

# PALM OIL

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## Technical Bulletin

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# PALM OIL SITUATION IN CHINA

# PALM OIL SITUATION IN CHINA

By  
Teah Yau Kun

China has emerged as one of the most important markets for Malaysian palm oil in recent years. Imports of Malaysian palm oil have exceeded one million tonnes annually over the last few years. The demand for palm oil in China has been firmly entrenched in certain sectors of the industries. While China is the second largest oilseeds producer in the world, after the USA, turning out over 41 million tonnes in the past season, per capita offtake of food oils of around 8 kg is still low by world standards. The low offtake was due to limited supply and a historical lack of consumer spending power. However, the pattern is changing now that China's 1.2 billion population is starting to reap the benefits of double-digit economic growth, and the demand potential is enormous. However, China is faced with limited land to raise domestic oil production which implies that the import-fed deficit will widen further.

## Oils and Fats in China

The oil consumption in China in 1994 was 8.7 million tonnes as compared to 7.7 million tonnes in the previous season. Although China's own vegetable oil production continues to break records, at around 5.7 million tonnes, it remains at least 3.0 million tonnes short of the growing domestic requirement. The food oil balance of China is shown in Table 1.

Inflation was the main driving force behind 1994's political decision by the Chinese authorities to enable higher oil consumption through

imports. It remains the top agenda in the main political issue in the central authority in 1995. There was a rise of 34% in prices of basic foodstuffs including vegetable oils where annual inflation was running at a whopping 20%. Beijing authorities wanted to get the inflation

down to less than 15% in 1995 and vegetable oils had to be imported to keep prices under control. Initially, the provinces were allowed to source oil imports without state control. The situation went out of control and prompted the authorities to back-track and put purchases firmly under the State Corporation. Since then, the pace of imports has been more restrained. Palm oil was one of the vegetable oils imported in substantial quantities during this period.

## Palm Oil in China

One of the major vegetable oils imported by China over the years was palm oil (Figure 1). The import volumes were in the range of half to three-quarter of a million tonnes between 1990 to 1993. The high price of palm oil in the last two years did not deter China from importing more palm oil and the volumes continued to increase to reach a million tonne level in 1994 and 1995.

With the above development, the prospect of palm oil in China is and will be very bright. With her big

Figure 1 : Imports of Palm Oil Into China

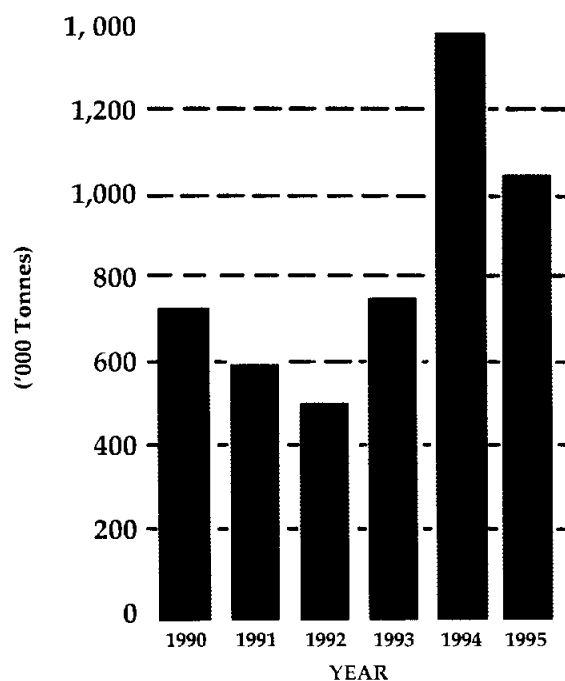


Table 1 : Chinese Edible Oil Balance (million tonnes)

	89/90	90/91	91/92	92/93	93/94	94/95
Production	3.57	4.45	4.87	4.79	5.17	5.73
Consumption	5.40	6.52	6.14	5.72	7.72	8.67
Imports :	2.06	2.16	1.43	1.12	2.79	3.17
a) palm oil	1.00	1.29	0.88	0.80	1.42	1.50
b) soyabean oil	0.52	0.50	0.22	0.10	0.93	0.95
c) rapeseed oil	0.48	0.37	0.29	0.15	0.36	0.65



One of TAS Missions

population, her demand for palm oil increases over time. Only her economic changes caused the utilization pattern of palm oil to fluctuate. However, the palm oil utilization pattern is very unique in China. It differs from that of rapeseed and soyabean oil and is not in direct competition with them. In China, palm oil (mainly palm olein) is strongly needed by the Chinese food industries.

Traditionally, palm oil is imported to service the instant noodles, snacks, fried fast foods and other industries producing fried foods, while the stearin is used for soap. Over the last two years, palm oil is increasingly being used for confectionery industries. This is as a result of the de-

velopment and growth of tourism industries as well as the rising foreign imported food trends in China. The rapid growth of the food industry started with the economic reforms in the late 1970's. In 1980, the food industry output was estimated at US\$6.6 billion, but it is expected that by the year 2000, the output of the industry will total US\$75 - US\$82 billion.

With the rapid growth in the food industries in China, demand for products with specific functionality and performances will increase. Majority of the Chinese users now know about the good technical attributes of palm oil.

## Tariff

It is expected that the oils and fats industries in China will encounter ups and downs as the Chinese Government strives to solve the domestic problems. The various policy changes witnessed over the last few years had created difficulties for the joint-venture industries in China. While China is determined to develop its national economy by implementing fair trade practices to conform to world standards, there is still an element of tariff discrepancy in certain products.

The tariff for palm oil is higher than those of other soft oils such as soyabean oil. The most recent custom tariffs being announced for vegetable oils and fats in the country effective 1 April, 1996 are shown in Table 2.

While the purpose of imposing tariff for rapeseed oil was to protect the local rapeseed industries, palm oil is not in direct competition with the locally produced oils (as mentioned earlier). Very little palm oil was used for the household as it is used more by the food industries for domestic food production as well as for export. Higher tariff for palm oil will detrimentally affect the food industries and this is not

beneficial for the development at a time when such development is being emphasised.

## Palm Oil Potential in China

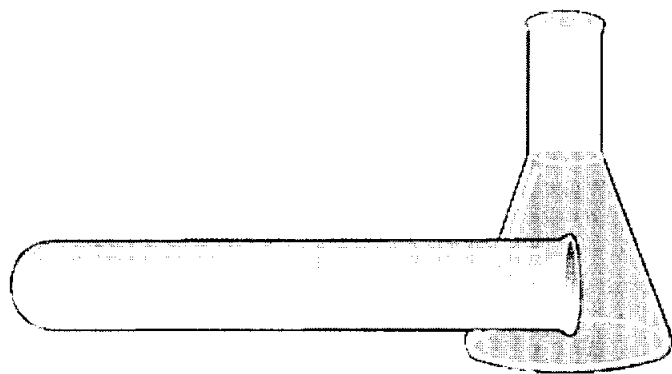
For a foreseeable period of time, the food industry, textile industry and the household industry will remain as the three major thrust areas of China's consumer industry. While the traditional consumption pattern of palm oil in China will sustain, new opportunities for palm oil in indirect applications are becoming plentiful.

As the food industries develop and the foreign food habits are increasingly accepted apart from the local food systems, the use of palm oil for diversifying product range in China offers a great potential. However, palm olein is still not fully accepted by the household although it has been blended with other vegetable oils especially in the Southern region.

Blending for household use during seasonal changes is a possibility with the change in people's dietary habits as a result of increasing economies of the population. Solid fat market offers ample opportunity for palm oil as the food industries develop. The palm oil industry in China must be a long term one since China is undergoing various changes. Temporary setbacks and hindrances may surface periodically due to policy changes as well as tariff discrimination against palm oil. This is part of the progressive reforms in China in her strife to find a solution to the various problems. Persistent efforts from both the private sector as well as the government agencies are necessary to enhance the acceptance of palm oil in China.

Table 2: Current Tariffs in China

Tariff Code	Product	Tariff Within Quota (%)	Tariff Outside Preferential (%)	Quota General (%)
15071000	Soyabean oil	13	121.6	190
15081000	Groundnut oil	9.7	75	100
15111000	Palm oil	18	30	60
15121100	Sunflower oil	40	91.2	120
15141000	Rapeseed oil	20	100	170
15152100	Corn oil	18	91.2	120



# TOCOPHEROLS AND TOCOTRIENOLS INTERACTIONS AND THEIR SIGNIFICANCE

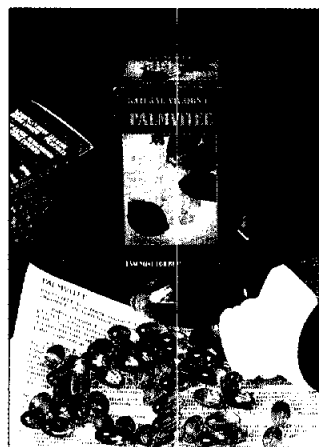
By  
Dr. N. Chandrasekharan

**V**itamin E as tocopherols and its analogues tocotrienols are present in significant amounts in palm fatty acid distillates (PFAD), a by-product in the palm oil refining process. It is now possible to obtain a tocopherol and tocotrienol rich fraction (TRF) from PFAD. Tocotrienols have been credited with regulating down HMG CoA reductase activity and thereby inhibiting cholesterol biosynthesis and suppressing tumour growth and inhibiting tumour promotion.

The composition of TRF has been suggested not to be constant from batch to batch. This variation may account for some of the inconsistency in the results of investigations carried out using TRF. The recent studies of Quereshi *et al.* from Wisconsin in the US and published in the *Journal of Nutrition* provides some explanations for the possible conflicting results on the impact of TRF. According to them the relative proportion of tocopherols and tocotrienols in TRF influences the actions of the tocotrienols, optimal potency being evident with a composition of 15-20%  $\alpha$ -tocopherol and

about 60% gamma and delta tocotrienols, whereas less effective preparations consist of >30%  $\alpha$ -tocopherol and 45% gamma and delta tocotrienols. The proportion of  $\alpha$ -tocopherol in TRF can vary from 15/100g to 44/100 g. Further the relative proportions of the tocotrienol isomers are also known to differ from batch to batch of TRF.

The problems in interpreting conflicting reports as a result of using preparations of TRF with variable composition pose a challenge to investigators. A solution would be the availability of pure preparations of the different isomers



Vitamin E from Palm Oil

of tocotrienols in adequate amounts. This would greatly facilitate elucidation of the interactions of tocopherols and possibly the mechanisms involved. It can also be resolved by using standardised preparations.

It has been reported by Lester Packer of the University of California that the tocotrienols are powerful antioxidants. Many age related

conditions have been attributed to free radical damage and antioxidants like vitamin E confer protection against free radical damage. Early this year Bierenbaum in the US has reported the regression of atherosclerotic changes in the carotid arteries with TRF. Carroll from Canada has reported that in vitro tocotrienols potentiate the action of tomosifen *in vitro*, an important chemotherapeutic agent against breast cancer. Scientists in Malaysia have found tocotrienols to inhibit HMGCoA reductase an important enzyme in cholesterol synthesis. Thus it seems that TRF has important roles in cholesterol metabolism and cancer prophylaxis. As such, based on the reports of many exciting studies, there is room for considerable optimism in the potential uses of TRF in disease prevention and health promotion.

## CONSUMER MAGAZINE CAUTIONS ABOUT THE POTENTIAL HAZARDS OF OLESTRA

By  
J.R. Santhiapillai

**F**ood Chemical News reports that the Consumer Reports magazine has cautioned its readers about the potential hazards of olestra, and said the Food and Drug Administration "should demand much stronger evidence on benefits and risks before olestra use is allowed to go any further".

"We don't believe olestra should become a staple ingredient in the food supply - eventhough its use in chips alone may not pose a major hazard to public health", the article in the Feb-

ruary issue of the magazine, published by Consumers Union (CU), said. The article continued: "Eating enough olestra to help reduce your

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waistline would mean boost-  
ing your health risk".

The article cited concerns  
about the food additive by  
the Centre for Science in the  
Public Interest and by  
Harvard School of Public  
Health epidemiologist Meir  
Stampfer, and asked, "Are  
you so addicted to snacks  
and so committed to a low-  
fat diet, that you'll risk los-

ing important nutrients and  
possibly getting "diarrhoea?"  
The magazine said three of its  
tasters sampled some of the  
prototype olestra chips and  
found they tasted better than  
no-fat chips but not quite as  
good as reduced-fat chips.

In a letter to FDA Commis-  
sioner Dr. David Kessler, CU  
said it sees no urgent need for  
the food additive to be ap-  
proved and urged that "sub-  
stantially more examination

and discussion" of the health  
issues is raised before olestra  
is approved.

Meanwhile, the American  
Council on Science and  
Health sent to Kessler a posi-  
tion paper prepared by the  
group on olestra, which  
urged the agency to accept  
the recommendation of the  
FDA scientific advisory com-  
mittee and grant limited ap-  
proval of the additive.

The paper which was re-

viewed by 20 researchers,  
said the savoury snack food  
limitation included in the fi-  
nal approval "will provide a  
valuable trial period". The  
paper added, "While olestra  
(like all other foods and ad-  
ditives) is not perfect, its po-  
tential benefits lead us to con-  
clude that it could be a posi-  
tive addition to the American  
diet".

## IN BRIEF

### CHOLESTEROL- SUPPRESSING MARGARINE IN THE SHOPS

By

T.P. Pantzaris & B.A. Elias

**A** new margarine shown to dramatically reduce  
blood cholesterol has reached the food shops in  
Finland recently and is already creating a  
sensation (*The Times* and *Financial Times*). It is  
reported that the new margarine, brand name "Benecol",  
in spite of its high cost at six times that of the normal  
product, is selling-out the moment it appears  
in the shops.

So called functional foods are  
finding a huge market in the  
West. Recent examples of  
successful launches are Gaiyo  
yoghurt from MD Foods in  
Denmark, fruit drinks with  
soluble fibre from Smith  
Kline Beecham and Heart  
Watch Omega bread, but  
their success has been nothing  
compared with Benecol.

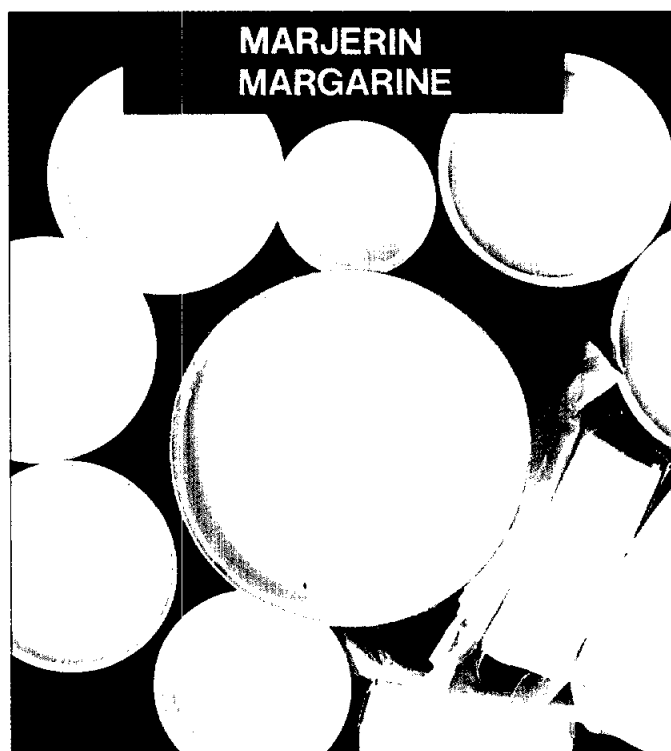
Benecol was developed by  
a small Finnish company,  
Raisio, and is priced in the  
shops at the equivalent of

US\$5.25 for a standard 250g  
packet. It is backed by a  
report in the *New England  
Journal of Medicine* showing  
that in a 14-month trial con-  
sumption of only 25 g per  
day (the amount which nor-  
mally goes on two slices of  
toast) reduced blood total  
cholesterol by 10% and LDL  
cholesterol by 14% which  
could be expected to cut the  
risk of heart attack by about  
33%. Importantly, the higher  
the cholesterol before con-  
sumption of the margarine,

the greater would be the  
cholesterol reduction.  
According to reliable  
sources, Raisio cannot meet  
demand in spite of working  
all possible overtime and are  
installing new plant to in-  
crease production four-fold  
this year, the company's  
share price has risen from 70  
to 160 markka in two months  
and the multi-national food  
giants are queuing up to  
secure manufacturing  
licences.

Benecol's health effects  
depend on its inclusion of

high levels of plant sterol  
derivatives and these could  
in theory be added to any fat  
product such as shortening  
or frying fat. The manufactur-  
ers say they have no plans  
to export their product to  
other countries until their do-  
mestic market is satisfied but  
Finland is a small country.  
What will happen when it  
reaches large health-con-  
scious America, can only be  
conjectured. They point out  
that this is a full-fat marga-  
rine and should only be used  
to replace other fats in the  
diet, not to supplement them.



Margarine

# British Tallow / Beef Fat

By T.P. Pantzaris & B.A. Elias

Following the recent announcement by the British government of a possible link between bovine spongiform encephalopathy (BSE) or "mad cow" disease in cattle and Creutzfeldt-Jakob disease (CJD) in man, the public throughout Britain and the EU reacted with panic and all beef (meat) sales fell to only one fifth of their previous levels, even in member states where there is no BSE disease.



The Superior Palm Oil

The EU Commission, alarmed at the possibility of huge losses among its all important agricultural community, promptly met and banned all exports of British beef products including tallow, whether for edible or inedible use. Since then, the scientific committee of top medical experts, appointed by the British government to advise on the matter, has been pointing out that so far only ten people out of a population of some 60 million have died under suspicion of having been infected through eating beef and these were old infections since the incubation period of the disease is 10-15 years. As a result of measures taken in 1989 and further reinforced this year, the possibility of new infection is very small indeed and British beef is safe to eat.

In Britain, the government and gradually the consumers, have accepted this advice and beef sales here are now back to normal levels, but consumers in the other EU countries are far from convinced and are refusing to buy even their own locally produced beef, which is free from any possibility of BSE infection. The EU Commission is also not quite convinced and is asking for stronger measures from Britain and until then, its ban on British tallow remains in force. As a result tallow stocks in the U.K. are piling up and even the soap and oleochemical manufacturers are refusing to buy the local tallow as there is too much trouble to use different origins for domestic and export trade.

Most of the British tallow has been replaced by imports from USA, Ireland and elsewhere, but those sources are more expensive and clearly there is now a greater opportunity for palm oil to capture a larger share of this market.

## Record Oilseeds Production Expected in South Africa

by  
J.R. Santhiapillai

Table 3 : Oilseed Area, Yield & Production

	96/97*	95/96	94/95	93/94	92/93
<b>Area (1000 ha)</b>	994	780	631	663	813
<b>Yield (tonnes/ha)</b>	0.96	0.79	1.05	0.86	0.52
<b>Crop('000 tonnes):</b>					
<b>Soyabean</b>	90	60	72	63	57
<b>Cottonseed</b>	90	42	48	26	36
<b>Groundnut</b>	130	75	103	117	80
<b>Sunflower seed</b>	600	437	438	362	250
<b>Total</b>	910	614	661	568	423

Note : \* - Forecast

Preliminary official estimates show a near-record oilseed crop is expected in 1996/1997 as a result of record oilseed plantings and improved weather.

In 1996, production of oilseeds is expected to be about 900 000 tonnes, up steeply from about 600 000 tonnes in 95/96. The sunflower seed crop is expected to be about 600 000 tonnes in 96/97 compared to 437 000 tonnes in 95/96 (Table 3).

If crops increase to current expectations, import requirements for sunflower oil, corn oil and soyabean oil will fall sharply and could also affect palm oil imports.

# POLISH CONFECTIONERY FATS INDUSTRY AND TRADE IN 1995

By  
M. Rasid M. Jaais &  
Dr B.A. Elias

Poland is a main producer of candy, chocolate, pastry and other chocolate products. In 1994, Poland produced 115000 tonnes of candy, 151 000 tonnes of pastry (without chocolate pastry), 49 000 tonnes of hard and stuffed chocolate, 82 000 tonnes of chocolate products (candy, pastry, etc.) and 33000 tonnes of other sweets (e.g. chocolate substitutes and, "oriental" products such as halvah, sesame cakes, etc). Production of sweets, including chocolate and chocolate products, is growing steadily since the beginning of the decade. Their export grows faster than production. In 1994, the total sales from sweets and confectionery industries reached US\$1 million and represented 7% of the whole foodstuffs industry revenues.

Ownership structure of the industry is as follows:

- ◆ 70% - private and privatised companies;
- ◆ 25% - cooperatives;
- ◆ 5% - state - owned enterprises.

Among the foreign shareholders of the large private Polish companies are :

- PepsiCo (USA)
- Wedel S.A. (Warsaw);

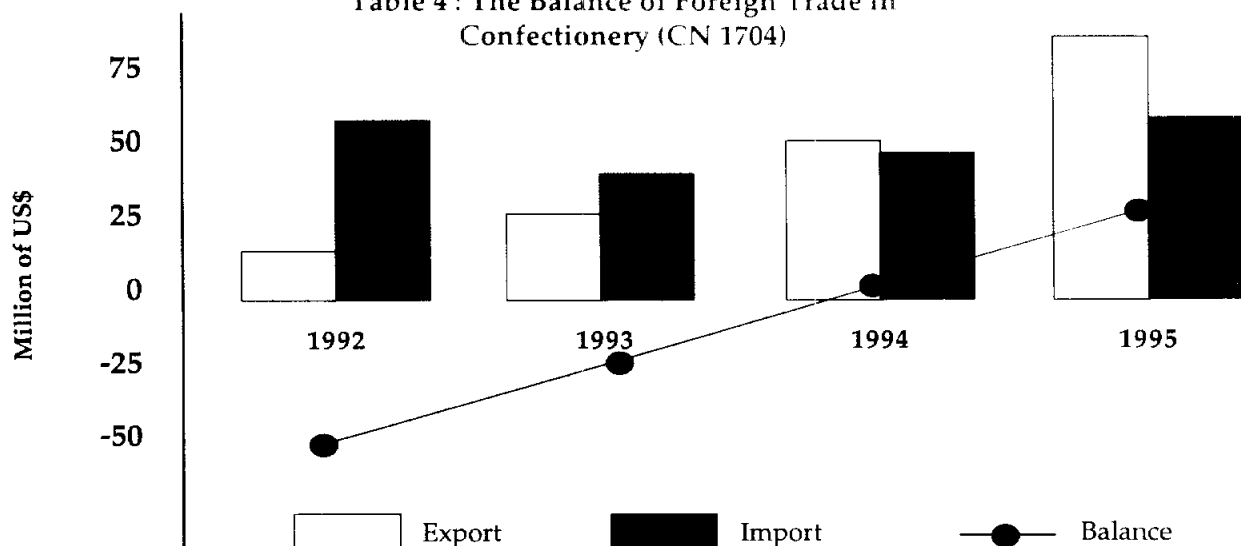
- Nestle (Switzerland)
- Goplana S.A. (Poznan) and Winiary (Kalisz);
- Mc Vitie Group United Biscuits (UK)
- San S.A. (Jarosaw); Kraft Jacobs Suchard AG
- Olza S.A. (Cieszyn), Fazer (Finland)
- Batyk Chocolate (Gdansk); CPC - Amino; Bahlsen
- Skawina, and dr Oetker
- Gdansk concentrate plant.

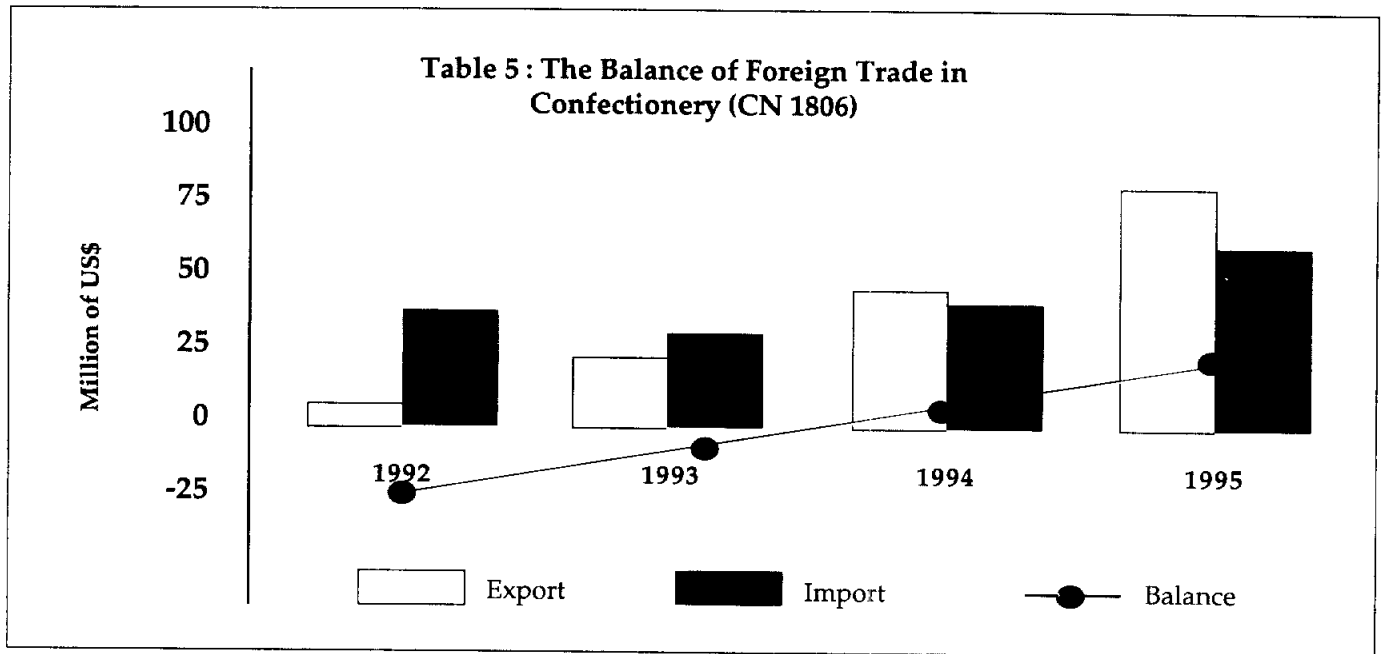
The most renowned products are of Wedel, Goplana, Wawel (Krakow), Olza, Kopernik (Torun), Winiary, Amino, Delecta, Oetker and Skawina. Prices of the domestic products are lower than those of imported products.



TAS Mission In Poland

Table 4: The Balance of Foreign Trade in Confectionery (CN 1704)



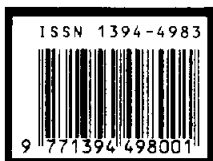


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We invite readers to send in their comments, suggestions and technical news which could be published in this newsletter.

*For more information please contact :*

Dr Hamirin Kifli  
Tel : 03-8259155/775  
Fax : 03-8259446  
E-mail: [hamirin@porim.gov.my](mailto:hamirin@porim.gov.my)