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CANCUN TO HONG KONG: AGRICULTURE NEGOTIATIONS IN WTO

With the failure of negotiations at Cancun conference and little progress afterwards at Geneva, all eyes are set on the Sixth WTO Ministerial Conference to be held in Hong Kong during December 13-18, 2005 for steering the negotiations successfully. As per the website of WTO, the main task before members in Hong Kong is to settle a range of questions that will shape the final agreement of the Doha Development Agenda, which members hope to complete a year later, at the end of 2006.

During the recent meeting at Geneva, an alliance of developing nations (G-33), including India and China, agreed upon that agriculture is engine and core issue of the WTO Doha Development Agenda. Developing countries are persistent with their strategic objectives to ensure that the critical issues of food security, rural livelihood and rural development should become integral part of agricultural negotiation. In addition to these, developing countries are also negotiating for Special and Differential Treatment (S & D) in favour of developing nations in all elements of Agreement on Agriculture (AoA).

As per July Framework released in July 2005, the tired formula for tariff reduction should consider the different threshold levels of tariff for developing and developed countries. The overall average reduction of tariff by developing countries should not exceed two-third of the average reduction undertaken by developed countries.

Just before this summit, the proposals offered by European Union and the US on trade reforms under Agreement on Agriculture

have been welcomed by world. But, it seems that neither the US nor the EU proposal will result in large reductions in the overall level of trade-distorting support beyond that planned by the EU under Common Agriculture Programme (CAP) reform and that allowed the United States under the July Framework Agreement. The US and the EU, under the Farm Bill 2002 and the CAP reforms (Common Agricultural Policy) respectively, have been supporting their agricultural sector with the highest agricultural subsidies offered today, whereby the EU offers 55.8 billion Euros and the US offers \$49.1 billion in yearly subsidies.

The U.S. is refusing to acknowledge widespread criticism of existing WTO categories for domestic support, particularly the lack of effective criteria to define legitimate Green Box spending. Moreover, although the U.S. has offered to reduce the cap on Blue Box spending by half from what was agreed in the July Framework of 2004, it is refusing to consider criteria to restrict the kind of payments that would be eligible for inclusion in the Blue Box. The U.S. continues to ignore dumping, which is the single most damaging aspect of agricultural trade today. Under the U.S. proposal, dumping by U.S.-based multinational corporations will continue and could even accelerate.

The double standards of developed nations are well evident in WTO negotiations. At the latest trade talks amongst Big Five (the US, the EU, Australia, Brazil and India), in Geneva, India took aggressive posture and declined to offer any higher tariff cuts than that contained in the paper tabled by the G-20 alliance of developing countries.



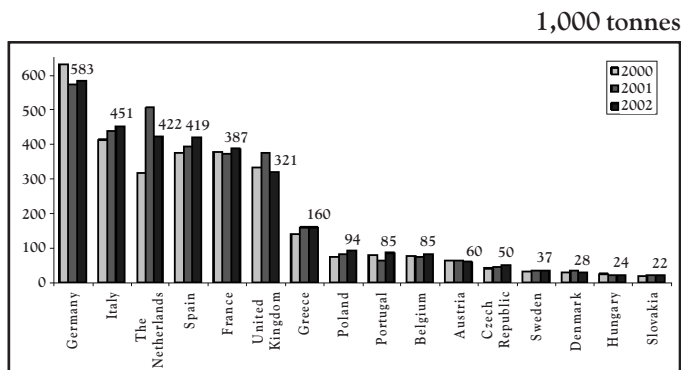
EDIBLE NUT MARKET IN EU : A BRIEF PROFILE

EU is the largest importers of edible nuts. The two segment of edible nuts are groundnut (peanuts) and luxury (tree) nuts. Later being the most important for European trade, constituting of almonds, hazelnuts, pistachios, coconuts, cashew nuts, walnuts and para- or Brazil nuts. EU market of edible nuts is more mature than that of US.

Consumption

Nuts in EU are consumed as snacks as well as in dishes. The demand increases traditionally during the Christmas and year-end holidays. Edible nut users in the EU are mostly the confectionary and chocolate industries. The total edible nut including groundnuts, in EU-25 market increased from 3.1 million tonnes in 2000 to 3.3 million tonnes in 2002 and has been showing an increasing trend over the years and the up trend is likely to continue as revealed by the recent import data. Import figures by country however, vary year to year.

Fig 1. Consumption of edible nuts in the EU member states, 2000-2002



Source : FAO (2005)

Leading nut-consuming countries of EU are Germany, Italy, The Netherlands and Spain. The Netherlands is the major re-exporter of groundnuts in EU. Total EU demand for groundnuts (shelled and unshelled) was almost 1.3 million tonnes in 2002, of which The Netherlands, the UK, Germany and France accounted for more than 75 %. Germany is the leading user of edible nuts in its industrial sector particularly in its whole range of chocolate products. It is also the leading producer of marzipan, which uses almond paste as the main ingredient. Groundnuts are the most popular nut product used in the snack industry in Germany.

Italy is also one of the leading nut consuming EU countries. Domestic almond consumption in Italy fluctuates between 25 thousand and 28 thousand tonnes annually. In Italy edible nuts is mostly used in confectionery and chocolate industry. Walnuts in shell are mainly consumed at the end of main meals, while shelled walnuts are either consumed directly as a snack or used in the confectionery industry. The Netherlands is a major consumer of groundnuts. The industrial use of groundnuts is estimated at about 80 thousand tonnes

annually (Dutch Peanut Council). In The Netherlands, groundnuts are consumed in many different ways, as a seasoned snack, as peanut butter, in sauces and in chocolate bars. Almonds and hazelnuts are mostly used in the food industry (about 80 to 90 percent).

Nuts are traditional ingredients in the Mediterranean cuisine, which attributes to the upward trend of nut consumption in Spain. France is a leading EU consumer of edible nuts, particularly of walnuts. Walnut consumption uses include snacking and home cooking, by-products consumption, such as walnut oil, and shelled walnuts used as ingredients in the pastry, bakery and cheese industries.

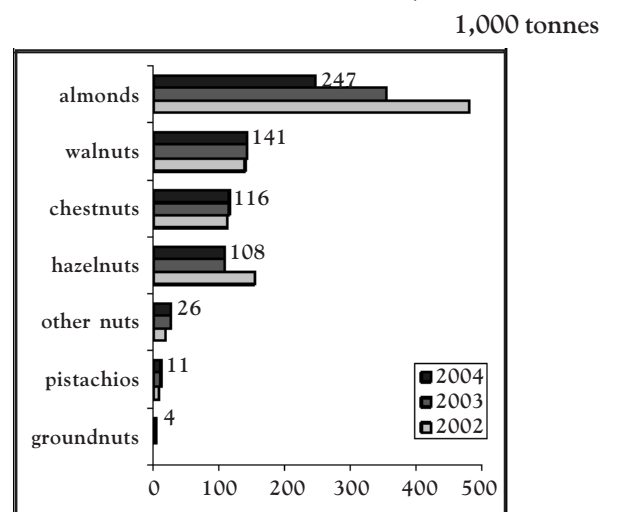
United Kingdom is an average consumer of edible nuts, with groundnuts being the most popular item stimulated by the increasing demand for Indian and other Asian cuisine in the UK. Groundnuts and other nuts are mostly used as ingredients in ethnic dishes and sauces. In order to increase the UK market, leading nut suppliers have turned to new product development. New flavours and coatings for peanuts are being introduced and manufacturers are attempting to position these products as premium peanut lines.

Greece is one of the world's leading consumers of edible nuts. About one third of its total consumption consists of almonds.

Production

Total production of nuts in EU in 2004 amounted to 653 thousand tonnes. Major edible nut products grown within the EU are almonds, walnuts, chestnuts and hazelnuts.

Production of edible nuts in the EU, 2002-2004



Source : FAO (2005)

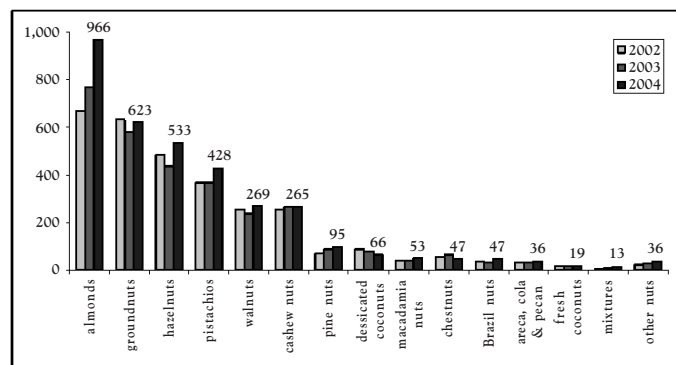
There was a decrease in almond production in the year in 2004. Nevertheless, almonds remain the leading edible nut grown in the EU, accounting for almost 40 percent of total nut production in 2004. Italy and Spain were the leading EU nut producers, together accounting for more

than 60 percent of total EU nut production in 2004, followed by Greece, France and Germany. The United Kingdom and The Netherlands do not grow edible nuts.

Imports

Total imports of edible nuts by EU member countries amounted to • 3.5 billion / 1.7 million tonnes in 2004, representing a total increase of 15 percent in value and 4 percent in volume since 2002.

Imports of edible nuts by EU member countries, by product group, 2002-2004, • million.



Source : FAO (2005)

Germany was the leading EU importer of edible nuts in 2004, accounting for almost a quarter of the total import value, followed by Spain (14%), The Netherlands (12%), Italy (11%), France (10%), the UK (8%), Belgium (6%) and Greece (3%). Almonds are the leading edible nut products imported by EU member countries, accounting for almost 30% of the total import value in 2004 followed by groundnut (18%), hazelnut (15%), pistachios (12%), walnuts (9%) and cashew nuts (8%). Almond imports increased by 44 percent in value and 17 percent in volume between 2002 to 2004.

Leading suppliers to the top-7 EU importers of edible nuts, 2004, imports in € 1,000, share in % of imported value

| Importing EU Country: | Import value: | Leading suppliers in 2004: |
|-----------------------|------------------|---|
| Germany | 787,929 | USA (25%), The Netherlands (16%), Turkey (14%), Spain (10%) |
| Spain | 485,365 | USA (49%), Iran (19%), China (5%), Turkey (4%), France (4%) |
| The Netherland | 414,214 | USA (21%), Argentina (16%), China (13%), India (11%), Vietnam (7%) |
| Italy | 383,054 | USA (30%), Turkey (25%), Spain (11%), Germany (15%), Iran (3%) |
| France | 344,441 | USA (25%), The Netherlands (14%), Spain (13%), Germany (10%) |
| UK | 296,132 | USA (20%), India (16%), Italy (10%), China (9%), Vietnam (6%) |
| Greece | 97,281 | USA (29%), Turkey (13%), China (10%), India (7%), Germany (7%) |
| Total EU | 3,496,870 | USA (27%), Turkey (10%), The Netherlands (8%), Spain (7%), Germany (6%), Iran (5%), China (5%) |

Source : Eurostat (2005)

The USA represents the leading supplier of edible nuts to these EU member states. During 2004, developing countries supplied 37 percent of the total imported value of edible nuts. Leading developing country suppliers are Turkey, India, China, Iran, Argentina, Vietnam, South Africa, and Brazil.

Leading developing country suppliers of edible nuts, 2004, supplies in € 1,000, share in % of supply

| Edible nut: | Import from DCs | Leading DC suppliers in 2004: |
|------------------|------------------|--|
| almonds | 16,876 | Morocco (34%), Chile (28%), Tunisia (11%), China (10%) |
| groundnuts | 307,125 | China (41%), Argentina (33%), India (8%), Brazil (7%), Egypt (3%) |
| hazelnuts | 342,365 | Turkey (95%), Georgia (3%) |
| pistachios | 178,603 | Iran (97%), Turkey (2%), India (1%) |
| walnuts | 59,133 | Moldova (33%), Chile (28%), India (21%), China (15%) |
| cashew nuts | 191,889 | India (61%), Vietnam (30%), Brazil (6%) |
| pine nuts | 49,514 | China (53%), Turkey (29%), Pakistan (17%) |
| desicc. coconuts | 51,545 | Philippines (46%), Indonesia (24%), Sri Lanka (21%) |
| macadamia nuts | 17,554 | South Africa (43%), China (20%), Guatemala (18%), Malawi (7%) |
| chestnuts | 4,946 | Turkey (71%), China (23%), Chile (4%) |
| Brazil nuts | 33,036 | Bolivia (78%), Brazil (14%), Peru (4%), Chile (4%) |
| areca/cola/pecan | 5,065 | South Africa (70%), Cote d'Ivoire (6%), India (5%), Pakistan (4%) |
| fresh coconuts | 10,519 | Dominican Rep. (28%), Cote d'Ivoire (22%), Sri Lanka (20%) |
| mixtures | 82 | Lebanon (26%), Philippines (26%), Turkey (18%) |
| other nuts | 9,230 | China (67%), South Africa (11%), Malawi (6%) |
| Total | 1,277,482 | Turkey (27%), Iran (14%), India (12%), Argentina (8%), Vietnam (5%) |

DC : developing countries

Source : Eurostat (2005)

Exports

Edible nut exports by EU member countries increased by 10% in value and by 12% in volume between 2002 and 2004, amounting to almost • 1.3 billion / 533 thousand tonnes in 2004. Spain is the leading EU exporter country of edible nuts in terms of value. The Netherlands is the leading EU exporter in terms of volume, which mainly concerns re-exports. Majority of the EU exports was directed to EU member countries.

Market Trends and Prospects

In recent years, consumption of edible nuts has shown an upward trend in the EU and, as a result, imports of walnuts and cashew nuts have shown an increase. Suppliers of fast food and snacks have benefited largely from people's increasing tendency to eat snacks, so the

savoury snack market has grown significantly, stimulating the market for groundnuts and more for luxury nuts. Luxury nuts are increasingly used as an ingredient in exotic dishes and as well marketed successfully as new developed mixtures eaten as such or processed in chocolate, candy bars, snacks, or in breakfast cereal mixtures. In EU nearly 90 % of all new edible nut product introductions continue to be in the four main categories: bakery, confectionery, snacks and desserts. Edible nuts are also increasingly used as salad dressings in French, Italian, Asian and Mexican cuisine. Reports also reveal increasing awareness amongst EU consumers on health benefits of edible nuts. Consumption trend in EU edible nut market shows good prospects for edible nuts as alternative source of protein. Nut is being increasingly used as healthy snack or meat substitute and sold as convenience product. Organic nuts or otherwise sustainably produced nuts are also speedily catching up in the EU markets.

Prices and Margins

Import/export and domestic prices of edible nuts in EU markets vary according to a number of factors, such as the type of product, its origin and the level of supply available on the global market. Changes in supply have

a much larger effect on price levels than changes in demand. Other factors affecting prices significantly are the exchange rate of the dollar; quality; grade; presentation (whole, shelled, pitted, broken etc.) and the method of drying/processing, which has been used prior to export. Basic reference price worldwide for a particular product is usually determined by the major origin country. For example, the USA is the reference for groundnuts, Iran for pistachios, India and Brazil for cashew nuts, Turkey for hazelnuts and Sri Lanka for coconut. Prices set on a global level and speculation based on forecasts on forthcoming harvest also have significant effect on prices.

Legislative Requirements

The following legislative requirements are mandatory for edible nut exports to EU:

- General Food Law
- Marketing standards
- Aflatoxin levels
- MRLs

Reference:

- CBI, The Netherlands

CONTRACT FARMING: KEY TO FOOD SECURITY IN DEVELOPING COUNTRIES

Market liberalization, globalization and expanding agribusiness, has led to enormous changes in agriculture production pattern, commercialization of agriculture and changes in developing country food security policy. Distributional benefits and risks associated to such commercialization however, remains function of institutional arrangements. One such in agriculture is formal contracts between producers and buyers (generally processors or exporters), a production and marketing system, known as contract farming.

Contract farming can be defined as an agreement between farmers and processing and/or marketing firms for the production and supply of agricultural products under forward agreements, frequently at predetermined prices. The arrangement also involves the purchaser in providing a degree of production support through, supply of inputs and the provision of technical advice. The basis being a commitment on the part of the farmer to provide a specific commodity in quantities and at quality standards determined by the purchaser, and a commitment on the part of the company to support the farmer's production and to purchase the commodity.

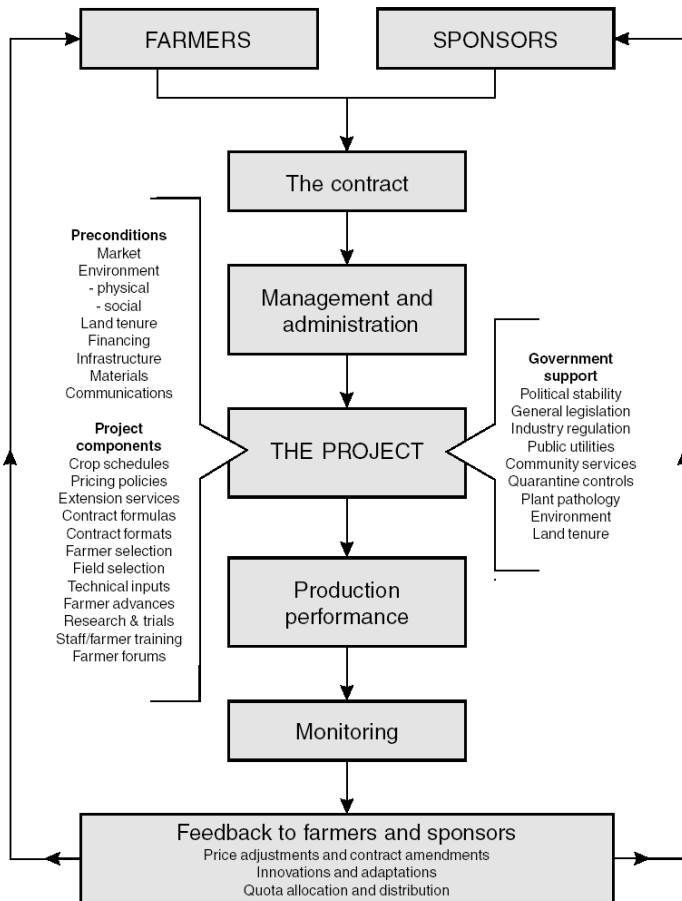
In contract farming, a central processing or exporting unit purchases the harvests of independent farmers, which can supplement or substitute for company production. Purchase terms are arranged in advance through contracts, exact nature of which can vary considerably from case to case. Contracts are generally signed at planting time and specifying the amount of

produce to be purchased by the company and the price, also can specify planting dates (and thus delivery dates) as well as total quantities to be delivered. Often the company provides credit, inputs, farm machinery rentals, and technical advice and always retains the right to reject substandard produce.

Contracting is most commonly practiced by food processing companies. Due to processing plants having high fixed costs, these companies tend to keep raw material inflows at a steady level, close to plant capacity. Further, it reduces uncertainties that would exist if the company simply bought crops on the open market, and gives the company some control over the production process.

In less developed countries contract-farming schemes are mostly multipartite arrangements involving private firms (usually overseas, but occasionally local), the host-country government, and international aid or lending agencies, such as the U.S. Agency for International Development (USAID), the World Bank, or the Commonwealth Development Corporation (CDC). National development bank sometimes provides growers with credit for the purchase of inputs such as fertilizer, seeds, etc. At harvest, the company pays growers the contract price, but takes off a sum that goes to the bank to repay its loan to the grower. Thus, private companies avoid the problems of assessing creditworthiness and prosecuting defaulters. In some cases, government agencies also provide inputs or technical assistance.

Figure 1
A contract farming framework



Source: based on Eaton, C.S., 1998b: 274

Contract farming schemes generally follows two trends. One, that produces traditional tropical commodities, such as sugar, rubber, oil palm, etc., tend to be produced at lowest cost on large tracts of land. These schemes usually involve a large number of growers, tight central control, and provision of numerous services by the central processing unit (for example, irrigation, harvesting, etc.). Usually there is heavy involvement of external donors in these schemes. Such schemes are referred to as outgrower schemes, common in Indonesia and Malaysia (rubber and oil palm) and in Africa (oil palm, sugar, and tea). Often such schemes have been seen to originate as resettlement schemes.

The second is usually on a smaller scale with more private-sector involvement and less tight centralized control, is frequently used in fruit and vegetable production, particularly in Central America and Thailand. These schemes entails mostly, the export of high-value items, such as asparagus, cucumbers, melons, strawberries, etc. with the company providing quality control, brand names, and marketing channels. Business-oriented growers, cooperatives, and individual small farmers are all involved. Fresh vegetable exports from Guatemala are an example of such schemes. Though in developing country total employment in contract farming of these nontraditional crops is much less than in

traditional crops, however, it is reported to be expanding at a faster rate and that these labor-intensive products are more promising outlets for small farmers.

Contract Farming and Food Security

The advantages, disadvantages and problems arising from contract farming vary according to the physical, social and market environments. The benefits are best examined in the light of the other alternatives, namely spotmarket purchases and large-scale estates.

Advantages for Farmers

The prime feature of contractual agreement for farmers is that sponsor normally undertakes to purchase all produce grown, within specified quality and quantity parameters. Contracts also provides farmers with access to a wide range of managerial, technical and extension services that otherwise may be unobtainable. Farmers can also use the contract agreement as collateral to arrange credit with commercial banks and financial institutions in order to fund inputs. Thus, the main potential advantages for farmers are:

- provision of inputs and production services;
- access to credit;
- introduction of appropriate technology;
- skill transfer;
- guaranteed and fixed pricing structures; and
- access to reliable markets.

Besides, tight coordination and quality control offered by contract farming, enables the smallholders to sell perishable goods overseas through open market sales. Reports reveal most significant income increases have been generated in those schemes in which smallholders gain access to lucrative export markets for labor-intensive luxury crops. Income increase has also been observed in case of traditional crops such as tea as e.g. success of The Kenya Tea Development Authority. Many schemes in contract farming requires growers to maintain a certain acreage of food crops along with the specialized contract crops, hence, imparting freedom to diversify crop and income sources and ensuring adequate food supply at the same time.

Advantages to the Sponsors

Companies and government agencies have a number of options to obtain raw materials for their processing and marketing activities. The main potential advantages for sponsors can be seen as:

- political acceptability;
- overcoming land constraints;
- production reliability and shared risk;
- quality consistency; and
- promotion of farm inputs.
- lower cost of inputs due to the absence of middlemen

Apart from the above, the key feature of contract farming is risk sharing and reduction. Contracting is fundamentally a way of allocating risk between the company and its growers. The latter assume most of the

risks associated with production, while the former assumes the risks of marketing the final product, thereby reducing the total risk relative to noncontract situation of that crop.

Types of Contract Farming

Contract farming usually follows one of five broad models, depending on the product, the resources of the sponsor and the intensity of the relationship between farmer and sponsor.

Centralized Model, involves a centralized processor and/or packer buying from a large number of small farmers, is used for tree crops, annual crops, poultry, dairy products often requiring a high degree of processing, such as tea or vegetables for canning or freezing. It is vertically coordinated, with quota allocation and tight quality control. Sponsors' involvement in production varies from minimal input provision to the opposite extreme taking control of most production aspects. e.g sugarcane farming in Thailand.

Nucleus Estate Model is a variation of the centralized model where the sponsor also manages a central estate or plantation. The central estate is usually used to guarantee throughput for the processing plant but is sometimes used only for research or breeding purposes. It is often used with resettlement or transmigration schemes and involves a significant provision of material and management inputs. e.g. Oil palm and other crop cultivation in Indonesia and Papua New Guinea.

Multipartite Model involve a variety of organizations, frequently including statutory bodies, developed from the centralized or nucleus estate models, e.g. through the organization of farmers into cooperatives or the involvement of a financial institution. e.g joint venture contract farming in China.

Informal Model is characterized by individual entrepreneurs or small companies, involving informal production contracts, usually on a seasonal basis. Often requires government support services such as research and extension and involves greater risk of extra-contractual marketing. e.g gherkin cultivation in Sri Lanka.

Intermediary Model involves sponsor in subcontracting linkages with farmers to intermediaries. Only demerit being chances the sponsor losing control of production and quality as well as prices received by farmers.

Well-managed contract farming is an effective way to coordinate and promote production and marketing in agriculture and is likely to bring potential benefits to smallholders by providing access to new markets and by providing opportunities for employing underutilized resources, particularly labour.

Reference:

- International Food Policy Research Institute (IFPRI)

SUGAR INDUSTRY IN FIJI: AN INTRODUCTION

Sugar production is a key sector of the Fiji Islands' economy. Sugar production covers 50% of the country's agricultural land, directly employs 13% of the workforce, indirectly provides employment for a similar percentage (FSC estimated in 2002, that sugar directly supports 25 % of the active labour force), accounts for about 35% of agricultural GDP and 8% of total national GDP. It is the country's second biggest earner of foreign exchange (around US\$125 million per annum), and generates some 30% of total exports. In addition, unlike other export-oriented industries in the country, the domestic value of production is high. Almost all factors of production are indigenous.

The current sugar industry began shortly after 1900, with the establishment of the Colonial Sugar Refining Company (CSR), which was a fully owned subsidiary of the main Australian sugar company, later transferred to the small farmers, CSR was the dominant player until the early 1970s. Following parliamentary approval in 1971, the majority shareholding of CSR was acquired by Government, and the Fiji Sugar Corporation (FSC) came into existence in April 1973. The FSC is a public company with a government shareholding of 68 percent. The other major shareholders are the Fiji National Provident Fund, the Grower's Council, and Fijian Holdings. FSC is the sole miller in Fiji, and operates four existing mills in Lautoka, Rarawai, Labasa, and Penang.

The pivotal role of sugar in Fijian society and the Island Nation's economy traces back to the first harvest in 1882. Decades later, the Lomé and Cotonou supply agreements with the European Union (EU) underlay Fiji's export-led growth through the late twentieth century. Along with other sugar producers in the African, Caribbean, and Pacific (ACP) group of countries, Fiji also depended on an annual export quota to the EU, at prices aligned with the price of sugar within the EU itself, which is three to four times higher than the world market price for sugar. Apart from high internal prices and production quotas, other core aspects of the EU sugar regime are import restrictions and export subsidies, the later contributing largely to EU's practice of dumping. Under the quota system sugar equivalent to the imports from ACP countries is promptly re-exported every year, deflating the world price of sugar. Presently, around • 1.3bn is paid annually in export subsidies by EU to processing and trading companies that export sugar. EU recently lost a case mounted by Australia, Brazil, and Thailand against its subsidised sugar exports under the WTO agreement and is proposing to cut its internal support price for sugar taking effect from 2006. The Fiji Sugar Corporation (FSC) estimates that, as a result, the price of sugar would fall by 23 % in 2006. The price cuts would have a serious effect in Fiji.

Unlike other developing countries dependent on high EU prices, the Fijian sugar industry is inefficient, insolvent, and dependent on government loans. With falling production of cane and output of sugar, the sector is currently facing a crisis, a situation that could have a major negative effect on both macroeconomic and social stability and the poverty status of the entire island. Sugar cane production fell by 9 % in 2000 and by a further 12 % in 2002. Of the 20 ACP sugar producers, Fiji now has the second-lowest cane yield and the lowest sugar yield per harvested hectare. FSC, the main Government-owned entity that owns the country's four sugar mills, is insolvent. Over the past two decades, the FSC has invested around F\$300m in mill upgrades, though without any evidence of improved capacity. High cost of cane cultivation and milling, mill inefficiencies and low productivity by growers, is further making the industry as a whole very cost inefficient.

Structurally, the Fijian sugar industry is quite unique. It is comprised of small farmers farming individual plots under lease. Normally, these holdings are run by families and extended families, and are under contract to provide sugar to the FSC. Farmers do not work on FSC land or plantations. These leases are currently expiring, and many are unlikely to be renewed. By 2009, 95 % of the total cane leases are likely to expire and, if current trends continue, it is likely that 27 % of the land will be taken away from tenants. The resulting insecurity surrounding land tenure has led to falling investor confidence in the industry as a whole. To add to this effect further, younger generations are seeing little incentive to enter the industry. The lack of commitment to cane farming is seen by some as a result of long-term insecurity.

Post Preference Scenario

There are several schools of thoughts regarding the future of Islands' sugar industry under the post preference scenario. According to analysts of Asian Development Bank (ADB), sugar production will not be affected, even with the industry's problems. In a reform plan, the ADB envisaged a 29 % increase in cane and a 51 % increase in sugar production. It assumes that only inefficient farmers would leave after preferences expire, and that the remaining, efficient farmers would make up the production totals. Certain reports strongly oppose ADB's estimates and claims that with 30 % reduction in sugar production post preference, there will be 1-2 % decline in the country's electricity, water, construction, finance, and insurance sectors, which collectively, contribute 15 % of GDP. In the social sector, health and education would contract by 2 % and 2.7 % respectively. However, the largest projected impact is on the informal sector, which would experience a 3.4 % reduction in real output.

As per certain other report Fiji has two options to increase productivity post-preference and offset the negative effect of output prices on farm profit: introduce new and

better technologies at all levels of production, or increase efficiency at various levels of production within the industry. Towards this the Fijian Cabinet has approved in principle a reform plan for the sugar industry, which was prepared by a visiting Indian government technical mission – the 'Indian Experts' plan, requiring and investment totalling F\$86m, which the Fijian government has already secured as a loan from the Indian government.

The restructuring of the sugar industry has much more key role to play in the Fijian economy. Two other main aspects that are under strong consideration by the Fijian government are electricity generation from the sugar industry, and sugar-based production of ethanol for fuel. For other sugar producers like Brazil and Mauritius, electricity generation from *bagasse* has been an important way of reducing their dependence on imported fossil fuels. Currently, Fiji is been spending its precious foreign reserves on diesel for electricity generation, as result of severe lowering of water levels at the country's main hydroelectric dam at Monasavu. *Bagasse* is a readily available waste of sugar industry and a renewable fuel, and has the added benefit of being carbon-neutral. This raises the potential for revenue gathering by trading carbon emission credits under the EU's Emissions Trading Scheme, an initiative parallel to the Kyoto Protocol.

Ethanol is a sugar-based fuel produced through the fermentation of cane juice. A clean-burning fuel for vehicles, ethanol can be used on its own or blended with petrol or diesel. Brazil has the world's most developed sugar ethanol programme. The case of Fiji is obviously on a very different scale to that of Brazil. A successful example for Fiji to follow is that of Mauritius, another small island developing state (SIDS), which is devoid of fossil fuel deposits but now generates 42 % of its electricity from *bagasse*. Towards this, Fiji already has supports from industry and government. The FSC has initiated an upgradation of their mills for export of electricity to Fiji's national grid, and is calling for a full feasibility study to investigate further methods of developing the use of fuel ethanol.

The Fijian government envisages these two ways of adding value to the sugar industry will have very positive effects, socially, economically, and environmentally. Both these areas can potentially create jobs, as well as returning profitability to the industry and saving Fijian foreign reserves.

Reference:

- Ministry of Agriculture, Govt. of Fiji
- ADB Technical Assistance Mission for Intermediation of Sugar Sector Restructuring - Republic of the Fiji Islands
- Oxfam Briefing Paper, September 2005

INDONESIA: AN AGRICULTURE ECONOMY

Indonesia's economy prior to independence was oriented to providing raw materials to The Netherlands. Subsistence agriculture, primarily the production of rice, was the mainstay of most of the population. The economy also relied on plantation agriculture, including sugar and rubber. Indonesia's economy grew impressively during the 1980s until 1990s, largely on the strength of its natural resources, including large population, rich energy reserves, substantial mineral deposits, and fertile farmland. Indonesia's gross domestic product (GDP) was \$208.3 billion in 2003. Its GDP per capita was \$970. Between 1985 and 1995 the GDP grew by about 95 %, while annual inflation remained below 10 %. Between 1980 and 2003 there were significant shifts in the structure of the Indonesian economy. Agriculture shrank from 24 to 17 % of the GDP and was over taken by manufacturing. During the early and mid-1990s annual output from agriculture grew by 3 % per year. About 19 % of total land is under cultivation for field crops or plantations. Small farms produce most of the subsistence crops but also contribute substantial proportions of the nation's rubber and tobacco. Plantation estates produce rubber, tobacco, sugar, palm oil, coffee, tea, and cacao, mostly for export.

Food crops accounted for 59 % of the agricultural GDP in 1993. Rice is the major staple food of the country, and the yield in 2004 was 53 million MT. Indonesia was once a largest importer of rice, but in the late 1960s and 1970s with the introduction of improved varieties of rice, increased use of fertilizers and pesticides, better irrigation, and improved farm credit, rice production grew annually by 5 % between 1969 and 1984. Rice is mostly grown in Java. In 2004, the Indonesian government instituted bans on imports of rice, sugar and salt. Ban on rice imports has been extended for further six months to December 2005, justified on the grounds that current rice stocks and projected output are sufficient to meet demand. Total rice output for 2005 is projected to reach 33.37 mn MT (husked) against projected domestic consumption of 31 mn MT.

Other important crops are cassava, maize, sweet potatoes, coconuts, sugarcane, soybeans, peanuts, tea, tobacco, rubber and coffee. Livestock raised include cattle, buffalo, pigs, goats, sheep, and poultry. Indonesia's chief agricultural exports include coffee, tea, cocoa, spices, and natural rubber, but together they account for less than 10 % of the country's total exports. Large quantities of food are still imported.

Indonesia is the world's fourth largest producer of coffee and the world's second largest producer of Robusta coffee beans, constituting 85 % of the annual harvest. Prices of coffee have risen to around US\$ 1,150 from an average of US\$ 850 per tonne in 2004.

Fisheries is also one of the important sector as exports are concerned making up about 1.8 % of GDP and 3.8 % (\$1.4 billion) of exports. Shrimp, prawns, scads, carp, Indian mackerel, goldstripe sardinella, milkfish, anchovies, and skipjack tuna being the chief catches. Indonesia's main fishing grounds are the northern rim of Sumatra and Java.

In accordance with the WTO Agreement on Agriculture, Indonesia agreed to eliminate non-tariff barriers on agricultural products, and replace them with tariffs. In the current Doha multilateral negotiations, Indonesia continues to advocate special product exemptions for rice, sugar, soybeans, and corn.

While Indonesia has been severely affected in terms of losses of human life and displacement in the December Tsunami, the overall Indonesian economy will be barely affected and the country's economy is expected to expand by 5.5% in 2005 and 6.0-6.5% in the following two years, according to ADB's Asian Development Outlook.

Reference:

- Ministry of Agriculture, Govt. of Indonesia
- Asian Development Bank

NONI: THE WONDER PLANT

One of the Pacific's most important medicinal herb, with roots, bark, leaves, terminal buds and fruit used to treat a wide range of maladies, *Morinda citrifolia*, (better known as Noni) is also known as 'Indian mulberry' and are identifiable by a straight trunk, large, bright green and elliptical leaves, white tubular flowers and its distinctive, ovoid, 'grenade like' yellow fruit. It traces back its history to Southeast Asia and the subcontinent and mentioned in ancient Sanskrit texts as *Ashyuka* means 'longevity'. The herb now has a spread over Australia to Southeast Polynesia (Tahiti) and Hawaii and the Marshal and Gilbert Islands in Micronesia.

Fruit growing in size up to 12 cm or more and has a lumpy surface covered by polygonal shaped sections and is a densely clustered globose, fleshy syncarp and somewhat gelatinous when ripe. It contains polysaccharides, scopoletin, vitamins and minerals. Noni fructifies in a year and bears fruit year round.

Traditional Use of Fruit

Fruit, emits a fetid aroma akin to blue cheese, is often consumed as a food at various stages of its ripeness. It is also manipulated and pressed to produce a sweet, sugary drink use in traditional medicine used in treatment of diabetes, heart problems, high blood pressure etc. According to traditional healers, the fruit is eaten or consumed as a juice, or added to basic recipes, for the purpose of warding off arthritis, rheumatic disease, the effects of aging, tuberculosis, and a variety of other uses. Ripe fruit is also mashed into a poultice and then applied to blemishes and boils for drawing out pus. Soft mush of unripened fruit is combined with salt and applied to cuts and broken bones to accelerate healing.

Seeds are triangular shaped and reddish brown, having an air sac attached at one end, making the seeds buoyant. Seeds contain alkaloid and traditionally harvested when turning white, fully soft, translucent and characteristically odorous. Plants appearing healthy, bearing large fruit or showing vigorous leaf growth, are chosen for seeds.

Traditional Uses of Seed

Traditionally noni seeds were roasted and ingested to help cleanse the body. Records indicate that Tahitians also consumed it for its unique flavour. Also used to make fetid liquid for hair as insecticide and applied to soothe irritated skin.

Traditional Uses of Leaf

Noni leaf has been used for thousand years in French Polynesian to treat a wide variety of ailments. These include arthritis, boils, bruises, colds, constipation, cough, cut, diabetes, diarrhea, dysuria, ear and eye infections, elephantiasis, enlarged spleen, fevers, fractures, gastric ulcers, gout, headaches, hemorrhoids, inflammation, itching, menstrual disorders, muscle aches, neuralgia, pain, pneumonia, rheumatism, ringworms, septicemia (blood poisoning), small pox, sores, sore throat, sprains, stomach aches, styes, tetanus and thrush. Leaves were also used as a tonic, emollient, deodorant and purgative and treat vitamin A deficiency in children.

The most intriguing and apparently most closely examined of the many claims for noni is for the prevention and correction of cancer-related changes in the human body. Researchers in Illinois, Hawaii and in other parts of the world are exploring the anticancer effects of noni juice. Extracts however, have shown anti tumor activity in animal studies. The Noni Research Institute, USA has filed several patents on noni products under pharmaceuticals. Indian Noni Research Foundation (INRF), Chennai is also actively involved with research and development on multifarious uses of Noni with more focus on conservation of Noni in India as it has been declared as endangered by the Botanical Survey of India.

Reference:

- www.NoniResearch.org
- Other web resources

PROCESSED FOOD: REGULATIONS AND CERTIFICATIONS FOR EXPORTS

Globalization, liberalization and ruling WTO agreements have resulted International Food Trade to increasingly rely on Inspection and Certification Systems for ensuring fair trade practices, safety and quality. Key principles involved are: Fitness for the Purpose, Risk Assessment, Non-discrimination, Efficiency, Harmonization with Codex Standards wherever possible, Equivalence, Transparency, Special and Differential Treatment, Control and Inspection, Procedures and Certification Validity. Food exported should conform to among other, Food Legislations, Regulation, Standards, Codes of Practices of the importing country, provisions contained in bilateral and multilateral agreements and as per the Codex, Code of Ethics in food trade. Implementation of Code of Ethics in food trade is the responsibility of the specific government exporting food, by making provisions for Food Legislation assuring safety through implementation of quality management such as GMP, GHP, HACCP, ISO-9001 etc., Food Control infrastructures including certification and inspection system and other legal or administrative procedures.

Food Safety and Quality

Two key attributes of food trade, safety and quality, is achieved mainly through Quality Assurance Programmes or Quality Management Programmes.

Codes of Practice

Codes of Hygienic and GMP's are recommendations made by Codex Alimentarius Commission (CAC) of FAO/WHO. These codes suggest guidelines to prevent and control many food quality and safety problems.

Good Manufacturing Practices (GMP)

GMP covers the fundamental principle, procedures and means, design and environment suitable for production of food for acceptable quality. It takes into account factory location, layout, building design, process area, processing equipment, maintenance, raw materials, personnel, pest management, storage, transportation, etc. The basic requirements for GMP includes:

- Use of high quality raw material with least microorganisms
- Selection of food processing equipment easy to clean and not promoting microbial growth
- Regular sanitization of equipments to prevent microbial contamination
- Filtering air of food processing areas to reduce airborne contaminants; and
- Training of personnel towards use of hygienic food handling practices.

GMP also ensures compliance to traceability procedure and release of finished products to market only after prescribed quality analysis. US-FDA has published Current Good Manufacturing Practices through subparts (Ref: 21 CFR, 110)

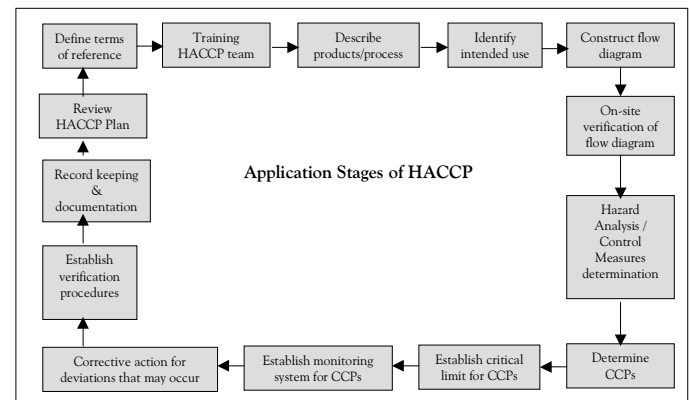
Good Hygienic Practices (GHP)

GHP describes the basic hygienic measures and covers hygienic design, construction and proper use of food manufacturing premises and machineries, cleaning and disinfection procedures including pest control. It takes into account: microbial quality of raw foods, hygienic

operation of each process step, hygiene of personnel and their training on hygiene and food safety. Key codes in GHP are:

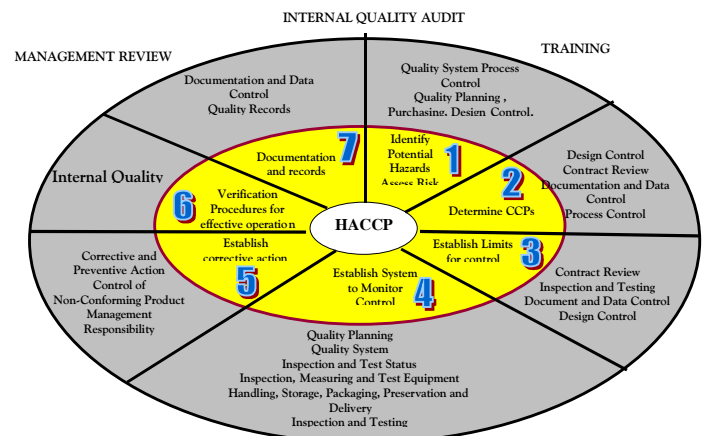
- CAC/ RCP 001/1969: Code of Practice of General Principles of Food Hygiene
- CAC/ RCP 023-1979: Hygienic Practices for low-acid and acidified low-acid canned foods
- CAC/ RCP 039-1923: For Hygienic Practice for Aseptically Processed & Packaged low-acid foods
- CAC/ RCP 042-1995: Code of hygienic practice for spices & dried aromatic plants
- CAC/ RCP 043-1995: Preparation & sale of street vended foods
- CAC/RCP 046-1976: Refrigerated Packaged Foods with extended shelf-life

Hazard Analysis and Critical Control Point (HACCP)
HACCP is a prevention system focused on controlling manufacturing process. It is recognized as a comprehensive prevention approach for addressing biological, chemical and physical hazards through anticipation and prevention during manufacturing process. Guidelines for implementing HACCP in Food Processing Units have been cited by Codex, ISO, EU and USA.



Source : CFTRI

Using ISO-9000 Framework to incorporate a HACCP Plan



Food Regulation and Exports of Food from India

Lately, more rigour has been brought into quality inspection and certification process of exportable food products as a response to the reported number of rejections of consignments. The Export Inspection Council (EIC) is the apex-designated agency charged with this responsibility. It facilitates SPS compliant exports by imposing a system of three types of inspection and certification, namely Consignment-wise Inspection (CWI), In Process Quality Control (IPQC) and a Food Safety Management System based certification.

EIC is empowered to notify commodities for Quality Certification and Inspection prior to export and also specify the type of certification and inspection to be applied to such commodities. Few notified commodities are fish and fishery products, black pepper, basmati rice, honey, egg products, milk and milk products. They are also empowered to issue certificates of origin to exporters under various preferential tariff schemes for export products. EIC's Certification is recognized in following areas:

- Basmati Rice by E.C. (for CoA).
- Black pepper by US-FDA (without this, the product is detained in USA).
- Fish & Fishery Products by Australian Quarantine & Inspection Service (AQIS)
(With EIC's certificates, only random verification of sampling not exceeding 5% is conducted; health certificate issued by EIC is accepted)
- With EIC's certificate, Milk, Milk products, Fruits & Vegetable Products covered under import inspection scheme of Sri Lanka – will not be subjected to testing by Sri Lanka.

Two key issues relevant to food exports are: (a) the pre-shipment inspection and certification by the exporting country and, (b) the import procedures and detention in the destination countries. Since, there are no uniform or homogenous product lines, there are wide variations in relevant food safety norms and over time, food safety standards have tended to become more complex and vary substantially amongst countries.

Food Exports to USA

Food and Drug Administration (FDA) is the apex agency in US establishing regulations on food trade under different nomenclature and addressing specific product lines. Food and Agricultural Import Regulations and Standards (FAIRS) USA covers Food Laws under FDA (DHHS) and US Code of Federal Regulations (CFR-21) providing rules for:

Food Safety:

- Parts 1 to 99, General Regulations for enforcement of FFDCa and Fair Packing and Labeling Act; colour Additives.
- Parts 100 to 169, General Regulation for Labeling, food Standards, cGMPs, HACCP for sea food.
- Parts 170 to 199, regulations for Food additives.

Labeling Requirements

21 CFR 101: Labeling requirements

- Foreign language & English.
- Name of Food.
- Net quantity of contents.
- Address

- Ingredients.
- Additives

Other Regulations and Requirements

This include legal framework for reasonable Sanitation and Standards concerning personnel, building and facilities, equipment and product process controls for food safety and Copy Rights or Trade Mark Laws counterfeiting trademarks registered in USA. Other regulations set up for few key specific product lines includes:

- Milk Cream: to meet requirements of FDCA & Import Milk Act import permit from DHHS.
- Meat & Meat Products to be inspected by APHIS & FSIS prior to release by US Customs.
- Plant & Plant materials to be accompanied by Phytosanitary Certificate.
- Poultry & Live Stock – Health Certificates.
- Inspection of seeds for Labeling & noxious weeds.

Besides, regulations governing use of Food Additives is listed in 21 CFR 170 – 199 and regulations on pesticides and other contaminants is established by Environmental Protection Agency, which establishes tolerance levels for pesticides and other contaminants.

Food Export to EU Countries

EU has been strategically introducing newer and stricter residue limits and regulations every time a need arises to restrict imports from developing countries like India. List of products known to pose risks to health, e.g., aflatoxins in plant products are put to stricter scrutiny and checks at point of import. Such imports are restricted to a list of approved border inspection posts. Similar approved list of countries has been established by EU for imports of products of animal origins (POAO). Official Feed and Food Control Regulation introduced by EU Regulation: 882/2004 and OFFC-2005 is to be effective from 2006 for feed and food of non-animal origin imported into UK, applicable to vegetables, cereals, nuts, mushrooms, fruits, products made out of these and drinks. The EU Food Hygiene Regulations are listed as:

- 854/2004 – Art.6 - Official controls on POAO - Procedures concerning imports.
- 853/2004 - Art. 6 - Requirements for approved establishment for both POAO & Non-POAO.
- 852/2004 - Art. 10
 - Corner stone; applies to all Foods.
 - Food business operators to register,
 - Compliance with GHP requirements
 - Food Safety Management based on HACCP

Besides EU's stringent check procedures, food and food products not complying with the above regulations are to be retained and the final decision rests with enforcement authority. Costs of sampling and analysis at the port of arrival to be borne by the exporters. It also insists on additional checks and requirements for high risk foods products such as peanuts and chilli powder. A list of approved food and food products for imports to EU is provided in www.food.gov.uk/imports.

Reference:

- CFTRI
- Seminar on Quality Standards and Compliance for Export of Agri Products

NEWS FOCUS

EU plan to unload 2 million tonnes of sugar on market

In spite of a World Trade Organisation ruling that such exports are illegal the European Union is planning to push more than 2 MT of surplus sugar on to the world market. The proposal, likely to draw a strong rebuke from other sugar-producing countries, would sell sugar from the EU's internal stocks abroad to prevent domestic oversupply. The European Commission had made recommendation to involve between 2-2.5 MT of sugar, compared with annual EU production of about 17 MT. The proposal is being communicated to representatives of the member states.

Source: Financial Times, September 11, 2005

European Sales of Soya Milk & Non-Dairy Drinks Surge

The European market for soya milk and non-dairy drinks is expanding by over 20% per annum. A new study by Organic Monitor (www.organicmonitor.com) predicts sales to rise to EUR 600 million in 2005. High market growth rates are attributed to product innovations and burgeoning consumer demand for health beverages. Initially most demand for non-dairy drinks was from consumers suffering from lactose intolerance, however demand has broadened to include consumers seeking functional beverages and healthy alternatives to dairy milk. Soya milk in particular is popular because of its link to low incidence of heart disease, osteoporosis and breast cancer.

The study reveals, fresh soya milk as the fastest growing segment in the British non-dairy drinks market. Spanish market where they are marketed by large juice and dairy companies has been showing rapid growth with non-dairy drink volume expanding by 317% between 2001 and 2004. The German non-dairy drinks market, also reporting exceptionally high growth rates and is projected to

overtake the British market in 2005 to become the largest in Europe. The Belgian firm Alpro maintains its market leadership position although its market share is eroding. The study claims, market winners will be those companies that adopt strategies based on product differentiation as non-dairy drinks become increasingly commoditised,

Source: The American Soybean Association Weekly Update, October 10 2005

China urged to set up sugar security reserve

According to the China Sugar Association and industry forecast agencies, sugar consumption in this world's most populous market is expected to outreach 11.8 MT in 2005, which means more than 1 million tons of sugar need to be imported this year to fill the insufficient domestic supply. A fast expanding economy, a booming food processing industry and a change in consumption structure are three factors that are driving up the sugar consumption in the country.

China is now the world's fourth largest sugar producer, only after Brazil, India, and European Union, and the world's fifth largest consumer after India, the EU, Brazil and the United States. Customs statistics of China show that the country has imported 579,300 tons of sugar during the first nine months of 2005, making it inevitable to become a huge sugar importer this year.

As per market sources the demand for sugar by the food baking companies in 2005 would maintain a growth rate between 7 to 8 % while the dairy products will pick up a pace of between 10 and 15 %. Market analysts therefore urged for security reserve of the sweet material to avoid major market fluctuations and prevent prices from running out of control in the future as the domestic sugar supply is expected to remain deficient in the long run.

Source: People Daily China-English, October 16, 2005

The news items and information published herein have been collected from various sources, which are considered to be reliable. While every care has been taken for authenticity of the material published, Exim Bank accepts no responsibility for authenticity or accuracy of such items.

Export-Import Bank of India, Centre One Building, Floor 21, World Trade Centre Complex, Cuffe Parade, Mumbai 400 005. Tel.: 2218 5272 Fax: 2218 2572 E-Mail: eximcord@vsnl.com
Agri Business Group: agrigroup@eximbankindia.com / sumana@eximbankindia.com

Contact Numbers: Ahmedabad: 26576852, Bangalore: 25585755, Chennai: 25224714, Guwahati: 2599135, Hyderabad: 23307816, Kolkata: 22833419/20, Mumbai: 22830761, New Delhi: 23326375, Pune: 26458599, Budapest: (00361) 3382833, Johannesburg: (002711) 4428010, Milan: (003902) 58430546, Singapore: (0065) 653 26464, Washington D.C.: (001) 202-223-3238

