capita consumption of Western style snacks is still very low compared with other Asian countries, such as South Korea and Japan, which have per capita consumption more than twice that of Thailand. Although the Thai snack market is currently growing, the market for imported ingredients used in snacks may not continue to grow at the same rate due to price sensitivity of most consumers. Many snack producers cannot use imported ingredients in their products because this increases production costs. Consequently, producers are attempting to obtain more of their materials domestically to reduce cost.

Advantages and Challenges for U.S. Exporters of Snack Food in Thailand

Advantages	Challenges
Premium products are more likely to use U.S. ingredients due to higher quality.	Ingredients from other countries are usually cheaper than the U.S.
Bangkok market is adopting a more Western diet – increasing popularity of Western style snacks such as potato chips.	The fluctuating value of Thai baht had made it difficult to purchase ingredients from the U.S. and other countries.
The premium price snack market consist mainly of expats and tourist in major cities such as Bangkok, Chiang Mai, Pattaya, and Phuket.	Local types and flavors of snacks may be more popular and cheaper. Many of these snacks use only local raw materials and ingredients.
Companies are using Thailand as a base for exports to China, Burma, Vietnam, Laos, Cambodia, Indonesia, Singapore, and other regions.	Frito-Lay and Berli-Jucker are concentrating on using local supplies. Both companies have invested heavily to increase potato production in Thailand.
The Thai snack market has been growing constantly and has significant potential for increased growth.	
Many companies are developing new products that may require the use of imported materials and ingredients. These ingredients are often not available locally.	

SECTION 2. MARKET SECTOR OPPORTUNITIES & THREATS

2.1 Market Size

Thailand's snack food market is incredibly diverse, with an estimated 2,000 different snack brands. It is estimated that at least 360 brands of salty snacks are available, of which 80% are actively promoted, according to industry sources. The majority of these snacks are Asian style snacks. However, Western style snacks have become more popular in recent years, with potato chips now comprising a large percentage of the Thai snack market. This is primarily due to Frito-Lay's pioneering efforts to increase the popularity of potato-based snacks in the Thai market.

The recovery of the Thai economy after the severe financial crisis that struck the country in 1997 has had a positive effect on the snack food industry. According to data gathered from major snack manufacturers, the market is estimated to be worth approximately \$280 million, per year. This makes the Thai snack food market one of the largest in the Asia-Pacific region.

The market is generally classified into five main segments: potato chips, extruded snacks, peas and nuts, fish snacks, and prawn crackers. The potato chips market is estimated to account for 30% of the overall snack market. Extruded snacks are believed to make up the largest percentage of the entire snack market, accounting for around 35% of the total. Prawn crackers, dry peas and nuts, and fish snacks each account for about 10% shares of the market. These estimates exclude the many snacks manufactured by smaller Thai companies and home-based producers, particularly those who sell their products in rural areas of Thailand. It is virtually impossible to gauge the sales volume of these products, so the actual size of the entire Thai snack market is also difficult to estimate.

2.2 Trade in Snacks

Thailand's import of snack foods is difficult to quantify. Thai customs does not break down the imports into specific categories that help to provide accurate data. It is possible, however, to provide a rough estimate of certain categories of snacks.

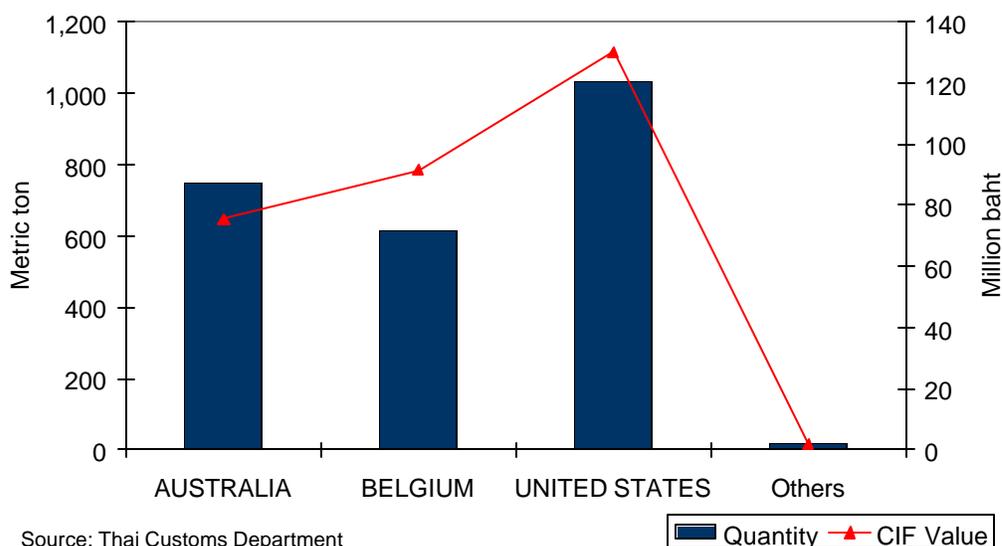
2.2.1 Imports of Processed Potatoes (HS 2005.200.004)

The Harmonized System (HS) code category 2005.200.004 for processed potatoes includes mainly potato chips and therefore is a fairly accurate indication of imports of this type of snack. The major exporters of processed potatoes to Thailand over the past several years have been the U.S., Belgium, and Australia.

2001

The total volume of processed potatoes imported to Thailand in 2001 was 2,416 metric tons with a value of nearly 300 million baht (Chart 1). Only three countries accounted for 99% of total import quantity and value in this category. The U.S. was the leading supplier, with volume totaling 1,034 metric tons worth over 130 million baht. Australia ranked second in quantity with 748 metric tons, but was third in value with 75.5 million baht. Belgium was the third largest supplier in volume terms with 614 metric tons. It ranked second in value with 91.5 million baht.

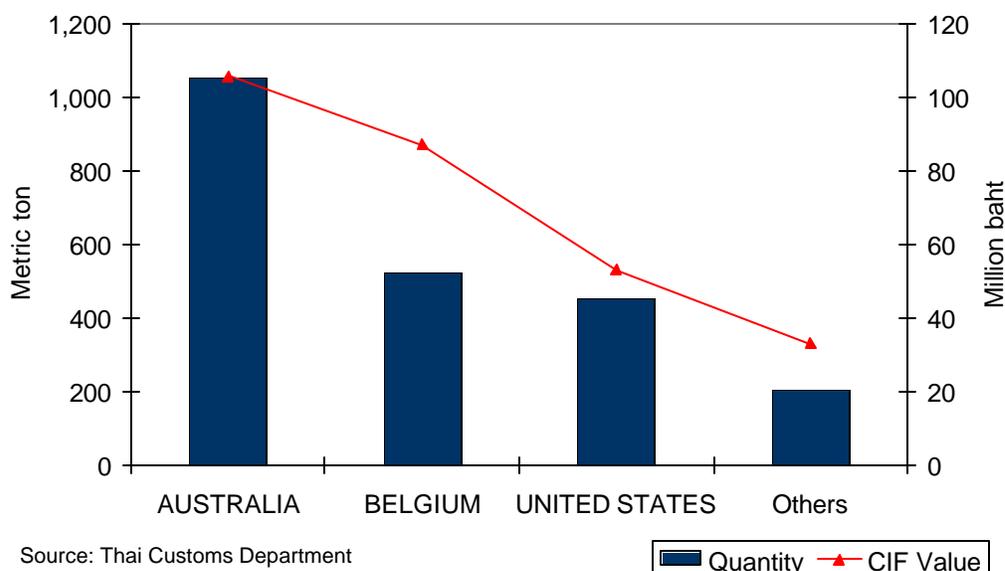
Chart 1: Thailand's Import Volume and Value of Prepared Potatoes, Not Frozen (HS 2005.200.004), 2001



2002

In 2002, the U.S. dropped to third in overall quantity and value of imports. Australia was the leader in both quantity and value of exports, with 1,054 metric tons worth over 105 million baht. Belgium ranked second, with quantity of 521 metric tons and value of about 87 million baht. The U.S. was third in both quantity and value with 454 metric tons valued at nearly 53 million baht (Chart 2). This was a significant drop for the U.S. from the previous year. Overall, imports from Australia, Belgium, and the U.S. accounted for 91% of total quantity and 88% of total value, but the three countries' share of the market dropped from 2001. This was primarily due to U.S. imports decreasing by more than half from the previous year. Imports from Asian countries, particularly China and Malaysia, increased dramatically compared to 2001.

Chart 2. Thailand's Import Volume and Value of Prepared Potatoes, Not Frozen (HS 2005.200.004), 2002



2003

The U.S. has been the leading supplier through the first four months of 2003. Imports from the U.S. during this period already topped the previous year's total, while imports from Australia and Belgium have declined. U.S. imports totaled 568 metric tons valued at over 65 million baht, accounting for 81% of total import quantity and 75% of total value in this category.

2.3 U.S. Snack Exports to Thailand**2.3.1 Potato Chips**

Table 1 shows that export of U.S. potato chips to Thailand experienced a sharp increase in 1999, rising nearly three-fold over 1998. Exports were slightly less in 2002. In 2001, the total declined significantly, falling from \$5.85 million and 2,118 metric tons in 2000 to only \$1.6 million and 600 metric tons. Imports decreased even more in 2002, falling to 352 metric tons worth \$1.14 million. The first five months of 2003 have seen a significant recovery for exports, with Thailand's imports at 525.4 metric tons of potato chips valued at \$1.7 million. This is a 436% increase in total tonnage and a 470% increase in total value over the same period in 2002.

Table 1. U.S. Exports to Thailand: Potato Chips (HS 2005.200.020), 1998-2003

\$ and MT	1998	1999	2000	2001	2002	Jan-May 2002	Jan-May 2003	Percent change
Value (thousands)	2,197	6,230	5,848	1,596	1,144	298	1,703	470%
Quantity	868	2,305	2,118	601	352	98	525	436%

Source: FAS/USDA

2.3.2 Popcorn

Table 2 shows that U.S. exports of popcorn to Thailand have been on a decreasing trend. Exports in 1998 totaled 2,617 metric tons valued at \$1.45 million. Exports in 2002 declined to 1,605 metric tons worth \$824,000. This trend has continued into early 2003 with export value down 43% and export quantity down 50% compared to the same time period in 2002.

Table 2. U.S. Exports to Thailand: Popcorn (HS 1005.904.040), 1998-2003

\$ and MT	1998	1999	2000	2001	2002	Jan-May 2002	Jan-May 2003	Percent change
Value (thousands)	1,453	1,065	1,001	1,085	824	345	197	-43%
Quantity	2,617	2,515	2,769	2,213	1,605	678	340	-50%

Source: FAS/USDA

2.3.3 Nuts and Seeds

Table 3 shows the data for U.S. exports of prepared nuts and seeds to Thailand. While exports of groundnuts have decreased significantly, exports of other nuts such as almonds and pistachios have been increasing. Exports of groundnuts have decreased to only 5.2 metric tons in 2002 worth \$15,000 from 137.6 metric tons worth \$351,000 in 1998. This decrease in groundnut exports has been offset by the increase in exports of other nuts, such as almonds and pistachios, which has seen export totals increase from 29 metric tons worth \$141,000 in 1998 to 113 metric tons worth \$588,000 in 2002. There have been no exports of groundnuts to Thailand through the first five months of 2003, while exports of other nuts and seeds have already surpassed 2002 totals with a total value of \$650,000.

Table 3. U.S. Exports to Thailand: Prepared Groundnuts, Other Nuts, and Seeds (HS 200811, 200819), 1998-2003

\$ and MT	1998	1999	2000	2001	2002	Jan-May 2002	Jan-May 2003	Percent change
Value (thousands)	592	519	700	481	603	480	650	35%
Quantity	167	163	185	166	118	87	97	11%

Source: FAS/USDA

2.4 Consumption Trends & Outlook

2.4.1 Consumer Tastes & Preferences

Many Thai snack food producers believe that consumer tastes and preferences are changing very quickly – they are always willing to try new products and flavors. As a result, companies also need to continue offering new flavors so that consumers have more variety to choose from. Offering consumers a larger product selection allows snack companies to sell to a wider range of consumers and helps individual companies maintain their market share. As a result, many companies have spent a large amount of money on research and development of new snack products and flavors.

The Thai snack market is highly fragmented, so companies must regularly monitor changing consumer preferences. This became increasingly important after the economic crisis in 1997 due to the decline in consumer purchasing power. Even during the recent economic recovery, consumers are switching to lower priced products. For example, in an attempt to maintain their current consumers and gain a larger market share, Frito-Lay is selling large packets of snacks that offer 20% more content, while maintaining current prices. The company's other strategies include launching products in local flavors and a campaign to give customers a free packet for every two they purchase.

Taste and Flavor

According to market research, most companies need to launch new flavors constantly in order to keep up with the increasing market size and changing consumer tastes and preferences. For example, the market for potato chips has been increasing. More Thai

consumers are eating potato chips, so manufacturers are coming out with new flavors in an attempt to capture a larger share of this lucrative market. Successful companies invest heavily in research and development.

Two of the latest flavor innovations are seaweed and wasabi flavored products. Many companies have decided to produce one or both of these flavors and have provided large marketing budgets to push these new products. Initially, these new flavors have done very well in the market. However, it remains unclear if they will be able to withstand the test of time. Many new flavors enter and exit the market very quickly, so only the best tasting products and flavors can survive.

Price

Almost all companies believe that Thai consumers are very price sensitive. A slight increase in the price of any product could cause sales to plummet, as consumers will switch to other competing snacks. Due to this price sensitivity of the majority of Thai consumers, high-end products make up a very small percentage of the overall market. The main consumer groups for these high-end products are primarily expatriates, wealthy Thais, and tourists. The market for high-end snack foods is thus estimated to be no more than 10% of the entire snack food market.

The lack of a sizeable market for high-end snack foods makes it very difficult for most Thai snack manufacturers to use imported ingredients. These ingredients are only used when equivalent or similar domestic ingredients are not available. Imported ingredients also are usually prohibitive in terms of cost, since the use of these ingredients usually means that companies need to increase prices. Due to the price sensitivity of consumers noted above, these price increases can be severely limit sales.

According to research, most Thai consumers do not care if a product is imported or not. However, consumers are mainly concerned with price. As a result, companies are forced to keep prices low. The demand for higher priced imported raw materials and ingredients will gradually decline. The only imported materials that will be purchased are those that are absolutely required and not available in the domestic market.

Health Consciousness

Increasing health and nutrition consciousness by many Thai consumers is another fast-growing trend. Eating healthier snacks and other foods has become an important part of this trend. Many health conscious consumers may have shied away from snack foods in the past, due to the common perception that snack foods are unhealthy. However, many companies are trying to overcome this perception by providing snack foods that are more nutritious. One example is the switch to new manufacturing processes, such as baking instead of frying. Another example is the increasing focus on health and nutrition in advertising and promotion campaigns.

2.4.2 Factors Impacting Consumers' Purchasing Decisions

According to snack producers, the factors impacting consumers' purchasing decisions, in order of importance, are as follows: taste and flavor, price, packaging and design, and package size.

2.4.3 Per Capita Consumption

Estimates of per capita snack consumption in Thailand vary significantly, ranging from a low of one small pack per week to a high of 10 small packs per week. The largest manufacturers set their estimates at around four to six small packs per week. Small packs for these companies are in the range of 15-25 gram packs.

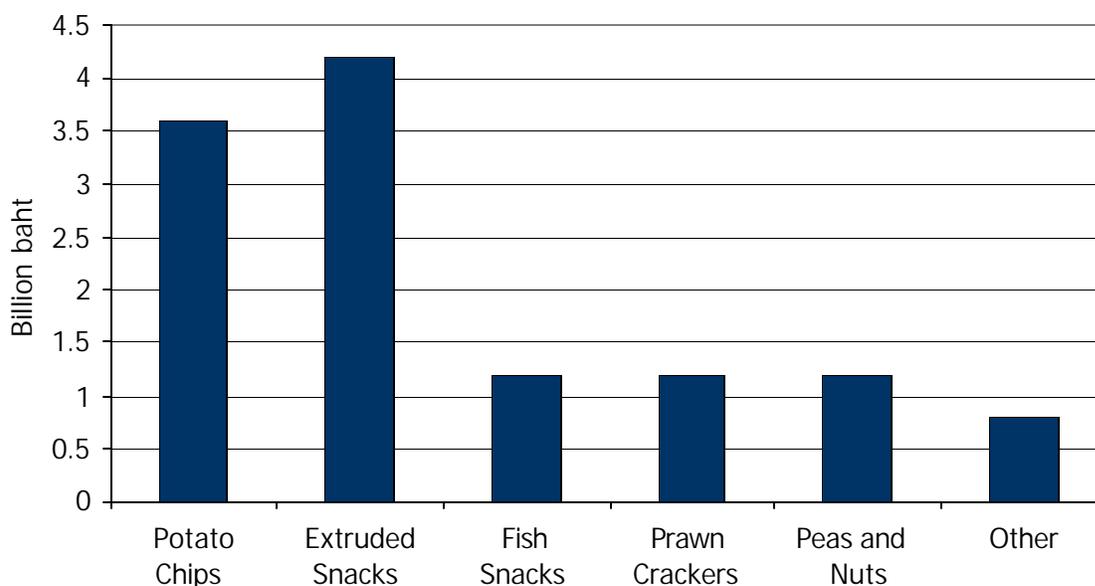
Per capita consumption is very difficult to accurately measure beyond these estimates because snacks consumed by a percentage of the population are locally produced products made by small rural manufacturers. It is therefore difficult, if not impossible, to estimate actual production and consumption.

According to industry sources, per capita annual consumption of potato chips in Thailand in 2001 was about 400 grams. With a population of over 60 million and 400 gram per capita consumption, Thailand’s total annual potato chip consumption is therefore about 24 million kilograms. Thailand’s per capita potato chip consumption was significantly lower than the U.S., which has a per capita consumption of 8 kilograms. Japanese and European consumption is estimated to be four kilograms, while South Korea’s consumption is two kilograms. It is also estimated that total snack consumption in Thailand was one kilogram per person per year and added that the UK’s snack consumption was upwards of four kilograms per person per year.

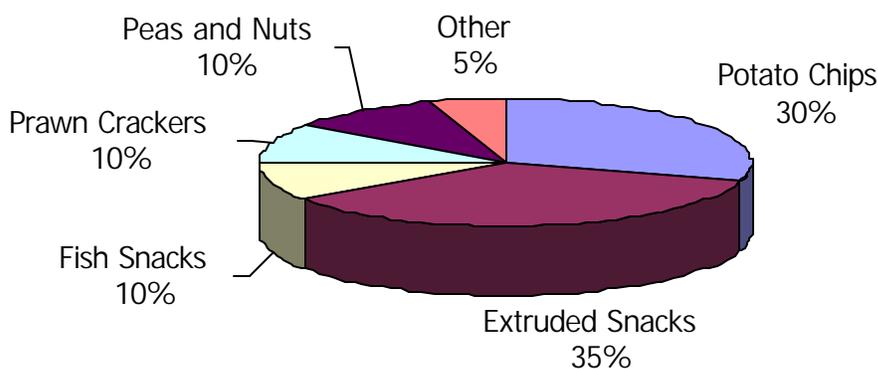
2.5 Industry Segments

The snack foods market in Thailand is broadly classified into traditional snacks and western snacks. Individual segments of the market discussed below are based on the various types of snacks as they are generally classified by leading manufacturers. These segments are potato chips, extruded snacks, fish snacks, prawn crackers, and peas and nuts. Charts 3 and 4 below show the relative sales volume and market shares of these different segments.

Chart 3. Thailand Sales Volumes of Major Snack Segments, 2002



Source: AgriSource research

Chart 4. Thailand Market Shares of Individual Snack Segments, 2002

Source: AgriSource research

2.6 Potato Chips

2.6.1 Market Size

Industry sources estimate that the potato chip market is valued at about 30% of the overall snack market, or about 3.6 billion baht per year (approximately \$US 86 million at 2003 exchange rate). The growth of this segment is heavily dependent upon the availability of fresh potatoes as raw material. Demand for potato chips has been growing consistently, but growth has been hampered due to a shortage of locally produced fresh whole potatoes, which manufacturers rely on for production due to the prohibitive cost of fresh potato imports as a result of high import tariffs.

2.6.2 Raw Material Supply and Usage

About 90,000-100,000 metric tons of fresh potatoes are used for human consumption each year in Thailand. Of this amount, about 60,000-70,000 metric tons of fresh potatoes are used in the potato chips segment each year. (To produce one metric ton of chips, four metric tons of fresh potatoes are needed). The amount of potato usage depends mainly on local production because out-of-quota import tariffs have, until recently, been over 125%. As a result, imports of fresh potatoes were only 146 metric tons in 2001. Imports jumped to 2,137 metric tons in 2002, primarily because local manufacturers were forced to import after local production plummeted due to diseases and other problems. According to the Thai Customs Department, the major suppliers were China, Laos, Australia, and the Netherlands with market shares of 64.3, 20, 8.4, and 6.2%, respectively. There were no imports from January to April 2003.

In mid-July 2003, the Thai government announced an increase in import quotas for fresh potatoes to 25,400 metric tons at a tariff of 27%. This increase came after government ministries, private companies, and farmers met and agreed to allow more imports of fresh potatoes for processing in order to avoid increased unemployment by local potato farmers and snack factory workers.

According to the Ministry of Agriculture and Cooperatives, Thailand's potato production averaged about 90,000-97,000 metric tons over each of the last five years. Production

depends greatly upon the weather, which has a significant impact on plant diseases, yield, and quality.

In recent years, the large producers, particularly Frito-Lay and Berli-Jucker, have contracted with small farmers and arranged their own production on larger farms in Northern and Northeastern Thailand. The companies provide seed and other inputs to small farmers, who then sell the potatoes back to the companies at a guaranteed minimum price, which in recent years has ranged from 9 to 12 baht per kilogram at farmgate. Even though they have production contracts, farmers often sell some of their crop to local middlemen and wholesalers, who pay slightly higher prices and supply smaller snack manufacturers or export markets.

Other key ingredients used in this segment include salt, palm oil or palm olein, and seasoning flavors. Preservatives are not listed as an ingredient in snacks.

2.6.3 Usage Trends and Outlook

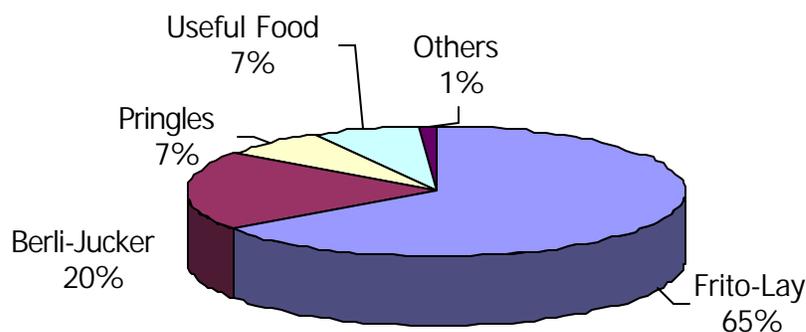
Potato chip producers prefer whole potatoes that are free of defects and diseases and sized at 5 to 10 centimeters in diameter.

Demand for whole potatoes is reported to be increasing about 20% each year. However, imports of whole potatoes depend on quotas and domestic potato production. If an import quota is allowed, potato chip producers normally use their maximum quota because they are faced with a scarcity of raw material every year.

With market demand for potato chips increasing dramatically, chip producers will continue to lobby the government for an increase in import quotas. However, results and impacts of the 2003 quota approval will be a major consideration in further increases in imports. If there are any negative impacts on domestic potato farmers, the approval of increased quotas is unlikely.

2.6.4 Key Players and Market Shares

Chart 5 shows estimated 2002 market shares for major manufacturers. Frito-Lay has been the largest player in this segment since it entered the market almost eight years ago. In 2002, Frito-Lay claimed a 65.3% share of the potato chips market. In April and May of 2003, the company was able to gain its highest share ever, at 69%, compared to 61% for the same period in 2002. Pringles was the second largest brand in this segment before it was revealed that GMO ingredients are used in the product. This news has caused Pringles share to drop from a high of 18% in 2000 to below 10% in early 2003. Greenpeace & Greennet tested numerous food products in Thailand and found many to contain GMOs. The products that tested positive included Pringles as well as Lay's Stax. Berli-Jucker Foods, manufacturer of Tasto brand potato chips, currently holds the second largest position in this segment with a 20% share. The only other company with a significant share is Useful Foods, the manufacturer of Potae potato chips.

Chart 5. Thailand Potato Chip Market Share, 2002

Source: AgriSource research

2.6.5 Seasonality

Consumption demand for potato chips is similar to other snack segments, with demand usually dropping about 10-15% during the main school holidays in March, April, and May. Students tend to consume fewer snacks while they are home during the school holidays. During the school term, children usually get an allowance to purchase lunch and snacks. However, during the school holidays, parents will watch over their children's diets more carefully and will not allow them to consume too many snacks, which are often considered "junk" food.

2.6.6 Pricing

Frito-Lay's potato chips retail sales prices typically are 6, 10, and 30 baht for small, medium, and large packs (21, 30, and 100 grams), respectively. Retail prices of other brands are 5, 10, and 25 baht for small, medium, and large packs.

2.6.7 Processing and Other Technology

Potato chips made from fresh potatoes are generally produced using deep frying processing. Pringles and Frito-Lay's Stax potato chips use processed potato flakes or granules as raw material and are produced using a different process.

2.6.8 Trends and Outlook

Utilization of production capacity in the potato chips segment is currently estimated at about 50-70% of the 24,000 metric tons total capacity. With domestic potato production unable to meet steadily rising consumption demand, major manufacturers will continue to lobby the government to approve continued and increased import quotas. China is expected to be the main beneficiary of these actions due to its cheaper price and ability to supply high quality stock in a timely manner.

Another important trend is that major chip producers have launched new flavors to expand their target consumer groups beyond children and teenagers. The latest flavors have often been seaweed-based. Several manufacturers have spent large marketing budgets to push this new flavor, which has helped the new flavors to become very successful in the market.

2.7 Extruded Snacks

2.7.1 Market Size

The extruded snack segment accounts for 35% of the snack market, or \$100 million. There is no dominant player in this segment, as there are many competitors with relatively minor market shares. It is also very difficult to accurately measure market shares of various producers because the segment is highly fragmented. Most of the smaller Thai companies compete in this segment because of the lack of a dominant player that exists in the other segments.

Friendship Co. Ltd. is one of the major producers in this segment with their Snack Jack green pea snacks, which accounts for about 10% of the extruded snack segment. The extruded snacks segment has been the largest in the Thai market for many years, although in recent years it has steadily been losing overall share to the potato chips segment. The potato chips segment has gained shares mainly by offering new flavors and brands to consumers. However, extruded snacks generally have a competitive advantage in terms of price due to their lower production cost and relative ease in sourcing raw materials. The overall share of extruded snacks is expected to remain at current levels, particularly as producers take advantage of AFTA agreements to export their products to other ASEAN countries.

In the domestic market, small to medium size producers of extruded snacks are now limited to traditional trade channel outlets due to the high costs and fees involved in entering modern retail trade channels. According to industry sources, the modern retail outlets charge 200,000 to 300,000 baht per flavor as an entrance or shelving fee. Despite this hurdle, there is high potential for producers in the extruded snack segment to develop new innovative products for introduction into these modern trade channels, as well as for export. The key factors for success appear to be a good tasting product, backed by continuous marketing and promotional activities, such as the inclusion of premium gifts.

2.7.2 Raw Material Usage

Volume

The major raw materials used in the extruded segment are corn, wheat flour, rice, dry peas, and potato flour or granules. Current usage is estimated at:

<u>Product</u>	<u>Annual usage (metric tons)</u>
Rice	5,000
Corn	10,000
Potato flour & granules	1,000
Dry peas	2,000
Wheat flour	10,000

Other key ingredients include sugar, salt, palm oil or palm olein, milk powder and seasoning flavors. No preservatives are listed as ingredients in any of the snacks in this category. Extruded snack producers try to keep production costs low due to the price sensitivity of consumers. However, they also must provide a good tasting product because consumers

choose snacks from many brands in the market. As a result, despite the expansion of the overall snack market, many extruded snack makers are increasingly obtaining their raw materials and supplies locally and the volume of imported raw materials and ingredients has remained rather stable.

Pricing

The domestic corn price (food grade) is about 5.50 baht per kg at factory gate. However, most snack producers purchase corn grits or flour from local millers as raw material. The price of these products is typically about double that of local whole corn. Imported corn is seldom used in local snack production due to high tariffs and limited import quotas.

The average CIF price of wheat flour was \$US255, 246, and 255 per metric ton during the 2001-2003 period (see Appendix Table 17). The current import price of U.S. wheat is about \$US 230 CIF per metric ton, compared to US\$180 last year. As with corn, most snack makers rely on wheat flour purchased from local millers.

The CIF prices of potato flour and flakes are about 30-35 baht and 40-45 baht per kg, respectively, according to the Thai Customs Department (see Appendix Tables 3 and 4). Imported dry peas currently cost about 15-17 baht per kg. Average CIF prices of green peas have increased from 12,733 baht per metric ton in 2001, up to 15,042 baht per metric ton in 2002, and 16,844 baht per metric ton this year (see Table 4). This is mainly due to limited supplies in world markets, but supplies and prices are expected to return to lower levels in 2003 and 2004.

Suppliers

Most corn used in Thai snacks is from domestically grown corn that is milled by local millers. In 2002, only about 1,600 metric tons of corn was imported from China, Lao PDR, Australia, and the Netherlands.

According to Thailand's Customs Department, major wheat grain suppliers are the U.S., Australia, and Canada, with market shares of 43, 33, and 24%, respectively. According to trade sources, the cost of importing wheat grain and milling locally is lower than the cost of importing wheat flour. In addition to lower costs, the wheat flour also remains fresh for a longer period of time. Major wheat flour suppliers are Japan, Singapore, Australia, Malaysia, Belgium, and China.

Domestic rice is often used in extruded snack production because Thailand is a major producer of high quality raw material. This makes the price for rice lower than other ingredients, but consumer preferences and competitive prices of other raw materials limit demand for rice-based snacks.

Imported dry peas come from Canada, Netherlands, U.K., New Zealand, U.S., and China. Canada and New Zealand dominate the market due to the ability to supply high quality, competitively priced, and large size marrowfat peas. However, U.S. suppliers have been able to capture a small share of this market in recent years as production of marrowfats has increased in the U.S.

Potato flakes, granules, and flour are now imported in larger volumes. This occurs mainly because Thailand's potato production is not enough to supply domestic demand, so snack manufacturers are turning to new sources of potato raw material. Major potato flake suppliers are the U.S., Germany, and Canada. Potato flour is imported mostly from Denmark, Germany, and the Netherlands. U.S. potato flakes, granules, and flour are viewed as being higher in quality than similar products from other countries, but EU and other suppliers are more competitive in terms of price, availability, and fast responses.

Large snack producers usually import their raw material directly from suppliers, but small/medium producers often obtain their materials from domestic importer-distributors.

Trends and Outlook

Raw material usage trends in the extruded snack segment are quite stable. The total snack market is growing at about 9-10% per year, but the extruded snack segment's share of the total market has been growing at a slightly slower rate due to the increasing popularity of potato chips.

Thai consumers like to try new flavors and products, which has made the life cycle of many extruded snacks shorter when compared to the past. Consumers are also very price sensitive, which means that extruded snack producers will have to keep their production costs low while trying to introduce new flavors and products. Otherwise, consumers will switch to other competing products or brands. Most consumers do not care if a product is produced from higher quality imported raw materials or ingredients. If the price is too high, they will simply not buy it.

Demand for imported raw materials in this segment is expected to remain at current levels, or increase only slightly. It is not expected to increase significantly with the growth of the total snack market. This is because imported ingredients are most often used only when domestic raw materials and ingredients are not available. If imported materials are required, extruded snack producers are expected to select suppliers that offer the best prices in relation to quality. In this regard, China is expected to become increasingly competitive.

2.7.3 Seasonality of Demand

Most extruded snack consumers are children and teenagers who like to try new products. The sales volume of snacks in this segment usually drops when other competitors launch new flavors or products, which is usually after the rainy season, or during October to February. Several trade sources also noted that their sales usually drop during Thailand's summer school vacation when children are at home (March-May), and also increase in line with the peak tourism months of November through February.

2.7.4 Pricing

Extruded snacks typically sell at retail for 5 baht for small bags, 10 baht for medium bags, and 20 baht for larger sizes. The cheapest snacks are sold at 2 baht per bag, particularly near rural schools where children have lower purchasing power. Premium products sold in 5 baht packs are usually available near city schools and via small retailers. Bigger size packs selling at 10 to 20 baht are usually sold in modern retail trade outlets. The best selling size is the 5 baht pack.

According to industry sources, wholesale and retail margins are about 15-25%. Two distribution channels include the modern retail trade and traditional trade channels. Distribution costs in the modern trade channel (25%) are generally much higher when compared to the traditional trade channel (15%). Modern retail trade channels, such as convenience stores, discount stores and supermarkets, also charge about 200,000 to 300,000 baht per flavor as a shelf fee. As a result, smaller snack producers cannot afford to

sell their products through these channels. They must sell through traditional trade channels and distribute products to retailers themselves.

Many snack producers also export their products to other markets where marketing costs are often lower when compared with the domestic market. However, transportation costs are higher than in the domestic market.

2.7.5 Processing and Other Technology

New extrusion processing techniques that can help reduce manufacturing costs are welcomed because domestic consumers are very price sensitive. Generally, most snack producers prefer to adjust the size and/or volume of their packages rather than try to lower processing costs or increase prices when production costs increase.

Higher quality and healthier manufacturing processes are increasingly used as extruded snack producers try to respond to rising health consciousness among Thai consumers. Some producers claim that they add vitamins and other ingredients to their products, while others are highlighting new ISO and other food safety procedures that they are adopting.

2.7.6 Trends and Outlook

Sales in the extruded snack segment are expected to remain at current levels due to the economic recession, both in Thailand and in other ASEAN markets. In addition, potato chips, led by Frito-Lay brands, are expected to continue capturing a larger share of the domestic market. However, the growth of the potato chips segment should continue to be limited by raw material constraints.

2.8 Prawn Crackers

2.8.1 Market Size and Shares

The prawn cracker segment comprises approximately 10% of the entire snack market and is currently valued at over 1.2 billion baht (\$US 28.5 million). This segment has been growing faster than the overall snack market and its overall share has increased about 7 to 8% in recent years.

The prawn cracker segment includes both traditional Thai prawn crackers and Japanese prawn crackers, which account for over 80% of this segment.

2.8.2 Raw Material Usage

Major raw materials used in Thai traditional prawn crackers are tapioca flour (45%), fresh shrimp (35%), palm oil (10%), garlic, salt, pepper, and flavoring. All of these ingredients are available domestically. The main raw materials used in Japanese prawn crackers include wheat flour (62%), coconut oil (20%), fresh prawns (11%), and salt.

Most prawn cracker producers usually buy wheat flour from importers or millers (such as UFM and Thai Flour Mill) who import whole wheat and mill it domestically. According to industry sources, this process reduces production costs and provides fresher wheat flour. Milling the wheat in Thailand also reduces mold and other production problems.

Volume

About 4,000 metric tons of wheat flour is expected to go in the prawn cracker segment. According to Thailand's Customs Department, imports of wheat flour totaled 51,079 metric tons in 2000, 57,968 metric tons in 2001, and 13,034 metric tons in January-April 2003 with a value of 546, 599, and 139 million baht, respectively (see Appendix Table 17). Meanwhile, total wheat imports were 811,620 metric tons in 2001 and 877,169 metric tons in 2002 (see Appendix Tables 18 and 19). Of these amounts, wheat demand for human consumption is estimated at about 60-70%. Demand for human consumption has decreased moderately as there has been a slowdown in consumption of domestic bakery, noodle, and biscuit products. About 10% of wheat imports used for human consumption goes to the snack industry and the remainder goes to bakery, noodle, and biscuit products.

Pricing

Average prices (CIF) of wheat flour were \$US 255, 246, and 255 per metric ton for the 2001-2003 period (see Appendix Table 17). Current import prices of U.S. wheat are about \$230 C&F per metric ton, compared to \$180 C&F per metric ton last year.

Wholesale prices of wheat flour increased by 40% over the past year due to higher import prices of wheat. Prices of baking flour of 13.5 to 14% protein content are about 500 baht per 22.5 kg. bag, followed by 500-530 baht per bag for cake flour, and 400 baht per bag for all purpose flour.

Suppliers

Thailand produces only about 500 metric tons of wheat per year. Local production is constrained by climate and other production factors. Meanwhile, Thailand's total wheat demand for human consumption was about 480 to 570 thousand tons per year. Thus, Thailand's wheat consumption relies heavily on imports.

Major wheat grain suppliers are the U.S., Australia, and Canada, with market shares of 43, 33, and 24%, respectively.

Major suppliers of wheat flour to Thailand are Japan, Singapore, Australia, Malaysia, Belgium, and Vietnam, with market shares of 30, 25, 17, 13, 7, and 4%, respectively.

According to trade sources, wheat imports will continue to be supplied by the U.S., Australia, and Canada due to their superior quality, abundant supplies, and low prices. In 2002, imports of U.S. wheat accounted for over 40% of total wheat imports or 378,337 metric tons, followed by Australia and Canada with 285,083 and 199,889 metric tons, respectively. As evidenced by data from the Thai Customs Department, the market share of U.S. wheat imports continued to increase to 44% of total imports in the 2002 calendar year, compared to 39% in 2000. Much of this increase, however, was due to reduced supplies from Australia and Canada.

Singapore wheat flour has been successful in quality improvements. Chinese wheat flour is also imported due to its relatively cheaper price. However, trade sources note that the quality of Chinese wheat flour is not very good.

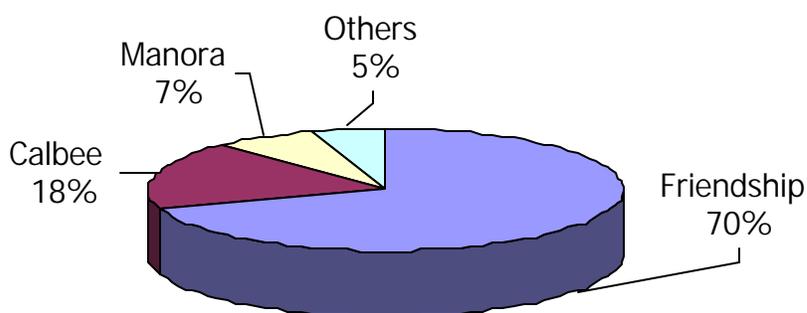
Major domestic flour suppliers are Bangkok Flour Mill Co., Ltd., Bangkok Inter Food Co., Ltd., Laemthong Food Products Co., Ltd., Siam Flour Trading, and Thai Flour Industry.

2.8.3 Key Players and Market Shares

There are currently over 30 brands of prawn crackers available in the market, with the majority being sold in upcountry retail shops. Only the major producers are selling their products in the modern retail trade channels and in the cities.

Friendship Co. Ltd. is estimated to control almost a 70% share of this market segment with its Hanami and Ruaypuan brands. The company's most popular brand, Hanami Prawn Crackers, holds approximately 55% of the segment, while its Ruaypuan brand accounts for another 12%. Friendship's main competitor in this market, Calbee, has had a market share of 15 and 18% respectively over the last two years. Manora Foods is the only other major player in this market, claiming approximately 7% of the market (Chart 6).

Chart 6. Thailand Prawn Cracker Market Share, 2002



Source: AgriSource research

Friendship expects to seize at least 50 more% of the segment's market share from its competitors within next three years. If they succeed with these plans, Friendship will rival Frito-Lay as one of the two major players in the market. The company currently ranks as one of the top four producers in the total snack market, trailing only Frito-Lay, but by a significant margin. The other two companies, Useful Food and Berli-Jucker, have comparable market shares to Friendship.

Hanami prawn crackers produced by Friendship have been the market leader in the prawn cracker segment in Thailand for many years. The company has launched its other brand, "Ruaypuan", as a brand for rural and upcountry markets. The objective is to capture share from small producers, particularly in northern and northeastern parts of the country.

Friendship's main competitor in this market, Calbee, has had a market share of about 15-18% over the last two years. In 2003, Calbee has greatly curtailed its marketing activities relative to Friendship. As a result, its market share has fallen to about 12%.

Although Calbee is the market leader in the Japanese prawn cracker market, its share in the overall Thai prawn cracker market has always trailed Hanami's significantly. The Hanami brand is known for its good taste and strong advertising, which has made sales of the product grow in modern trade channels.

Manora Foods is the only other major player in the prawn cracker segment, claiming approximately a seven% share. Manora's product is the Thai traditional prawn cracker, using local tapioca flour and shrimp as the main ingredients. Manora's share has been declining

due to high rivalry in the segment and a higher selling price for its products. The company also produces prawn crackers and extruded snacks under “Orderves” and “Free Bus” names. The company recently launched “Orderves” shrimp crackers and “Manhora” cracker in chicken flavor to expand its customer base. Orderves’ target consumers are teenagers, while Manhora prawn and chicken crackers target both teenagers and adults. Manhora has also increased the quantity in their packages in hopes of recovering some market share. The company has received good response in the rural market and now is trying to gain the same through in modern trade channels.

The remaining 13% of the prawn snack segment belongs to small brands.

2.8.4 Seasonality of Demand

The leading company in the market, Friendship, says that their prawn cracker sales usually experience a drop during the rainy season (May-October). This is because people, mainly children, often remain indoors more often during the rainy season and do not go out as often to purchase snacks. Sales also drop when there is a launch of new products or new flavors by competing producers.

2.8.5 Pricing

Japanese prawn crackers are sold in 5, 10, and 20 baht packs, while Thai traditional prawn crackers are sold in 5, 10, and 25 baht packs. Wholesale and retail margins are 15 and 10% respectively.

2.8.6 Processing and Other Technology

Thai traditional prawn crackers use fried processing while Japanese prawn cracker rely on extruded processing. Leaders in this segment do not expect any major changes in the production process or technology.

2.8.7 Trends and Outlook

This prawn snack segment is expected to grow along with the total snack industry. Many other snack producers have introduced new products or flavors in order to maintain growth, but the prawn cracker segment has remained stable because the shrimp flavor is unique and the product is different from other snacks. Consumers also prefer this good tasting product without preservatives. Another significant factor is pricing, which is usually competitive due to the relatively low prices of wheat and tapioca flour, the main ingredients.

2.9 Dry Peas and Nuts

2.9.1 Market Size

The dry peas and nuts segment is estimated to account for around ten% of the overall snack market, or approximately \$29 million. This is down from about 14% of the total snack market value five years ago, mainly due to increasing competition from potato chips and other snacks. The main products in this segment include peanuts, fried green peas, almonds, cashew nuts, and pistachios.

Snacks made from imported peas, beans, other pulses, and peanuts are burdened with increased production costs due to high import tariffs, which range up to about 60% of CIF value on peanuts and 42% on dry peas. As a result, end product prices are relatively high, which can be an obstacle to expanding sales. Although the Finance Ministry announced in

July 2003 that tariffs on both peanuts and dry peas will be reduced to 30%, consumer prices of these products will still remain high compared to other snacks.

Almonds and pistachio imports currently face similarly high tariffs of 60% or 50 baht per kg. However, the July 2003 tariff changes will allow in-shell and shelled almonds and pistachios to be imported at a sharply reduced rate of 10% or 8.5 baht per kg. Tariffs on prepared almonds and pistachios will be reduced to 30% or 25 baht per kg. The larger reduction for in-shell and shelled products is intended to support domestic processors of these nuts.

2.9.2 Raw Material Usages

The main raw materials used in this segment include dry green peas, pistachios, almonds, cashews, and peanuts. Other associated ingredients are wheat flour, palm oil or palm olein, sugar, salt and MSG. All of the dry green peas, pistachios, and almonds used in snack products are imported. There were minimal imports of cashew nuts. Peanuts are sourced domestically and imported, mainly from Vietnam and China.

Dry Green Peas

In 2002, imports of dry green peas totaled 3,253 metric tons, falling from 6,030 metric tons the previous year due to less availability and higher prices. About 80% of the import volume is used in the snack industry, with about 1,500-2,500 metric tons used in this fried crispy green pea snack segment. In 2002, major suppliers of green peas included Canada, Netherlands, the U.K, New Zealand, and China with market share of 52, 23, 10, 4.81, and 4.69%, respectively.

Table 4. Thailand's Import Volume and Value of Dry Peas by Origin, 2001-2003

	2001		2002		2003 (JAN-APR)	
	Quantity	CIF Value	Quantity	CIF Value	Quantity	CIF Value
CANADA	4,042.386	49.243	1,690.032	30.418	683.916	13.252
NETHERLANDS	668.036	4.809	752.500	5.206	322.500	2.225
NEW ZEALAND	732.857	11.235	152.650	1.843	86.000	1.786
UNITED KINGDOM	252.000	4.910	338.500	6.505	168.000	3.327
UNITES STATES	25.253	1.121	13.015	0.505	34.930	0.617
Others	309.73	5.47	306.87	4.46	36.60	1.23
GRAND TOTAL	6,030.262	76.787	3,253.571	48.940	1,331.947	22.436

Quantity: metric ton
CIF Value: million baht

Source: Thai Customs Department (HS 0713.100.002)

Pistachios

In 2002, only about 170 metric tons of fresh or dried pistachios were imported with a total value of about 27 million baht (approximately \$650,000). Imports of fresh or dried pistachios in 2001 were a similar volume and value. Thailand also imported another 337 metric tons of prepared pistachios in 2002 worth over 29 million baht (about \$700,000). This was up significantly from 2001 imports of 146 tons worth 17.4 million baht (\$415,000).

Most of the imported pistachios are consumed as snacks, but some are also used in the bakery and confectionery industries. Major suppliers of pistachios are the U.S. and China,

with equal market shares of about 45% by quantity. In 2002, the U.S. captured a 69% share of the fresh import trade, while China held 21%. However, Chinese pistachios held a 55% share of the prepared category, compared with only 31% for U.S. prepared pistachios.

Almonds

Thailand's official imports of fresh, dried, and roasted almonds totaled nearly 528 metric tons in 2001 and 542 metric tons in 2002, with total values of 67.2 million and 71.4 million baht, respectively. The U.S. consistently holds about 96% of this key segment of the almond market.

Imports of roasted almonds are insignificant compared to fresh and dried product, totaling only about 0.6 metric tons worth 0.25 million baht in 2001. Import volume in 2002 slightly decreased to 0.5 metric tons while value decreased by more than half to 0.12 million baht. This was because there were more imports made from cheaper sources. The U.S. leads the roasted almond segment as well.

According to FAS/USDA, US prepared or preserved almonds exported to Thailand totaled 76.8 metric tons with a value of \$2.15 million in 2001 and 44.4 metric tons worth \$1.52 millions in 2002. The difference between the FAS/USDA and Thai Customs totals is because the Thai Customs Department seems to have classified the majority of these imports under a different HS code.

Peanuts (Groundnuts)

Thailand imported about 34,000 metric tons of fresh peanuts in 2002 worth about \$14.07 million. Imports in 2001 were nearly the same quantity, but the value was over \$15 million. Imports for 2003 are on pace to surpass the 2002 level. About 90% or more of these imports are from Vietnam, but China and Laos also supply some quantities. A significant share of the imported fresh peanuts is used in the domestic snack industry, but large volumes are also consumed in traditional foods.

Imports of peanuts in the form of prepared snacks and other products are relatively insignificant compared to fresh peanut imports. Prepared peanut imports in 2002 totaled about 65 metric tons worth about \$116,000. This was down from 2001 imports of 89 tons worth about \$250,000.

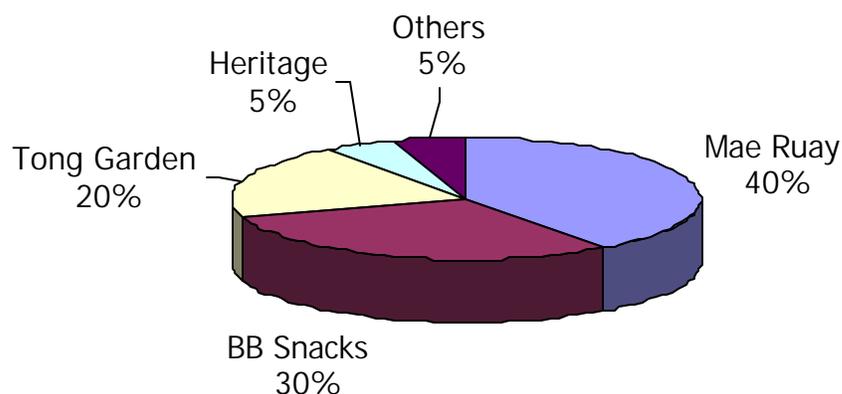
Usage Trends and Outlook

The official import figures noted above do not take into account significant levels of smuggling that occurs, particularly for nuts. Much of this unofficial trade is via Thailand's border with Malaysia because the Malaysian market is virtually free of import tariffs. There are also high volumes of smuggled goods from Vietnam entering Thailand via Laos and Cambodia. Imports of dry green peas, almonds, and pistachios are expected to increase after Thailand's import tariffs are reduced, but smuggling is expected to remain rampant until Thailand's tariffs are reduced to levels similar to those in Malaysia.

2.9.3 Key Players and Market Shares

The three leading companies in this sector are Mae-Ruay Snack Food Factory Co., Ltd. (Koh Kae brand peanuts), BB Snack Co., Ltd. (Greennut brand dry pea snacks), and Tong Garden Co., Ltd. (Tong Garden brand nuts and green peas). Mae-Ruay is estimated to control over 40% of the overall segment, with BB Snack claiming 30%, and Tong Garden accounting for another 20%. Heritage (Nut Walker and Blue Diamond brands) is also a leading importer and packer of almonds, pistachios, and other premium quality nuts. Heritage's market share is estimated at about 5% of the dry pea and nut segment. The remaining 5% belongs to other small producers. (Chart 7).

Chart 7. Thailand Peas and Nuts Market Share, 2002



Source: AgriSource research

Mae-Ruay's main products are peanuts coated with wheat flour in a range of flavors. The company has concentrated primarily on peanuts since its founding. Its Koh Kae brand is very strong due to its continuous marketing activity and competitive prices. The company has launched new flavors continuously to maintain its market share, particularly as other snacks have been introducing new products and flavors.

BB Snacks is the leading manufacturer of crispy coated green peas, crispy coated peanuts, roasted nuts, and other snacks. The company currently employs a fully automated modern plant in Phatum Thani. BB Snacks also exports its snacks world-wide, including the U.S.A., Japan, China, Taiwan, Hong Kong, Singapore, India, Bangladesh, Saudi Arabia, the United Arab Emirates, Netherlands, U.K and Germany. Its green peas hold a strong share in the market due to consumer perceptions of the product as a delicious and nutritious food.

Tong Garden sells a wide range of peas and nuts, including peanuts, pistachios, and cashew nuts, coated green peas, and other snacks. Tong Garden is perceived as a premium snack producer, but with small quantities in their packages. Therefore, its market share is not as high due to its general reliance on higher income consumer groups.

2.9.4 Seasonality of Demand

Seasonality of demand for the dry pea and nuts snacks segment is different from other snacks. Due to its premium price, market demand moves in line with the economic situation. Sales usually increase when the country's economy is good. Major consumers for the premium products within this segment (almonds, cashew nuts, and pistachios) are not children and teenagers, as with other snacks, due to more expensive prices.

2.9.5 Pricing

Retail prices of peanuts are 5 baht for 80-gram packs, 10 baht for 160-gram packs, and 30 baht for 330-gram cans. Retail prices of green peas are 5 baht for 26-gram packs, 10 baht for 55 grams, and 20 baht for 100 grams. Premium nuts, including almonds and pistachio, are about 23 baht for 20-gram pack.

According to trade sources, retail margins are about 20% and about 10% at wholesale.

2.9.6 Processing and Other Technology

Both fried and roasted processing is used in this segment. Some producers also coat their nuts or peas with special mixtures of various flours and seasonings. Currently, there is little movement toward new technology in this sector.

2.9.7 Trends and Outlook

The dry peas and nuts snack segment is expected to remain at current levels, even though several players are conducting research and development to offer unique choices to consumers. Lower production costs resulting from import tariff reductions would allow producers to increase their marketing activities and boost, or at least maintain, their market shares in the highly competitive snack market.

2.9.8 Opportunities for U.S. Ingredients

U.S. green pea suppliers have a disadvantage in terms of price, due primarily to exchange rates and lower supplies relative to Canada and New Zealand, the main suppliers. Unless prices are lower, it may be difficult for U.S. dry green pea suppliers to expand their market in Thailand. The outlook for U.S. pistachios, almonds, and other nuts is relatively more favorable, but rising competition from China and other world suppliers will require U.S. suppliers to offer more competitive prices and quality.

2.10 Fish Snacks

2.10.1 Market Size

Fish snacks account for almost 10% of the overall snack market, with total estimated value of about 1.2 billion baht (\$US 28 million). In 2002, the segment grew by an estimated seven% over 2001 and is expected to grow 12% in 2003.

2.10.2 Raw Material Usage

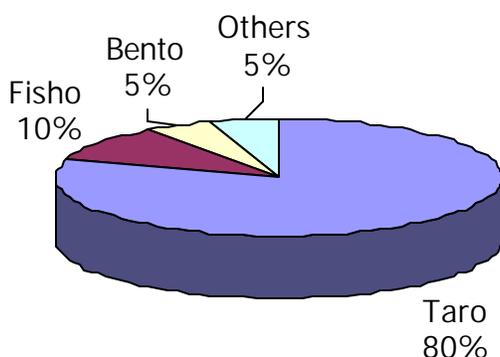
Major raw materials used in this segment are fish meat, tapioca flour, wheat flour, flavorings, sugar, and salt. An estimated 1,900 metric tons of fish, 260 metric tons of tapioca flour, and 15 metric tons of flavorings is used. According to trade sources, local fish meat and tapioca flour are used, while flavorings are imported from the U.S., Canada, and Hong Kong.

The fish snack market segment is expected to grow at a rate of 10%. Imported flavorings used in the segment are expected to grow in line with the market.

2.10.3 Key Players and Market Shares

PM Food Co., Ltd., the manufacturers of Taro fish snacks, is the dominant player in this segment, with close to an 80% share. The other major players are Fisho and Bento, with approximately ten and five% each respectively (Chart 8).

Chart 8. Thailand Fish Snack Market Share, 2002



Source: AgriSource research

Taro has gained a strong hold on this segment due to the lack of strong competitors when the company entered the segment in 1982. The company offers various flavors of fish snacks backed by heavy marketing activities. Taro snacks are distributed mainly through modern trade channels, which has been very effective for sales in the city markets. The company has just launched squid flavor snacks and plans to launch seven more new products in 2003. The company has budgeted around 150 million baht for marketing activities and expects to gain another five% in market share.

2.10.4 Seasonality of Demand

Consumption demand usually drops during the school holidays (March-May) due to the same factors affecting demand for other snacks. However, increased marketing activity, along with new flavors and product lines, helps to maintain growth.

2.10.5 Pricing

Retail prices of fish snacks are 5, 10, 15, and 22 baht for 15, 32, 50, and 70 grams packs, respectively.

2.10.6 Processing and Other Technology

Baked processing is primarily used in the segment. Currently, there are no significant developments in technology. Instead, producers rely on adjustments to flavors and packaging to differentiate their products.

2.10.7 Trends and Outlook

Although the fish snacks segment is not as exciting as the potato chips segment, it has significant potential to grow. More marketing activities are expected in 2003. New zip lock packages with various choices of flavors should also boost consumption.

2.11 Overall Snack Market Trends and Outlook

New products and flavors usually require long lead times for development and launch. Some companies spend a significant amount of their budget on the research and development of new snacks for the Thai market. New snacks also require a lot of market testing to determine if the flavors and tastes fit the preferences of consumers. Even with careful investment in product and market research, there is no guarantee that new products will be successful because of the very finicky tastes and preferences of Thai consumers. Many products fail to make their way to the market. Many that do make it end up having a very short life cycle. Only the best tasting products provided at reasonable prices have a chance to succeed.

The Thai market has seen the addition of dozens of new snack products and flavors in recent years. This trend is expected to continue as companies compete to introduce new products in an attempt to capture a larger share of the market. Some of these products are introduced to try to create a new consumer segment. Others are added to try to maintain current consumers and keep them from switching to other companies snacks.

Frito-Lay's Siam Classic potato chip is an example of a new product that is attempting to gain a new consumer segment. Lay's Nori Seaweed is another product that seems to offer current consumers a new choice. Siam Classic potato chips have had some difficulty penetrating the market because the Thai flavored snacks do not seem to appeal to most potato chip consumers. The snack is also having difficulty attracting newer consumers. At the same time, Nori Seaweed flavored chips have been highly successful and have helped Frito-Lay increase its market share in the Thai snack market to an all-time high.

Some of the most successful flavors recently have been Japanese flavors. These include Wasabi and Seaweed flavored snacks. Friendship has recently added a line of Snack Jack Wasabi flavored extruded green pea snacks to their portfolio. Earlier this year, Frito-Lay introduced Nori Seaweed flavored potato chips, which as noted above, has been doing well in the market.

Many other companies have added local Thai flavored snacks to their portfolio in order to attract more rural consumers. Very little is known about the tastes and preferences of rural consumers so it is difficult to predict whether or not these new snacks will be able to catch

on in the market. The trend of adding Thai flavored snacks is expected to continue as companies attempt to increase their sales volume.

Several snack producers predict that newer products will become healthier due to the increasing nutrition and health consciousness of Thai consumers. This is expected to force some manufacturers to use healthier snack production processes, such as baking and toasting. Other companies are trying to change the image of their snacks into healthier products by highlighting vegetable ingredients. Others have added spirulina seaweed to their fried and extruded snacks in an attempt to promote their products as healthy snacks. Overall, the major factor will be the image of the product that the company is able to portray to consumers.

Trade sources also note that cheaper raw materials will become more prevalent as the industry becomes more competitive. Companies may sacrifice quality in exchange for cheaper prices, so those that try to maintain high quality standards may have difficulty maintaining market share. An example of this trend is Wincall Marketing. Wincall's market shares have been declining in recent years due to increasing competition in the market. Many of its competitors have been using a pricing strategy to increase sales, but Wincall has been reluctant to do this because of concern about maintaining the high quality of their products. They use higher quality ingredients and therefore cannot capture very high margins like some competitors who use lower quality raw materials and ingredients.

Extruded snacks are expected to become more popular as companies will switch to using extrusion technology due to lower production costs compared to other production processes.

Promotional Activities

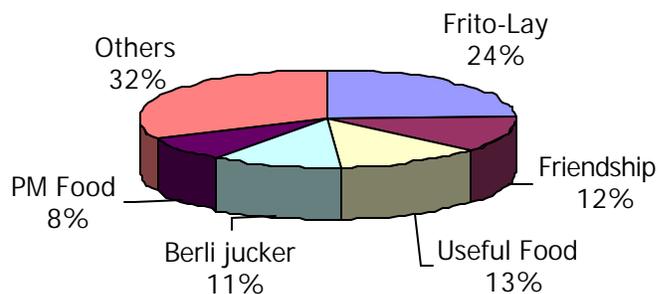
Promotional activities are expected to increase with rising competition in the market. Indeed, companies have already begun to increase their promotional budgets due to the increasing competition. The major snack food players, such as Frito-Lay, Berli-Jucker, and Friendship, have already announced a major increase in their marketing budgets. Frito-Lay has increased their budget by 50% over 2002, while Friendship has boosted theirs by nearly 100%.

Prices

It is unlikely that snack prices will see any increases in the near future. The market is becoming increasingly competitive; so companies need to keep prices down to maintain their market shares. Due to this highly elastic consumer price demand, the trend is likely to be toward decreased quantity and weight in consumer packages.

Key Players

Chart 9 shows market shares for key players in the overall snack market. Frito-Lay currently is the largest player with an approximate 24% market share. Other key players include Useful Food with an estimated 13% share, Friendship with 12%, Berli-Jucker with 11%, and PM Food with 8%.

Chart 9. Thailand Snack Market: Market Shares of Key Players, 2002

Source: AgriSource research

2.12 Distribution

Snacks in Thailand are distributed through modern and traditional trade channels. The modern retail trade channel has been playing a more important role in Bangkok and other major cities in recent years, but the traditional trade channel still dominates marketing in rural areas. Premium priced snacks are usually sold in modern trade channels in larger cities.

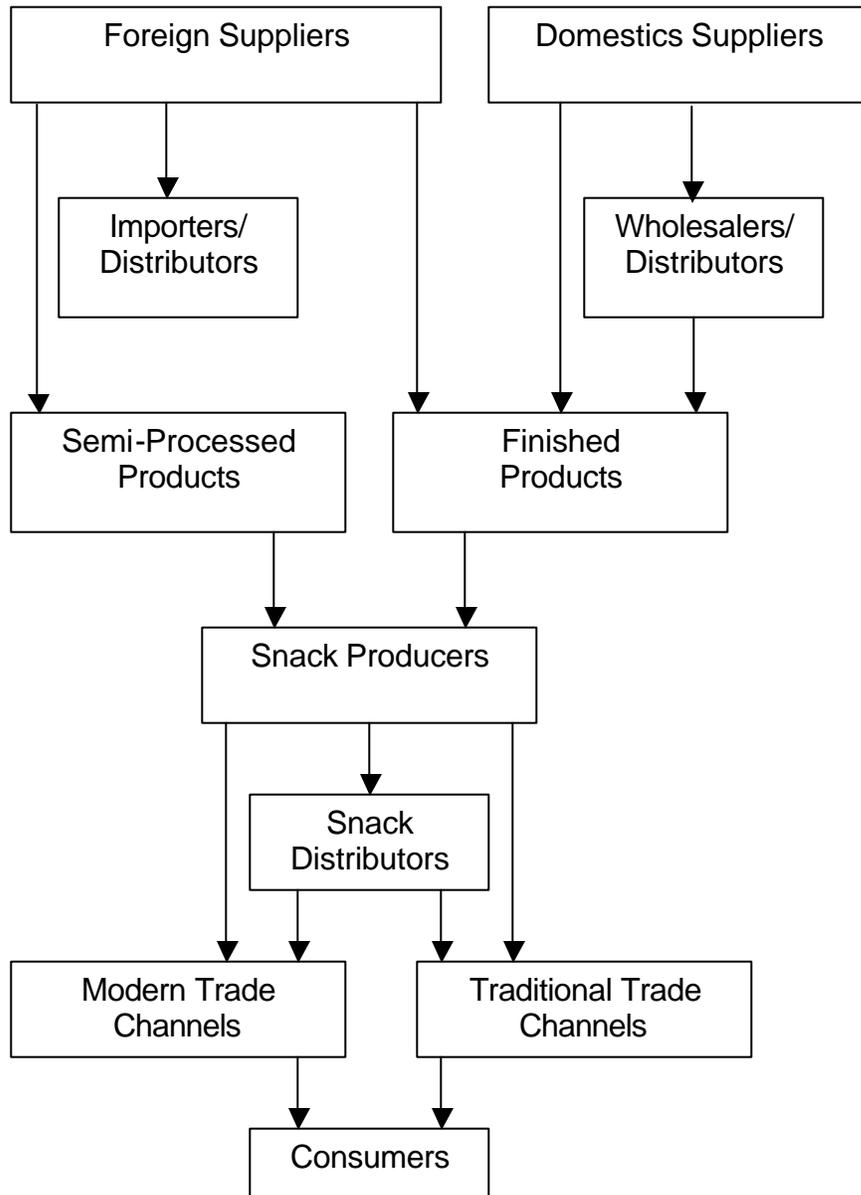
The retail food market in Thailand can be divided into four major sub-sectors: hypermarkets, supermarkets, convenience stores, and traditional markets (wet markets and "mom and pop" stores). Over 70% of the retail food trade in Thailand is done through the traditional markets. This is one reason why foreign retailers are so optimistic about the future growth prospects of the Thai retail food industry. Most hypermarkets and supermarkets are concentrated within the Bangkok area. Even though Bangkok has only 20% of the country's population, the area accounts for over 70% of the supermarkets and superstores.

Companies who want to enter the modern retail trade channel are charged a hefty shelving fee for their products. This prevents the large majority of Thai snack manufacturers from entering this marketing channel. Companies that sell their products through modern retail trade channels usually have a significant amount of money invested in snack production technology and machinery. Most of these companies also usually back their products with large marketing budgets. As the industry has become more competitive, companies are now spending a larger amount of their budgets on marketing in order to keep their products fresh in the minds of consumers.

Products that use imported materials and ingredients will increasingly be found in only modern trade channels, as the traditional trade channels are dominated by companies selling their products at very low prices. These companies conduct little or no marketing activities and rarely sell their products in the modern channels. They concentrate on the traditional channels where there is no cost for entry. They often beat out larger snack producers by offering lower priced snacks. It is difficult to accurately assess the sales volume of these types of snacks because many of these smaller companies are difficult to contact and often prefer not to reveal their sales and other financial figures.

Figure 1 outlines distribution in the Thai snack market. Snack producers may obtain imported ingredients directly from foreign suppliers or through local importers and distributors. Most of the larger companies obtain their ingredients directly from suppliers, while smaller companies will usually obtain them through local importers. The major players in the market also have contract farms from where they obtain their local raw materials, particularly potatoes and peanuts.

Figure 1. Distribution Strategy



Snack distribution through modern retail trade channels goes through three primary segments: hypermarkets, supermarkets, and convenience stores. Hypermarkets, such as Tesco Lotus, Big C, and Carrefour, are similar to Super Wal-marts and Super K-Marts in the U.S. Another hypermarket, Makro, bears similarities to price clubs in the U.S., such as

Sam's Club. Tesco Lotus superstores, as of December 2002, total 52 locations nationwide and are situated in and around Bangkok as well as other major cities in throughout Thailand. Big C is the second largest hypermarket chain in Thailand currently and has 35 locations in Bangkok and other major cities. Makro and Carrefour have 21 and 17 total stores, respectively.

The main supermarket chains in Thailand are Tops, Food Lion, Foodland, Home Fresh Mart, and Villa. These supermarkets are usually smaller than those in the U.S. Villa and Foodland generally cater more to expatriates and higher income Thais. Therefore, these companies usually carry more premium priced and imported products than other stores. Villa carries the largest variety of imported products of any store in Thailand. Some Tops stores, such as the one in Central Chidlom department store, also cater to the higher-end market. Tops is the largest supermarket chain in the country, with 48 locations as of December 2002.

Snacks can also be found in convenience stores throughout the country. 7-Eleven is the largest such chain in the country, with over 2,000 stores in operation nationwide, making it the fourth largest 7-Eleven distributor worldwide. Stores like 7-Eleven and Family Mart are located in prime points throughout major cities and at fuel stations along major highways. Other convenience stores, such as Tiger Mart, Jiffy Mart, and StarMart, are located only at fuel stations.

2.12.1 Raw Material and Ingredient Suppliers

All of the companies that were interviewed are satisfied with the overall quality and service of their suppliers.

Strengths of Current Suppliers

Some of the strengths of the current suppliers include quality, pricing, availability of supply, and on-time delivery. Many companies choose to buy from suppliers who can provide them with lower prices because of the highly competitive market conditions in Thailand. Companies need to keep their costs down to remain competitive. Other companies try to work with suppliers who can provide them with higher quality raw materials and ingredients. These companies usually end up paying more, which is why many of the companies who have listed quality as strength for their suppliers have also listed price as a main weakness. These companies are focusing on maintaining a high quality product. Some are beginning to lose market share by maintaining this strategy.

Frito-Lay purchases raw materials and ingredients from domestic suppliers and local contract farms so that it can avoid high tariffs rates, fluctuating exchange rates, and for some products, GMO-related issues.

Most wheat flour suppliers in Thailand import wheat and then mill it locally. Since Thailand's labor cost are lower, milling the wheat locally helps to keep costs down. In addition, local milling helps to extend product shelf life and freshness and limits the likelihood of mold buildup and other quality concerns.

Weaknesses of Current Suppliers

The Thai snack market is highly competitive, so companies that cannot keep their manufacturing costs low will have difficulty remaining profitable. As a result, poor pricing is

the main supplier weakness mentioned by the majority of snack companies. Many of the companies who choose lower price suppliers often have to suffer the consequences in other areas, such as contaminated and unclean products.

Fluctuating exchange rates and high tariffs accentuate this pricing problem for companies who import their raw materials and ingredients. High tariffs added on to the relatively higher cost of imported goods sometimes makes purchasing foreign raw materials and ingredients almost impossible for Thai snack companies.

The main weakness of foreign suppliers noted by manufacturers was the slow response time and lack of customer service. Many snack companies complained that they have received little or no technical assistance from their foreign suppliers, while local Thai suppliers often provide solutions for many technical problems.

Major Factors Considered When Purchasing Raw Materials

The most important factor listed by the majority of snack companies is price. Quality was listed as the next most important, followed by availability of supply. The companies that have quality as their most important factor end up obtaining their raw materials at higher prices than their competitors. These companies are willing to pay a higher price to produce a higher quality product.

The main reason most companies listed price as the most important factor is due to the high price sensitivity of consumers. These companies need to produce their products at a reasonable cost so that they will be able to sell their products at competitive prices. Frito-Lay saw its market shares drop significantly when it chose to increase the price of its potato chips.

Characteristics Desired of Raw Materials

The main characteristic that snack companies look for when they purchase raw materials and ingredients is fresh and uncontaminated products. They also look for raw materials and ingredients that will provide a good texture and taste after the snack products are manufactured. Most companies are satisfied with medium to high quality as long as they are provided at a reasonable price. Major snack food companies also noted that they would only purchase raw materials that are free of GMO ingredients.

Some companies are shying away from using potato flakes and flour instead of fresh potatoes, even though they are cheaper to use. Only the smaller companies seem to use potato flakes and flour in their snacks due to the lower manufacturing costs compared to fresh potatoes. Frito-Lay tried using potato flakes in one of its products in 2002, but the product failed due to the unsatisfactory taste compared to fresh potatoes.

Local Potato Production

All the major potato chip producers in Thailand are purchasing their potatoes locally to reduce costs. Potato growers in Thailand supply around 60% of annual needs, while the remaining 40% is imported. Local growers provide about 70,000 metric tons per year, while demand totals 120,000 metric tons and is rising sharply. The shortfall is met by imports.

Frito-Lay, the largest snack producer in Thailand, contracts with over 6,000 farmers in northern Thailand to grow potatoes needed for the company's snacks. The company provides the farmers with imported seed potatoes and other production inputs. Frito-Lay

has each year increased the amount of land used to grow its potatoes. This increase relates directly to the company's plans to use its factories in Thailand as a production base to expand sales in the Asian region.

In an attempt to lower production costs, Frito-Lay is currently assisting its contract farmers in developing better seed potato varieties. This is being done in an attempt to reduce the reliance on seed potatoes imported from the U.S., Canada, UK, and Australia. Mr. Chawala Wongyai, an agronomist at Frito-Lay Thailand, has asked the Thai government for assistance in the research and development of seed varieties and also for help in finding suitable planting areas. Mr. Chawala states that, "imported seeds are expensive. The costs are also volatile due to the exchange rate."

Frito-Lay purchases most of its potatoes from contract growers and procures some from farms that it manages directly. The company specifies to contractors that it will only purchase potatoes that are at least 4.5 cm in diameter. The price that Frito-Lay will pay depends primarily on the starch content, which must be a minimum of 18%. Frito-Lay guarantees a price of between 5.50 and 7.50 baht per kilogram for potatoes that meet their specifications. The percentage of potatoes produced in Thailand that meets Frito-Lay's specifications is difficult to determine because Frito-Lay annually contracts with over 6,000 farms nationwide. Most of these farmers will not send Frito-Lay potatoes that they know will not meet specifications.

Berli-Jucker, the second largest potato chip producer in Thailand, is also using contract farms for potato growing in Northern and Northeastern Thailand.

The Agriculture Department is working to reduce the need for costly imports by producing 1,000 metric tons of seed potatoes. It hopes this will reduce the volume of imported seed by 10%. The Department would encourage private investment in producing seeds and would certify seed quality, noted the director-general of the Agriculture Department.

Trends and Outlook

Distribution through modern trade channels is expected to become increasingly important for Thai snack producers, particularly for higher end products. Higher priced products will eventually be limited almost exclusively to this channel. The modern trade channel is especially strong in Bangkok and major cities, such as Chiangmai and Phuket, as well as for marketing premium snacks to tourists and other higher income consumers. However, in rural areas where traditional trade channels are dominant, higher end products are often difficult to find because the majority of rural Thai consumers lack the purchasing power to buy these products.

SECTION 3. COST AND PRICES

3.1 Tariffs and Quotas

A major obstacle facing U.S. exports to Thailand is the high import duties placed on high-value fresh and processed food products. Specific duties are no longer placed on most agriculture or food products, and ad valorem rates are expected to decline to between 33% and 50% under WTO rules. However, import duties currently remain very high, with rates at around 40 to 60%. The rates will remain relatively high even after they are reduced by 2004 in accordance with WTO rules. A 35 to 50% reduction in the rates from 60% will still leave many items in the 30% to 40% tariff range.

The Thai government has reduced tariffs for certain groups of agricultural and food products in recent years in order to comply with WTO tariff reduction agreements. Many U.S. companies have benefited from these tariff reductions and have been able to gain a larger share of their respective markets. However, Thailand's tariffs remain generally protective, particularly in comparison to other ASEAN countries and in relation to Thailand's status as leading world food exporter.

Although Thailand's economy relies strongly on agriculture, the Thai government has, in some cases, lowered the tariffs on agricultural and food products below what was required of them according to the country's WTO commitments. The tariff rate quotas for certain agricultural products were adjusted in 1996. In October 1996, for example, the government removed the quota for soybeans and also lowered tariffs on soybean meal once specific domestic purchase requirements were met. However, this was done mainly to satisfy the rising need for protein meal required by the export-dependent livestock and aquaculture industry.

The government also places a relatively high tariff on corn imports and requires that imports only arrive in Thailand between February and June when local supplies are short. Corn is also subject to a tariff-rate quota, which is based on domestic wholesale corn prices.

Another highly restricted commodity is rice, which is still subject to a safeguard on importation and on price levels, in accordance with WTO rules.

Duties on the majority of fresh and processed snack ingredients also remain very high. Most of these items will remain in the 30 to 40% tariff range even after the rates are reduced by 33 to 50% according to WTO agreements. Such rates are very high compared with other countries in the ASEAN region, such as Malaysia, Singapore and Indonesia. Companies trying to penetrate the Thai market will therefore require time, patience, and creativity.

On July 29, 2003, the Thai Government approved a plan to restructure the current tariff schedule. There will be no changes for the majority of agricultural products and processed foods, which will have tariffs rates reduced by 2004 according to WTO agreements. However, some items used in snack production will benefit from this restructuring. These items include potato products, wheat, wheat flour, and dry peas and lentils.

Potato Import Tariffs and Quotas

As of July 2003, the Thai government has increased the annual import quota to 25,400 metric tons. This has been done in an effort to offset declining local potato yields, which has handicapped local potato chip producers. Companies like Frito-Lay and Berli-Jucker have lost a substantial amount of sales due to the declining yields. This has caused both companies to lay off some of their workers to cut costs. By increasing the import quotas and reducing out-of-quota tariff rates, the government hopes that the snack producers will be able to increase

production and rehire their workers. However, the government will allow potatoes to be imported only during July and December, which is when local supplies are lowest. These potatoes will be assessed a 27% tariff instead of the usual 124% tariff on out-of-quota imports.

The normal cost for fresh potatoes is approximately 14 baht per kilogram. With the new 27% tariff, the costs for importing one kilogram of potatoes should be approximately 19.5 baht. At the normal 124% out-quota rate, imported potatoes would cost 33.4 baht per kilogram.

Tariffs on Dry Peas and Other Pulses

Thailand currently assesses a 46% tariff rate on dry peas and other pulses, but the July 2003 proposed reductions have set the new tariff at 30%. Even this reduced rate is so high that it could be considered a trade barrier, particularly when other leading ASEAN countries set their tariffs on pulses at 0 to 5%. Thai snack food producers believe that their imports of dry peas would increase by at least 20% if the duty rates were at a comparable level with other Asian countries.

Tariffs on Wheat and Wheat Flour

The new tariff on wheat announced in July 2003 is expected to be set at 100 baht per metric ton, a significant reduction from the previous rate of 1,000 baht per metric ton, or roughly \$24. This rate is expected to remain effective until it is lowered to 5% as of Jan 1, 2005.

A new tariff on wheat flour was also set in July of 2003 at 2,250 baht per ton, as compared to the previously assessed tariff of 3,260 baht, or about \$75 per ton.

Thai food producers who export wheat-based products usually use lower priced imported flour because they can claim a duty rebate for their exports based on the flour content in the products. It is still unclear if the new tariffs will continue to favor imports, or if more wheat flour demand in the snack trade will shift to local flour millers.

SECTION 4. MARKET ACCESS

4.1 Non-tariff Barriers

In addition to high duties, many of the Thai government's practices and policies pose a strong non-tariff barrier to imports. The primary examples are the country's customs regulations and food registration and labeling requirements. Phytosanitary standards are also a major concern for many U.S. companies and other international suppliers.

4.2 Customs Regulations

Companies importing snacks and ingredients to Thailand are often faced with the inconsistent operating procedures of the Thai Customs Department, especially relating to product valuation. In order to comply with the WTO Valuation System, the Thai Government announced a new valuation scheme that went into effect on January 1, 2001. This scheme allows six methods to calculate the import duty, including:

- Method 1: Transaction Value of the Imported Goods
- Method 2: Transaction Value of Identical Goods
- Method 3: Transaction Value of Similar Goods
- Method 4: Deductive Value
- Method 5: Computed Value
- Method 6: FallBack Value

The government's new valuation schemes have solved many of the valuation disputes encountered earlier. However, some importers still complain about unfair treatment from customs officials, primarily when intra-company transfers, discounted goods, and promotional items are concerned.

Reforming payment procedures and brokerage licensing processes continue to be a major problem due to the considerable amount of paper work and formalities required. A lack of coordination between the Thai Customs Department and other import regulating agencies is another major problem. As the departments become more computerized and efficient, these problems should be reduced.

It is recommended that companies exporting products to Thailand have reliable freight forwarding and customs clearing companies represent them in the goods clearing process and with customs relations. This is because the regulations of the Thai Customs Department sometimes change frequently and it is often difficult for foreign companies to keep track of these changes.

4.4 Food Quality Regulations and Standards

Thailand's regulations and standards for the food industry are governed by the Food Act of B.E. 2522 (1979). The Government has assigned responsibilities for the enforcement of this act to the Ministry of Public Health's Food and Drug Administration (FDA). Provincial Offices of Public Health are also responsible for implementing legal food control operations. They often rely on food analytical support services in the Department of Medical Sciences.

The FDA's Food Control Division in Bangkok is responsible for licensing domestic and imported food products, registration of certain controlled foods, and food labeling. The FDA also requires standards, testing, labeling, and certification permits for all imported food products. These requirements can be a trade restriction due to the cost, length and complexity required for the process. There are also occasional circumstances where demands are made for disclosure of proprietary information, which may result in another type of trade restriction due to some companies' desires to keep their information secret. In recent years, many of FDA's procedures have been somewhat streamlined, but registration and licensing delays of one year or more can still occur.

A detailed list of ingredients and the manufacturing process is required for all processed food products. Many U.S. manufacturers are not willing to disclose such information about their products for fear of losing their trade secrets. This has been one of the main reasons why many U.S. products have not entered the Thai market.

Further details about food quality regulations and standards are available in the FAIRS reports published on July 2003 and August 2000. Both reports are available online at www.fas.usda.gov.

SECTION 5. KEY CONTACTS & FURTHER INFORMATION

The USDA Foreign Agricultural Service in Bangkok, Thailand maintains up-to-date information covering food and agricultural import opportunities in Thailand and would be pleased to assist in facilitating U.S. exports and entry to the Thai market. Questions or comments regarding this report should be directed to the Foreign Agricultural Service in Bangkok at the following local or U.S. mailing address:

Local: Office of Agricultural Affairs Embassy of the United States 120-122 Wireless Road Bangkok 10330 Tel. +662-205-5106 Fax. +662-255-2907 Email: Agbangkok@fas.usda.gov Home page: http://www.fas.usda.gov	U.S. Mail: Office of Agricultural Affairs U.S. Embassy Box 41 APO, AP 96546
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End of Report.