Exporting coconut water to Europe

The consumption of coconut water in Europe is still relatively small compared to Asia and South America, which account for more than 90% of the world consumption. However, the European market is growing at an increasingly fast rate. The United Kingdom, the Netherlands, France and Germany offer the best opportunities for exporters from developing countries.

There is an increasing introduction of drinks with coconut water as an ingredient in Europe.

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1. Product description

Regarding trade classification, coconut water in the European Union is imported under the 8-digit code 22029010 by the Combined Nomenclature (Eurostat). However, this product code also includes other non-alcoholic drinks. Therefore, specific statistics about international trade are not available.

Product definition

Coconut water is the liquid inside coconuts, which are the fruits of the coconut palm (*Cocos nucifera*). Coconut water is also called coconut juice. Coconut water should not be confused with coconut milk or coconut cream, which are made from the grated fresh kernel.

Although coconut water can be obtained directly from young green coconuts and offered as chilled or frozen without pasteurisation to consumers, those forms still have a limited share on the European market. Even though the highest quantities of coconut water can be obtained from young coconut which are 6–9 months old, processed coconut water intended for export is more often obtained from the water (liquid endosperm) of matured coconut. However, it is a trend to claim on packed coconut water that it is produced only from young coconuts.

Coconut water from matured coconuts is usually a side product in the production of coconut milk, desiccated coconuts and virgin coconut oil. The reason for this is that water from young coconuts is limited in supply and too expensive to process, because young coconut is more expensive than mature coconut. Likewise, meat/kernel from young coconut has very limited processing applications.

On the other hand, meat/kernel from matured coconut can be used to produce various high-value coconut products. In such a process, coconut water is essentially an additional income, the economic benefit of doing integrated processing. The major income is still coming from the processing of the coconut meat/kernel.

The main export forms of coconut water include pasteurised or sterilised coconut water, which is mostly traded in the following forms:

Bulk concentrated coconut water – This type of coconut water is usually produced by vacuum evaporation and mostly concentrated to 60 degrees Brix (sugar content of a water solution), but it can be concentrated to lower Brix values too. Concentration is done to lower transport costs. In this way, transport costs for water and packaging can be saved. When it arrives in importing countries, the concentrate is reconstituted with water and

packed in consumer packaging. It is very often blended with different fruit juices as well to suit the taste of European consumers.

Bulk frozen concentrated coconut water – This type of product is used in the same way as concentrated coconut water, but it is frozen in order to prolong the shelf life of the products. The usual shelf life of 60 degrees Brix (sugar level in water solution) of concentrated coconut water is 24 months, but the shelf life of concentrated coconut water is almost unlimited.

Bulk single-strength (not-from-concentrate, NFC) coconut water – This type of coconut water is obtained either from green or from mature coconuts and packed in bulk packaging such as bags or barrels of usually 200 I in volume. The usual Brix content of NFC coconut water is between 3 and 4 degrees. This coconut water is further repacked in aseptic consumer packaging.

Prepacked coconut water – This type of coconut water is mostly produced using ultrahigh-temperature processing but also with other forms of preservation such as microfiltration. Processed water is packed in aseptic packaging such as tetrabricks or cans. As strong brand competition among coconut water takes place on the European market, it is not very common that exporters from developing countries export packed coconut water under their own brands. This export is usually done as a mean of subcontracting for some international brands such as Innocent or Vitacoco.

Pasteurisation or sterilisation requires an investment in processing facilities and the most recommended technology is currently ultrahigh-temperature processing, which minimally deteriorates the quality and taste of coconut water. Emerging technologies such as high-pressure pulsed electric field processing or ohmic heating should still be investigated. However, microfiltration can also be used instead of thermal pasteurisation to prevent a change in the taste of coconut water.

This study covers processed coconut water as described above. To find out more about other coconut products, read our studies of Desiccated coconuts in Europe and Coconut oil. Products which can have a selling potential on the European market but with much smaller quantities are the following two products, which are not elaborated on in this study:

Young tender coconuts. Fresh coconut water from young nuts is the most appreciated by final consumers. As green coconuts cannot be stored for more than 6 days at room temperature, exporters from developing countries need to make sure that post-harvest operations such as wax coating and cold chains are perfectly managed. Young coconuts are typically exported by air transport, which naturally increase the price of this product.

Chilled or frozen young coconut water. Coconut water of this type is immediately packed after cracking the nuts. It is usually produced from young coconuts which are 6–9 months old. Although chilled coconut water is very common and is much appreciated in the largest producing countries, it is still not an option for export to Europe due to an extremely short life of usually 24 hours. Freezing the fresh coconut water can be a viable option for exporters from developing countries, but it require investments in deep-freezing facilities.

Vitamins and minerals can be added to coconut water, although it is not a common practice regarding the production of pure coconut water. You can find an approved list of additives in the European Regulation on the addition of vitamins and minerals or in the Regulation on food additives.

The name "coconut water" is reserved for 100% coconut water. If sugar, sweeteners or acid are added to fruit juice which is diluted with water, the product must be called nectar, soft drink or fruit drink.

Picture 1: Coconut water



Picture 2: Several brands of coconut water sold in Europe



Picture 3: Coconut water innovation award during Fruit Logistica 2016



Picture 4: Retail packaging of coconut water



Green Dwarf in Brazil, King Coconut in Sri Lanka, Aromatic Green Dwarf (Nam Hom) in Thailand and Chowgat Orange Dwarf in India are some of the most popular cultivars for tender coconut consumption around the world.

Quality

According to industry practice, the most important quality requirements for coconut water are defined by the following parameters.

- Colour: Coconut water colour should be clear and transparent. One of the main challenges is to transport fresh raw materials to the processing plant and process them within 3–10 days from the time of harvest. This is especially important for coconut water processing, as prolonged storage of the coconuts will also have an impact on the turbidity or the "cloudiness" of the coconut water.
- Flavour: The physical and chemical properties of coconut water can vary, depending on the type of coconut, the climate and soil conditions. Some varieties tend to be more aromatic and sweeter (Nam Hom, for example) compared to others. European consumers appreciate much more the taste of NFC coconut water than coconut water reconstituted from concentrated juices, so producers often add natural flavours to reconstituted coconut water.
- Taste: The taste of coconut water depends on the variety, the maturity of coconuts and the production process. The taste of water from young coconuts is commonly perceived as better compared to the taste of water from mature coconuts. The "maturity" of coconut water can be chemically determined by measuring the level of sorbitol in "mature" coconut water compared to "young" coconut water.
- Brix level: The usual Brix level (sugar content in juice solution) for natural coconut water is between 3 and 7 degrees. However, the Brix level of concentrated coconut is much higher, and can be between 30 and 60 degrees. As there is still no official European legislation regarding the minimum Brix level for coconut water made by the dilution of concentrated water, the majority of European producers use a minimum of 4.5 degrees.

Regarding quality issues, there is a difference between the taste of bottled coconut water and fresh juice taken directly from fresh green coconuts. Prolonging the coconut water shelf life without modifying its flavour and nutritious properties remains a technical challenge.

Coconut water is considered a fruit juice and therefore the European Union Fruit Juice Directive applies. Read more in the Buyer requirements section of this report.

Labelling

The product must be labelled as coconut, coconut water or concentrated coconut water.

Fruit nectars must declare a percentage volume of the coconut water on the packaging. As the European Directive on Fruit Juices does not specifically define a minimum share of coconut water, the Codex Alimentarius Standard is applied. This means that the minimum content of coconut water in fruit nectar is 25%.

In the case of retail packaging, the product labelling must be in compliance with the European Union Regulation on food information to consumers. This regulation defines more clearly the nutrition labelling, origin labelling, allergen labelling and legibility (minimum font size for mandatory information). This regulation came into effect on 13 December 2014, but the obligation to provide nutrition information will apply from 13 December 2016.

In the common case of export bulk packaging, the information required above must either be placed on the container or be given in accompanying documents. "Coconut water or concentrated coconut water" as well as the name and address of the manufacturer or packer must appear on the container. It is common that the product specification declares the Brix and acid level.

Packaging

The most common export types of concentrated fruit juices (including coconut water) packaging are aseptic or sterile-filled:

- bag-in-box, 20 l;
- plastic container, 20 l;
- steel drum, 200-250 l;
- plastic drum, 200-250 l;
- stainless steel container, 200-800 l;
- stainless steel container, 200-800 l;
- foldable container, usually 1.000 l;
- truck tankers, usually 25.000 l.

Regarding retail packaging, most coconut water on the European markets is sold in TetraPak packaging solutions, followed by PET packaging and aluminium cans.

Tips:

For more information on Good Practices for small-scale production of bottled coconut water, check the training guide published by the FAO.

Invest in processing technology. In order to retain quality, coconut water must be packed very quickly after the nut is open.

If you are a producer of copra, desiccated coconuts or coconut cream, consider investing in facilities for the production of coconut water. Instead of discharging coconut water as a waste product you could make a profit by selling it as a by-product. Besides coconut water consider also investing in less complicated technologies such as fermentation or in the production of coconut water vinegar.

For more information about labelling and food contact materials see our study on buyer requirements for processed fruit and vegetables.

For more information about the evaluation of quality, identity and authenticity of fruit juices see the Code of Practice developed by the European Fruit Juice Association.

2. Which European markets offer opportunities for exporters of coconut water?

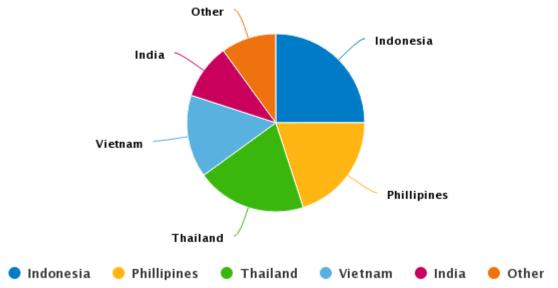
United Kingdom, the Netherlands, France and Germany and United Kingdom offer opportunities for exports of

coconut water. Besides these countries, the largest markets opportunities are expected to be found in the emerging markets of Central and Eastern Europe in coming years.

Imports

Figure 1: Leading European suppliers of coconut water

in share of exported volume



Source: Estimation by the author based on the industry sources

- There are no exact data on imports of coconut water in Europe. However, the United Kingdom is the largest importer far ahead of the Netherlands, France and Germany. United Kingdom consumption was nearly 25 million litres in 2015
- One of the fastest growing markets regarding consumption of coconut water is France. However majority of coconut water consumed in France comes through the Netherlands. French market may be more difficult to enter due to sceptical consumers, but the quality product and branding could stimulate consumption. Beside France there can be opportunities in whole Europe as coconut water consumption increase is a global trend.
- Major suppliers of the bulk concentrated water to Europe are Philippines and Indonesia. Thailand is more
 focused on coconut water and there are several installations of packing facilities which produce coconut
 water for the leading international brands. A similar packing trend can be expected in Brazil, Mexico and
 India which are currently investing into the coconut water packaged sector.

Tips:

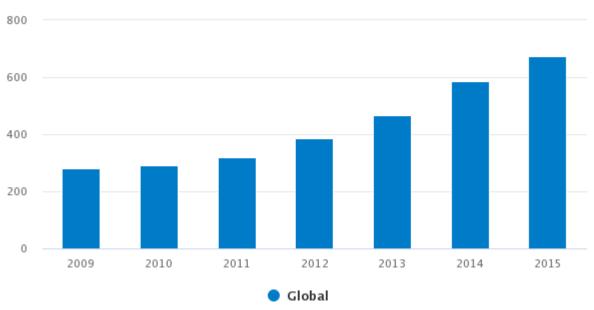
Besides targeting the United Kingdom as the largest European import market, consider countries that are showing growth in imports such as France, the Netherlands and Germany. As coconut water is a growing trend in western Europe in coming years consumption of coconut water can be expected to increase in Central and eastern European countries too.

You can follow the examples of Thailand, Brazil, Mexico and India which are searching for direct subcontracting possibilities and packaging on site. This can add value to your product and increase the profits made from exporting coconut water.

Consumption

Figure 2: Global consumption of coconut water 2009-2015

in million litres



Source: The Food and Drink Innovation Network

- Increasing consumption of coconut water is a global trend, and in 2014 a total of 587 million litres of coconut water was sold worldwide, with consumption expected to rise by a further 15% in 2015. This global trend is spreading across Europe but Brazil is still the largest world consumer.
- Extensive research carried out by the market research company Technavio has shown the coconut water market in Europe can be expected to grow rapidly at annual growth rate of more than 23% until 2020. The growing health consciousness among consumers worldwide is one of the key factors driving market growth in the coming years.
- Although coconut water consumption is increasing, it is still a niche product comparing to fruit juices and soft drinks. According to a survey conducted in the United Kingdom by market research agency Canadean, only 7% of consumers had purchased coconut water in the last twelve months. However, 49% of those who did buy coconut water consumed it regularly, saying that they drank the beverage either 'daily' (19%), 'weekly' (12%) or 'every couple of weeks' (18%).
- The primary coconut water consuming country in Europe is the United Kingdom with near 25 million litres consumed in 2015. However the largest increase in consumption is expected in France.
- The coconut water market in Europe is dominated by the sweetened coconut water segment, which accounted for a market share of more than 74% in 2015. Some of the coconut water brands contain undeclared amounts of sugar, which can be a challenge to the growth of the segment.
- European consumers appear to appreciate the taste of NFC coconut water above that of coconut water made from diluted concentrated coconut water.
- The leading coconut water retail brand in Europe is Vitacoco followed by Chi coconut water. Other important brands which are predicted to increase market share on the European market are: Zico (international brand of Coca-Cola), Green Coco (brand headquartered in Germany), O.N.E. (international brand by Pepsi Co) and Vai-Vai (brand headquartered in France).

Tips:

Opportunities can be found in specific products such as coconut water with an increased amount of pulp and not made from coconut water concentrate.

New flavour mixes are another opportunity and those can be developed in close cooperation with

European processors and bottlers. So invest in product development facilities in order to meet demands of the curious European buyers.

3. Which trends offer opportunities on the European market for coconut water?

Opportunities for coconut water on the European market lie in the following trends:

- Coconut water is marketed as a 'health booster' in many different ways. Most often it is marketed as 'dehydrator' and 'anti-aging' product which opens a sport drinks, health and beauty channels for developing country suppliers. Other health claims include: stress-buster, a natural diuretic, digestive soother, detoxifier, stomach comforter and cholesterol lowering product.
- Low-sugar products are appreciated by European consumers. Due to this trend coconut water is promising
 category on the European beverages market. Besides being a naturally low-sugar drink, it is likely that
 coconut water will increasingly be used as a sweetener in fruit drinks and other beverages. This offers
 opportunities to developing country exporters, especially in the export of concentrated coconut water which
 is more suitable to be used as an ingredient than tender coconut water.
- More and more coconut-water based drinks are being introduced in Europe. In 2008 the European share of global introductions of drinks with 'coconut water' in the description was only 14% and in just four years this has increased to 34%. The largest numbers of new coconut drinks entering the market were in Spain, France, the United Kingdom, Germany and the Netherlands.
- Food safety certification supported with frequent laboratory tests can also be a great advantage to exporters to European markets.
- Corporate social responsibility (CSR) standards are also becoming more important.
- The consumption of organic products is increasing in Europe and it is positively influencing consumption of coconut water too. Therefore consumption of organic coconut water is likely to increase too.
- Opportunities for developing country exporters are also seen in added-value segments such as not-fromconcentrate coconut water (NFC coconut water), organic and fair-trade coconut water.
- The package itself is expected to be very important, especially in presenting the content of the product as consumers are reading labels more than ever before.
- There is increasing marketing of fresh coconut filled with natural coconut water. Supermarkets in western European countries have already started to offer young coconuts, with the first launches in the United Kingdom in 2015. Along with coconuts, coconut openers are sold in the stores.
- Spanish company Genuine Coconut won the Innovation Award 2016 at the major European trade fair for fresh fruit and vegetables FRUIT LOGISTICA (Picture 3). However developing country exporters must be aware that this is still a niche product with very low export volumes and with high transport costs.

Tips:

With respect to coconut water, an extensive study about European market trends is available. See our study about trends for processed fruit and vegetables.

One of the opportunities can be found in new product solutions with coconut water as an ingredient.

Use the opportunity to sell organic, fair-trade and NFC coconut water.

To find out more about product and country specific trends in the sector, read our studies about Superfruit juices in Europe.

Anuga trade fair is the best place to monitor market trends for coconut water and to meet potential prospects in Europe. It is held every other year in Cologne in Germany. Another trade fair that is important to visit is SIAL which is held every other year in Paris in France.

Regular information about the crop, processing and market situation can be found on the leading European information service for processed fruit and vegetables FoodNews.

4. With which requirements should coconut water comply to be allowed on the European market?

In addition to the quality requirements mentioned in the product description and below, for a general overview of the buyer requirements in the European Union please refer to our study about buyer requirements for processed fruit and vegetables.

Legal requirements

All foods including coconut water sold in the European Union must be safe. This applies to imported products as well. Additives must be approved. Harmful residues in pesticides are banned. It should also be readily obvious from the labelling if a food contains allergens.

Coconut water quality requirements

The composition and quality of fruit juices are covered by a specific European Union Directive on fruit juice. This Directive stipulates the specific characteristics of fruit juices and fruit-based drinks in order to guarantee that the best possible products are put on the European market. It defines the composition of various products that can be produced, including not only fruit juices, but also dehydrated fruit juice and fruit nectars.

As an example, if a coconut water has been sweetened or has been obtained from concentrated juice, it must be clearly indicated on the label. One of the common problems regarding imports of coconut water from developing countries is undeclared content of sugar.

Food safety

In June 2015, Codex Alimentarius Committee on Contaminants in Food adopted a standard to reduce the maximum level for lead in fruit juices and nectars. The maximum level of lead was changed from 0.05 to 0.03 mg/kg.

In the event of repeated non-compliance regarding specific products from particular countries, stricter conditions may apply. These stricter conditions in practice mean obligatory laboratory checks for a set number of imported containers or trucks. Products from countries that have shown repeated non-compliance are put on a list included in the Annex of Regulation (EC) 669/2009.

At the moment (from March 2016), there are no increased checks regarding imported coconut water.

European Union has set maximum residue levels (MRLs) for pesticides in and on food products. MRLs apply to 315 fresh products and to the same products after processing, including coconut water, adjusted to take account of dilution or concentration during the process.

Packaging requirements

Packaging used for coconut water must protect the:

- colour and taste and other quality characteristics of the product; coconut water is sensitive to oxidation and therefore must be transported in aseptic and hermetically sealed packaging
- product from bacteriological and other contamination (including contamination from the packaging material itself)

• product from moisture loss, dehydration, and where appropriate, leakage as far as technologically practicable.

Labelling requirements

In December 2014, the new European Union Labelling Regulation went into effect. The new labelling legislation forbids misleading consumers. Moreover, claims that any food prevents, treats or cures a human disease may not be made.

Another change is allergens labelling, in that allergens have to be highlighted in the list of ingredients and requirements now also apply to non-pre-packed foods including those sold in restaurants and cafés. However, coconut water in Europe is not considered an allergen. A relevant allergen in beverages industry is sulphur dioxide which is used in production of soft drinks. The maximum allowed level of sulphur dioxide and sulphites is 10 mg/kg in terms of the total SO2.

Common requirements and niche requirements

- Food safety certification is often requested by European Union importers. The most common certification schemes accepted on the European markets are IFS, FSSC22000 and BRC. In the fruit juice industry, the most recent development is SGF certification. SGF certifies fruit processing companies, packers and bottlers, traders and brokers for fruit juices, as well as transport companies and cold stores in almost 60 countries worldwide.
- SGF certification has a particular focus on authenticity and safety checking for conformity and food fraud by analyses and traceability checks. Already more than 80% of imported fruit juice products in Europe are coming from production sites with SGF certification.
- Environmental protection, organic and fair-trade certification schemes are becoming more and more popular in the coconut water trade in Europe. In order to be labelled within the European Union with the EU organic logo, producers from developing countries must fulfil European organic farming requirements.
- The European Union regulates both organic food and drinks produced and/or processed within Europe and organic goods from elsewhere (Commission Regulation (EC) No. 1235/2008 with detailed rules concerning import of organic products from third countries).

Organic products can readily be imported from non-European countries whose rules on organic production and control are equivalent to Europe's. However this is not a case for most developing countries except Argentina, Costa Rica and Tunisia.

For all other non-European countries, importers can have their organic products certified for import into the European Union by independent private control bodies approved by the European Commission.

Tips:

Specifically for coconut water, consult the EU Export Helpdesk where you can find European Union legislation for your selected products under the corresponding 22029010 code.

For information on commonly requested standards, check the International Trade Centre's Standards Map, an online tool which provides comprehensive information on over 210 voluntary sustainability standards and other similar initiatives covering issues such as food.

Refer to Codex Alimentarius for the General Standard for Fruit Juices and Nectars. The Codex Alimentarius standard is in line with the current practices in Europe.

Refer to The Code of Practice of the European Fruit Juice Association for guidelines specifying good manufacturing practices (GMP) in the production of fruit juices and nectars.

Always stick to the rules. New laboratory testing methods can easily discover the addition of non-permitted sugars, water or other fruit to fruit juices. It takes a long time and a lot of money to build a good reputation in European markets, but this can be lost very quickly if you are caught with adulterated or 'sub-standard' products.

To find out the maximum residue levels (MRLs) that are relevant for fruit juices, you can use the EU MRL database in which all harmonised MRLs can be found.

Get food safety certification. However, check with the importers and experts if the food safety certification company you engaged is recognised by the European Union buyers. Independent international accredited certification companies include SGS, CIS, TÜV and Bureau Veritas.

Check Codex Alimentarius Code of practice for the prevention and reduction of lead contamination in foods in order to meet stricter requirements for the maximum level of lead in fruit juices and nectars.

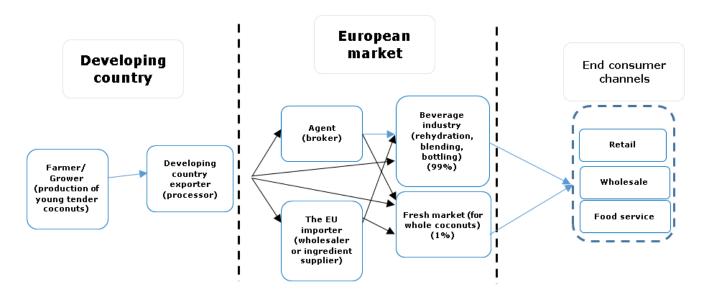
5. What competition will I be facing on the European coconut water market?

Following in the footsteps of popular coconut water, birch juice is emerging as the latest trendy health drink in United Kingdom, Germany and Austria. For more information about competition on the European fruit juice market, see our competition study.

6. Which channels can you use to put fruit juices on the European market?

A specialised processor (bottling company) is the preferred channel for market entry in this sector. Many importers also engage in trading and wholesale activities.

Chart 1: European channels for fruit juices, 2016



Source: Market researcher insights from industry sources

The majority of imported coconut water in Europe is used by the beverage industry in three main ways, listed here in the order of used quantities:

- in the bottling and production of 100% coconut water made from concentrate
- as ingredients for the production of nectars, fruit drinks, soft drinks and other beverages.
- in bottling of not-from-concentrate (NFC) coconut water.

In the beverage market channel, the use of coconut water as ingredient is expected to increase. Promising

segments for developing country exporters are manufacturers of:

- sport drinks
- fruit flavoured drinks
- protein and milk drinks
- ready to drink coffee
- ready to drink tea.

Niche market opportunities of suppliers of fresh green coconuts can be found in new channels such as juice bars, fresh juice stores, raw food restaurants and juice corners which are increasing their market share. Those channels are in line with the general healthy living trend.

In 2015, hypermarkets and supermarkets segments dominated the coconut water market and accounted for more than 45% of the market share in terms of revenue. Since Europe has a strong network of supermarkets and hypermarkets with a number of global players such as Carrefour, Tesco, and Metro Group, the majority of packaged coconut water is sold in hypermarkets and supermarkets.

Tips:

Use the opportunity to sell organic, fair-trade and NFC coconut water including fresh coconuts, especially to the suppliers of the new market channels such as juice bars.

Read our tips about doing business and finding buyers on the European market of processed fruit and vegetables.

7. What are the end-market prices for fruit juices on the European market?

Indication of the margins related to the retail prices for coconut water is not very precise, as the sector involves many different products. The prices are also different between producing countries regarding type of juice, fruit variety and quality of products. Therefore, developing country exporters can only have a very general impression of price developments.

Roughly speaking, the Cost, Insurance and Freight (CIF) price of concentrated fruit juice represents around 50% of the retail price of the retail packaging of fruit juices made from concentrates. The best option to monitor prices is to compare your offer with the offer from the largest competitors.

A very rough breakdown of the prices is shown in the illustration below.

Table 1: Price breakdown for fruit juices

Steps in export process	Type of price	Average share of the retail price
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Coconut production	Raw material price (farmers' price)	15-20% (price of the coconut fruit required for the production of one litre of coconut water juice)
Handling, processing and selling bulk product	FOB or FCA price of concentrated juice	20-30%
Shipment	CIF price	35-50%
Import, handling and processing	Wholesale price (value added tax included)	60%
Retail packing, handling and selling	Retail price (for average packaging of 250 g)	100%

Please note that the share of the retail price paid to farmers varies a lot between producing countries and the type of the product. Different amounts of fresh coconuts are needed for the production of the same quantity of coconut water depending of the type and a variety of fruit. The amount of coconut water in a coconut may vary between 200 ml and 1 litre.

Tips:

Keep in mind that young coconuts intended for coconut water extraction require fast transport. Most whole young tender coconuts from the Asian and Pacific Coconut Community pass through Hong Kong or Singapore markets before being transported by plane to Europe. However, a tender coconut can be heavy (0.8 to 2 kg each), leading to considerable airfreight costs.

Monitor retail prices of different coconut water brands in Europe on the website of the specialised Spanish coconut water supplier – Cocoshop.

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