



**Market study on the Swedish market for organic
chia and sesame**

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INTRODUCTION

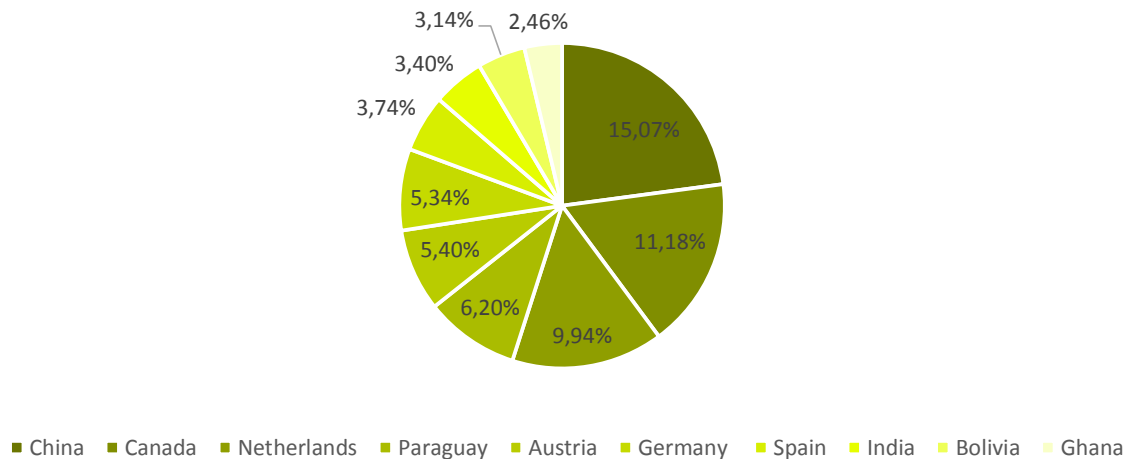
This report screens the Swedish market for organic chia and sesame. It provides information on market size and development over time, consumer trends, packaging and labelling requirements and much more. The report places Sweden in the European context, a large market with more than 450 mil. consumers. The 27 members states of the European Union apply the same conditions for import from countries outside the union, both when it comes to tariffs and rules and regulations for goods placed on the EU market. This is why, partially this report will give you even information that is relevant for export to other European markets than Sweden.

The report was prepared as part of the project that the National Board of Trade Sweden/Open Trade Gate Sweden and Swiss Contact are carrying out in Bolivia during 2020 - 2021. The target group is therefore primarily Bolivian small and medium-sized enterprises (SMEs) that are currently exporting to countries within the EU and the American markets, but still without a presence in the Swedish market. However, the information in this report is also relevant to a wider range of companies from any country that is interested in getting an overview of the Swedish market for organic chia and sesame.

1. MARKET SIZE AND DEVELOPMENT OVER TIME

The global chia seeds market size is expected to reach USD 4.7 billion by 2025 growing at a CAGR of 22.3%, according to a new report by Grand View Research, Inc. while sesame seed market size growth is expected at a CAGR 2.2%. Rising demand for gluten-free products, awareness about the health benefits of chia seeds, and growing use of omega 3 in animal feed are some of the main factors that was driving the growth of this market.¹

Currently U.S., Germany, China, and Brazil are the major countries with largest markets in their respective regions for oilseeds. The largest exporters of oilseeds to the World are China with 15,7% followed by Canada (11.18%) and Netherlands (9.94%). It is important to note that the exporters are not necessarily also the producer.² The largest exporters of oilseeds to the Sweden in 2020 were from Austria (54.03%), China (16.92%) and Bulgaria (7.02%).³ Sweden's imports represent 1.3% of world imports for oilseeds.
Figure 1 The largest exporters of oilseeds to the World



Bolivia is ranked as 11th exporting country of oilseeds to the world. It exported oilseeds to the world worth approximately 19 mil EUR in 2020 and ¼ of its total value was exported to EU27. Looking to trade between Bolivia and EU (Table 3), the imported oilseeds between 2016-2020 in terms of trade value (EUR), has decreased for about 50%.

¹ <https://www.grandviewresearch.com/press-release/global-chia-seeds-market>

² COMTRADE database

³ COMTRADE database

Table 1 Imports from Bolivia to Europe

Oil seeds and oleaginous fruits, whether or not broken*					
in € thousands					
	2016	2017	2018	2019	2020
World	24 172	24 108	23 845	16 983	19 399
EU27	8 857	11 694	6 772	4 978	4 864
Germany	3 706	4 487	2 882	2 164	2 223
Netherlands	2 908	4 157	1 638	1 871	2 034
Italy	264	549	896	35	179

*Excluding edible nuts, olives, soya beans, groundnuts, copra, linseed, rape or colza seeds, sunflower seeds, palm nuts and kernels, cotton, castor oil, sesamum, mustard, safflower, melon and poppy seeds.

Figure 2 shows the total amount of imported oilseeds from the World to Sweden between 2016-2020 in terms of weight (kg) and trade value (USD). The amounts of imported oilseeds have steadily increased each year, while the trade value has only increased slightly, showing a relatively stable price, meaning that oilseeds are becoming cheaper each year.⁴

Figure 2 Imports of oilseeds to Sweden 2016-2020 in net weight (kg) and trade value (USD)

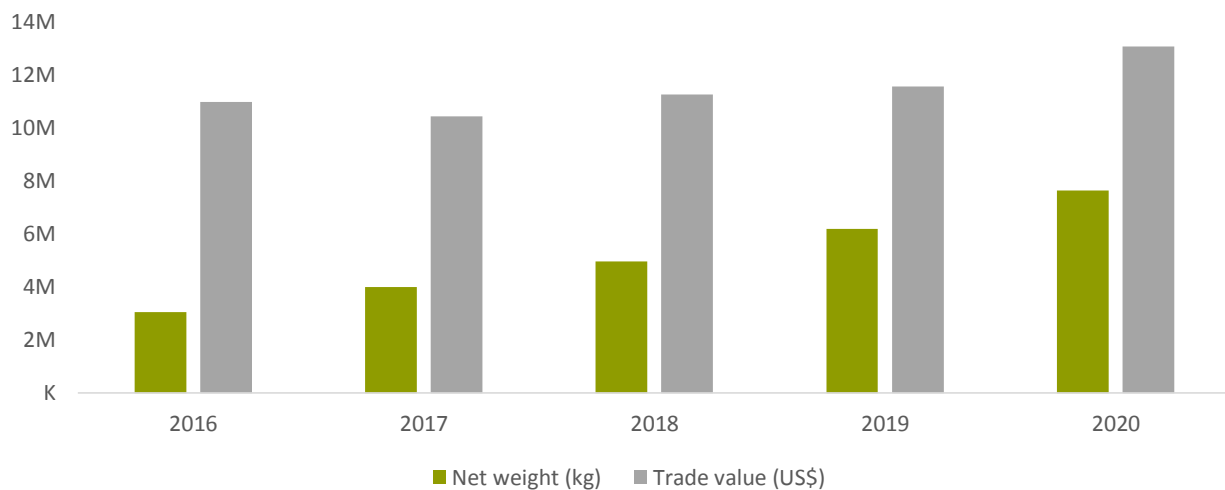
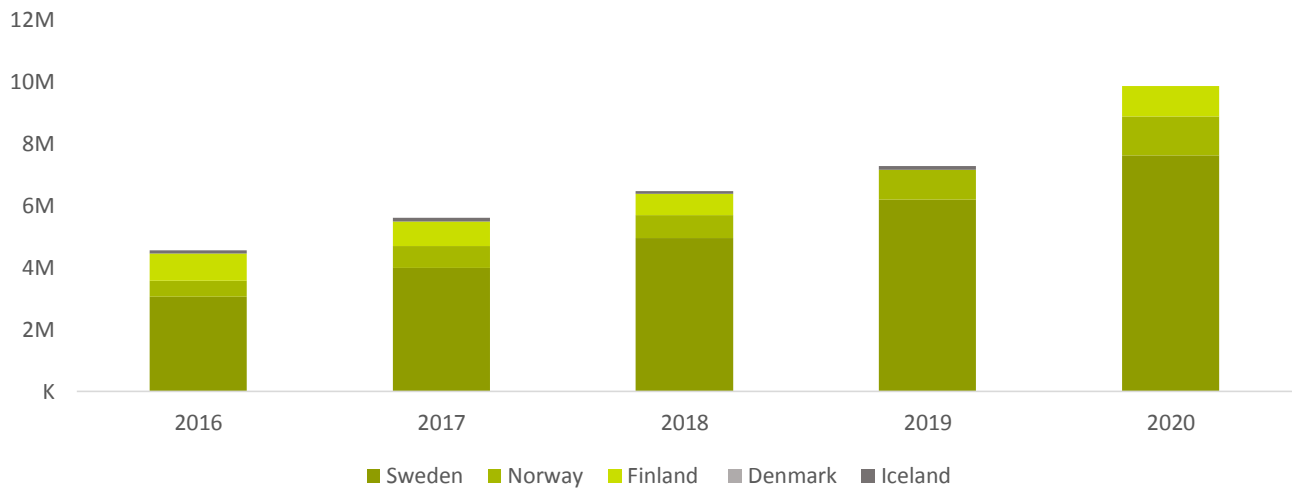


Figure 3 shows the total amount of imported oilseeds from the World to the Nordics between 2016-2020 in terms of net weight (kg). There has been an increase in imports over time, specifically on the Swedish market, where imported oilseeds have increased by 150% between 2016-2020. Norway is a much smaller market but has also seen similar growth with an increase of 136% over the period. Imports to Finland has been relative stable with an average of about 83 tonnes per year, as well as in Iceland with about 41 tonnes per year. There was no reported data on Denmark.⁵

⁴ COMTRADE database

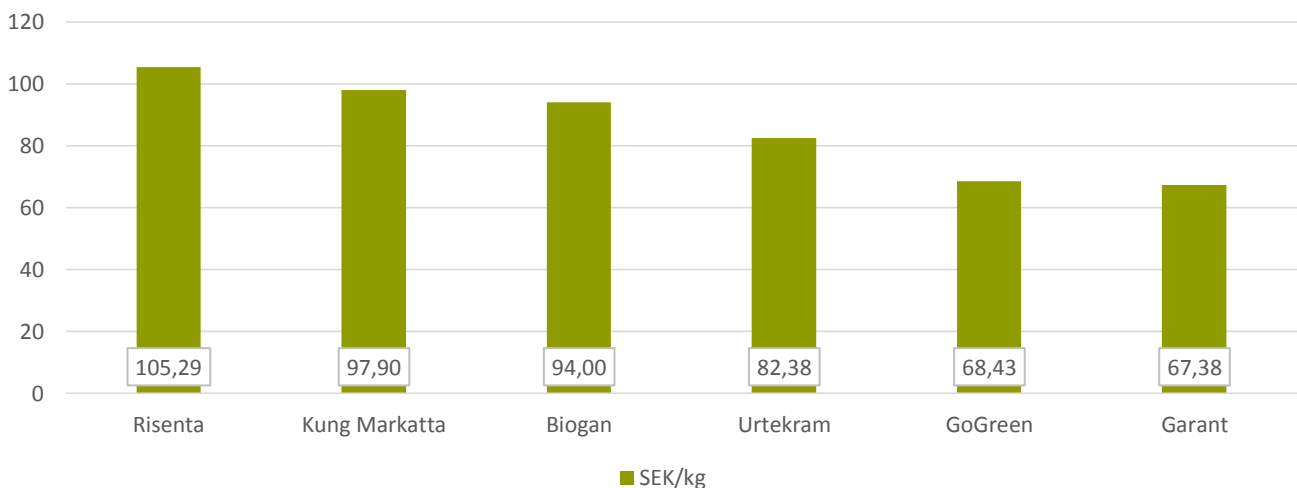
⁵ COMTRADE database

Figure 3 Imports of oil seeds from the World to the Nordics 2016-2020 (kg)



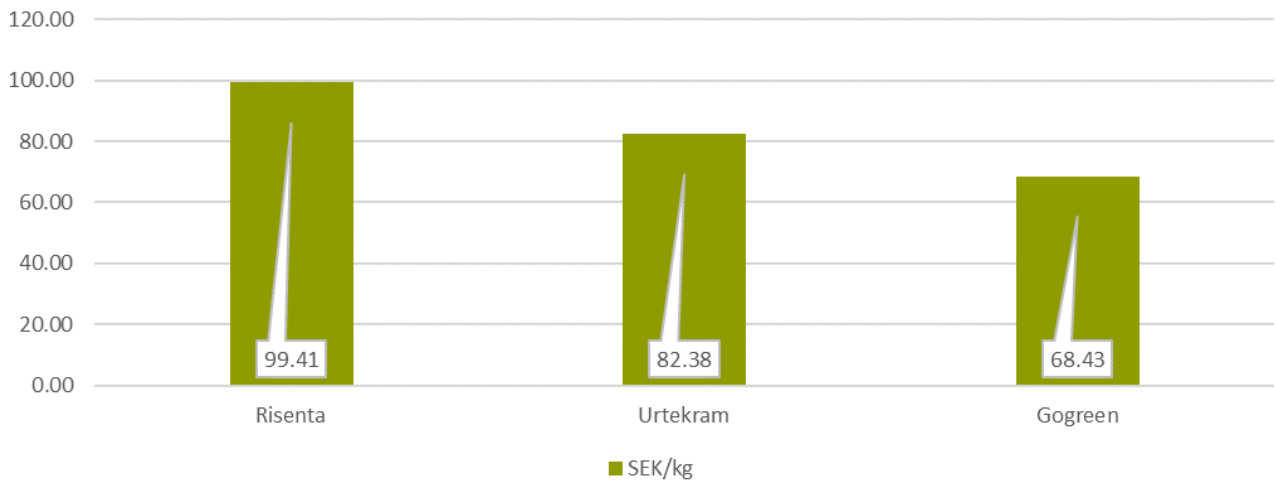
There are two types of sesame seeds- hulled sesame seeds and unhulled sesame seeds. Current prices for Unhulled sesame seeds (Figure 3) on the Swedish market varies from little more than 67 SEK/kg to 105 SEK/kg differing for almost 38 SEK/kg depending on the brand and retailer. Products vary in weight from 170g-500g.⁶ While the hulled sesame seed price (Figure 4) varies for little more than 30 SEK/kg.

Figure 4 Unhulled sesame seed retail prices (SEK/kg)



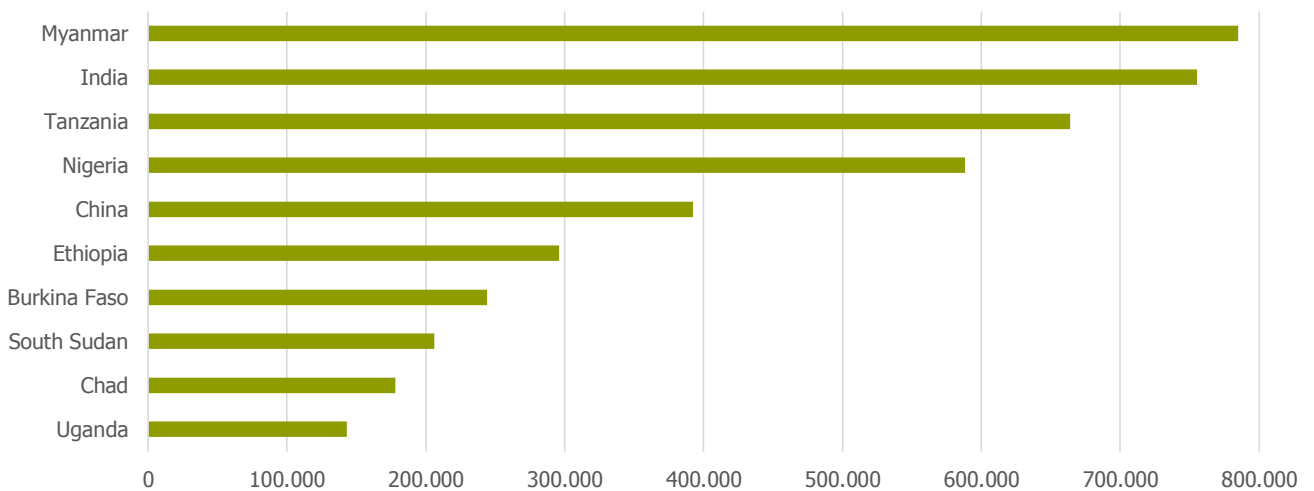
⁶ hemkop.se, coop.se, ica.se, mathem.se, mat.se

Figure 5 Hulled sesame seed retail prices (SEK/kg)



Myanmar is biggest producer, producing 785,038 metric tons in 2019. In comparison, Bolivia comes in 33rd and produced 13,330 metric tons 2019

Figure 6 Largest sesame seed producers in the World 2019 (metric Tons)



At the moment in Sweden the demand for chia and sesame seeds has decreased, or it's at least is not increasing. To expert's opinion the demand is stable and will stay stable as it is today. There are no any signs that chia or sesame seeds will become more popular.

2. MARKET STRUCTURE AND PLAYERS

The chia and sesame seed market in terms of distribution channels can be divided into these segments: supermarket, hypermarket, convenience stores, online, and other distribution channels. According to market experts these products are the largest in the private market, and is not considered as a big product in the public domain. The online channel at the moment holds a niche share in the market, and as an impact of global pandemic is expected to grow at a healthy pace.⁷

If looking on market segmentation by product type, both chia and sesame includes white, black, and brown seeds. For chia the black seed segment dominates the market, while the white chia seed segment has been recording a healthy growth rate. According to WBOC the sales of black chia seeds are expected to exceed 40,000 million metric ton in 2021. For sesame the white seeds dominate the market.

Looking at sesame segmentation by application it can be divided into four segments: food processing, baking industry, confectionary industry, industrial uses (cosmetics, pharmaceuticals), where food processing is the main segment for sesame with 35.7%. On the basis of application for chia seeds it is segmented into food, beverage and nutraceutical, where food application can be further sub segmented into bakery, breakfast cereals and soups & gravies. For Chia the health food segment is crucial, but it is assumed that they will remain as a niche product.⁸

Different market segments may have their own specific needs. These needs will depend greatly on the end-product the seed will be used for.

⁷ www.wboc.com/story/44146343/global-packaged-chia-seed-market-2021-is-expected-to-register-a-cagr-of-58-with-top-countries-data-industry-growth-analysis-segmentation-size-share, Global-packaged-chia-seed-market-2021

⁸ www.cbi.eu/market-information/grains-pulses-oilseeds/chia-seeds/market-potential, Chia seed market potential

3. CONSUMER AND MARKET TRENDS

Sustainable food and healthy eating are two major trends impacting the food and beverage market in Sweden. At the same time, the pandemic has accelerated the online sales of food and beverage and has caused shifts in Swedish consumption habits. In Sweden, a healthy lifestyle has gained popularity, which has led to a sharp increase in the consumption of organic food. Environmentally friendly lifestyles and care for ethical production of foods of animal origin are growing in popularity.

The pandemic years of 2020-2021 have accelerated two major trends in the Swedish food market: sustainability and digitalization. Swedes are concerned about the environment and want to make climate-smart choices, also when it comes to the consumption of food and beverages.

Swedes traditionally have preferred food that is locally produced, but the interest in recent years has also expanded to food categories that traditionally have been imported. The growth of the organic market has skyrocketed during the past decade, and evidenced decrease in popularity from 2018 and instead locally produced foods have increased, becoming the most important factor shoppers cite, as 20% of shoppers deem local to be the most important factor, vs. only 7% citing organic as the most important factor. Despite a decline in organic food popularity the share of organic food currently makes up around 10% of the total food market in Sweden. All major retailers have several organic food brands. Even hard discounters Lidl or Axfood's Willys, are focusing on increasing the share of organic produce to make it more affordable for less affluent shoppers. Retail sales of organic foods grew by 3.5% in 2020.

In the last decade the debate of locally vs. organically produced food has increasingly come into the public eye. Stakeholders such as large farming corporations, smaller farms and sustainability researchers have differing opinions on the matter. Research is pointing out that the public is increasingly preferring locally produced food over organic food that is not locally produced. Reasons for this often include that large corporations only do the bare minimum needed to label their products as organic and ignore other dimensions such as; community food security, farm-worker security, animal welfare, land stewardship, resource conservation, preservation of heritage breeds and sustainability.⁹

In the coming years, experts predict that the world must shift its eating habits from animal-based proteins from meat and dairy to plant-based proteins from legumes and nuts to achieve a healthier diet that works within the planetary boundaries. Nuts and seeds are thus an "emphasized food" and is predicted to be consumed up to five times as much in 2050 as it is consumed today.¹⁰ Knorr and WWF's report Future 50 Foods list 50 foods that people can eat more of, only resulting in a positive impact on one's health and the environment. The report identifies nuts and seeds as an important segment due to their high protein and natural fat content. Sesame seeds are included in the list and are praised for their high levels of copper and magnesium and versatility as a paste, a topping, in desserts and as sesame oil.¹¹

Chia seeds are especially popular among consumers who live a healthy lifestyle, who exercise a lot, and runners, due to being high in omega-3, fiber and protein.¹² The large purported benefits of chia seeds on cardiovascular health has one of the key stimulants for demands in the market.¹³

Chia seeds became immensely popular in the 2010's around the world with the rise of the trend of 'superfoods', and then also in Sweden. Their popularity has only continued, and chia seeds are no longer seen as a trendy health food, but a normal food product that most people are familiar with. Chia seeds are

⁹ www.researchgate.net/publication/231858753_Local_versus_organic_A_turn_in_consumer_preferences_and_willingness-to-pay, Local versus organic: A turn in consumer preferences and willingness to pay

¹⁰ eatforum.org/content/uploads/2019/07/EAT-Lancet_Commission_Summary_Report.pdf, EAT Lancer Commission Summary Report, p.12

¹¹ www.wwf.org.uk/sites/default/files/2019-02/Knorr_Future_50_Report_FINAL_Online.pdf, Future 50 Foods

¹² www.ica.se/halsa/artiklar/darfor-ar-chiafron-sa-nyttiga/, Därför är chiafrön så nyttiga

¹³ www.transparencymarketresearch.com/chia-seeds-market.html, Chia seeds market

readily available in most supermarkets, and chia seed food items such as chia seed drinks and chia puddings are popular in both RTE segments and in HoReCa. The chia buzz is considered to be over, but according to active chia buyers, the forecast is still positive.

Vegetarian food and plant-based alternatives to meat are growing in demand and shaping the food market. Surveys estimate that around 60% of Swedes eat vegetarian food at least once a week.

4. LABELLING & PACKAGING

Packaging regulations in Sweden follow the EU's regulations on materials and articles intended to come into contact with food (EC 1935/2004).¹⁴ The regulation is mainly concerned with preventing the migration of substances from the packaging to the food in such quantities that will:

- Make up a risk for one's health
- Causes an unacceptable change in the composition of the food
- Changes the smell or taste

As the risk of migration increases, the requirements for packaging are becoming stricter. The conditions where risk for migration increases relevant for oilseeds include high temperature (plastics), high fat content and long storage time. The Overall Migration Limit (OML) for plastic contact material to the packaged food is 60mg/kg food or 10mg/dm².¹⁵ An initiative for 2025 in the industry stimulates the environmentally friendly packaging use. Wholesalers work quite a bit with trying to reduce the use of plastic, the aim is to use plastic that is recyclable based on initiative, so it is important in the industry to try to find packaging that is good for the environment.

To get the best suitable packaging, the producer and the packaging manufacturer should agree on the type of foodstuff, best-before dates and temperatures. The packaging manufacturer is responsible for retaining documentation stating what the intended use is for and completing necessary tests to issue a Declaration of Compliance (DoC), which the producer should retain from the manufacturer. If plastic packaging is used, a specific DoC is necessary in accordance with EG 10/2011.¹⁶

It is important to label any food products¹⁷, and in Sweden, it is always the producing or importing company that carries the main responsibility that any information and labels are correct. Information on the labels may not mislead the consumer or indicate that the product has special effects that it doesn't in fact have. Labels need to be clearly visible and easy to read, in Swedish or a closely related language. Characters must be at least 1.2mm on large packaging or 0.9mm on small packaging. Regulations on labelling must follow EG 1169/2011 and LIVSFS 2014:4.¹⁸ The EU Commission has developed the Food Labelling Information System tool (FLIS) which is free and helps companies find mandatory information for the labels of food products in order to be sold in the EU.¹⁹ According to EU regulation, mandatory information on the label for processed vegetables, fruit, berries and nuts is:

- Name of product
- List of ingredients
- Allergen information
- Quantity of certain ingredients or categories of ingredients
- Net quantity of the food
- Date of minimum durability
- Best before date
- Storage conditions and/or usage
- Nutrition declaration (energy value, amounts of fat, saturates, carbohydrate, sugars, protein and salt (see point b)
- name and address of the packer and/ or dispatcher

¹⁴ ec.europa.eu/food/food/chemical-safety/food-contact-materials/legislation_en, Food contact materials Legislation

¹⁵ ec.europa.eu/food/food/chemical-safety/food-contact-materials/legislation_en#plastic_materials, Food contact materials legislation: Plastics

¹⁶ www.livsmedelsforetagen.se/app/uploads/2018/09/foxxrpackningsguide-att-tank-a-pa-nar-du-valjer-forpackning-2018.pdf, (p.12) Förpackningsguide: Att tänka på när du väljer förpackning 2018

¹⁷ www.livsmedelsverket.se/produktion-handel--kontroll/information-markning-och-pastaenden, Information, märkning och påståenden

¹⁸ kontrollwiki.livsmedelsverket.se/artikel/34/informationen-far-inte-vilseleda, Informationen får inte vilseleda

¹⁹ ec.europa.eu/food/food/labelling-and-nutrition/food-labelling-information-system-flis_en, Food Labelling Information System

- Instructions for use where it would be difficult to make appropriate use of the food in the absence of such instructions.

Important to note that in Sweden, labelling needs to be in Swedish.

The Swedish National Food Agency and legislation has a list of 14 ingredients/food groups that cause the most serious allergic reactions which also have specific labelling requirements to see what products contain allergens. Sesame seeds and thus all products made from sesame seeds are included on the list.²⁰ Labels need to make sure it is easy to see if and what allergens a product contains by making the text bold or larger for the allergens in the ingredients list.

Nutrition and health claims

There are strict regulations governing statements given on products concerning nutrition and health properties. Such statements are called nutrition and health claims. Health claims may only be stated on the label if they are approved by the European Commission. Nutrition and health claims have special rules for labelling in addition to the regulation (EU) no 1169/2011 on food information.

Small Packages

Sweden applies specific labelling requirements for "small packages", where the largest surface is less than 10 cm². Specific nutritional labelling rules are still applicable when a so-called nutrition claim is included on the label. Information on sweetener content is also required on small packages. Foodstuffs consisting of one single ingredient need no list of ingredients if the sales name of the foodstuff is identical to the sales name of the ingredient, or if the ingredient is clearly stated by the sales name, e.g. tea, sugar, raisins.

Swedish Keyhole Logo

In 1989, the National Food Administration implemented a voluntary labelling system for foods that are leaner and contain less sugars and salt and more fibre than food products of the same type normally do. A "keyhole" symbol can be printed on the package of these products, be attached on shelves in stores or used in advertising and marketing of the products. The symbol is free of cost as well as free to use for products from all countries. No previous acceptance or licensing is necessary. Its application is supervised by the local public health administration. However, the products must meet the standards established by the National Food Administration. More information can be found [here](#).

Common labels in Sweden on food labelling and health claims:

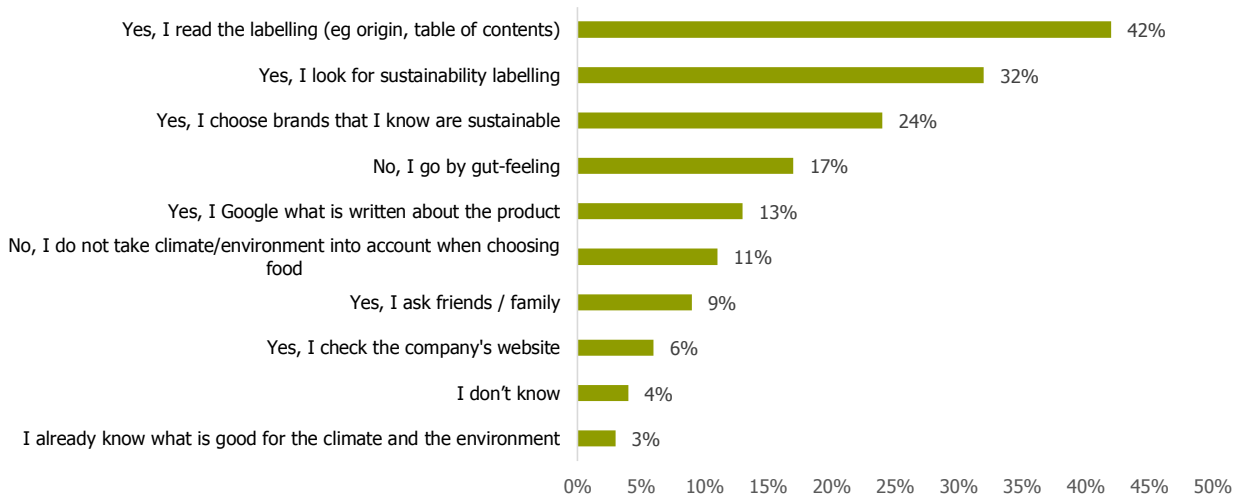


Importance to consumers

Consumer attitude towards packaging of the food stuff in their daily use was measured in Felixbarometer survey where respondents answered question (figure 4): Do you check if a product is good for the environment when you buy food - majority of respondents claimed that they check what impact on the environment has the product showing that this question is a highly important in the choice of the product.

²⁰www.livsmedelsverket.se/livsmedel-och-innehall/text-pa-forpackning-markning/allergimarkning#Ingredienser_som_ofast_ger_allergi_eller_annan_%C3%B6verk%C3%A4nslighet, Allergimärkning

Figure 7 Do you check if a product is good for the environment when you buy food, and if so, how?



Sweden is among the world's leading examples in fight against waste, aiming for a zero-waste society.

Regarding the packaging of the products foodstuffs must be packaged in a way that:

- protects the organoleptic and quality characteristics of the product;
- protects the product from bacteriological and other contamination (including contamination from the packaging material itself);
- does not pass on any odor, taste, colour or other foreign characteristics to the product.

The safety of food contact materials must be evaluated and ensure that there is no migration of unsafe levels of chemical substances from the material to the food.

[Regulation \(EC\) No 1935/2004](#) of the European Parliament and of the Council establishes a list of groups of materials and articles (such as plastics, ceramics, rubbers, paper, glass, etc.) which may be covered by specific measures that include a list of the authorised substances, special conditions of use, purity standards, etc. Specific measures exist for ceramics, regenerated cellulose and plastics.

Recycling of Packaging Materials in Packaging Waste

On January 1, 2006, Sweden implemented new rules on plastic bottles and metal cans. According to these new rules, plastic bottles and metal cans may not be sold in Sweden unless they participate in an approved recovery system. The annual registration fee to participate in a recovery system is 10,000 SEK (approximately €1172.5).

The Swedish National Food Agency (Livsmedelsverket) has determined that all food producers using packaging must have a system in place for tracing one step back and forth in the supply chain to facilitate control and recall of faulty products.²¹

In Sweden, more than 9/10 Swedes²² will routinely recycle packaging that comes with their shopping. It is currently not legally required to label packaging with recycling instructions, but it is recommended to facilitate recycling for consumers. Instructions for how to write recycling instructions on packaging can be

²¹ livsmedelsverket.se/globalassets/publikationsdatabas/broschyrrer-foldrar/markning-av-forpackade-livsmedel.-livsmedelsverkets-broschyr.pdf, Märkning av färdigförpackade livsmedel"

²² www.ftiab.se/179.html, Insamlat material

accessed through.²³ In Sweden, the non-profit organization *Förpacknings & Tidningsinsamlingen (FTI)* is responsible for the national collection system that allows households to recycle their packaging materials.

The categories where recycling is possible include:

- Coloured glass packaging
- Clear glass packaging
- Metal packaging
- Paper packaging
- Plastic packaging
- Newspapers

FTI has created standardized symbols that are used both for recycling stations and on packaging to make recycling of materials clear. The symbols correspond to the types of packaging that you can recycle, thus any packaging should clearly belong to these categories and be labelled with which. The symbols should be at least 10 mm and text may or may not be included. The symbols can be used with colour or without, but it is important to use the correct colour codes. The symbols can be used with or without text. The symbols are free to download and easily accessible through: <https://www.ftiab.se/3163.html>

It is important to note that processes and regulations for recycling are not the same across the Nordics, and there may be differences in how packaging is recycled. Products intended to be sold in several countries may need to include recycling instructions and symbols in several languages.

Packaging used today:

In retail, chia seeds are mostly sold in plastic and occasionally in paper packaging. Sesame seeds are sold in plastic packaging in larger quantities, and occasionally in glass packaging when sold in smaller quantities, intended to use as a garnish. Paper packaging is recommended as the production results in less emissions and are easy to recycle. Glass packaging require more energy both in production and transport.²⁴ One study conducted by packaging manufacturer Smurfit Kappa found that 3/4 consumers prefer paper packaging over other materials.²⁵

Relevant EU regulation for packaging follows in: EC 178/2002 which states that the foodstuffs producer is responsible for food safety, EC1935/2004 which includes laws and regulations of materials intended to come in contact with foodstuffs and EC 2023/2006 which regulates good manufacturing practice for materials that come into contact with food. There are also additional regulations for specific materials that may be relevant; Plastics (Regulation EU 10/2011), Recycled Plastics Materials (Regulation EC 282/2008), Regenerated Cellulose Film (Directive 2007/42/EC), Active and Intelligent Packaging (Regulation EC 450/2009).²⁶

Relevant Swedish regulation for packaging: SFS 1998:944 §12-14 which states that the sum of certain chemicals (lead, cadmium, mercury and hexavalent chromium) cannot exceed 100µg/g in packaging.²⁷

²³ www.ftiab.se/3163.html, Märk dina förpackningar

²⁴ smasteg.nu/klimatsmartast-foerpackning, Klimatsmartast förpackning

²⁵ packsweden.se/2019/08/20/studie-tre-av-fyra-konsumenter-foredrar-pappersforpackningar/ , Tre av fyra konsumenter föredrar papperförpackningar

²⁶ www.foodpackagingforum.org/food-packaging-health/regulation-on-food-packaging/food-packaging-regulation-in-europe , Food packaging regulation in Europe

²⁷ www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/forordning-1998944-om-forbud-mm-i-vissa-fall_sfs-1998-944, Förordning (1998:944) om förbud m.m. i vissa fall i samband med hantering, införsel och utförsel av kemiska produkter

Picture 1 Overview of food Contact Materials

Overview of Food Contact Materials (FCM) regulations in the EU						
Framework regulation (EC) No 1935/2004		GMP-framework (EC) No 2023/2006			All materials	
Plastic (EC) No 10/2011	Active and intelligent materials (EC) No 450/2009		Recycled Plastic (EC) No 282/2008		EU-harmonized	Material-specific
	Ceramics (EC) No 2005/31		Cellophane (EC) No 2007/42			
Paper & cardboard	Metal	Glass	Rubber	Silicone	National	
Wood	Textile	Coatings	Glue	Inks		

Although the labelling is important in the market to ensure the product quality and safety according to market experts it is assumed that labelling for the segment of oilseeds is not that important as for other segments, for example fresh fruit, particularly bananas.

5. IMPORT REQUIREMENTS AND CERTIFICATIONS

Three Swedish authorities share the responsibility concerning food and agriculture in Sweden: the Swedish Board of Agriculture, the National Food Administration (NFA) and, to a lesser degree, the National Board of Fisheries. The NFA is the central supervisory authority for matters relating to food imports.

Sweden is a member of the European Union (EU) and Swedish national food legislation is, to a large extent, harmonised with the EU's food legislation. Nevertheless, in certain cases, there is room for national interpretation of the EU laws. Therefore, it is important to distinguish within EU legislation whether rules and regulations are mandatory or voluntary. In some instances, rules in Sweden may be stricter than the general EU law stipulates. For example, Sweden applies more restrictive legislation with regard to pesticides and irradiation, under the umbrella of public health precautions.

Fruit and vegetables that are not covered by a specific standard must meet the general standard – or the applicable UNECE standard. Operators are free to choose which standards they would use in their business practice.

Food safety & traceability: All foods including edible fruit, nuts and seeds sold in the European Union must be safe. This applies to imported products as well. Additives must be approved. Harmful contaminants such as pesticide residues, or excessive levels of mycotoxins or preservatives, are banned. It should also be readily obvious from the labelling whether food contains allergens.

Contaminant controls: The European Commission Regulation sets maximum levels for certain contaminants in food products. This regulation is frequently updated and, apart from the limits set for general foodstuffs, a number of specific limits apply to contaminants in particular products.

Although food safety certification is not obligatory under European legislation, it has become standard practice among food importers to demand some type of food safety certification. Many European buyers will ask for certification recognised by the Global Food Safety Initiative (GFSI).

Based on standard EU regulations required safety certificates:

- International ISO 22000;
- IFS International Featured Standards;
- BRC (Global Standard for Food Safety)

ISO 22000:

The ISO 22000 is an international food safety standard developed by the International Organization for Standardization. It sets out requirements for a food safety management system and can be used as a certification if the business follows it correctly.²⁸

IFS International Featured Standards:

The International Featured Standard (IFS) is a Global Food Safety Initiative (GFSI) benchmarked standard for manufacturers, wholesalers, distributors, agents and brokers. IFS addresses food safety and management of product quality in: Food and ingredient manufacturing.²⁹

²⁸ www.iso.org/iso-22000-food-safety-management.html, ISO 22000 Food Safety Management

BRC (British Retail Consortium):

The BRC standard was first developed to help British food retailers meet legal food safety obligations but is today a global standard. The BRC focuses on quality, food safety and legality. The standard specifies the food safety, quality and operational criteria requirements that food manufacturing organisations must fulfill with regard to legal compliance and protection of the consumer. The BRC can be used by any organization regardless of size or geographical location. The BRC has a simple certification process which only requires one

Commercial samples may in some cases be imported without border controls. However, the latter must be registered online at the Swedish Food Agency.

Chia is considered an authorized novel food by the EU and is included in the Union list established by Commission Implementing Regulation (EU) 2017/2470. In January 2020 it was decided that the use of chia seeds is risk-free if they are not sold in any food that requires heat treatment of 120 degrees C or above and are safe without any specific restrictions or precautions regarding their use levels.³⁰

In Sweden, the top three recognized certifications are KRAV, Nyckelhålet and Fairtrade, where the percentage of the population that "is very familiar with it" are 29%, 29% and 20% respectively, and those who have never heard of it under 5% for all. The EU Organic Leaf label is far less recognized with only 10% of the population saying they are "very familiar with it" and 19% having never heard of it. There are many organic products that carry the EU Organic Leaf but not the KRAV logo. On the chia and sesame market, a minority of the organic products also carry the KRAV logo.³¹

EU Organic leaf:

To be able to sell food as organic, producers must follow certain regulations. Organic food cannot be farmed using artificial fertilizer, synthetic pesticides or GMOs. The product must contain at least 95% organic ingredients. To sell food as organic, the importer must be checked and certified by the food control agency (livsmedelskontrollen), and then by a certified inspector for organic food. When the company is approved, it will be given a certificate and certified for organic production. The inspection bodies want to see how good the company is at tracking its supply chain to make sure that all parts of the product are produced organically.³²

Krav:

KRAV is a certification for organic food which tells the customer in the grocery store which product in its category is the most sustainable in its production. KRAV-labelled foods are produced organically without artificial chemical pesticides and without artificial fertilizer. The KRAV Standards comply with EU regulations for organic production and are equal to the EU Organic leaf label, however, the standards are even stricter. KRAV certification is not required to sell organic foods, the EU Organic leaf is enough, but the KRAV certification is better recognized by the Swedish consumer. To become certified, you must comply with their standards and contract a certification body to certify you. Once you become certified, you need to pay an annual license fee which is based on the yearly sales value of your imported products. Here is a list of 7 approved certification bodies that you can contract:³³ <https://www.krav.se/foretag/certifieringsorgan/>.

On the chia seed market, 1 out of 16 products carry the KRAV logo and for sesame seeds, 2 out of 6 carry it.

²⁹ www.nsf.org/testing/food/food-safety-audits-certifications/manufacturing-packaging-distribution-certifications

³⁰ eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020R0024, Commission Implementing Regulation EU 2020/24

³¹ www.livsmedelsverket.se/globalassets/publikationsdatabas/rapporter/2021/l-2021-nr-06-vad-tycker-konsumenterna-om-nyckelhålet.pdf, Vad tycker konsumenterna om Nyckelhålet

³² www.livsmedelsverket.se/produktion-handel-kontroll/produktion-av-livsmedel/kontroll-och-markning-av-ekologisk-mat, Kontroll och märkning av ekologisk mat

³³ www.krav.se/foretag/bli-krav-certifierad/, Bli Krav Certifierad

Fairtrade:

Fairtrade is a certification for producers that produce foods sustainably and treat their farmers and workers fairly. The Fairtrade label tells customers that the brand cares about its workers and is socially responsible. To get certified, an independent auditor from FLOCERT must inspect the producer and importer.³⁴ The Fairtrade certification is most used for products such as coffee, tea, chocolate, sugar and bananas. It is currently not used for chia and sesame seeds.

Nyckelhålet:

Nyckelhålet is a label that tells the consumer what products are healthy in that specific product category and will help the consumer create better food habits. Nyckelhålet can be used by any company free of charge if the product meets the Swedish National Food Agency's criteria for that product category. The criteria for product categories can be found here: <https://www.livsmedelsverket.se/livsmedel-och-innehall/text-pa-forpackning-markning/nyckelhalet>

When it comes to choosing a new supplier, the retailers evaluate products based on many criteria, e.g. is it produced in a good way for the environment, does it hold all the food safety requirements, are the working conditions fair, a competitive price, and mode of transportation that isn't very bad for the environment. They do a lot of investigations when we take in a new supplier of course.³⁵

The requirements depend mostly on what the product is, some products for example aren't labelled with Fairtrade. It is mainly used the industry standard and benchmark what is normal. Also, everything that is sold in the market can't be KRAV-labelled for example, it depends on the function of the product and what is expected to be complemented with it. Research says that customers don't care so much for some segments, but will care a lot for some, e.g. bananas.

³⁴ www.fairtrade.net/act/get-certified, Get certified

³⁵ Interview with Bergendahls

6. TRANSPORT AND DISTRIBUTION CHANNELS

According to Comtrade data the main transport for oilseeds in Bolivia is a road transport, while rest of the world combine different ways of transportation, where Air transportation is least popular.

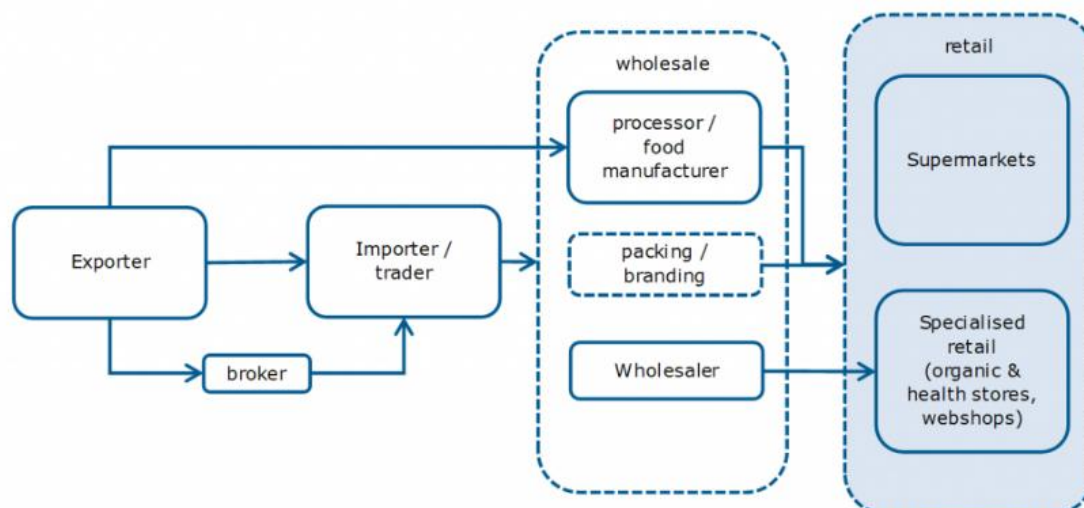
The main grocery retailers in Sweden have built up their own buying and import departments where they can buy products from a central distribution warehouse. They can import products themselves or through independent wholesalers who then act as agents or importers.

For retailers it is almost essential to have an agent/distributor in Sweden, since they can't buy large volumes, it can't be imported big volumes from countries far away, e.g. South America, so there is a need for a distribution channel through Sweden or Europe.

Most of the chia is imported into Europe as well Sweden is by traders of special ingredients. As the quality of seeds is one of the main concerns, importers have an important role in checking the quality and food safety specifications of the product and putting the necessary certifications and labelling for the product. Distribution and wholesale activities are sometimes combined with services to pack chia under a private label.

Some of the chia seeds are traded through brokers. These are often individuals or small companies that link your product to buyers in Europe and take a commission on the sales. Their function is purely commercial, and as a supplier, you will remain responsible for most of the logistical process.³⁶

Picture 2 Market channels for chia seeds (Source: CBI)



The market for chia seeds is relatively small, and so the main chia importers are the most logical channel for most foreign suppliers. Major importers are often committed to one or two large suppliers, so when you are new in the market, you may have to resort to smaller buyers or pursue other options. Brokers can be a solution if you lack the resources and time to do your own networking and marketing in Europe, such as at trade fairs.³⁷

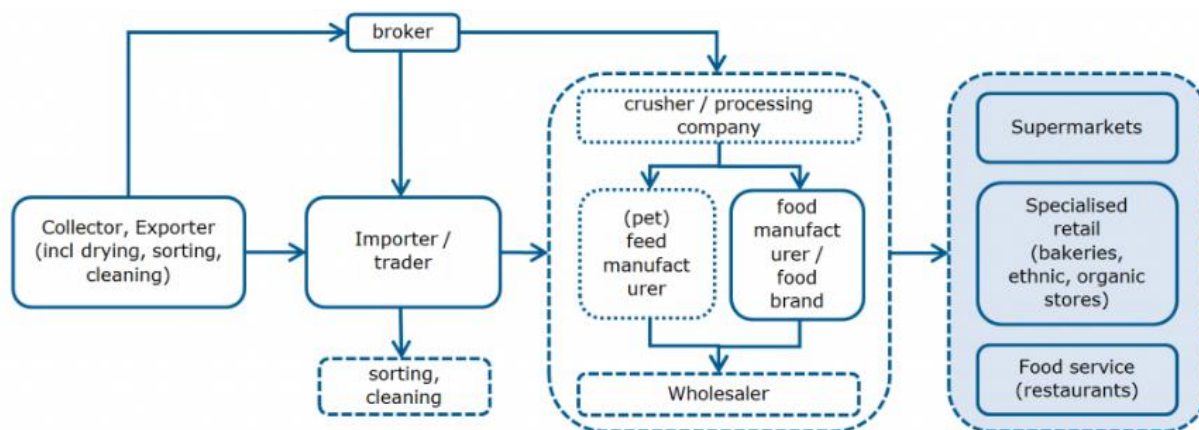
Sesame often enters the market through importers and brokers that handle bakery ingredients, seeds and grains or organic food ingredients. Before sesame reaches the end-consumer, most of the seed has been processed into manufactured food products, giving bakeries and food manufacturers a relevant position in the supply chain.

³⁶ www.cbi.eu/market-information/grains-pulses-oilseeds chia-seeds/market-entry, Chia seeds market entry

³⁷ Ibid.

Generally, sesame seeds are imported into Europe by traders of ingredients. They have an important role in checking the quality and food safety specifications of the product, as well as in the distribution to smaller users and resellers. Importers can be specialised in bakery ingredients or general seeds and grain products, as well as in health or organic ingredients. Some of these companies have additional processing and packing facilities to fulfil the needs of food manufacturers, food service suppliers and food brands. Food manufacturers use sesame seeds as an ingredient to produce all kinds of (food) products. These actors need a reliable supply chain and stability, so they often work with medium- or long-term contracts.³⁸

Picture 3 European market channels for sesame seeds

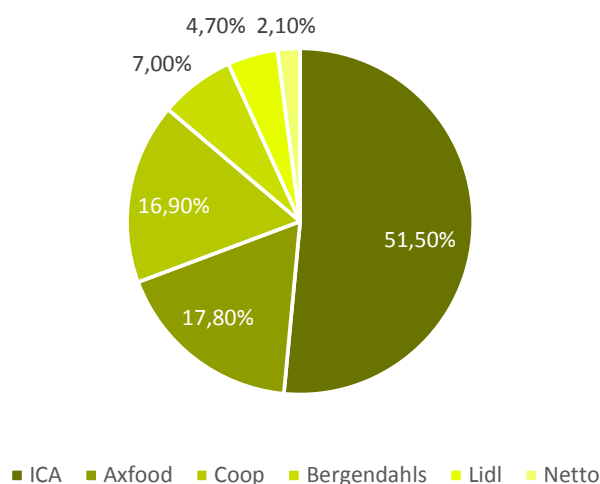


Imports of raw ingredients for food manufacturing is conducted by either importers or agents specialized in selling to this sector, or by the manufacturers themselves.³⁹ Approximately 60% of organic foods in Sweden are sold through the retail channel, 18% through food services, 20% through Systembolaget.⁴⁰

Retail sector:

Competition among grocery retailers is very concentrated and consists of six players; ICA (51.5%), Axfood (17.8%), Coop (16.9%), Bergendahls Group (7%), Lidl (4.70%), and Netto (2.10%).

Food Service sector:



³⁸ www.cbi.eu/market-information/grains-pulses-oilseeds/sesame-seeds/market-entry, Sesame seeds market entry

³⁹ www.flandersinvestmentandtrade.com/export/sites/trade/files/market_studies/2018-Swedish%20food%20market_0.pdf, The Swedish Food Market

⁴⁰ norden.diva-portal.org/smash/get/diva2:1386343/FULLTEXT01.pdf, Nordic Council of Ministers: Market Analysis of Organic Foods in the Nordic and Baltic Countries p.63

The food service sector consists of wholesalers that supply HoReCa and public institutions, of which two dominate the market; Martin & Servera (Axfood) and Menigo, with other players Svensk Cater, Dafgårds and Axfood Snabbgross making up a 10% market share together.⁴¹ There are also many smaller importing wholesalers who specialize in certain food items. These specialized wholesalers may distribute their goods via large grocery retailers, food service wholesalers, or directly to independent stores.⁴²

Channels of procurement:

The big four retailers develop their own private labels and use procurement to find suppliers on a 1-year basis through their own trading companies. The sourcing is done for all of the retailers' stores, e.g., Coop's trading company will procure private label products for its stores in Sweden, Norway, Denmark and Finland.

In order for the food product to reach retailers/supermarkets shelf it needs to be considered not only global/Swedish regulations, but also retailers own requirements to work with them. Main market players have set their own criteria.

ICA:

To supply food products to ICA, the supplier must follow one of GFSI's (Global Food Safety Initiative) approved standards for production of food. ICA also approves ISO 22000 and IP Livsmedelsförädling (Swedish foodstuffs certifier). The supplier must also meet ICA's own high standards on animal wellbeing, the environment, and social responsibility.^{43,44}

Coop:

All of Coop's suppliers for their private-label products are certified by a third party. In addition to this, Coop does its own analysis every year by looking at risks in supply chains, which they will then use to do deeper examinations and propose aspects that could be improved to the supplier.⁴⁵

Axfood:

Axfood's suppliers must follow Axfood's own Code of Conduct which focus on the sources and traceability of food, fair working conditions, animal care, and limiting the use of harmful pesticides.⁴⁶

Most large and well-known importers have long-term partnerships with suppliers across the world. The challenge for new suppliers is to build lasting relationships with importers. Gaining the latter's attention may require lowering prices, but also added value and quality in the form of "sustainable", "natural", "organic" or "fair trade" products. Transparency of the supply chain & guaranteed food safety is essential.

Agents involved in the nut trade usually act as independent negotiators for their clients and/or as intermediaries between buyers and sellers. Typically, they charge commissions of 2-4% for intermediary services. Another activity performed by these parties is the supply of private labels for retail chains in Europe.

Secondary processing involves roasting, salting, coating, and mixing with other nuts, where appropriate, followed by the conditioning of the product, packaging, and distribution to the main supermarkets, markets,

⁴¹ www.svt.se/nyheter/lokalt/norrboten/matkrig-for-miljarder, Matkrig för miljarder

⁴² www.flandersinvestmentandtrade.com/export/sites/trade/files/market_studies/2018-Swedish%20food%20market_0.pdf, Swedish Food Market

⁴³ www.ica.se/hallbarhet/kvalitet/sakra-leverantorer/, Säkra leverantörer

⁴⁴ www.sigill.se/omraden-och-regler/livsmedel/

⁴⁵ www.coop.se/vart-ansvar/hallbarhetsarbete/hallbara-leverantorer/, Hållbara leverantörer

⁴⁶ www.axfood.com/contact/suppliers/axfoods-requirements-for-its-suppliers/, Axfoods requirements for its suppliers

and specialty shops. Many packing companies have roasting facilities in their factories, enabling them to develop different products which they can sell directly to consumer segments.

Retailers rarely buy directly from developing country exporters. However, certain developing country exporters (processors) package their products directly for private label or even their own label brands. Approximately 80% of food in Sweden is sold via the food retail sector, led by ICA Sweden, AXFood, COOP Sweden, Lidl, and Citygross.

Online sales skyrocketed among retailers during the COVID-19 pandemic in 2020.

The **foodservice channel** (hotels, restaurants, and catering establishments) is usually supplied by specialized importers (wholesalers). The foodservice segment often requires specific packaging in previously determined weights, which is different from the requirements for bulk or retail packaging.

7. SUSTAINABILITY ASPECTS (ECONOMIC, SOCIAL, ENVIRONMENTAL)

Reducing environmental impact, improving packaging, taking care of waste and developing it's physical and mental impact⁴⁷ are the main sustainability topics in the food processing industry in Sweden. It needs to be taken into account that the sustainability is not only in the packaging and product as such, in order to cooperate with Sweden and importers working with Sweden the several things need to be kept in mind and followed. As for example the importers might refuse to cooperate with the country that has a reputation of child labour. You have to think about all the parts, it doesn't help to just do one thing right, you have to do all things right.

Another example of Sweden reaction to sustainability issues, in October 2020, it was discovered that some batches of sesame seeds imported from India contained the pesticide ethylene oxide right away all these products were recalled from the market. As one of the interviewees mention they strictly follow whether the product is grown in a good way and the right quality despite the origin of the product. Companies are more and more expected to act in social issues, they are expected to do good.

The 8th UN Sustainable Development Goal "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all".⁴⁸

At the moment the highest priority is to control the CO2 emissions, and food equals one third of our climate impact. To this task (mostly) younger generations adds questions about social justice.

The Swedish Trade Federation (Svensk Handel) has identified a few aspects regarding the environment that any company trading with Sweden should be aware of and keep in mind:⁴⁹

- Sweden strives to foster a sustainable society that uses the Earth's resources sustainably and are recycled without hurting people or the environment.
- The Swedish Environmental Code (Miljöbalken) which contains regulations that all business owners must follow
- The Precautionary Principle (Försiktighetsprincipen) which states that you are obliged to take precautionary measures as soon as your activities risk causing an inconvenience to people's health or the environment.
- The Principle of Substitution (substitutionsprincipen) states that any chemical products used or used to treat the product must be substituted for a less harmful substitute if available.

"The Polluter pays" is a principle that states that the one responsible for harming the environment must bear the socio-economic costs that arise. The principle also means that businesses are responsible for making sure that the products can be responsibly collected or recycled, e.g., by making sure that packaging can be recycled through FTI (Sweden's packaging recycling organization) (ftiab.se) and including clear instructions for the consumer. Corporate Social Responsibility Companies have different requirements as regards social responsibility. Some companies will require adherence to their code of conduct or to common standards such as the Supplier Ethical Data Exchange (SEDEX), Ethical Trading Initiative (ETI) or amfori Business Social Compliance Initiative code of conduct (BSCI)

⁴⁷ https://www.foodfriends.se/wp-content/uploads/2019/09/Trendspaning-2020_web.pdf

⁴⁸ <https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>

⁴⁹ <https://www.svenskhandel.se/globalassets/gammalt-innehall/sveriges-importorer/importhandboken.pdf>, "Importhandboken" p.22, accessed June 14th 2021

8. CONCLUSIONS

Scandinavia is really concerned of the environmental and sustainability issues and as well as for the mental health of the planet and therefore they seriously consider all the aspects and choose wisely to whom with cooperate. Recent trends show that 20% of Swedish shoppers will chose local product than organic, though in terms of products that are not locally grown they are open for options.

Labling for cha and sesame seeds is not as important as for other segments for example banana.

As the rest of Europe also Sweden is experiencing a raise in healthy life style. Chia seeds are the kind of product that people talk about a lot and has been trendy, but not in big volumes.

Reducing environmental impact, improving packaging, taking care of waste and developing it's physical and mental impact are the main sustainability topics in the food processing industry in Sweden.

In order to the food product to reach retailers/supermarkets shelf it needs to be considered not only global/Swedish regulations, but also retailers own requirements to work with them. Main market players have sent their own criteria.

I think that anyone who wants to export seeds to Sweden should go via these companies that clean and package the seeds in Europe instead.