Market Development

MARKET BRIEF ON

GUM ARABIC

OVERVIEW OF WORLD PRODUCTION AND TRADE

April 2000

ITC

INTERNATIONAL TRADE CENTRE UNCTAD/WTO

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GENEVA
2000

This market brief has not been formally edited by the International Trade Centre UNCTAD/WTO.

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M.D PMD/00/0116

ABBREVIATIONS

AIPG	Association for International Promotion of Gums
CIF	Cost, insurance and freight
EU 15	European Union (currently comprising of 15 countries)
FAO	Food and Agriculture Organization of the United Nations
FOB	Free on board
INRA	Institut National de la Recherche Agronomique (France)
JECFA	Joint FAO/WHO Expert Committee on Food Additives
LDC	Least developed country
WHO	World Health Organization

GUM ARABIC

Product description

The most recent specification of gum arabic was drawn up at the thirty-first session of the Codex Committee on Food Additives and Contaminants, held in The Hague, Netherlands, from 19 to 23 March 1999. This specification makes no radical changes but rather builds on previous specifications, defining gum arabic as "the dried exudate from the trunk and branches of *Acacia senegal* or *Acacia seyal*, of the family Leguminosae", which consolidates the position of gum from *Acacia seyal* as a food additive. In reaching that definition, the Joint FAO/WHO Expert Committee on Food Additives (JECFA) is simply acknowledging the surge in supply and demand for friable gum arabic, the exudate of *Acacia seyal*.

Gum arabic is basically produced for the market by the countries of the "gum belt" (hereafter called the producing countries) in the dry parts of sub-Saharan Africa at a latitude of between 12° and 14° North, where trees of the genus *Acacia*, and more particularly the *senegal* and *seyal* species, grow.

World export production

With the exception of publications such as those of the Gum Arabic Company from the Sudan, which has been reporting annually since 1960 on gum production and gum exports, the only way to assess world production is to analyse customs statistics on imports, breaking them down by producing country in order to calculate their exports.

Customs services identify gum arabic with the code:

1301.20 GUM ARABIC

An analysis is necessary for two reasons:

- Unlike botanists and manufacturers, those who compile customs statistics do not distinguish between the varieties of gum arabic. The hard gums (botanical complex *senegal*) and friable gums (botanical complex *seyal*) are both recorded under the same code, 1301.20. However, using the values declared for imports, it is possible roughly to distinguish the countries that market mostly hard gum arabic from those marketing friable gum arabic. This is done by dividing the values by the tonnage;

- The total imports of a given country do not distinguish between the gum arabic that comes directly from a producing area (from east to west: the basins of the Nile, Lake Chad and the River Senegal) and those from the few European re-exporting countries where the trade in gum arabic, that is, the purchase and subsequent sale of the gum, has been carried on for decades for historical reasons. Consequently, if one was to calculate world production by taking the tonnage imported by each country in the world, the quotas re-

exported by the trading countries (France, the United Kingdom, the United States and Germany) would be counted twice!

Table I, presented in the annex, gives the amounts (in metric tons) of gum arabic put on the world market, by country or by group of countries, while specifying the share of the least developed countries (LDCs) in this export market. The average over seven years (1991-1997) does not take into account domestic consumption by the producing countries (for which no data are available) and so is not a measure of world production of gum arabic, especially as stocks are held for several years. The year 1998 is not taken into account in calculating the average because of a lack of data (particularly for India).

This average is 37,000 tons/year for the period 1991-1997. Of these exports, about 26,000 tons (70%) are put on the market by LDCs, an increase of 6%, or 2,000 tons, compared to the period 1991-1995. However, if one compares the period 1991-1994 with the period 1995-1998, in order to smooth out fluctuations in orders from one year to the next, even with incomplete data for 1998 one can see a far more significant increase, as the average goes from 33,200 tons for the first four years to an average of 41,400 tons for the last four years, an increase in exports of almost 25% (24.7% to be exact, on the basis of the figures in table III).

Imports

In the period 1991-1998, imports of gum arabic varied between 27,000 tons (in 1993) and 44,000 tons (in 1998, excluding India's imports). These calculations are based on data published by the importing countries. In order to take into account the case of India, which seems to import low-value products that do not necessarily fit into the classification of gum arabic described above, only 66% of the imported tonnage is counted for the purpose of the calculations in tables I and II and the totals in table III. The data supplied by this country reveal lower-than-average prices (US$ 400 per ton instead of US$ 1,000), signifying the presence of exudates mixed with those of other species or, in the case of friable gum arabic, with a low-grade product.

Table II, presented in the annex, shows import volumes by quantity (in metric tons). It also ranks each country or group of countries by percentage of the estimated total market.

An upward trend in world imports of gum arabic can now be observed. Following a peak of 42,000 tons in 1994, followed by a drop in 1995 to 38,000 tons, the data for 1996, 1997 and 1998, despite being incomplete, confirm a clear trend towards a growing market demand for gum arabic. The years 1996 and 1997 marked a turning point for the market for imports of gum arabic with a collapse in the prices of hard gum, which, according to the sources cited in the *Marchés Tropicaux* magazine, fell by half between March 1996 and March 1998. Imports in 1997 and 1998 confirmed this fall in gum arabic prices, with the beginnings of a recovery in the food additives market.

Table II shows that the majority of gum arabic imports in 1997 were to five countries or regions of EU 15:

- France is the leading importer, with over a third of the world market;
- The United Kingdom, Germany, Scandinavia and Italy share around a third of the market;
- The United States, India, Japan and the rest of the world account for the final third.
- Two thirds of world imports are therefore destined for Europe.

Re-exports

With one well-known exception - the Central African Republic, mentioned below in the section headed "Main origins of imports" - most of the gum arabic that is re-exported is re-exported from a few, mostly European, countries with a colonial history.

The main traders or manufacturers dealing with gum arabic are located in France, the United Kingdom and, to a lesser extent, Germany or the United States. In 1998, France alone accounted for more than half (61%) of world trade in re-exported gum arabic, worth US$30 million out of a total of US$49 million; together, the United States (14%), the United Kingdom (8%) and Germany (8%) accounted for almost a third of trade in the re-export market, worth US$15 million out of a total of US$49 million; the other European countries accounted for 4% of the value of the trade, and the rest of the world, including Switzerland and Japan, for 5%.

In terms of re-exports, Europe still dominates the market for gum arabic, accounting for 81% of business in 1998. The gross added value achieved is over 100% of the value of imports in the case of the United States, Germany and the United Kingdom (respectively, 147%, 125% and 101%), while France achieves just over 180% of gross added value. The calculation is a straightforward one: you take the average export price per ton, deduct the average purchase price per ton of imports, and divide the result by the latter. This gross added value includes the manufacturing costs of wet-treating and spray-drying gum arabic. In fact, a growing proportion, if not all, of the re-exported gums undergo the complete industrial treatment process, which has two objectives:

- To filter and then sterilize the gum arabic (it is dissolved in water, purified and then given brief ultra-heat treatment to pasteurize it) so that it is perfectly safe from a phytosanitary point of view;
- To spray-dry the gum arabic solution to turn it into an easy-to-use solid (for use as a stabilizer in liquid foods, to be dissolved as necessary, for coating, etc.).

The industrial crushing processes have become obsolete, as they no longer meet the phytosanitary requirements in the industrialized countries. These "dry" processes are losing ground every year to "wet" processes, which require a much more complex manufacturing system (dissolving, mixing, multiple filtration, pasteurization and, lastly, spray-drying using the same kind of equipment as that used to make powdered milk). Nevertheless, more and more private exporters in the producing countries are investing in semi-automated sorting and crushing facilities so that they can offer cleaned gum arabic with a standardized grain-size. These investments make it possible to raise by

about 10% the value added in the producing country and to reduce the transport of waste (bark, wood, sand, etc.), as well as the rejection of goods for non-compliance.

A large part of the gross added value is used to finance this equipment and its operation, which correspondingly reduces the net added value to manufacturers in the sector. It is not possible to calculate this net added value on the basis of the documents used in the preparation of this brief. However, the levels of performance achieved by the French manufacturers (180% gross added value) can be explained by the use of a proportion of friable gum arabic in most of its production, which reduces proportionally the costs of purchasing raw materials and is bound to give a higher net profit margin. Indeed, one can observe that, in terms of value, France is the country that pays the least for its gum arabic (except for India), which means that its imports include a fair proportion of friable gum.

Apparent consumption and emerging countries

For the same period, table III, presented in the annex, gives an overview of the countries consuming gum arabic from the international market. The countries are ranked in decreasing order of their imports in 1998 (according to the COMTRADE database). On the basis of this table, the apparent average consumption of gum arabic in the period 1991-1997 can be estimated at 37,300 tons, some 200 tons below the average exports of the producing countries. The reason for this difference is that a small proportion of gum arabic is re-exported under a different name (parapharmaceutical, complex food additive, etc.), thereby avoiding classification under code 1301.20, where gum arabic is identified as a foodstuff or commodity.

In 1997, 10 countries accounted for 80% of the apparent consumption of gum arabic; after them come 15 countries that can be considered as "emerging", now accounting for around 15% of such consumption. The remaining 5% of demand is shared between around 30 countries. A careful reading of this table shows that, after the 10 major consuming countries (the United States, India, France, Mexico, the United Kingdom, Japan, Germany, Italy, Sweden and Switzerland), each consuming over 1,000 tons in 1998 (in 1997 in the case of India, since the 1998 data are not known), there are 15 emerging countries in the import market for gum arabic. These 15 countries will be of special interest to the LDCs, for trading and technological relationships could be developed with them, leaving to the major trading countries the trade with their neighbours and the 30 other countries around the world.

The potential market for gum arabic in the Latin American countries, for example, is now over 3,000 tons, mostly handled by the major trading countries presented above. This potential has doubled in four years!

The average annual tonnage that can be seen emerging in the period 1995-1998 is as follows:

- Mexico, with around 2,000 tons (500 tons in 1991-1994);
- Brazil, with over 450 tons (300 tons in 1991-1994);
- Argentina, with over 300 tons (200 tons in 1991-1994);

- Colombia and Chile, with over 100 tons a year each.

Further potential of 2,000 tons is offered by other countries, particularly in Asia, with Pakistan, the Republic of Korea, China, the Philippines and Thailand each importing 400-450 tons during the period 1995-1998, an increase of 30% over the period 1991-1994, again handled by the major trading countries.

After them, South Africa and Australia, each with an apparent gum arabic consumption of 300 tons, are a pair of countries whose domestic consumption of gum arabic is on the increase. It went from 400 tons in 1991-1994 to 600 tons in 1995-1998 - a jump of 50%!

Lastly, sales of gum arabic seem to be increasing in the countries of Eastern Europe, including Poland, Slovenia, Hungary, Romania and even the Russian Federation, with, respectively, between 150 and 20 tons a year. Over the four-year period 1995-1998, these five countries together reached the potential 300 tons already forecast in 1997.

It can be observed here that one third of the 25 % increase in demand for gum arabic between 1991-1994 and 1995-1998 (see "World export production" above) is accounted for by the United States and two thirds by the emerging countries listed above. The economic changes in these countries can only boost the world market for gum arabic in the next 10 years, with the prospect that they could eventually take over from the Western industrialized countries and Japan.

Main origins of imports

As very few of the producing countries (five or six, and not the most important ones) provide customs data, exports are calculated by analysing carefully the imports of the re-exporting or consuming countries. It is common knowledge that there are flows of gum arabic across the borders of the producing countries, but in the absence of published data from the customs services concerned it is not possible to take them into account here in order to recalculate the actual contribution of each country to the export market.

For the last two years, however, a simplification of those flows has been observed, particularly around the Lake Chad basin, from where gum arabic is increasingly exported directly by each country, including by the second-largest producer in the world, Chad, most of whose gum arabic now leaves FOB (free on board) N'Djamena, which correspondingly reduces the flows through neighboring countries, where they acquired a new customs origin.

The data available for 1998 rank the producing or exporting countries in the following order, from largest to smallest, by percentage of total tonnage (LDCs are in italics):

Main producing countries	1. *Sudan* (56%) 2. *Chad* (29%) 3. Nigeria (10%)
Minor producing countries	*Eritrea* (1%), Cameroon (1%), *Mali* (0.8%), India (0.5%), *United Republic of Tanzania* (0.3%), Senegal (0.3%), Islamic Republic of Iran (0.3%)
Re-exporting countries	*Central African Republic* (0.3%)
Other:	About 20 countries (0.5%)

Three countries account for 95% of supply, the next 8 countries account for over 4.5% and about 20 others contribute marginally to supply, altogether accounting for less than 0.5% in quantities of about 20 tons each (or one container per year).

It can be seen that six LDCs are involved in this market, which is one of the five main sources of exports for the Sudan and Chad (the third in the case of Chad).

It should be noted that:

- This classification excludes trade bound for India (no data available for 1998);
- The Central African Republic publishes customs data, which show that most of its exports are re-exports, but without mentioning the countries of origin, which are undoubtedly neighboring producing countries.

Market characteristics

We now know that the market for gum arabic is dominated by a handful of countries in terms of exports, re-exports and imports. Three countries account for 95% of supply, 10 countries consume 80% of the world's supply of gum arabic and 4 of these countries account for more than 75% of re-exports in the world.

It is therefore a very concentrated market, in which the top places are occupied, and have often been occupied for a long time, by a few countries. However, some recent examples have shown that it is still possible to enter it within a decade, especially when the enterprise drive is led by the private sector: Chad has just demonstrated this in brilliant fashion, going from a 5% to a 30% share of the gum arabic market in less than 10 years!

As there is no recent study available on the various uses of gum arabic, it is not possible to describe here the current segmentation of the market or its quantitative and qualitative (hard/friable gum) distribution. Instead, we shall simply recall the main uses mentioned in the literature:

- As a food additive in confectionery, pastries and wine; in the coating and encapsulation of flavours; as a stabilizer in fizzy and other drinks; and, more recently, in health foods or organic foods, as Chad has been exporting gum arabic certified as organic by Ecocert (a European body monitoring organic farm production) since the autumn of 1997;

- As a pharmaceutical or parapharmaceutical ingredient; for example, it is used directly in cough pastilles or in the encapsulation of products in the form of capsules. As a result of the high prices for gum arabic since 1994, these market segments have been affected quite seriously by the use of substitutes such as modified starches and other celluloses. The risks to human health posed by these synthetic products could lead to renewed interest in gum arabic, as has emerged quite clearly in the last few years with the rise of 25% in demand between 1991-1994 and 1995-1998;

- As an additive in the printing, paint and textile-printing industries, in adhesives (for postage stamps) or in moulds in foundry ceramics, a booming industry in which gum arabic has many advantages.

These uses are related to two of the main characteristics of gum arabic: its high solubility in water and its low viscosity. These qualities make it an excellent emulsifier, stabilizer, thickener and adhesive; it is non-toxic and has a low calorific value, making it useful in health-food applications.

Prices

The prices in dollars per ton of gum arabic for the 1998-1999 season were, according to the sources cited each week in the *Marchés Tropicaux* magazine, as follows:

Kordofan gum arabic from the Sudan	US$1,800 per ton FOB
Grade 1 gum arabic from Nigeria	US$1,500 per ton CIF (cost, insurance and freight)
Grade 2 gum arabic from Nigeria	US$1,000 per ton CIF

Kordofan gum arabic, named after a province at the heart of the country's gum belt, is the typical gum exported by the Sudan. It is the exudate of *Acacia senegal*, cleaned and sorted by the Gum Arabic Company.

The grade 1 gum arabic exported by Nigeria is also the exudate of *Acacia senegal*, but it has only been cleaned, not sorted mechanically. The Kitir gum arabic from Chad is a similar kind of product.

The grade 2 gum arabic exported by Nigeria is the exudate of *Acacia seyal*, cleaned only: a price is only available for deliveries outside Nigeria. The Talha gum arabic from Chad is a similar kind of product.

For a few months towards the end of 1997, the prices for the No. 1 gums from Chad and Mali were published in *Marchés Tropicaux*; they were only slightly lower than those for the grade 1 gum from Nigeria.

The price of friable gums (grade 2, Talha, etc.) has fluctuated only a little in recent years, ranging between US$750 and US$850 per ton CIF (source: *Marchés Tropicaux*) in a market where supply and demand are well matched. The product is

quite plentiful and is harvested without bleeding from trees found in dips in the terrain where the soil is well irrigated; the harvest is therefore far less sensitive to climatic variations than that of the hard gums, as the exudate of gum arabic is heavily dependent on the water stored in the soil on which the gum acacias stand. However, since 1998-1999, the price of friable gum arabic has risen, showing a clear increase in demand. The price rose to US$1,000 per metric ton during the last marketing campaign.

The price of hard gums (Kordofan, grade 1, Kitir, etc.) depends on a much tighter market. Their price peaked at over US$4,400 a ton for batches traded in 1994-1995 (source: *Marchés Tropicaux*). The market began to ease up in 1996, a trend that continued into 1999. It seems to be linked to the amount of stock held in the Sudan, which could be estimated at over 50,000 tons in 1997 - a year-and-a-half's worth of world consumption of hard gum arabic - on the basis of figures published on the Internet by the Gum Arabic Company up to the beginning of 1996.

In 1995, the Sudan actually harvested 51,000 tons. Exports rose to 18,000 tons, so that 33,000 tons remain in stock from the year 1995. The years 1996 and 1997 were said to be normal and so should be comparable with 1994, when the country harvested 30,000 tons. As exports in 1996 and 1997 were close to 20,000 tons, there does appear to be a year-and-a-half's worth of world consumption in stock. The immediate effect of that can be seen in the fall in the price of hard gums, and it can be expected to have a knock-on effect: the manufacturers in the sector, assured that there will be no shortage of gum arabic, will now be able to carry on with their search for new market opportunities. This has been the shadow hovering over the market for gum arabic for a quarter of a century, since the first droughts hit the Sahelian countries in 1973-1974, preventing them from producing the 62,000 tons consumed at the time in the world. In this context, the Sudan has always had an extremely important role to play, since the stocks it has built up secure the market and allow natural gum arabic to recover today the segments lost to substitute products whose long-term effects on people's health have yet to be determined, or to establish itself in new segments such as organic farming. It will also be observed that this stock has undoubtedly allowed the Sudan to take for itself over half of the market share related to the 25% increase calculated earlier. Nevertheless, Chad, which holds no such stocks but which has a well-organized production system, took the other half of that market share by increasing its exports, particularly to the United States.

Since 1998, manufacturers in the sector have begun to set up sorting and crushing units in the producing countries, following the example set by the Sudan. This strategy means that some of the value can be added on the spot, where labour costs are much lower than in the industrialized countries, and also, as pointed out in the section headed "Re-exports", that fewer impurities are transported and the gum arabic produced is ready for the industrial spray-drying process.

Nevertheless, whether or not a country has sorting and crushing units available, it is always the actual purity of the product which determines its real value today. That purity should be preserved and improved in order to reduce the number of filtration stages and to achieve well-defined products from hard or friable gum arabic.

The most recent prices, published in *Marchés Tropicaux* No. 1791 of 3 September 1999, confirm the downward trend begun in June not only in the price of hard gum arabic but also, and this is a new development, in friable gum arabic. At the time of writing, the prices are as follows:

Kordofan gum arabic from the Sudan	US$1,500 per ton FOB
Grade 1 gum arabic from Nigeria	US$1,000 per ton CIF
Grade 2 gum arabic from Nigeria	US$550 per ton CIF
No. 1 or Kitir gum arabic from Chad	US$1,000 per ton FOB

It is quite difficult to deduce a clear trend from this new situation, but one can postulate some hypotheses, beginning with the following: everything is happening as if production of both hard gums and friable gums had increased beyond market demand. One consequence of this fall in prices could be that the work of bleeding and harvesting hard gums, or simply harvesting friable gums, would be so poorly paid in certain free-market countries that the harvesters would give up this work. On the other hand, the situation might be the result of a strategic move by one of the producing countries wishing to "squeeze" its competitors before taking over the market as a whole with a free hand to set prices, which it would of course raise. Such schemes have been observed in the past, but they are suicidal for the world market in gum arabic. Let us hope that those responsible are prevented from pursuing this process and that it fails as quickly as possible.

Market access

There are no real barriers to the development of the market for gum arabic. In most countries in the world, including those in Europe and North America, there are no specific quotas or import duties on it. Some countries only require a certificate of origin, while others, such as the United States, also require a fumigation certificate to ensure that the gum arabic and its packaging are safe from a phytosanitary point of view. On the other hand, shipments of "organic" gum arabic have to prove that they have not undergone fumigation, as methyl bromide, which is commonly used in this treatment, is strictly prohibited in Ecocert's specifications.

Distribution channels and trading practices

The path from the producer of gum arabic to the consumer is not a uniform one. The channels are organized according to the rules in force in each country. In some countries, the trade in gum arabic is completely or partially controlled by the State, but in most of them these channels are today organized by actors from the for-profit private sector, or sometimes by non-governmental organizations from the non-profit sector, on the basis of free competition. We shall therefore describe briefly the channels through which gum arabic goes from the producer to the consumer in a free-market system:

- The farmer bleeds his trees and then harvests (in the case of hard gum) or collects (in the case of friable gum) by hand the nodules of gum arabic in clean bags, taking care to keep the harvest from the different species of acacia separate. This harvest is then laid out in the shade on a clean tarpaulin to

complete its maturation (or polymerization) before being transported (by donkey, camel or van) on market day to a trader ;

- The trader empties the bags and checks the product visually and a price is agreed on the basis of weight or volume. The gum arabic is transferred to new bags with the name of the trader on them, as well as the location of the producer (compulsory in the case of organic certification for reasons of product traceability) ;

- The trader or an intermediary hires a medium- or large-sized truck, puts the batches together and transports them to an exporter, who knows the ins-and-outs of the passage through customs, export rules and international trading rules. After unloading, the bags are weighed and then emptied in batches of the same origin, and checked. A rebate can then be calculated on a price agreed in advance (in the case of an intermediary or agent) or a price can be agreed upon (in the case of an independent trader or grouping) on the basis of the cleanness, purity and state of polymerization of the gum arabic supplied ;

- The exporter further sorts the gum so that it has at least been cleaned, if not graded, using the available equipment, before export. The gum arabic, still separated at least into hard gum and friable gum, is then packed in bags, which are sometimes colour-coded, bearing the name of the product, the name of the export agency, the country of origin, the net weight and details of traceability for organic gums. The gum is then loaded on to pallets before being put into containers for shipping under customs authority by road, rail and then sea ;

- The importer receives the product, inspects it visually and then takes samples for analysis (to ensure that different species have not been mixed together), and only then gives the bank the go-ahead to credit the exporters' accounts with the amount specified in the documents, unless the delivery did not comply with the relevant standards ;

- The importer, in the case of a trader, then forwards the product to its industrial consignee. If the importer itself is part of a production chain for spray-dried gum arabic, it begins manufacturing its range of products. The sales department then sets about marketing them to the various users from the food, pharmaceutical and other industries.

Packaging and labeling

As gum arabic is a natural product, the packaging should allow it to "breathe" so that polymerization can continue during transport. It should be packed in sacks made from woven synthetic or natural fibers. Gum arabic can be carried in any means of transport and, since it has an unlimited shelf life, it can be transported by the cheapest means, including by ship between Africa, Asia and the other continents.

Whereas gum arabic used to be packed in units of 100 kg, in the last few years 50-kg sacks have become the norm. However, the current trend, in keeping with the regulations in force in some industrialized countries, is to pack gum arabic in 25-kg sacks, which, in the absence of mechanization, makes some handling operations easier. As the gum is soluble in water, it must be protected from water and damp rising from below (thus requiring storage on pallets) and from the rain (thus requiring warehouses or containers in good condition).

In terms of labeling, there are no specific standards for gum arabic but common sense and usual trading practices mean that the following are always indicated:

- Country of origin ;
- Name of the product - gum arabic ;
- Specific category - Kordofan, Kitir, Talha, etc. ;
- Name of export agency ;
- Net weight in kilograms.

The following are sometimes found:

- Colour-coded sacks or labeling to make it easier to distinguish the specific category ;
- A code to ensure the traceability of the batches (organic gum) ;
- A stamp guaranteeing the quality - for example, Ecocert in the case of a certified organic product.

Sales promotion

Gum arabic, coded E414 (or 9000-01-05 or 232-519-5), is not well known to end consumers, who do not know what the code signifies, and this often makes gum arabic seem like a chemical product that is harmful to health. It would be worth promoting gum arabic in the media and, at the least, clearly identifying it on the packaging of products that contain it.

Individual gum arabic manufacturers cannot afford such a media campaign, but a professional body such as the Association of International Promotion of Gums (AIPG) could tackle it with the support of the producing countries and their exporters, and with the help of international funding aimed at the LDCs in particular.

Market outbook: opportunities and threats

Although it is threatened by recent discoveries related to the development of cereal by-products such as corn bran (by INRA-Limagrain in 1995), gum arabic is in a better position today than it has been for the past quarter of a century, with :

- Demand for both hard gum arabic and friable gum arabic ;
- Consumer concern with food quality ;
- Fairly abundant supply from several countries ;
- Stocks in the Sudan providing cover for a few bad harvests ;

- Prices for hard gum arabic back to a reasonable level;
- A quite sharp recovery in the economies of the industrialized countries;
- The emergence of countries developing their own user industries.

All these factors point to a good outlook for the development of the world export market for gum arabic in the next 10 years. If a target were to be set, it could be to reach again the apparent consumption levels of the 1970s, of 70,000 tons by the year 2010, or an increase of 5% a year from 1997 onwards in the flows of gum arabic onto the market. The market can already be observed to be heading towards the 50,000-ton mark in 1998; what will the trend be in 1999 and 2000?

Even though this target might appear ambitious, let us not forget that gum acacias protect the soil against erosion, enrich it and improve overall water levels in it, thereby helping to combat desertification while, most importantly, allowing hundreds of thousands of Sahelian farmers and shepherds to remain on their land.

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Hamburger & Sons Ltd.
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Red Carnation Gums Ltd.
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Thew, Arnott & Co. Ltd.
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Paul Thomas & Co. Inc.
PO Box 612, MORRISTOWN, NJ07963-0612
Tel: + 1201 984 0900 Fax: + 1201 984 5666 Telex: 219805 SPGMUR

Tic Gums Inc.
4609-T Richlynn Drive, BELCAMP, MD 21017-1227
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TRADE FAIRS AND EXHIBITIONS

FIE: Food Ingredient Europe takes place every year between September and November, rotating, in the following order, between London (4-6 November 1997), Frankfurt (1998) and Paris (14-16 September 1999), where the fair was held three years earlier (16-18 November 1996).
Website: http://www.fi-events.com/

IFT: International Food Trade, the North American version of the FIE, held every year in summer (July) in Chicago, United States.

These two events are a meeting place for most of the economic actors connected with gum arabic; the emphasis is generally on its use in foods rather than on its pharmaceutical or technical uses.

INFORMATION SOURCES

COMTRADE database, United Nations Statistics Division.

EUROSTAT, European Commission (Brussels).

European Kompass On Disc.

Marchés Tropicaux, 190 Boulevard Haussmann, 75008 Paris, France.

http://www.marches-tropicaux.com

Simplified inspection and certification procedure, ECOCERT 1997, in accordance with regulation CEE 2092/91, for the parton "Harvesting, production, processing and export to third countries'".

Le Marché de la Gomme Arabique: production, commercialisation et utilisation, ITC, Geneva, 1978.

FAO, A review of production, market and quality control of gum arabic in Africa, TCP/RAF/4457, Rome, 1996.

Internet: http://www.redbay.com/plthomas/arabic/

ANNEXES

Note on the tables

Some discrepancies can be observed in the totals in tables I, II and III. The discrepancies between tables I and II are within a margin of between 0.25% and 1.04%, an average of 0.7% over eight years. The discrepancies between tables I, II and III are within a margin of between 0.7% and 7.3%, an average of 3.5% over eight years.

These discrepancies are due partly to some errors by the author in reading or calculating from the mass of data interpreted and partly to errors within the database, which is of course also dependent on the quality of information supplied to it. The author has been able to correct some errors by cross-reference to other sources, including those provided by EUROSTAT, but, on the whole, the data presented below are sufficiently reliable to allow a coherent analysis to be made of the world market for gum arabic as presented in this market brief.

Table I

Exports of raw gum arabic, 1991-1998 (in metric tons)

	Sudan	Chad	African LDCs	Total LDCs	Nigeria	Other African	Asia	Total
1991	25 909	2 228	447	**28 584**	6 706	1 016	809	**37 115**
% 1991	70	6	1	**77**	18	3	2	77+ 23 = 100
1992	17 061	2 450	1 274	**20 785**	8 358	1 799	726	**31 668**
% 1992	54	8	4	**66**	26	6	2	66+ 34 = 100
1993	13 475	3 701	719	**17 895**	7 042	1 524	756	**27 217**
% 1993	50	14	2	**66**	26	6	2	66+ 34 = 100
1994	23 341	4 558	1 932	**29 831**	9 822	1 819	684	**42 156**
% 1994	55	11	5	**71**	23	4	2	71+ 29 = 100
1995	18 143	7 001	1 790	**26 934**	9 914	1 031	814	**38 693**
% 1995	47	18	5	**70**	25	3	2	70+ 30 = 100
1996	17 671	7 365	2 414	**27 450**	12 164	935	435	**40 984**
% 1996	43	18	6	**67**	30	2	1	67+ 33 = 100
1997	17 342	8 527	4 232	**30 101**	10 199	1 069	696	**42 065**
% 1997	41	20	10	**71**	24	3	2	71+ 29 = 100
1998	24 261 *	12 584 *	1 311 *	**38 516 ***	4 188 *	644 *	383 *	**43 731 ***
% 1998	56 *	29 *	3 *	**88 ***	10 *	1 *	1 *	88+ 12 = 100
Average 1991-1997	18 991	5 118	1 830	**25 939**	9 172	1 313	703	**37 127**
Average in % 1991-1997	51	14	5	**70**	25	3	2	70+ 30 = 100

- Some of the data for 1998 were not yet available on 2 September 1999.

Source: United Nations Statistics Division, COMTRADE database.

Table II

Imports of raw gum arabic, 1991-1998 (in metric tons)

	France	UK	USA	India **	Germany	Italy	Japan	Other	Total
1991	9 781	6 810	5 479	3 311	3 251	3 451	1 983	2 998	**37 064**
% 1991	26	18	15	9	9	9	5	8	**100**
1992	9 691	7 402	2 681	2 668	4 114	1 095	1 682	2 570	**31 903**
% 1992	30	23	8	8	13	3	5	8	**100**
1993	10 560	4 724	2 035	2 573	2 957	2 058	782	1 746	**27 435**
% 1993	38	17	7	9	11	8	3	6	**100**
1994	12 009	4 653	6 916	3 763	4 371	5 201	1 447	3 362	**41 722**
% 1994	29	11	17	9	10	12	3	8	**100**
1995	10 675	4 247	5 364	7 547	4 518	2 169	1 072	2 740	**38 332**
% 1995	28	11	14	20	12	6	3	7	**100**
1996	12 450	4 079	6 454	8 334	2 528	1 735	1 220	3 987	**40 787**
% 1996	31	10	16	20	6	4	3	10	**100**
1997	15 931	4 836	6 078	6 095	3 252	699	1 379	3 371	**41 641**
% 1997	38	12	15	15	8	1	3	8	**100**
1998	20 075	5 137	9 028	*	3 058	644	1 599	4 081	**43 622**
% 1998	46	12	21	*	7	1	4	9	**100**
Average 1991-1997	11 585	5 250	5 001	4 899	3 570	2 344	1 366	2 967	**36 982**
Average in % 1991-1997	31	14	14	13	10	6	4	8	**100**

* Some of the data for 1998 were not yet available on 2 September 1999.

** India imports low-price gum (US$400 per ton): only 66% of the tonnage is counted.

Source: United Nations Statistics Division, COMTRADE database.

Table III

Apparent consumption of raw gum arabic, 1991-1998 (in metric tons)

	1991	1992	1993	1994	1995	1996	1997	1998 *
USA	6 667	4 972	4 715	9 071	6 901	7 964	8 544	13 413
France (EU 15)	3 083	2 873	2 785	3 727	1 785	3 886	4 943	7 627
United Kingdom (EU 15)	3 717	4 136	1 974	2 706	2 700	2 678	1 531	3 141
Germany (EU 15)	1 836	2 507	1 214	2 215	1 981	531	2 095	1 951
Japan	2 014	2 015	1 218	1 797	1 428	1 793	1 871	2 009
India (100% of domestic consumption)	5 152	3 969	3 823	5 814	11 686	12 796	9 365	
Italy (EU 15)	4 934	2 022	3 116	5 787	2 748	2 289	1 730	1 879
Switzerland-Liechtenstein	887	794	1 043	967	1 023	864	729	1 171
Mexico	418	542	564	556	489	1 878	2 093	3 196
Sweden (EU 15)	812	514	504	856	347	1 775	1 361	1 727
Denmark (EU 15)	1 038	998	653	1 208	624	656	679	837
Belgium-Luxembourg (EU 15)	826	619	627	1 200	877	690	1 229	147
Ireland (EU 15)	756	409	215	409	868	1 380	1 199	659
Saudi Arabia	55	241	452	147	261	932		
Brazil	397	222	177	310	423	453	476	489
Norway	871	755	757	616	913	610	880	626
China		106	48	207	401	162	263	748
Rep. of Korea	274	286	258	396	432	646	399	374
Australia	39	150	200	233	199	278	306	
Argentina		146	294	247	296	238	374	308
Philippines	315	364	134	399	240	440	270	
Poland		44	51	75	97	98	157	218
Spain (EU 15)	251	243	181	286	315	936	334	288
South Africa		353	166	275	400	242	305	
Netherlands (EU 15)	176	416	204	345	239	233	249	246
Finland (EU 15)	384	316	294	300	509	334	294	426
Chile	32	46	34	65	142	54	111	181
Colombia	54	72	38	107	76	118	107	114
Thailand	127	82	94	133	113	117	134	
Venezuela	228	224	181	211	164	175	108	
Turkey	53	76	104	75	61	81	76	110
Hungary	16		17	16	15	21	38	56
Canada	127	123	109	154	104	97	94	106
Greece (EU 15)	69	70	65	52	132	68	82	97
Israel	80	50	80	50	70	90	100	120
Portugal (EU 15)	38	33	28	45	33	57	82	120
Algeria		109	94	58	57	95	160	
Pakistan	355	504	250	479	637	425	225	305
Slovenia		62	62	84	69	60	50	
Hong Kong, China		76	62	179	212	248	70	87
Iceland	85	80	57	52	68	70	83	79
Peru			10	12	4	41	38	4

Table 3 (continued)

	1991	1992	1993	1994	1995	1996	1997	1998 *
Romania		1	8	7	31	18	35	28
Malaysia	25	41	42	57	43	72	96	92
Russian Federation				18	23	18	17	31
Panama					12	14	13	8
Ecuador	13	698	17	23	41	17	29	20
Honduras			1	2	5	3	7	5
Zimbabwe	9	12	13	7	22	4	14	
Paraguay	10	14	2	19	10	17	9	
Czech Republic			19	20	22	17	16	16
New Zealand	16	9	11	18	23	12	12	10
Costa Rica				18	9	4	6	
Slovakia				12	10	8	8	6
Croatia		2	3	1	7	5	7	13
Tunisia	10	43	154	147	59	46	5	
Bangladesh	19	16	16		5	2		
Other	11	19	66	101	52	60	29	25
Total(in tons per year)**	34 579	31 164	26 042	40 946	38 328	42 965	40 903	43 433

Average 1991-1997: 37 300 tons	Average 1991-1994: 33 200 tons	Average 1995-1998: 41 400 tons (+ 24.7%)
Average EU 15: 16 000 tons	Average 1991-1994: 16 100 tons	Average 1995-1998: 16 000 tons (-0.7%)

Abnormal data								
Morocco			14	41	-1 060	80	44	
Indonesia	-2 234	-1 757	-197	218	1 671	142	308	156
Austria (EU 15)	58	49	48	68	-86	19	104	119
Singapore		-21		143	-1	31	-25	-39
Egypt				24	116	-6	-54	

* Some of the data for 1998 were not yet available on 2 September 1999.

** Totals calculated using 66% of Indian consumption (gum of uncertain origin - see footnote to table II).

Source: United Nations Statistics Division, COMTRADE database, and EUROSTAT, particularly for the 1998 figures for Finland.
