The world coconut market

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Un potentiel qui se heurte à la coque

Like passion fruit, coconuts are much better known in processed form than fresh. The processing industry has long focused on this tropical fruit that is rich in flavour and can be used in many ways whereas sales of fresh nuts are smaller in terms of volume. More than other fruits, coconuts are found in extremely varied forms, not only in the food industry but also in sectors such as cosmetics, building and pharmaceuticals. Sales of fresh coconuts are marginal but growing on the European markets. They have a strongly exotic image but are difficult to use, reducing retail sales. A number of innovations to reducing the obstacle of shelling could stimulate consumption in the future.

Informations

- Product(s) : Coconut
- Rubrique / Thématique : Economic analyses
- Country : World
- Keywords : Packing-Packaging, Export, Import, Legislation, Nutrition-Health, Post Harvest, Price, Production

Shop

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Coconut close-up

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- World citrus market, close to saturation?

World production

With production totalling 60.7 million tonnes (FAO) in 2008, coconut is the sixth most cultivated fruit in the world and is grown in more than 90 countries. Production has increased by 19% in the last decade (50.8 million tonnes in 2000). Asia and the Pacific account for 86% of world production, Latin America and the Caribbean 10% and Africa 3%. More than 70% of world production is concentrated in only three countries: Indonesia (32%), the Philippines (25%) and India (18%). Brazil, Sri Lanka, Thailand, Mexico and Vietnam trail far behind. Côte d'Ivoire and the Dominican Republic are only in the 22nd and 29th positions.

Coconut is essentially a smallholder crop and only 6% of world production is from large estates.

Exports

The coconut trade is mainly in processed products and only 0.6% of world production is sold as fresh nuts. With the exception of Indonesia, the main producer countries are not the main exporting countries.

Coconut exports have increased gradually in recent years. They reached 360 000 t in 2008 in comparison with 222 000 t in 2000, a 62% increase. This overall increase may be the result of an increase in per capita consumption, population growth and the globalisation of trade. Asia, with its 77% contribution to world exports, is the main supplier of coconuts. The main Asian, source countries are Vietnam, Indonesia,
Sri Lanka and Thailand, with respectively 34%, 31%, 11.4% and 11.3% of total Asian exports.

Other sources such as the Latin American countries and West Africa supply the world market. With 12% of total exports, the Latin American countries form the second largest supplier of coconut in the world, far behind the Asian countries. The two main sources are Mexico and the Dominican Republic which supply North America and, to a lesser extent, Europe.

Africa exports half as much as Latin America and ships nuts mainly to Europe. Côte d’Ivoire accounts for practically all exports from Africa (95%).

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## Imports

Asia, the leading region for coconut exports, is also the main import zone. The Asian market accounts for 66% of all imports, with most of the produce coming from the Asian countries that are largely dominant in world production. Thus China and Japan purchase most of their supply from their neighbours, such as Vietnam. The intensity of trade in Asia is explained by the eating habits (consumption of fresh produce and, above all, processed coconuts) in these countries where most of production is for domestic consumption.

Europe is the second destination for coconuts, importing 34,000 to 35,000 tonnes per year. Imports are fairly stable although they increased by 17% from 2000 to 2009. The main source countries are Côte d’Ivoire (31%), Sri Lanka (26%) and the Dominican Republic (20%), which between them account for 77% of European imports. This is completed by other sources such as Costa Rica, the Philippines and Thailand, that supply 5.3%, 4.7%, 4.5% and 2.6% respectively of the total quantity shipped to Europe.

The volumes shipped to Europe by source country are steady, with the exception of the Dominican Republic with a substantial decrease in shipments from 2000 and 2009 that has been partially compensated by Sri Lanka.

The main European importing countries are the Netherlands (33%), the United Kingdom (19%), Italy (16%), France (9%) and Spain (8%), making a total of 85% of imports. The Netherlands is the main European importer, re-shipping 60% of its total exports to EU partners. It is supplied directly from source countries (13,500 t) and also indirectly from other community countries (1,800 t).

The United Kingdom and Italy draw their supplies directly from source countries and import little from other EU countries. Spanish imports are mainly from source countries, and an average of 50% of the total is exported to other European countries. France imports as much from source countries as from other European countries such as the Netherlands.

Intra-community trade has thus developed in the last ten years, with better distribution of produce. Import flows in the various EU countries still seem to be determined by the heritage from the past. Most of UK coconut imports are from Sri Lanka while those on the French market are shipped from Côte d’Ivoire.

North American imports are slightly smaller than those of the European Union. Contrasting with geographic logic, Thailand is the leading supplier, followed by Mexico and the Dominican Republic.

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## Prices

Coconut prices are stable in Europe. The average is EUR 14 to 15 for a sack of 50 nuts, EUR 11 to 12 for a sack of 40 nuts, EUR 8 to 9 for a box of 15 to 16 and EUR 5 to 6 for a box of 8. However, prices depend on the source of the nuts, with those from the Dominican Republic, Costa Rica and Sri Lanka often being more expensive (about EUR 19 per sack of 40) than those from Côte d’Ivoire (about EUR 11.50 for the same quantity). This variation in price result from production and transport costs and also the average size of the nuts. Coconuts from Côte d’Ivoire are generally smaller and fetch a lower price than those from competing sources. The prices of boxed (hence repacked) coconuts at the import stage varies from EUR 0.40 to 0.80 per nut according to quality, sources and possibly the time of year.

Temporary changes in price may result from exceptional events. The tsunami that hit Sri Lanka in December 2004 caused serious damage to plantations, making exports impossible for a long time. Sri Lanka is an important source of supply and the quantity shortfall on consumer
markets soon resulted in higher prices. Likewise, the political disturbances in Côte d'Ivoire from February to April 2011 resulted in the suspending of exports to foreign markets and hence higher prices on the European markets. Especially on the French market, scarce supply from Côte d'Ivoire resulted in a rise in prices from EUR 0.40-0.60 per nut to EUR 0.80 until June, when the shortage was gradually made up.

The quality of imported coconuts

In spite of their apparent toughness, coconuts, like other fruits, may have quality defects that can affect sales conditions. It is difficult to assess the quality and freshness of a coconut. It is considered that coconuts keep for about two to three months but this period depends on storage conditions. Coconuts are generally shipped at 8 to 12°C. Storage temperature at the import stage is about 10°C. In contrast, downstream the produce is often stored at ambient temperature and this is not favourable for the conservation of the quality of the fruit. It is also difficult to find out the time elapsed between the harvesting of the nuts and shipping from the source country. Some importers ask shippers to perform tests at the source by opening a representative number per batch. On reception, quality verification can be performed by checking that they contain milk and that the eyes are not germinating.

The main defects observed in coconuts are:

- broken nuts because of poor sack handling;
- nuts wetted by the juice of other fruits, enhancing the growth of moulds;
- germination of eyes.

Shell strength varies according to variety. For example, the shell of 'West African' tall is thicker than that of the hybrid cultivar 'PB 121'. The latter are more fragile, with a higher risk of broken nuts in the batches sold.
Coconut main origins

Consumption in Europe

Coconut consumption is fairly small in Europe and has hardly changed in recent years. Certain professionals consider that consumption per household is 1 coconut every 4 years. It is a complement to the range of exotic fruits and often not out forward by retailers. However, it has a strongly exotic image not only because of the palm and the distant source but also because of the special, much-appreciated taste of the flesh. It is also well-known by the public via a broad range of processed products (biscuits, beverages, ice cream, exotic cuisine, etc.). The main feature that slows consumption is obviously its inconvenience. Its hard shell and consumers’ lack of knowledge of how to open it give it a secondary role in the range of exotic fruits that does not match its image. Innovative attempts at making opening easier (several pre-cutting procedures) have been tried from time to time but there has never been a truly practical and economically satisfactory system.

The association with coconut-based processed products (beverages, dried fruits, etc.) has been a line of research in marketing for the promotion of consumption. The results do not seem to have come up to the expectations of those involved. The only pathways that currently seem positive for increasing consumption are ethnic markets consisting of people who know more about how to use coconuts and the fresh-cut produce sector. The presentation of trays of coconut segments in supermarkets can encourage the European public to consider the fruit with more enthusiasm. This is in fact just a transposition of older practices when sellers were to be found in the street and fairgrounds.

Consumption is fairly steady throughout the year although it speeds up at times in the summer and, like all exotic fruits, during the Christmas period. In addition to its exotic image, a significant asset is its price. It is inexpensive and much cheaper than other tropical produce. Its form, colour and originality also make it stand out, with liquid to drink and pulp to eat in the same fruit.
Innovations in coconut

Innovations to promote coconut sales in Europe are few and far between and the few attempts have rarely been truly successful. Developing the pre-cutting of the shell is technically difficult and not very profitable, given the retail price. Another technique developed was the insertion of a wire to break open the nut but the result was not convincing.

Innovations focused on the consumption of coconut water seem more promising. One consists of a hole in the shell with a closure that the consumer can easily remove to insert a straw. Another is immature nuts with the husk cut in the shape of a roof. It is easy to pierce the shell to insert a straw. These nuts are often packaged in thermo-retractable film and sold in Asian shops in Europe. Thailand seems to be one of the largest suppliers of this type of prepared coconuts. ‘Aromatic’ coconut varieties have also been developed there.

The coconut-based beverage sector is also a substantial market and has developed strongly in recent years. In Brazil, for example, annual sales are some 300 million dollars. Coconut water in Tetra Pak packaging is a great success in the USA and in English-speaking European countries. Recommended by the FAO, the drink is made from green coconuts and has virtues for health (low carbohydrate, low fats, rich in minerals, etc.) and in particular for rehydrating the body. The name ‘Fluid of Life’ is used. And coconut is used of course in the composition of numerous beverages with other ingredients. Removing the difficulties involved in consumption, the sector is growing markedly faster than sales of nuts.

Pieces of coconut flesh in trays seems to be the main innovation for this traditionally imported fruit. Processed in Europe, it is sold in the fresh produce department and keeps for about three weeks.
coconut spec 1

Post-harvest
After picking, the nuts are dehusked by hand with a steel point tool in the ground. This gives commercial nuts. Distillation is made between mature or dry nuts for eating and fresh immature juice nuts.

Even if the pulp is partially dehydrated, coconuts are not subjected to a special drying stage.

The nuts are often repacked after import in boxes of 4 or 8 (50 x 50 cm) or 16 to 16 (40 x 60 cm) for sale to retailers or on wholesale markets.

coconut spec 2

Nutrition
Coconuts have a high fibre content and are a good source of minerals and trace elements: magnesium, iron, manganese, copper, etc. It is a fresh fruit but the pulp contains only 45% water in contrast with other fresh fruits.

There is no specific standard for fresh coconut. However, several international standards apply to processed coconut:
- Codex Alimentarius standard for dried grated coconut (Standard 177, 1991 revised in 2011);
- Codex Alimentarius standard for coconut-based aqueous products (Standard 240, 2003);
- Code of Hygiene Practice for Desiccated Coconut.

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Coconut Nutritional value (100 g)

<table>
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<tr>
<th>Component</th>
<th>Value (g)</th>
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<tbody>
<tr>
<td>Protein</td>
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<tr>
<td>Carbohydrates</td>
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<tr>
<td>Lipids</td>
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<tr>
<td>Fibre</td>
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<tr>
<td>KCal</td>
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**Noix de coco évolution importations**


**Noix de coco traitement et colisage**

Les traitements post-récéolte:

- Après l'ouverture, les fruits sont débourrés manuellement à l'aide d'une pelle en acier fixée au sol. Cette étape est suivie par la déshydratation des noix pour leur conservation.

Les noix matures sont appelées parfois « noix à beurre » ou encore « noix à jus ».

Même si la pulpe est en partie déshydratée, les noix de coco ne passent pas l'unique étape de séchage.

**Noix de coco origine importations**

Noix de coco nutrition et réglementation

**Nutrition**
La noix de coco est un fruit riche en fibres. Sa consommation apporte une bonne source de minéraux et d'oligo-éléments (magnésium, fer, manganèse, cuivre, etc.). C'est un produit frais, mais le pulpe de coco ne contient que 45 % d'eau contre 62 % d’autres produits frais.

<table>
<thead>
<tr>
<th>Nutrition</th>
<th>Valeur nutritionnelle pour 100 g</th>
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<tbody>
<tr>
<td>Protéines (en g)</td>
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<tr>
<td>Glucides (en g)</td>
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<tr>
<td>Lipides (en g)</td>
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<td>Fibres (en g)</td>
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<tr>
<td>KCalories</td>
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**Réglementation**
Il n'existe aucune norme spécifique pour la noix de coco commercialisée à l'état frais. En revanche, il existe plusieurs textes internationaux sur le produit transformé :
- norme Codex Alimentarius sur la noix de coco râpée déshydratée (Stan 177 de 1991 révisé en 2011) ;
- norme Codex Alimentarius sur les produits aquacoles à base de noix de coco (Stan 240 de 2003) ;
- code d'usages en matière d'hygiène pour la noix de coco desséchée.

Noix de coco production et exportateurs

[Tableau de données]

Source : [Site web du Cirad]