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Market opportunities and entry strategies for palm oil products in the United States

March 2022



International Trade Centre

About the paper

This study was undertaken by the International Trade Centre within the framework of implementing the Sierra Leone West Africa Competitiveness Program, which is financed by the European Union under the 11th European Development Fund and implemented by the United Nations Industrial Development Organization in partnership with the International Trade Center.

The International Trade Centre (ITC), in partnership with the United Nations Industrial Organization (UNIDO), is implementing a technical assistance project in Sierra Leone under the West African Competitiveness Program (WACOMP). The project aims at increasing Sierra Leone's competitiveness through enhanced productivity and trade compliance in the cocoa, cassava, and oil palm value chains with a view to boosting the country's integration into regional and global value chains.

The project has specific objectives of improving the performance, growth, and contribution to industry, regional trade and exports of the three value chains and improving the business climate at the national level.

Identification of international market opportunities for Sierra Leone's oil palm products and developing a roadmap for product and market development to facilitate access to global markets have been an important objective of interventions under the project. This study is conducted to respond to these needs by identifying and analyzing opportunities in the United States of America (USA) market and proposing useful market entry strategies into the USA for Sierra Leonean producers and exporters.

For any questions regarding the contents of this report, please send email to befecadu@intracen.org.

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Acronyms

AGOA	African Growth and Opportunity Act (US Policy)
B2B	Business to Business
BRC	British Retail Consortium – standards agency
CAGR	Compound Annual Growth Rate
CPO	Crude palm oil (HS code 151110)
CPKO	Crude palm kernel oil
CSPO	Certified Sustainable Palm Oil
EORI	Economic Operators Registration and Identification
EPA	Economic Partnership Agreement
ESG	Environmental, Social and Governance (ESG)
EU	European Union
FFA	Free Fatty Acid
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GSP	Generalized System of Preferences
HACCP	Hazard Analysis Critical Control Points
HS	Harmonize System – Customs standards
IFS	International Featured Standards
IFBA	International Food & Beverage Alliance
ISO	International Standards Organization
ITC	International Trade Center
MS	Market share
MT	Metric Ton
NDPE	No-deforestation, No-peat and No-exploitation (NDPE)
NGO	Non-Governmental Organization
NPD	New Product Development
POF	Palm oil and its fractions (HS 151190)
RFA	Rain Forest Alliance
RSPO	Roundtable on Sustainable Palm Oil
SME	Small and Medium-sized Enterprise
UN	United Nations
UNIDO	United Nations Industrial Development Organization
US	United States
USA	United States of America
USD	United States Dollars
USP	Unique Selling Propositions
WACOMP	West Africa Competitiveness Project

Executive summary

According to a recent industry report by FNF Research (fnfresearch.com) “Global Sustainable Palm Oil market anticipated to reach around USD 30,100 Million by 2026. The anticipated CAGR for the market is around 9% from 2020 to 2026.” The question that this report address is can Sierra Leone benefit from this global increase in demand and if it can, is the USA a good target market to achieve that growth?

Most US consumers are unfamiliar with palm oil beyond the negative image that it receives from environmental protection organizations like Rain Forest Alliance (RFA), Rainforest Action Network (RAN), Nature Conservancy, Pro-Fauna.org and multiple other global and regional NGO’s that promote their efforts heavily to consumers as they work to protect the rainforest. One does not have to search far to find negative press on palm oil. The 2021 book by food journalist Jocelyn Zukerman titled “Palm Planet – how palm oil ended up in everything and endangered the world” summarizes many of the negative elements of palm oil for the environment.

Palm oil is not something that typical US consumer goes to the store to purchase as a stand-a-lone product. However, there are multiple reports being circulated on the web and in print that state that palm oil is in 50% of “all” goods on the grocery shelf (as also indicated in the above mentioned book from Zukerman). This statement is very popular with organizations that oppose the use of palm oil for environmental reasons. It is often utilized as a campaign pitch donate to their cause and to influence consumers to decrease their consumption of palm oil in an effort to save the rainforests.

Despite looking extensively for verification of this statement in published reports, the authors of this document have not seen any statistical documentation to corroborate this statement. A survey of local retailers in Washington state does not support this claim.

On the flip side of this argument, the statement can be used to explain the commercial success of palm oil, proving to be an economical viable product due to its versatility as an ingredient in cosmetics and food products. Palm oil is an inexpensive oil with an exceptional ability to substitute higher cost oils while not changing the quality, flavor, or texture of the product. It can be used to replace more expensive chemicals, textures, and flavor profiles.

The efficiency and yield of palm oil allows for ample supply at a low direct and marginal production cost. This fact is utilized by food and cosmetic formulator to integrate palm oil into their product, reducing the cost over more expensive oils without compromising quality.

Economies of scale in the production, processing and distribution of palm oil provide for a high cost of entry into a market which has oligopolistic tendencies with few processing players of significance. The fact that palm oil is a commodity, which is traded on a standard which is not exceedingly unique from one supply source to another, provides the industry with few niche market opportunities. Buyers, in the US, are typically industrial buyers (food and cosmetic processors and not end consumers), and given multiple options to purchase (origins), the buyer will purchase at the lowest cost available on the market as long as the source is reliable and competent to supply the product per the contract.

In the US, the bulk of all palm oil is imported by a limited number of companies with Cargill, ADM and Bunge being the most visible due to their size. While Cargill handles 195 million tons of palm oil cargo annually and has corporate sales exceeding \$114.6 billion, most consumers have never heard of Cargill, Bunge, or ADM, though it would be nearly impossible to go through a day without consuming multiple products that have passed through the Cargill, Bunge, and/or the ADM supply chain. Among these items, palm oil is one item that consumers consume without knowing the origin or history of the ingredient. Between these three colossal companies, they demand a dominating market share of the palm oil imports into the US.

While these companies dominate the US industry, it is not appropriate to eliminate any chance of opportunity for Sierra Leone palm oil from achieving a niche in the US market. The negative press that dominating companies like Cargill provides for an opportunity for product to enter the market which has a

social and environmental appeal. A palm oil that is produced with environmental and social standards achieved and documented could attain a niche market for food or cosmetic products.

This report provides some recommendations to Sierra Leonean exporters aiming to enter the US palm oil market and does not address issues related to domestic Sierra Leone demand, environmental or social requirements outside of the US market.

However, given that Sierra Leone is a net importer of palm oil, the report at hand recognizes from a national strategic perspective the importance for Sierra Leone to increase its focus should be on import substitution. It is difficult to find motivation to increase exports when the country is a net importer of palm oil. Likewise, unless specific market demand, due to product characteristics allows palm oil producers to sell their product internationally at a premium over the domestic market there is no economic incentive or benefits to export.

This lack of economic buyer incentive to purchase Sierra Leone product is complicated by environmental and social standards certification that is not the case for domestic markets.

According to US published reports from the US Census Bureau the Sierra Leone diaspora in the USA was around 35,000 with no concentrated geographic center. This is not a demographically economically attractive market for US based companies to build a business upon. With 35,000, or even two times that amount if one wants to believe that number is incorrect, spread across the USA would provide a difficult market to justify the marketing expenses. That would also require the marketer to assume that the Sierra Leone diaspora have a proclivity, purchasing power and strong demand for palm oil to justify demanding Sierra Leone product. Are the 35,000 or so Sierra Leone buyers motivated to pay a premium for commodity from Sierra Leone? The buyer would also be required to look beyond the fact that there is limited supply that complies with US regulations for sanitation and buyer requirements for environmental protection. Importers are liable for the producer meeting or exceeding US sanitation standards. This will discourage mainstream buyers from taking a risk on a product that does not have HACCP and other standards. They must justify why they would buy product without these standards when they can buy the same product at an equal or better price with the standards.

This report takes a look at the US market. It Therefore, the recommendations of this report will need to be reconciled with data from in-country research and strategy development efforts.

Recommendations for palm oil and palm oil related products

There is a market for Sierra Leone palm oil in the USA as outlined with specific products, buyers, and exporters in Appendix 25 – Buyers of Nigerian exports of 151110 of this report. A review of these facts clearly identifies existing trade and can be utilized as a template for expansion.

For others to achieve success in the USA market we recommend the following:

- A. Review the details in Appendix 25 to identify current trade as documented by bill of lading and import data. These are the importers, exporters and products currently entering the USA market from Sierra Leone.
- B. Secure appropriate standards prior to pursuing the market. Appropriate standards include HACCP and RSPO, and if possible other standards which promote the sales including “organic” certification and/or FairTrade® should be achieved before investing in USA market development.
- C. Identify a niche within the USA market to pursue. Identify what makes Sierra Leone product different as it will not compete without a hook, something that motivates the buyer to buy it over product that meets the standards above and has a commodity price based upon economies of scale in production, processing, and shipping.
- D. Develop a marketing strategy that builds upon scope of producer targeting the social conscience US buyer – Fairtrade, Organic, Non-GMO.

- E. Find a buyer or broker who is interested in supporting your efforts and is willing and able to invest their time to develop the niche that you have identified as having the greatest opportunity for your specific product. This broker will most likely require a retainer of \$3,000 - \$5,000 USD per month for six to twelve months while they develop the opportunities. At the end of this time period, they would either continue to work with the product on a commission basis, require continued retainer or opt to move on to other products.

PART I: SIERRA LEONE PALM OIL - MARKET SITUATION

2.1. Sierra Leone Palm oil value chain

This report does not address factors inside of Sierra Leone for the production and marketing of palm oil. However, in order to understand the opportunities and develop a SWOT (Strengths, Weaknesses, Opportunity and Threat) analysis, it is critical that some factors should be understood and explored. This report explores these factors in this section of the report.

With a relatively small allocation of land to palm trees (32,000 ha vs. Nigeria's 2.5 million, Guinea's 2 million, Togo's 600 thousand and even Senegal's 50,000 ha) the domestic demand exceeds available supply, and a trade deficit exists.

Sierra Leoneans, with each person consuming an average of one kilo of unprocessed palm oil per month, keeps local producers Goldtree¹, NedOil² and Socfin³ busy meeting local demand.

In 2016, TomCo Energy PLC published a report titled "Palm Oil Project in Sierra Leone" where they performed a profit and loss forecast, which illustrated that given their chosen variables that a palm oil processor with a \$900,000 investment over three years, handling around 8000 Fresh Fruit Bunches (FFB) would be profitable in year two." If accurate these calculations provide a positive light on investment. It should also be assessed whether market conditions, including the ban on the use in Palm Oil as a biofuel, would impact this calculation.

A report (CIRAD, 2019) indicated that more than 50% of the local production is utilized in soap manufacturing. With the palm oil industry contributing a direct value added (VA) to the Sierra Leone economy of \$354 million USD in 2017, an estimated 76% goes to soap production and 24% to oil. Discussions with Sierra Leonean sector experts indicated that the red palm oil is preferred by local consumers. A review of products in the US market for cosmetics also finds a preference for red palm oil (see **Appendix 11 – Amazon data top products**)

Sierra Leone has palm oil fractions (POF) with total export sales just over \$2.533 million USD. It is also important to note the Sierra Leone has a trade deficit of nearly \$4 million USD. The initial impression of this fact would be that Sierra Leone should focus on import substitution versus exports, unless they can get a premium for their product on the international market that they cannot get in the domestic market. If that is the case, then they should export their premium oil and import less expensive oil for domestic needs. This is a question which requires further review and analysis within country review, which is not covered by this assignment, but is covered in another report from the same project. From review of export data and opportunities, we could not identify a competitive advantage on Sierra Leone palm oil that would make this the case.

In the 2013 report – titled Palm Oil in African – Past, Present and Future -- lists the palm oil actors in Sierra Leone as Sierra Leone Agriculture (United Kingdom), Quifel group (Portugal), Gold Tree (United Kingdom), Bolloré Group (France), Agriterra Group (UK), SIVA (India), Sepahan Afrique (Iran), and FELDA (Malaysia). A review of these companies' domestic Sierra Leone activities would help provide details for a SWOT analysis which takes into consideration the domestic activities; however, it is not included in this report.

Perhaps the exports or export potential is in what is referred to as Artisanal oil extracted from wild dura palm trees with this oil referred to by locals as "red oil" which is rich in carotenoids. Perhaps this less abundant product has a premium and can be exported at a higher level than selling on the domestic market.

¹ See <https://www.goldtreeholdings.com>

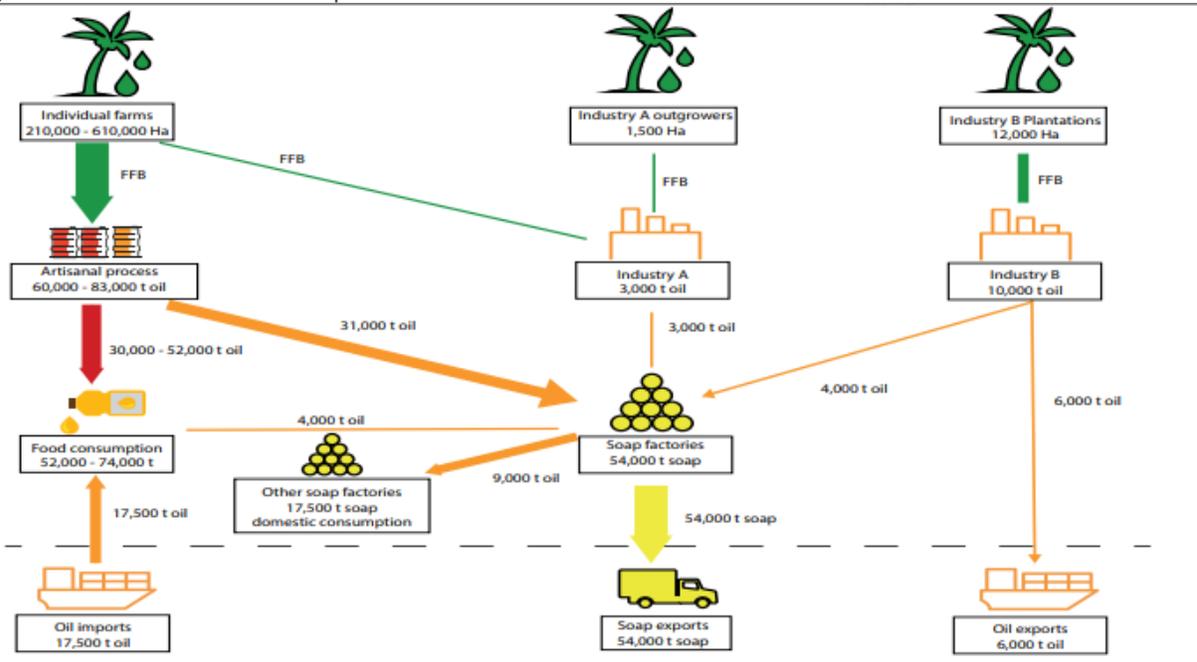
² NedOil Limited is a Sierra Leone based entity, established in 2007 to build and operate a new oil palm and soap factory in Yele. The objectives of the project are to support health projects and other initiatives of Lion Heart Foundation and improve the living standards of 1,500 smallholder farmers. The concept is aimed at integrating business and development that will not only bring direct benefit to farmers, but also enhance their food productions.

³ See <https://www.socfin.com/en/locations/sierra-leone>

This red oil is referred to in numerous reports as a preferential oil for local cooking. If this is the case, then the domestic market may pay a premium for this product.

According to the report “Palm oil Value Chain Analysis in Sierra Leone” (CIRAD, 2019), the Sierra Leone supply chain for palm oil is illustrated as follows.

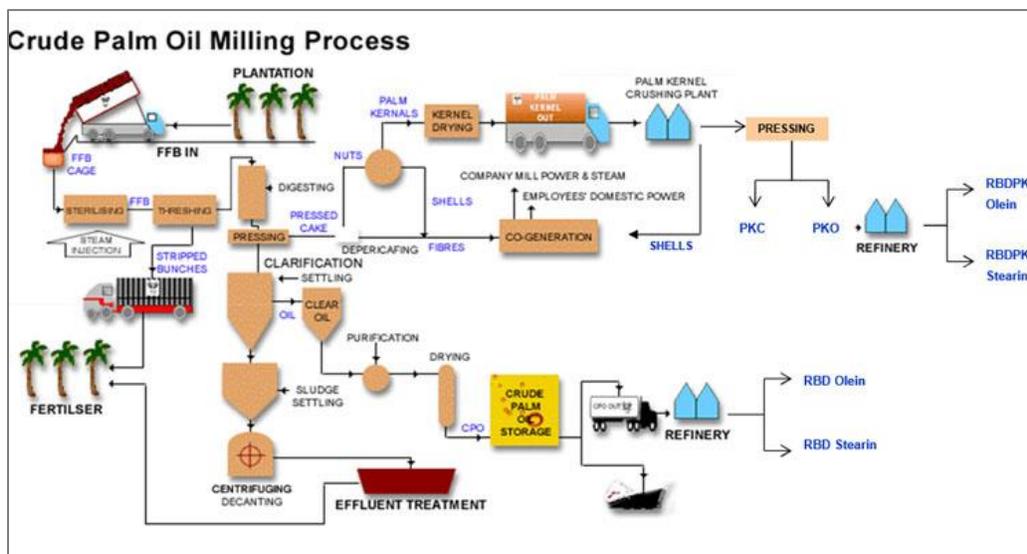
Figure 1 - The main flow of the palm oil value chain in Sierra Leone



Source: CIRAD

HDC, a leading manufacturer of edible oil mechanical equipment illustrates the palm oil milling process in the following way⁴.

Figure 2 - Crude Palm Oil Milling Process

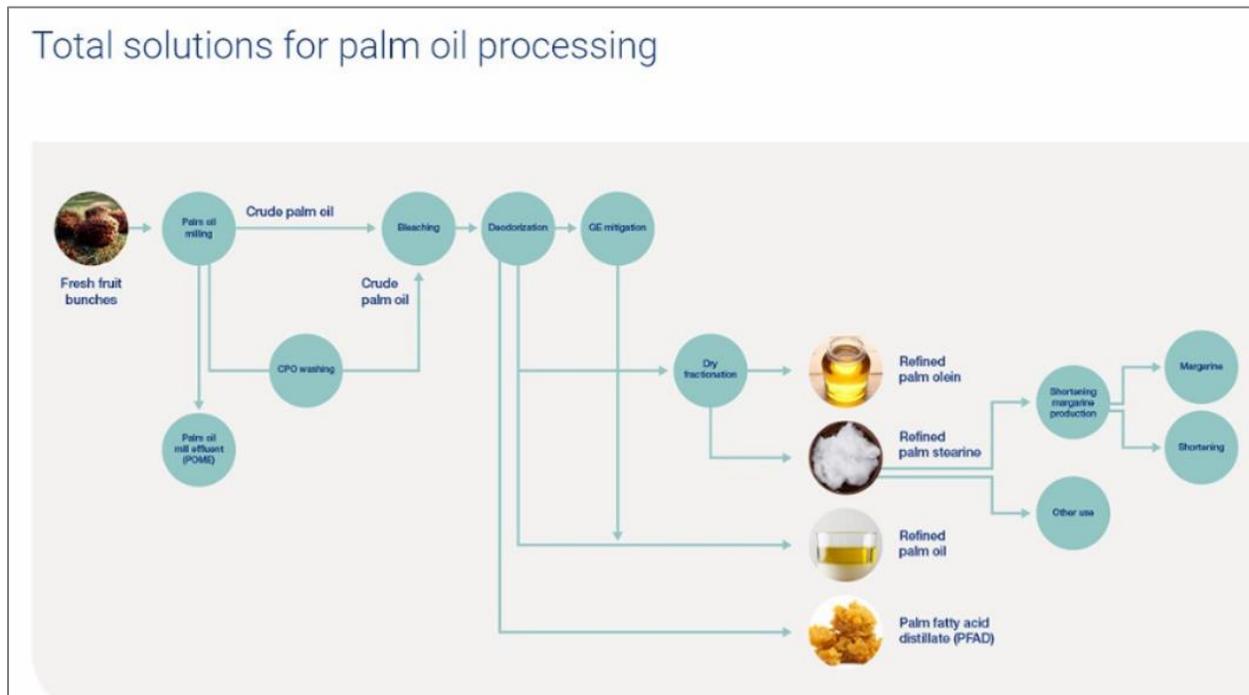


Source: Crude Palm Oil Production Process, HDC (Chinese equipment producer)

⁴ Available at: <https://www.palmoilmills.org/products/crude-palm-oil-mill/crude-palm-oil-production-process.html>

By slight contrast, the process as outlined by Cargill in their 2017 annual palm oil report is as follows reflecting their perspective of the flow⁵.

Figure 3 - Total solutions for palm oil processing



Source: Palm oil processing, Alfa Laval

2.2. Sierra Leone palm oil exports and export potential in the US market

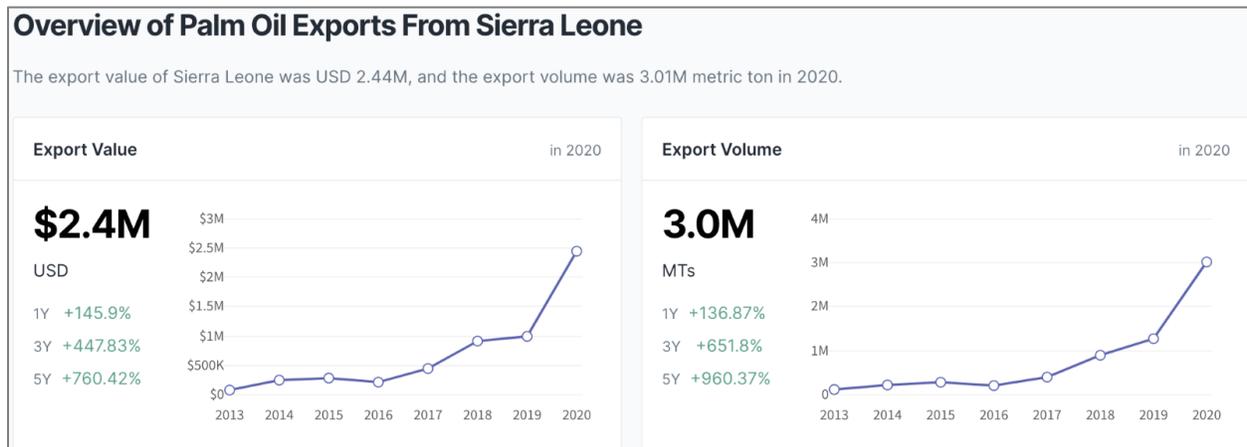
Based upon historic volumes, Sierra Leone is not a globally significant player in the palm oil international supply chain. This is not an assessment of their potential to increase in global significance, but historically they are not a major player in the supply chain. With Sierra Leone imports exceeding exports, it appears that local demand could easily consume additional production of palm oil inside of Sierra Leone. Demand for palm oil in Africa exceeds production in Africa, therefore, the African market offers significant potential for increased sales.

Historically, Sierra Leone has four palm oil export markets – with regional buyer Senegal providing the most consistent market. This study does not address the factors that contribute to this regional demand; however, it is important to note the close proximity of a strong market. The UK, US and Australia round out the top four export markets for Sierra Leone palm oil. These markets are geographically distant from Sierra Leone and therefore the buyer’s motivation is not tied exclusively to price but has many other factors contributing to the demand and consumption.

In 2020 Sierra Leone exported about 3 million metric tons for an export value of \$2.4 million USD.

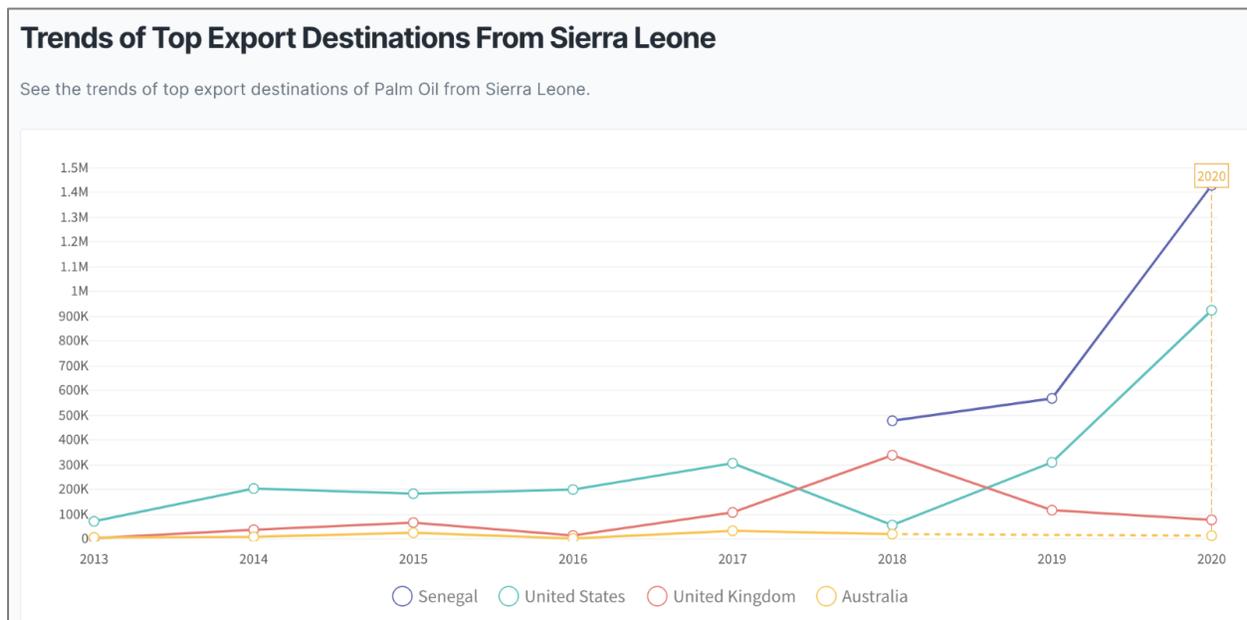
⁵ Available at: <https://www.alfalaval.com/industries/food-dairy-beverage/food-processing/fat-and-oil-processing/palm-oil-processing/>

Figure 4 - Palm oil exports from Sierra Leone in 2020



Source: TRIDGE . Available at: <https://www.tridge.com/intelligences/palm-oil/SL/export>

Figure 5 - Top export destinations from Sierra Leone under HS 151190, 2013-2020 (in USD)

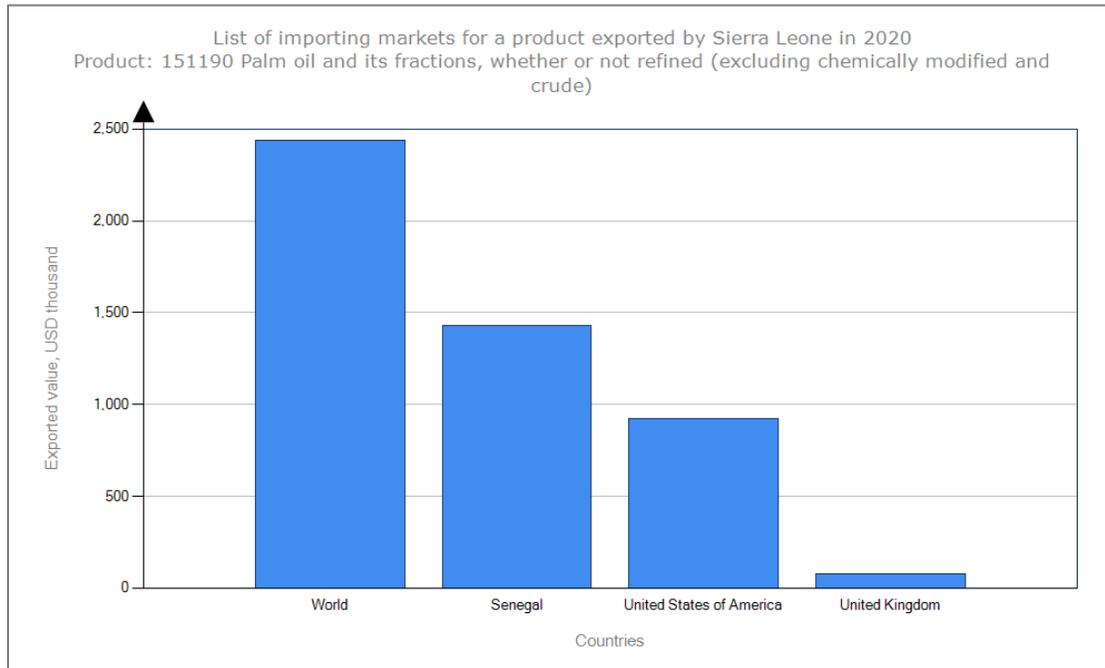


Source: TRIDGE. Available at: <https://www.tridge.com/intelligences/palm-oil/SL/export>

Sierra Leone exports have been increasing significantly since 2013 as illustrated in the above graphics.

Despite small total volumes, the US is a significant market for POF as their number 2 (37.9% market share) destination for exports behind regional neighbor of Senegal (58.5% MS) and significantly ahead of the UK (3.2% MS).

Figure 6 – Sierra Leone’s exporting markets under HS 151190, 2020 (in USD thousand)

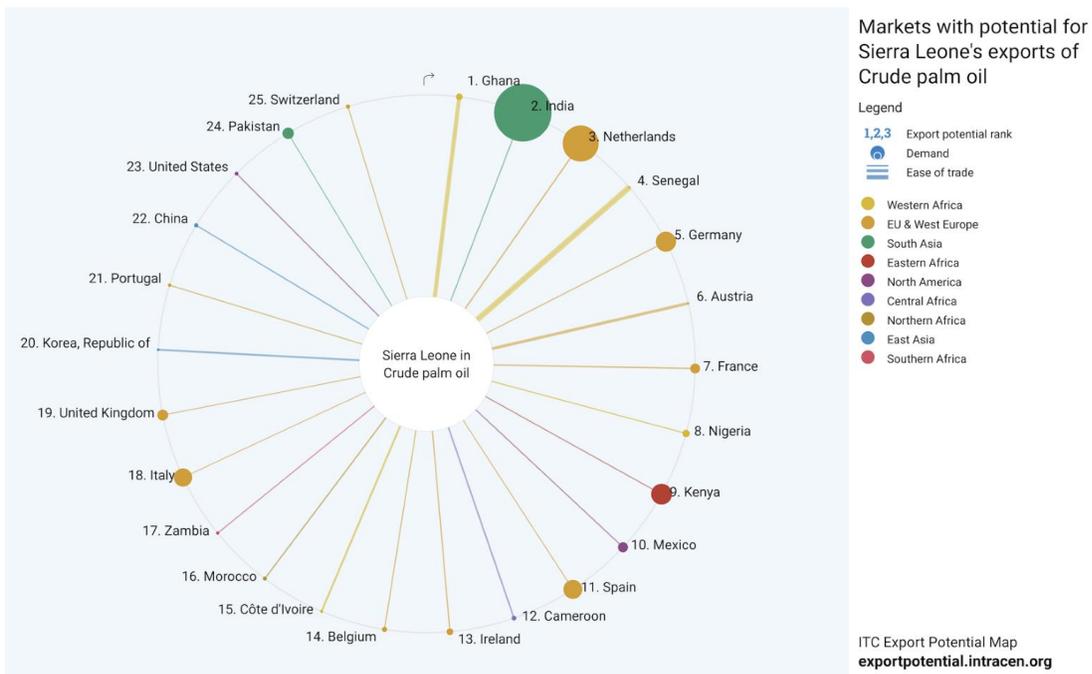


Source: ITC Trade Map. Available at:

https://www.trademap.org/Country_SelProductCountry_Graph.aspx?nvpm=1%7c694%7c%7c%7c%7c151190%7c%7c%7c6%7c1%7c2%7c2%7c1%7c1%7c2%7c1%7c1%7c2

ITC Export Potential Map data places the US as the #23 potential market for Sierra Leone crude palm oil (CPO).

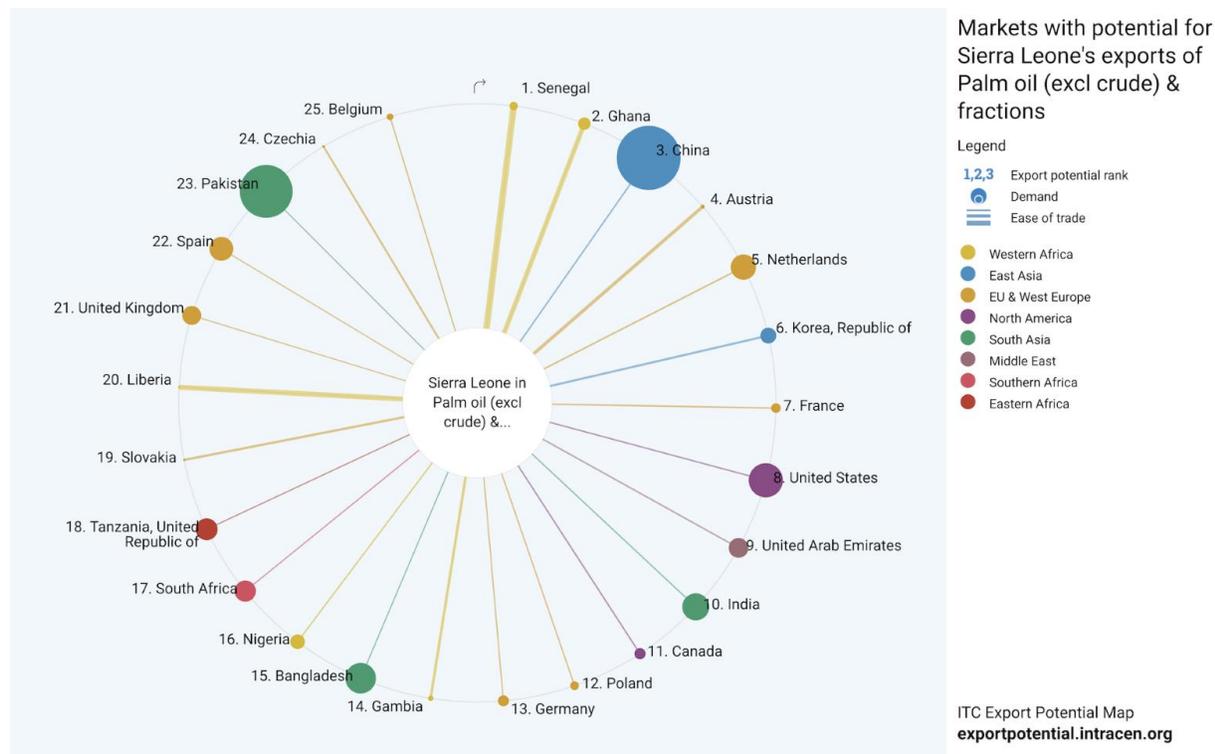
Figure 7 - Potential markets for Sierra Leone's exports under HS 151110



Source: ITC Export Potential Map

The US appears instead as the #8 potential market for processed palm oil and its fractions. Notwithstanding the different position covered by the US as a partner in relation to the two products in terms of overall export potential (which is the sum of realized and un-realized trade), there seems to be a very small untapped export potential for crude palm oil (HS 151110) while none for palm oil and its fractions (HS 151190) is no untapped export potential for this product in the US market.

Figure 8 - Potential markets for Sierra Leone's exports under HS 151190



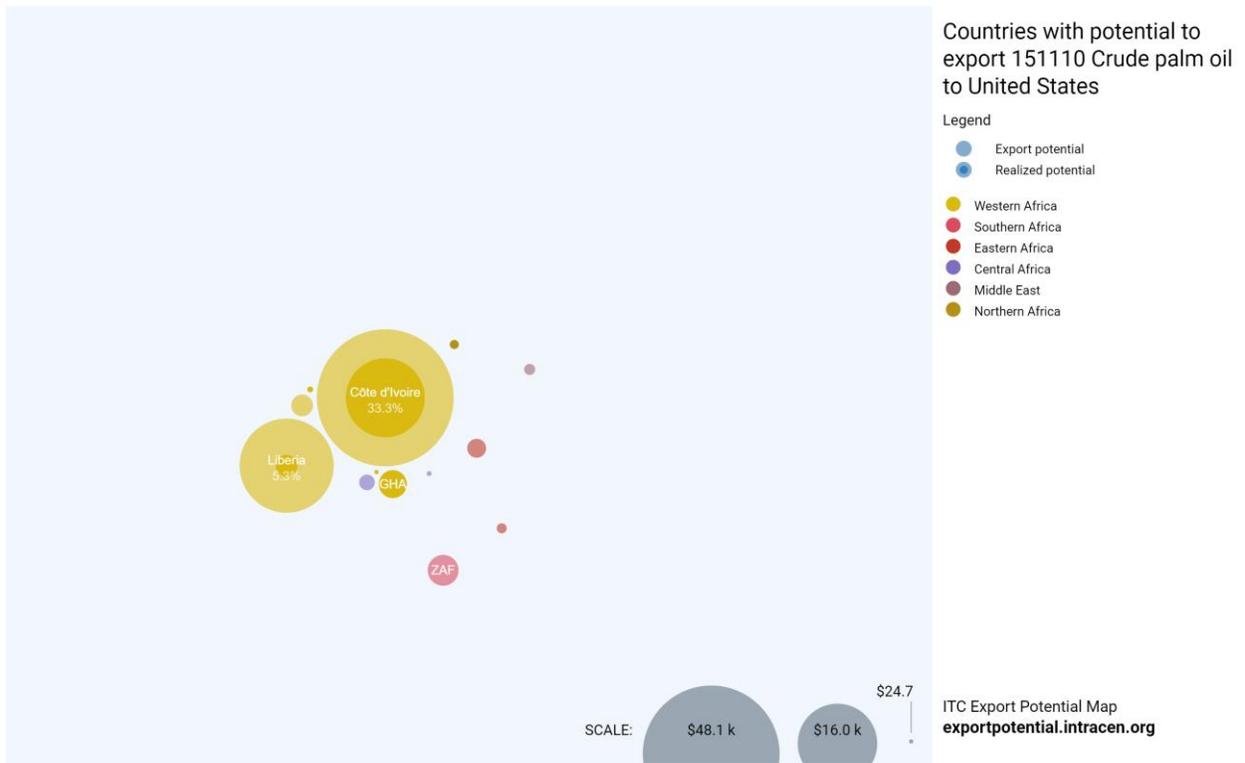
Source: ITC Export Potential Map

However, the same data base shows that other Sierra Leone neighbors like Cote d'Ivoire, Senegal and to a certain extent Liberia seems to have much higher untapped potential into the US market. This indicates that there are chances for West African countries at large to increase their exports of palm oil to the US.

The ITC Export Potential Methodology follows directly from the combination of supply, demand and easiness to trade factors.⁶ The impact of non tariff measures (e.g. sanitary and phytosanitary standards, technical barriers to trade, etc) is not taken into consideration. Other elements that are not part of this methodology include also logistics and ability to supply crude oil, versus the efficiencies of global processors like Cargill Wilmar, ADM, and IOI. The data may also reflect the potential for processed palm oil to fit into niche markets where buyers require social and environmental standards and certifications that appeal to their consumers.

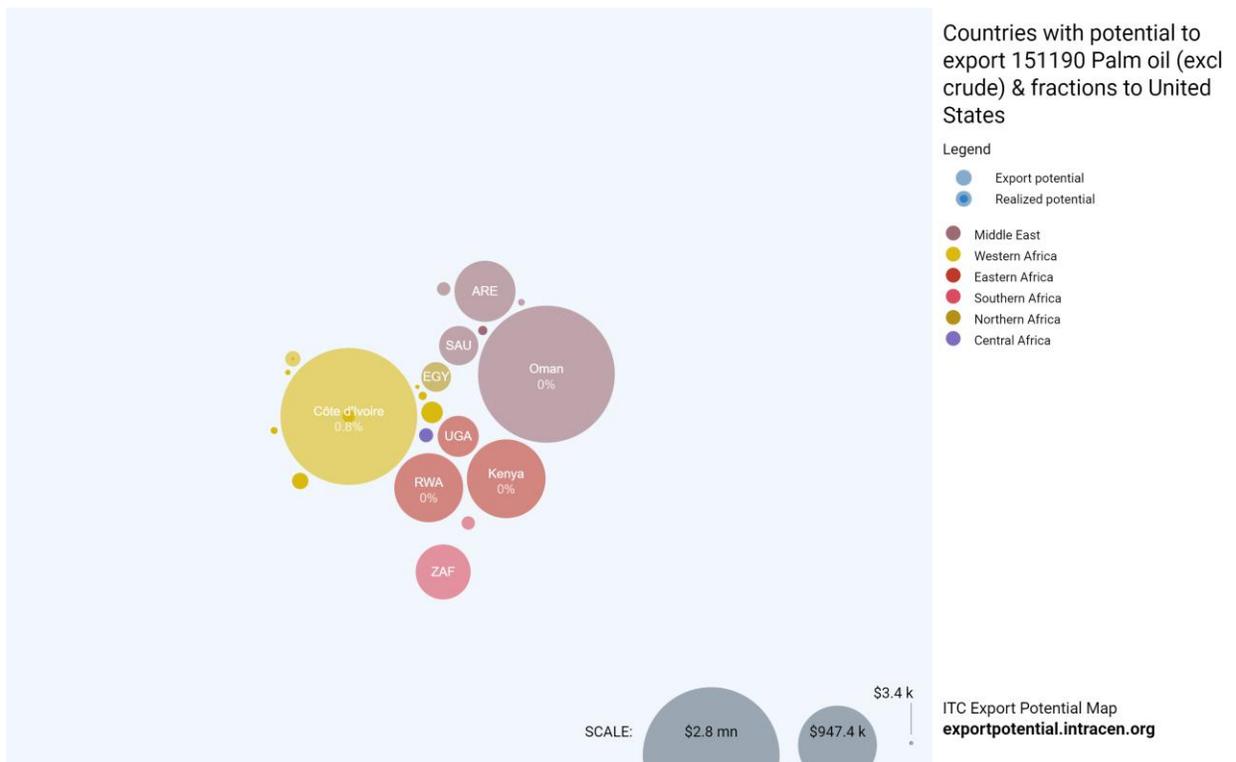
Figure 9 – African countries with potential to export Crude palm oil (HS 151110) to the US

⁶ See https://umbraco.exportpotential.intracen.org/media/1089/epa-methodology_141216.pdf



Source: ITC Export Potential Map

Figure 10 – African countries with potential to export Crude palm oil (HS 151190) to the US



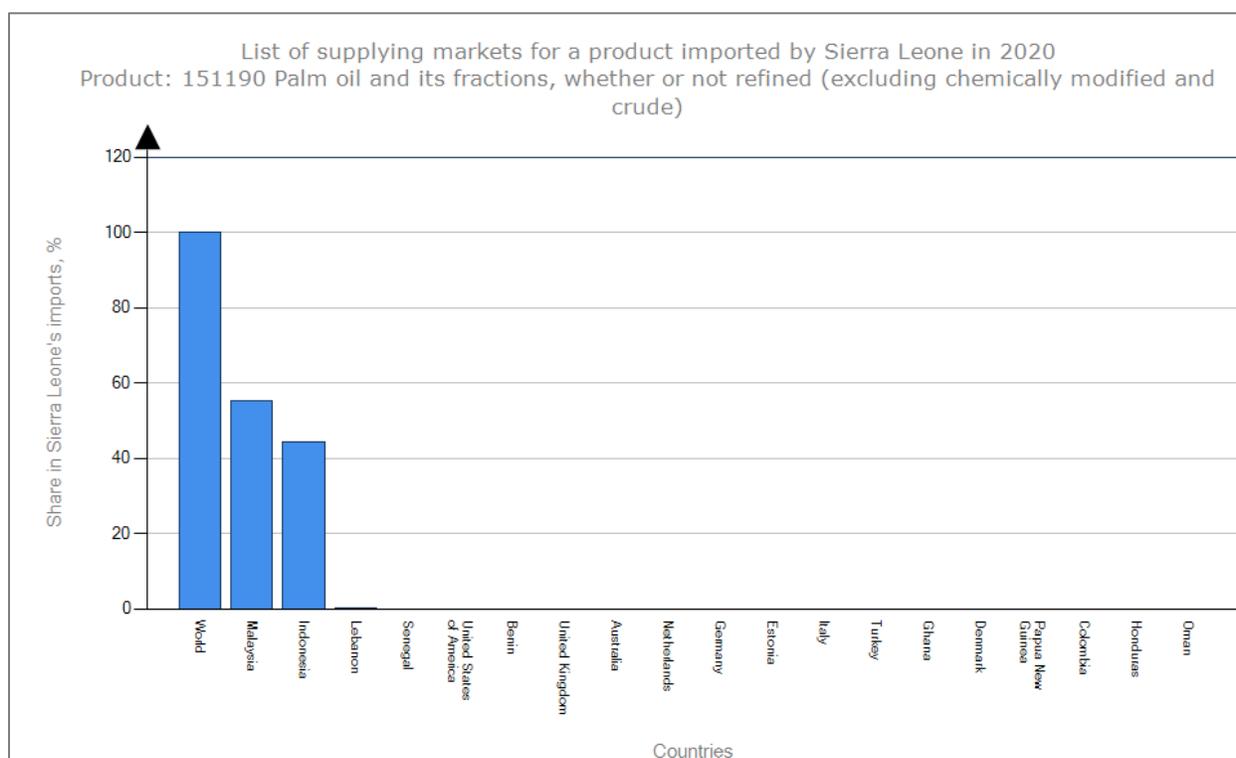
Source: ITC Export Potential Map

Without a major processor inside of Sierra Leone, it is however questionable if economies of scale in processing will place Sierra Leone palm oil in a price competitive position until a large processor supports the value chain. Therefore, it must be assumed that the difference relates to the ability for small farmers and producers to meet niche needs that the larger companies cannot meet due to their need to focus on the greatest common factor in demand and meet those requirements not cater to bespoke and niche product.

2.3. Sierra Leone palm oil imports and trade balance

In 2020, based on most updated data from partner countries⁷, Sierra Leone imported essentially POF about equally from Malaysia and Indonesia.

Figure 11 - Sierra Leone's importing markets under HS 151190, 2020 (in percentage)



Source: Trade Map

Looking at historical data is however possible to observe some differences in the data related to import flows reported by Sierra Leone (direct data) and the ones reported by its partners (mirror statistics). In some cases, also some imports of CPO (HS 151110) have been identified as indicated in the table below.

Both direct data and mirror statistics, however, indicate that Sierra Leone remains fundamentally a net importer of palm oil (HS 1511, which includes both CPO and POF), with a negative trade balance recorded on almost all years since 2014.

⁷ Latest data on ITC Trade Map (www.trademap.org) for Sierra Leone date to 2018. In order to have information on later years, export data for partner countries are used. This are called mirror statistics.

Table 1 - Sierra Leone trade balance of Palm oil

Trade balance	2014	2015	2016	2017	2018	2019	2020
Based on direct data	-1,672	-16,585	12,885	-13,121	454		
Based on mirror statistics	-22,406	-18,465	-17,830	-18,942	-13,709	-8,241	-2,901

Source: ITC Trade Map

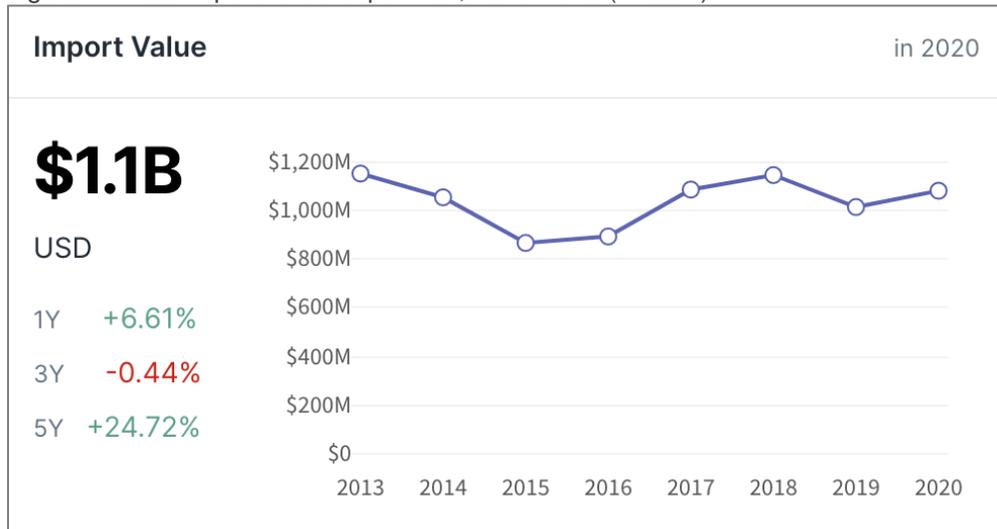
PART II: US PALM OIL - MARKET STRUCTURE

3.1. The US palm oil market situation

3.1.1. Market Overview

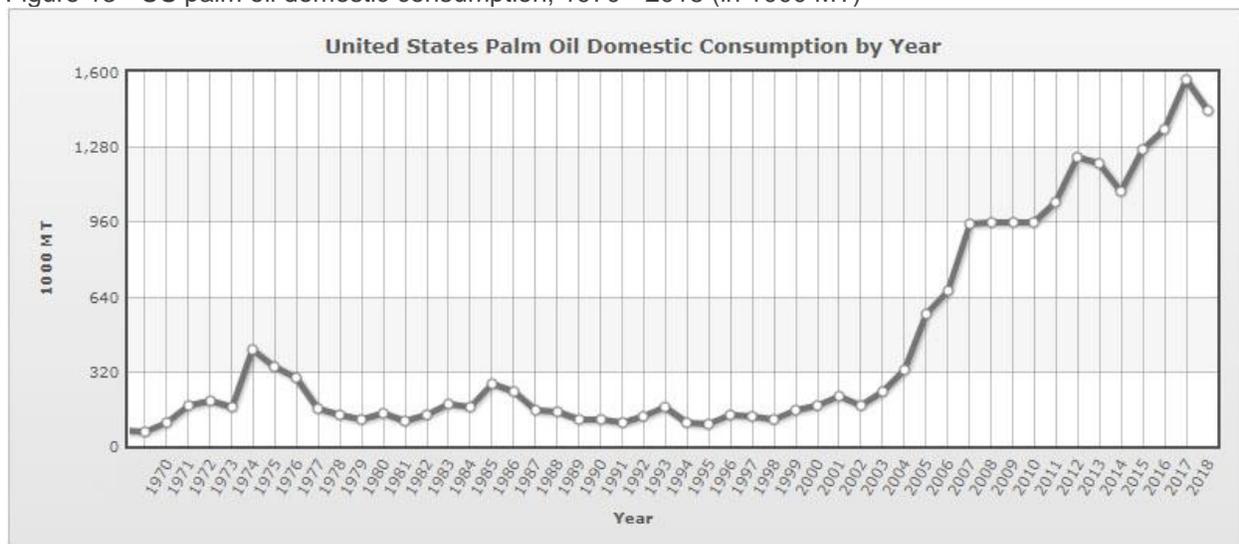
Despite the negative press that palm oil receives in the media, the US imports and consumed in excess of \$1.1 Billion USD in 2020. The chart below reflects a range of imports most greatly impacted by global prices rather than a change in demand in the US, which has been increasing for a number of years despite the total imports decrease in the 2013 – 2015 date range.

Figure 12 - US Import value of palm oil, 2013-2020 (in USD)



Source: TRIDGE. Available at: <https://www.tridge.com/intelligences/palm-oil/US/import>

Figure 13 - US palm oil domestic consumption, 1970 - 2018 (in 1000 MT)



Source: IndexMundi. Available at: <https://www.indexmundi.com/agriculture/?country=us&commodity=palm-oil&graph=domestic-consumption>

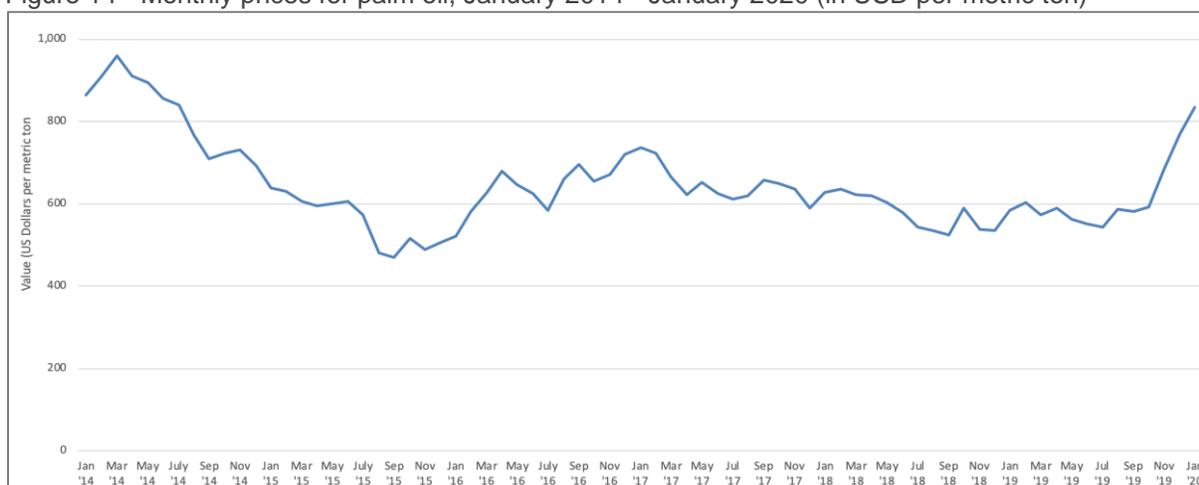
Impacting this growth of palm oil in the US are many factors including product price and quality characteristics that make palm oil an attractive ingredient versus other oils.

3.1.2. Prices

In 2021, the approximate price range is between US\$ 0.66 and US\$ 0.14 per kilogram or between US\$ 0.3 and US\$ 0.06 per pound (lb.), with the price in Leone is SLL 6577.23 per kg. The average price for a ton is US\$ 657.72 in Bo and Freetown. The Sierra Leone's import price for palm oil in 2019 was US\$0.60 per kg.

The chart below from the World Bank reflects monthly prices of palm oil from January 2014 to January 2020 in USD per MT.

Figure 14 - Monthly prices for palm oil, January 2014 - January 2020 (in USD per metric ton)



Source: World Bank4. Available at: <https://www.statista.com/statistics/673385/monthly-prices-for-palm-oil-worldwide/>

3.1.3. Nutritive values of palm oil in the US market

Palm oil has also benefitted from the push by many groups including the National Restaurant Association, New York City Health Board, the Harvard School of Public Health and others to decrease trans-fatty acids, which pushes the nutritional benefits of palm oil above many other oils. There is a tradeoff between the benefits of no trans-fatty acids versus the negative social impact on the environment, and consumers can choose between healthy palm oil versus impact to the rainforest. Consuming bad oils has an impact on the individual's health, and the results are identifiable, personal, and non-debatable. Consuming an oil that has production that harms the environment is distant, abstract, not immediately felt, and debatable. Therefore, there is a challenge in consumer education and the weight given to each factor. Consumers that are inclined to be concerned about the health of the environment, rainforests, global warming will shy away from palm oil, while consumers who have less concern about these factors will not have a problem consuming palm oil.

Figure 15 – Fats and oils, which to eat and which to ditch

fats/oils:

cleaning up your diet by using the right fats & oils is essential to improving your health from the inside out.

WHICH TO EAT:

SATURATED FOR HOT USES

non-animal fats, organic, unrefined forms are ideal

- coconut
- palm

animal fats, from pasture-raised/grass-fed & organic sources are ideal

- butter
- ghee
- lard
- tallow
- schmaltz* (chicken fat)
- lamb fat
- duck fat
- full fat dairy
- eggs, meat & seafood

*higher in omega 6 fatty acids so they should be consumed in moderation



UNSATURATED FOR COLD USES

organic, extra virgin and cold-pressed forms are ideal

- olive oil
- sesame oil
- nut oils (walnut, pecan, macadamia)
- flaxseed oil**
- avocado
- nuts & seeds
(including nut & seed butters)

NOTE: unsaturated fats (typically liquid at 68 degrees room temperature) are easily damaged/oxidized when heat is applied to them. we do not want to consume damaged fats.

**flaxseed oil is okay for moderate use but asperennary with it or doses of 1-2 Tbsp/day is NOT recommended as source of PUFA bodyunsaturated fatty acid intake should remain minimal




WHICH TO DITCH:

SATURATED

man-made fats are never healthy, trans-fats are particularly harmful.

- margarine
- hydrogenated or partially hydrogenated oils
- man made trans-fats often found in "buttery spreads" including oil blends like Earth Balance, Benecol and I Can't Believe It's Not Butter to name a few

UNSATURATED

these oils are highly processed and oxidize easily via one or more of the following: light, air or heat. consuming oxidized oils is never healthy.

- canola oil (also known as rapeseed oil)
- corn oil safflower oil
- vegetable oil rice bran oil
- soybean oil
- grapeseed oil
- sunflower oil

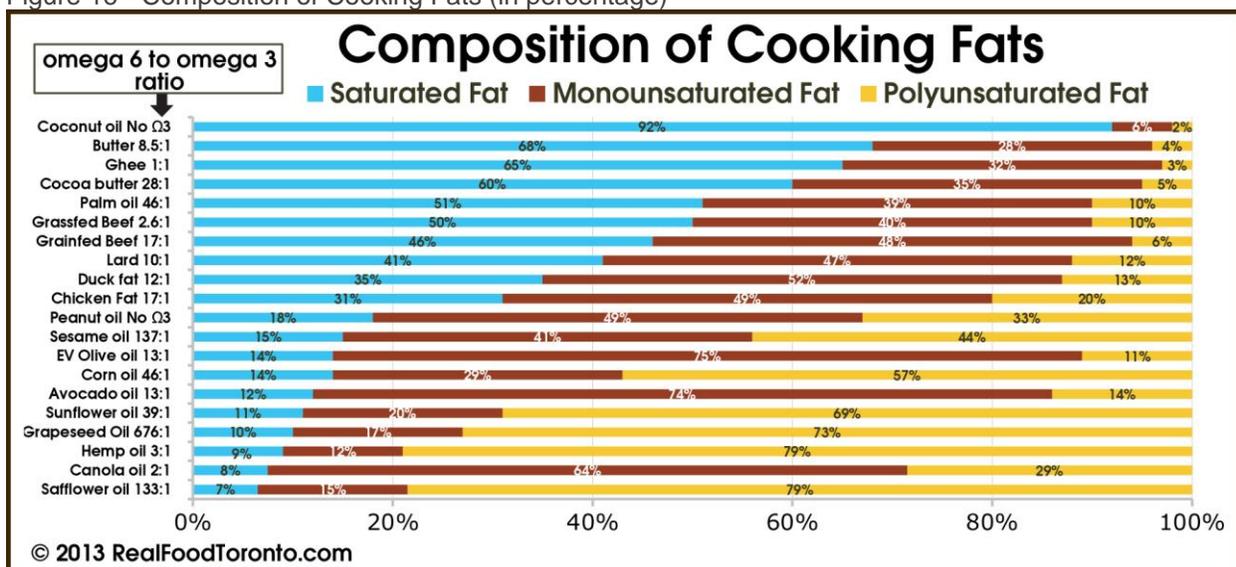
Diane Sanfilippo | BALANCED BITES nutrition & wellness | www.balancedbites.com

Source: Balanced Bites. Available at: <https://d1qkyo3pi1c9bx.cloudfront.net/2/CA03E98E-A994-4489-9B13-B32169AB17BA/26f74aa4-0737-454f-b5b7-f8121a02736f.pdf>

While medical opinions vary on the benefits versus risks associated with palm oil consumption, the above graphic appears to be a clear summary of those who consider palm oil as a “good” oil to use when considering health issues.

Palm oil also has a positive Omega oil balance as illustrated by the following chart.

Figure 16 - Composition of Cooking Fats (in percentage)



Source: RealFoodToronto. Available at: <https://thehealthybutcher.com/blog/composition-of-cooking-fats/>

3.1.4. Environmental considerations

With the success of multiple rainforest supporting NGOs, the consumer in the US has a negative image of palm oil as being bad for the rainforests and therefore bad for consumers. All palm oil marketing strategies for product entering the US must include a nod to the ethical consumer who purchases products with strong consideration on the products impact on the environment. This paper does not address the “right” or “wrong” decision on consumption of palm oil; however, we provide the following points for consideration.

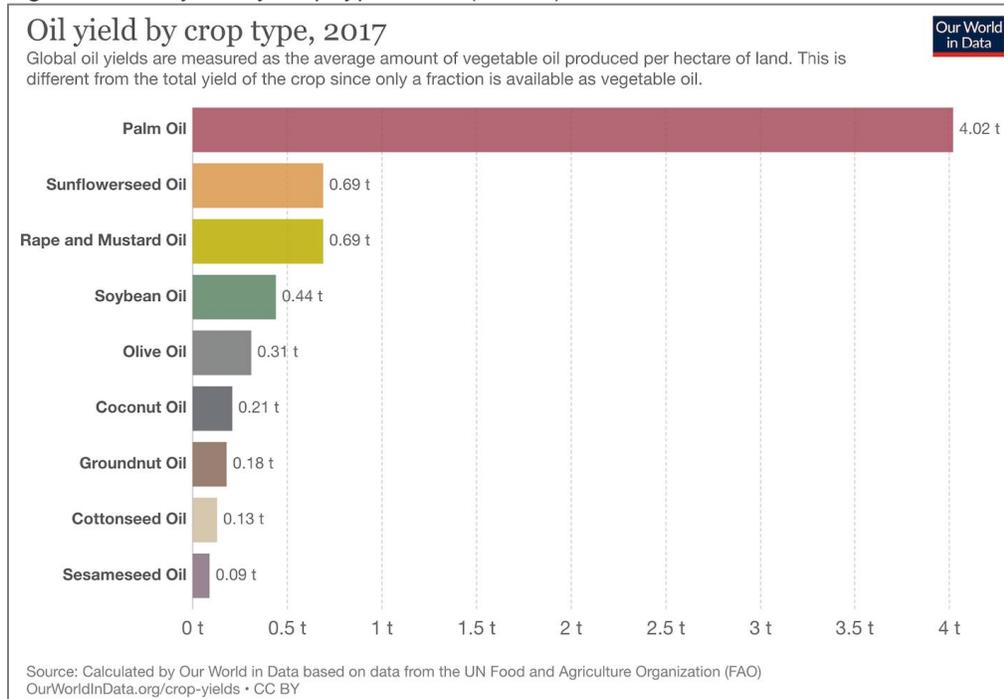
Table 2 - Pros and cons of palm oil

Pros	Cons
Crop yield per hectare higher than all other commercially produced oils. As much as 10 x other oils.	1.4 million hectares of rainforest annually replaced with palm oil plantation
Hectares required to supply global demand for edible oil considerably less than any other vegetable oil.	Working conditions at palm plantations under suspicion and sanctions
Global palm oil production increased 15-fold between 1980 and 2014, fueled by the oil’s low production costs and versatility, and the crop’s high yield.	"One fifth of all greenhouse gas emissions stem from deforestation, and one of the major drivers of deforestation is palm oil," according to Leila Salazar-Lopez of the Rainforest Action Network. The United Nations Environment Programmer also says that palm oil plantations are one of the leading causes of rainforest and peatland loss in Indonesia and Malaysia.
Demand for palm oil is expected to increase at an annual rate of 1.7% until 2050	Global forest loss is at an all-time high, with an estimated 3.6 million hectares of primary rainforest – an area the size of Belgium – lost in 2018.

Source: Author

The chart below shows the yield of palm oil per hectare which clearly far exceeds the competitive products. This high yield is a positive in many areas including land use quantity, labor per liter of product, revenue per hectare and quantity of scale efficiencies in handling and logistics.

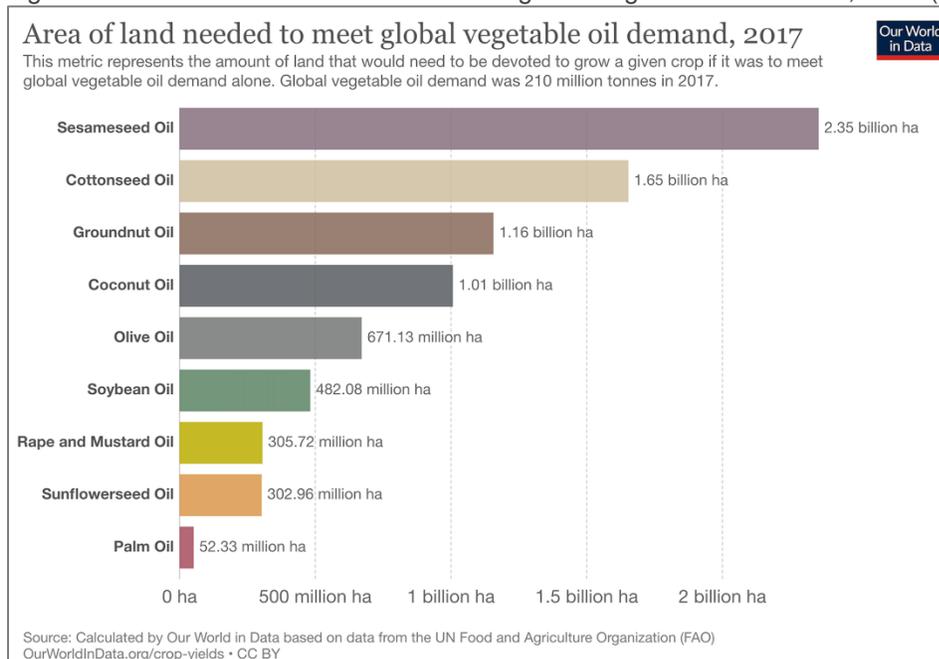
Figure 17 - Oil yield by crop type, 2017 (in tons)



Source: Our World in Data based on FAO data. Available at: <https://ourworldindata.org/grapher/oil-yield-by-crop>

This chart below shows the calculation of land that would be required to meet global vegetable oil demand in 2017. As illustrated in this chart, palm oil yields allow for fewer hectares to be harvested to meet global demand than other oils.

Figure 18 - Amount of land needed to meet global vegetable oil demand, 2017 (in hectares)



Source: Our World in Data based on FAO data. Available at: <https://ourworldindata.org/grapher/area-land-needed-to-global-oil>

The social problem is that the land utilized was often previously rainforest prior to being cultivated for palm oil production. This is a fact and factor that the palm oil industry could utilize more effectively to counter the negative publicity that palm oil receives. If the industry could do a better job of promoting the fact that palm oil takes up less land than other oil crops and the benefit that provides to allow other lands to be used for other crops, perhaps they could show the environmentalists the positive tradeoff of growing palm versus other crops.

3.2. Palm oil use in the US

With the low cost and relatively neutral impact on texture, flavor and quality, palm oil as an ingredient makes it a viable substitute/replacement for a wide variety of oils in products. This provides the formulator⁸ with the ability to lower the cost of production without lowering the quality or changing the quality to where the consumer would recognize a difference when palm oil is used versus a more expensive oil. The high yields of palm oil provide for good returns to growers on a per hectare and input basis. These factors help support increased production, which often occurs by converting rainforests to palm oil plantations, hence the negative impact on the environment. This keeps the prices of palm oil low while the ROI for those involved is high which stimulates the conversion of rainforests and other crops to palm oil plantations.

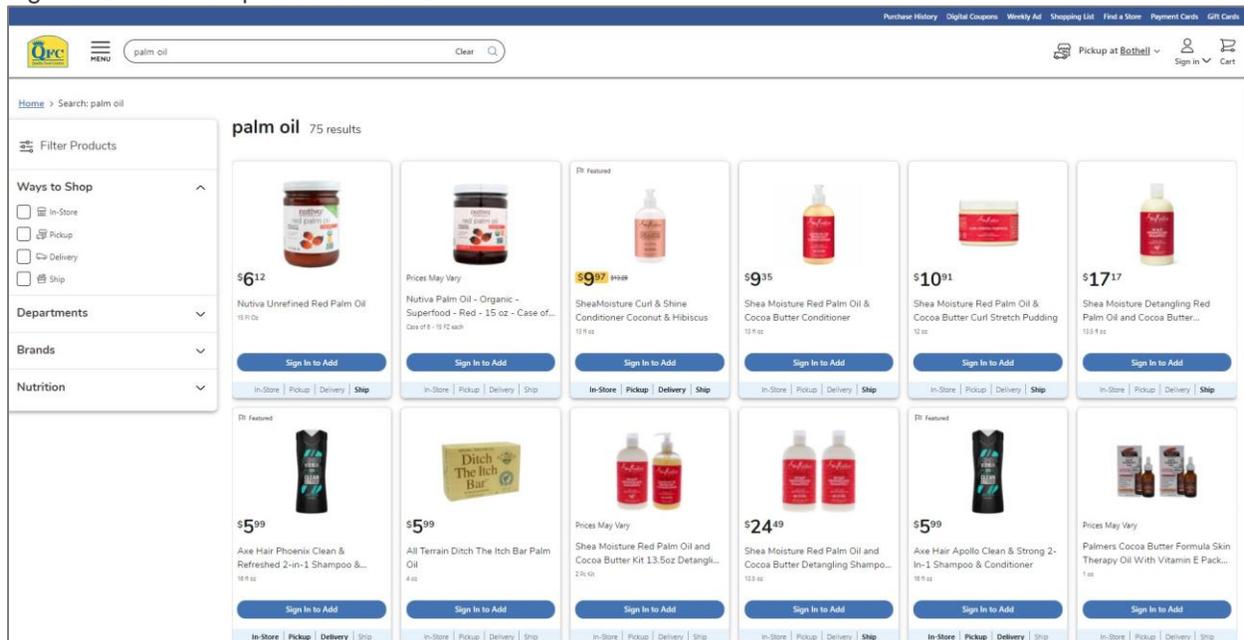
There are numerous reports that state that “from cookies and ice cream to soap and shampoo: every second product in supermarkets contains palm oil.” A report from Facts&Factors, states in its key recommendations from analyst section that “almost 70% of personal care products comprise of one or more palm oil derivatives, which is predicated to drive the market growth.”⁹ This report author has not been able to substantiate this claim, and a review of products at their local store does not show anywhere near that number of products having palm oil as an ingredient. Nonetheless, palm oil has a diverse use in foods and beverages.

A search of Seattle retailer QFC, a Supermarket retailer, shows zero food products available for pick-up at the local market that is 100% palm oil. As pictured below, some palm oil is available to order and have delivered to your home. The local search does show that there are numerous cosmetic products that contain palm oil, with some available for pick-up at the store.

⁸ A “formulator” is a title within a company of the person who determines the formula for a product. They will look at multiple factors including price and chemical composition to formulate the product at the optimal formula of price and characteristics (quality)

⁹ Available at: <https://www.fnfresearch.com/global-sustainable-palm-oil-market-by-type-palm>

Figure 19 - Palm oil products at QFC



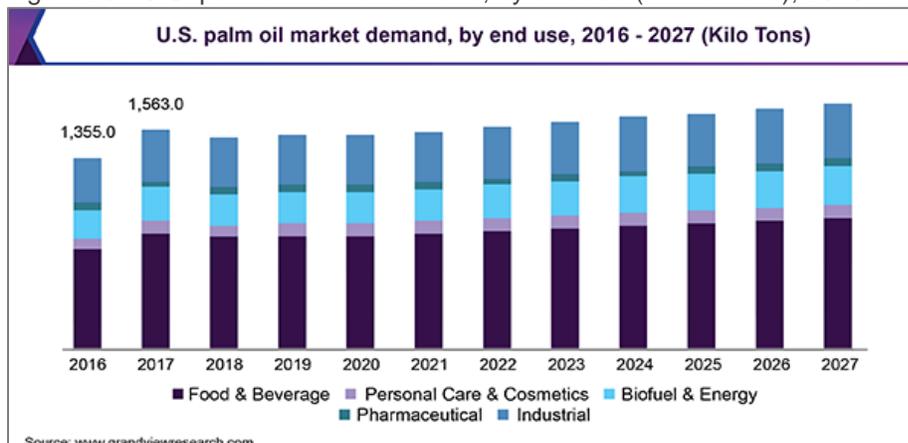
Source: QFC. Available at: https://www.qfc.com/search?query=palm%20oil&searchType=default_search&fulfillment=all

The FAF report also states, as confirmed by multiple other sources, that palm oil use in cooking is low in the US. A search of the Seattle Washington area market confirms that no palm oil is available at retail unless it is sold at stores serving diaspora from countries where its use is traditional and extensive.

Statista, a leading subscription based data consolidator, stated that: “Around 70 percent of the palm oil in the United States is used in food production or sold as a cooking oil, according to 2016 figures. Cosmetics account for a relatively small share of the palm oil market, at 5.4 percent. It is estimated that these proportions won’t change significantly by 2022.”¹⁰

This is reflected in the chart below published by Grand View Research, which shows that a small percentage of palm oil is used for cosmetics with the majority going to food and beverages, which is supported by the fact that the number one user of palm oil in the US is PepsiCo.

Figure 20 - U.S. palm oil market demand, by end use (in Kilo Tons), 2016 - 2027



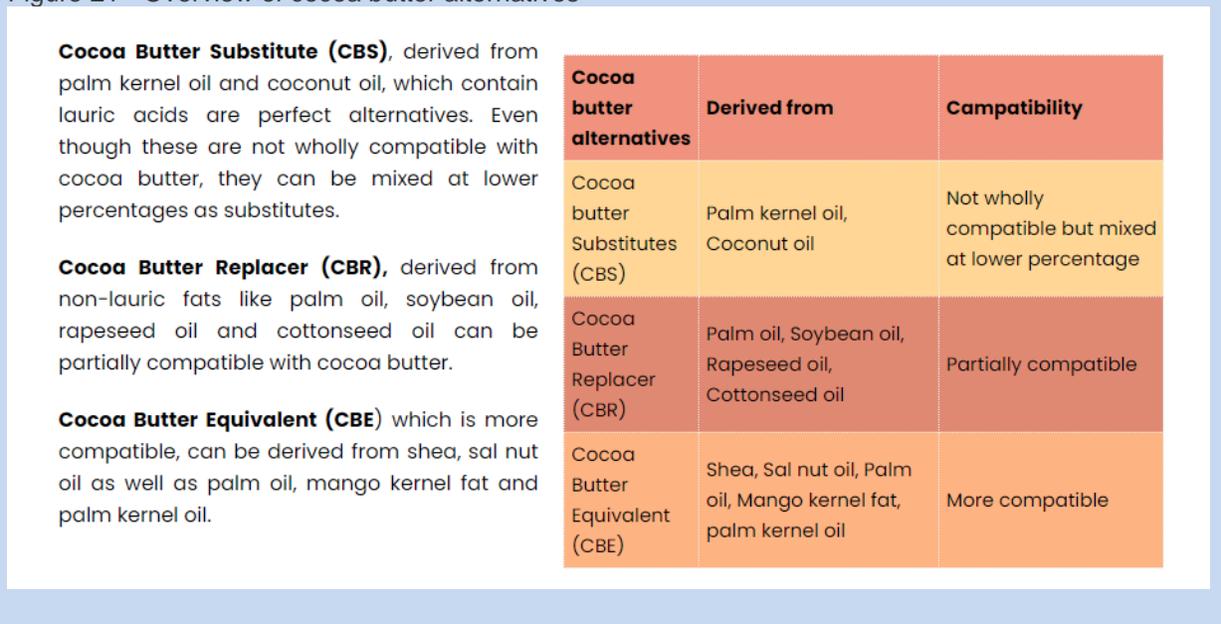
Source: Grandview Research. Available at: <https://www.grandviewresearch.com/industry-analysis/palm-oil-market>

¹⁰ Available at: <https://www.statista.com/>

Information Box: Cocoa Butter Substitute (CBS) and the potential for palm oil usage

In the United States, 100% cocoa butter must be used for the product to be called chocolate. The EU requires that alternative fats not to exceed 5% of the total fat content. If CBS's were allowed in the US, that would significantly change the market for palm oil. While large companies like Mars, Hershey and Nestle dominate the retail chocolate industry, there are thousands of independent chocolate manufacturers producing niche chocolate. Many of these brands would use more palm oil if they were allowed to call the end product chocolate. For years, the Global Shea Alliance (GSA) has been working with the US food industry regulators to allow shea butter as a CBS, if they are successful this may also include palm oil.

Figure 21 - Overview of cocoa butter alternatives



3.3. Consumer Preferences

The consumer is King and therefore products sold to the consumer have to meet their needs and expectations. For palm oil, this goes beyond the quality and price of the product to include a wide range of social and environmental issues. This report talked about many of these issues throughout this report, as they are critical to consumer demand at all levels.

In this section, we will further cover the consumer expectations and requirements for these standards based upon their preferences.

3.3.1. Quality

In most cases, the US consumer does not know that they are consuming palm oil; therefore, the standards for quality are set above the end consumer level. The formulation experts at the food processors and cosmetic manufacturers determine if palm oil can be utilized in their products without hindering the quality, flavor, texture, or color of the finished product. One of the luxuries that palm oil has is that it is very versatile and therefore can be utilized in a wide range of products with a negative or altering impact on the product.

As stated earlier in this report, there are estimations that as high as 50% of goods in the grocery store contain some form of palm oil product. Other reports found in the discovery process of this report indicate that up to 70% of cosmetics contain palm oil products. If it is in fact, 70% of cosmetics have palm oil, the percentage of food products could be much lower, depending upon the balance of cosmetic (HABA) and cleaning products, versus the food products. Suffice it to say that palm oil is a major contributor to many products in the retail store, even if the percentage of palm oil is in fact low as a percentage of all ingredients utilized.

A conflict of this data is documented in this section - Palm oil use in the US – which states that 70% of palm oil is used in food.

The versatility of palm oil does not eliminate the need for quality to comply with chemical composition and purity. Quality requirements for palm oil are indicated in the table below.

Table 3 - Quality requirements for palm oil products

Characteristics	Product requirements						
	Crude (CPO)			Red (RPO)	Neutralised (NPO)	Neutralised, bleached (NBPO)	Neutralised/ refined, bleached and deodorised (NBD/RBD)
	Special quality (SQ) grade	Standard quality (STD grade)	CPO, max	RPO, max			
Free fatty acid (as palmitic), %	2.5	5.0	3.5	0.05	0.25	0.25	0.10
Moisture and impurities, %	0.25	0.25	0.25	0.02	0.10	0.10	0.10
Peroxide value, meq/kg	1.0	2.0	1.0	0	-	-	2.0
Anisidine value	4.0	5.0	5.0	2.0	-	-	4.0
Colour, 133.35 mm (5 ¼ in) Lovibond	-	-	-	2.5R	-	20.0R	3.0R
DOBI	2.8	2.3	2.5*	-	-	-	-
Carotene, mg/kg	-	-	500-800	-	-	-	-
Note: * Minimum							

Source: Malaysian Palm Oil Board (MPOB) and Standards Malaysia

3.3.2. Organic

The US recognizes organic product that is certified to meet the National Organic Program (NOP). This certification of organic must come from a recognized third party certifier (meaning that they are independent from the buyer and the seller).

Product can be “organic”, but if it is not certified organic by a recognized 3rd party certifying agency, it does not matter. To be certified as organic, the product must be produced in a field that has not produced any non-organic product in the 3 years prior to certification. The product when harvested must maintain identity (traceability) to the farm and not be out of the chain of custody of a certified organic handler.



Organic can be a good niche for exporters if their product complies and is certified. Buyers are willing to pay a premium for certified organic product. The volumes are smaller, and the buyers place less weight on the price versus the certification than non-organic product.

3.3.3. Social and ethical concerns for consumers

Sustainability, ethical production and labor issues are a critical and negative point for palm oil. There are multiple consumer categories that will not consume palm oil due to its impact on the environment. Despite the acknowledgement of this fact, Greenpeace researchers found that 12 of the US largest brands—Colgate-Palmolive, General Mills, Hershey, Kellogg’s, Kraft Heinz, L’Oréal, Mars, Mondelez, Nestlé, PepsiCo, Reckitt Benckiser, and Unilever—were still sourcing from at least 20 palm oil groups that actively cleared rainforests in Indonesia, Malaysia, and Papua New Guinea.

Consumers that are partial to supporting environmental causes will shy away from palm oil unless it has a leading and recognized sustainability certification.

In an effort to improve their social image standing, in 2018, UK retailer Iceland banned all products under their private label to utilize palm oil in their ingredients¹¹. Given the economic benefits of palm oil, this is a bold move, and it will be interesting to see if retailers in the US follow.

In addition to environmental issues, labor issues are also a concern for the US consumer and government. In October 2020, the US Customs and Border Protection (CBP) blocked the import of palm oil made by FGV Holders of Malaysian over forced labour concerns. CBP cited physical and sexual abuse, debt bondage and abusive conditions as reasons for blocking FGV Holdings. Shipments from the company and its subsidiaries will be held at US entry ports.

While this type of issue is not unique to palm oil, it certainly does not help the overall image and consumer appeal for palm oil.

Simply stated, Palm Oil has an image problem, and like many images, this one reflects some facts and some myths. Palm oil’s reputation as a destroyer of the rainforest is well deserved and is a major concern for consumers and for corporations. It is estimated that palm oil plantations clear 1.4 million hectares of rainforest annually. While this rate has slowed from a high of 3.6 million hectares in 2018 it is still a major concern for buyers. This image harms the growth of palm oil sales globally.

The impact of palm oil on the environment is undisputed, and that fact pushes corporations to adjust their procurement patterns. Companies work to improve the impact that their purchases have on the environment, and therefore, if Sierra Leone is going to be a player in the export markets, they will need to have a solid sustainability and traceability program.

3.4. Market Structure and Key Players

The top palm oil consuming companies in the US are on these charts in order of total tons utilized.

Table 4 - US market profile chart

Type of company	# of copmanies
Food processor	11 companies
Cometic, HABA and cleaning companies	4 companies

¹¹ See <https://www.theguardian.com/environment/2018/apr/10/iceland-to-be-first-uk-supermarket-to-cut-palm-oil-from-own-brand-products>

Fast food	2 companies
Retailers	3 companies

Source: Author

The tables below reflect the leading importers ranked by tonnage used and their commitment to the Roundtable on Sustainable Palm Oil (RSPO) standards. The leading company with RSPO standards is the family owned Mars (chocolates) company with a 17.5 score.

In the industry and for consumers a sustainability policy transparency toolkit has been developed by ZSL, (Zoological Society of London) titled SPOTT, which scores palm oil companies annually against over 100 sector-specific ESG (Environmental, Social and Government indicators) to benchmark their progress over time. By tracking transparency, SPOTT incentivises the implementation of corporate best practice.

Investors, buyers and other key influencers can use SPOTT assessments to inform stakeholder engagement, manage ESG risk, and increase transparency across multiple industries¹².

The lowest SPOTT score of the top 20 companies is publicly traded ConAgra, a leading fast moving consumer goods (FSMG) company with brands and products including the brands illustrated below which includes many of the leading brands of cooking oil (see **1.12 Social monitoring scores**).

Figure 22 Leading importers with RSPO standards ranked by tonnage used



Source: ConAgra

It is interesting to note that according to bill of lading data, none of the companies listed as the 20 users of palm oil were importers. They purchase their product in ready to use form from importers including AAK AK, Bunge Limited, Cargill Incorporated, COFCO Corporation, IFFCO International, Industrializadora Oleofinos SA De CV, United Oils Processing & Packaging, Willowton Group and Wilmar International Limited.

¹² Further details on SPOTT can be found via this YouTube video: <https://youtu.be/2ZvqSNHAWJ8>

Figure 23 Performance table of the top palm oil consuming companies in the US (in total tons utilized)



All Sectors v in 2019 v

[DOWNLOAD FULL RESULTS](#)

COMPANY v	SECTOR	COUNTRY OF HQ v	RSPO MEMBER v	COMMITMENT TO 100% RSPO CSPO BY 2020 v	COMMITMENT APPLIES TO v	TOTAL PO USED (TONNES) v	100% COVERED BY RSPO CSPO FOR ALL PALM OIL USED v	DEFORESTATION- & CONVERSION-FREE SUPPLIER POLICY v	TOTAL SCORE OUT OF 22 v
PepsiCo Inc.	Manufacturers	USA	✔	✔	✔ Company ✔ Entire Corporate Group	506,341	✔	✔	14.9
Procter & Gamble	Manufacturers	USA	✔	✔	✔ Company ✔ Entire Corporate Group	463,295	✘	✔	14.3
Mondelez International, Inc	Manufacturers	USA	✔	✔	✔ Company ✘ Entire Corporate Group	294,726	✘	✔	12.6
YUM! Brands, Inc.	Food Service	USA	✔	✔	✔ Company ✔ Entire Corporate Group	157,776	✘	✔	12.3
Colgate-Palmolive Company	Manufacturers	USA	✔	✔	✔ Company ✔ Entire Corporate Group	138,490	✘	✔	14.8
Walmart Inc.	Retailers	USA	✔	✔	✔ Company ✔ Entire Corporate Group	103,730	✔	✘	13.3
McDonald's Corporation	Food Service	USA	✔	✔	✔ Company ✔ Entire Corporate Group	90,474	✔	✔	13.8

Source: WWF

Figure 24 Performance table of the top palm oil consuming companies in the US (in total tons utilized)

COMPANY	SECTOR	COUNTRY OF HQ	RSPO MEMBER	COMMITMENT TO 100% RSPO CSPO BY 2020	COMMITMENT APPLIES TO	TOTAL PO USED (TONNES)	100% COVERED BY RSPO CSPO FOR ALL PALM OIL USED	DEFORESTATION- & CONVERSION-FREE SUPPLIER POLICY	TOTAL SCORE OUT OF 22
DuPont Nutrition & Biosciences	Manufacturers	USA	✓	✓	✓ Company ✗ Entire Corporate Group	86,222	✓	✗	15.1
Johnson & Johnson	Manufacturers	USA	✓	✓	✓ Company ✗ Entire Corporate Group	84,296	✗	✓	14.5
Mars	Manufacturers	USA	✓	✓	✓ Company ✓ Entire Corporate Group	80,067	✓	✓	17.3
Kellogg Company	Manufacturers	USA	✓	✓	✓ Company ✓ Entire Corporate Group	79,330	✓	✓	13
General Mills	Manufacturers	USA	✓	✓	✓ Company ✓ Entire Corporate Group	78,978	✓	✓	11.5
Conagra Brands, Inc.	Manufacturers	USA	✓	✓	✓ Company ✗ Entire Corporate Group	46,200	✓	✓	9
The Hershey Company	Manufacturers	USA	✓	✓	✓ Company ✓ Entire Corporate Group	31,235	✓	✓	16.5
Costco Wholesale Corporation	Retailers	USA	✓	✗ 2021	✓ Company ✓ Entire Corporate Group	27,972	✗	✗	13

Source: WWF

Figure 25 Performance table of the top palm oil consuming companies in the US (in total tons utilized)

COMPANY	SECTOR	COUNTRY OF HQ	RSPO MEMBER	COMMITMENT TO 100% RSPO CSPO BY 2020	COMMITMENT APPLIES TO	TOTAL PO USED (TONNES)	100% COVERED BY RSPO CSPO FOR ALL PALM OIL USED	DEFORESTATION- & CONVERSION-FREE SUPPLIER POLICY	TOTAL SCORE OUT OF 22
Campbell Soup Company	Manufacturers	USA	✓	✓	✓ Company N/A Entire Corporate Group	26,857	✓	✓	13.6
The J.M. Smucker Company	Manufacturers	USA	✓	✓	✓ Company ✓ Entire Corporate Group	11,232	✓	✗	12
The Kraft Heinz Foods Company	Manufacturers	USA	✓	✗	✓ Company ✓ Entire Corporate Group	6,567	✓	✗	10.8
Kroger	Retailers	USA	✗	✓	✓ Company ✓ Entire Corporate Group	4,994	✓	✗	9.5
The Estée Lauder Companies	Manufacturers	USA	✓	✓	✓ Company ✗ Entire Corporate Group	4,578	✓	✗	14

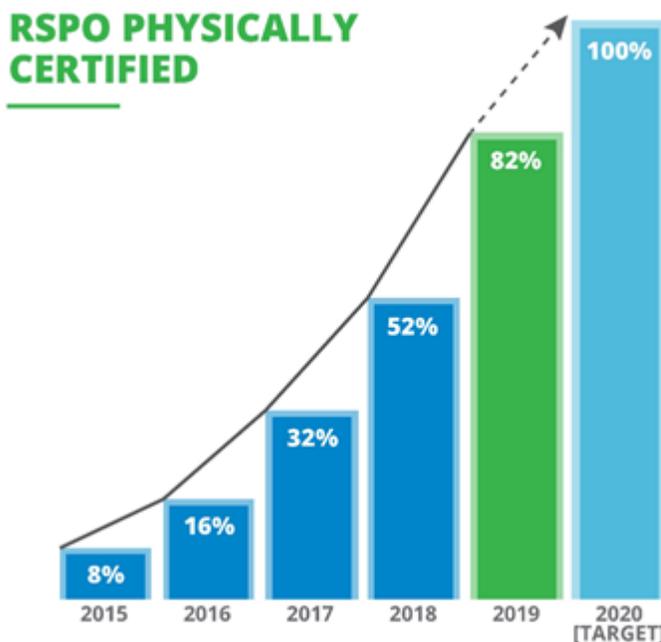
Source: WWF

As discussed above, the palm oil industry has a high level of concentration. Major buyers like PepsiCo approve their suppliers through criteria beyond price and product specifications to include social and environmental standards including Roundtable on Sustainable Palm Oil (RSPO), No-deforestation, No-peat and No-exploitation (NDPE) program, Certified Sustainable Palm Oil (CPO), Non-GMO, Palm Oil Done Right and dozens of other standards and rankings.

PepsiCo, as the largest user of palm oil, is a good example of how the industry operates. They work closely with their suppliers and source more than 25 crops across 60 countries. In 2019, PepsiCo purchased 70% of their palm oil from 9 suppliers - AAK AK, Bunge Limited, Cargill Incorporated, COFCO Corporation, IFFCO International, Industrializadora Oleofinos SA De CV, United Oils Processing & Packaging, Willowton Group and Wilmar International Limited. The other 30% of their needs is served by 26 other global companies listed in Appendix 8 – Pepsi suppliers. By the nature of the business and the requirements for products and environmental and social standards, these companies are large multi-national processors, landowners, and traders that allow for traceability of product to confirm that standards are met, and identity preserved, at every level of their supply chain.

The stated goal of PepsiCo, similar to that of Cargill, was to have had 100% RSPO physically certified product by 2020. The confirmation of achieving this goal has not been found by our research team; however, in 2019, they had achieved an 82% share.

Figure 26 Trend of PepsiCo RSPO physically certified product, 2015 – 2020 (in percentage)



Source: PepsiCo. Available at: <https://www.pepsico.com/esg-topics-a-z/palm-oil>

The PepsiCo supply chain is not significantly different from the supply chain for other large users of palm products. It is end users like PepsiCo, Proctor and Gamble (P&G), Mars, and McDonalds that drive suppliers to meet their needs. If a supplier is going to sell to PepsiCo, they must have a plan in place and in execution to meet their standards, starting with RSPO.

3.4.1. The Amazon factors

In the US, many importers and brokers utilize Amazon.com as a bellwether to gauge the market appeal, packaging, quality, and price of their products. Retailers often ask new suppliers, or new products, “what

their sales are on Amazon”. Therefore, an Amazon presence is critical to market entry and can be utilized as a good tool for developing a market.

A global search on Amazon for the key word “palm oil” brings up 892 products with a total of 382 monthly sales including food and cosmetic grade oils. This is very low when compared to 2000+ for olive oil with 2,019 monthly sales.

Jungle Scout, an Amazon research tool utilized by businesses to identify opportunities and monitor their products and competition ranks palm oil as a 3 (1 – 10 with 10 being the highest opportunity) with a Medium Demand with high competition. Olive oil is a 4 with high demand and high competition.

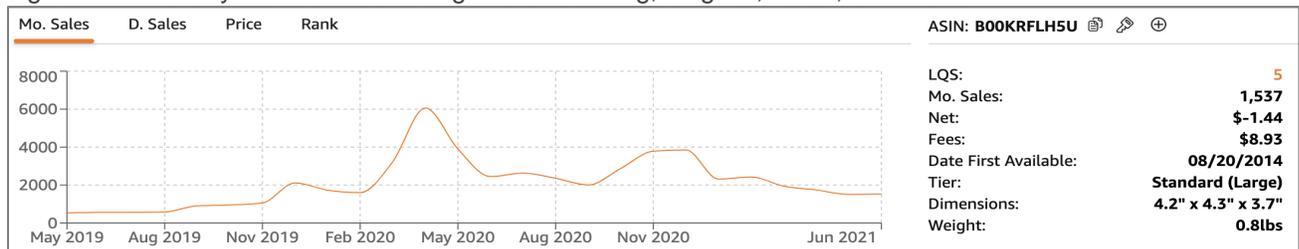
This is not to say that there are not opportunities, but they must be gauged upon this metric and the right niche needs to be entered. More details from a review of Amazon data can be found here below and in Appendix 11 – Amazon data top products.

This data in the pictures below from Amazon shows that this palm oil from Ecuador has monthly sales of 1,537 units, which is 56 per day for monthly sales of \$17,510 USD. The product has 2,404 reviews and ranks an average review of 4.7 stars out of 5 stars. This is a good rating and would generate annual sales of around \$204,000 USD.

What this illustrates is that while a product may not be available at one local store, there are 56 people a day buying this particular product via Amazon.com. In Redmond Washington, outside of the Amazon Headquarters of Seattle, this product can be delivered within 2 hours.

The chart below reflects the monthly sales of this SKU through Amazon.com including their net revenue and further product details as outlined below.

Figure 27 - Monthly sales of Nutiva Organic Shortening, Original, 15 oz, on Amazon



Source: JungleScout

Figure 28 – Overview of Nutiva Organic Shortening, Original, 15 oz, on Amazon

Nutiva Organic Shortening, Original, 15 oz
 Visit the Nutiva Store
 ★★★★★ 2,404 ratings | 81 answered questions
Amazon's Choice for "shortening"
 Price: **\$5.39** (\$0.36 / Fl Oz)
Coupon 40% **Subscribe & Save coupon**
 Coupon available for Subscribe & Save purchase option only. [Details](#)
 Thank you for being a Prime member. Get a \$150 Gift Card: Pay \$0.00 upon approval for the Amazon Prime Rewards Visa Card.
 May be available at a lower price from **other sellers**, potentially without free Prime shipping.
Flavor Organic Shortening
Ingredients Organic palm fruit oil, organic unrefined virgin coconut oil, organic unrefined red palm oil
Brand Nutiva
Weight 15 Ounces
Item 4.5 x 4 x 4.5 inches
Dimensions LxWxH
About this item

Source: Amazon

Figure 29 - Price, monthly sales, daily sales, and monthly revenue of Nutiva Organic Shortening, Original, 15 oz, on Amazon

Average Monthly Sales 1,540		Average Sales Rank 3,686		Average Price \$11.37			
#	Actions	Product Name	Brand	Price	Mo. Sales	D. Sales	Mo. Revenue
1		Nutiva Organic Shortening, Original, 15 oz (425g) BOOKRFLH5U	Nutiva	\$11.37	1,540	56	\$17,510

Source: JungleScout

Finding a niche to set product apart is critical as there are multiple options within palm oil and alternative products. If Sierra Leone is going to be successful in marketing product into the US, they must find a niche. The niche that this particular product is filling is USDA certified organic, non-GMO and certified under the “Palm Done Right” program, a social and environmental standard accepted and promoted by many brand owners and retailers¹³.

Additional data on Amazon.com sales and available product is found in Appendix 15 – Amazon top sales

3.4.2. Supply Chains

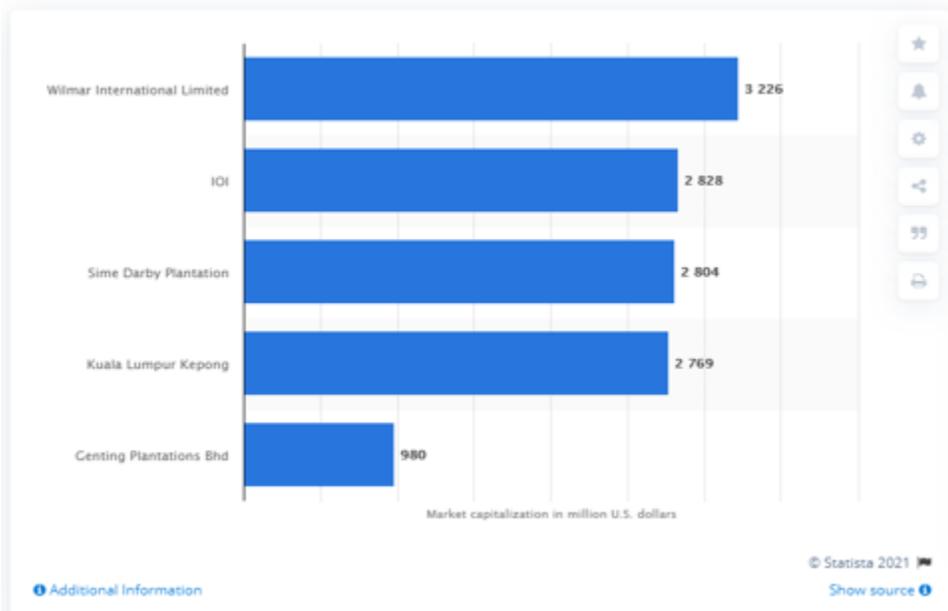
The typical supply chain for palm oil entering the US is identical to the chain for the UK and EU. While there are thousands of palm oil plantations, large and small, corporately owned, and independent small

¹³ More information available at: <https://palmdoneright.com/>

landholder producers, the funnel of the supply chain gets very narrow at the processor stage. To enter the US market without involvement of one of the large processors will limit the market accessibility.

The chart below reflects the leading global palm oil companies globally. In the US, the importers are Daabon Organic, Perdue Agribusiness LLC, DHL Global Forwarding (on behalf of an importer), Capitol Food Company, and Energy Feeds International.

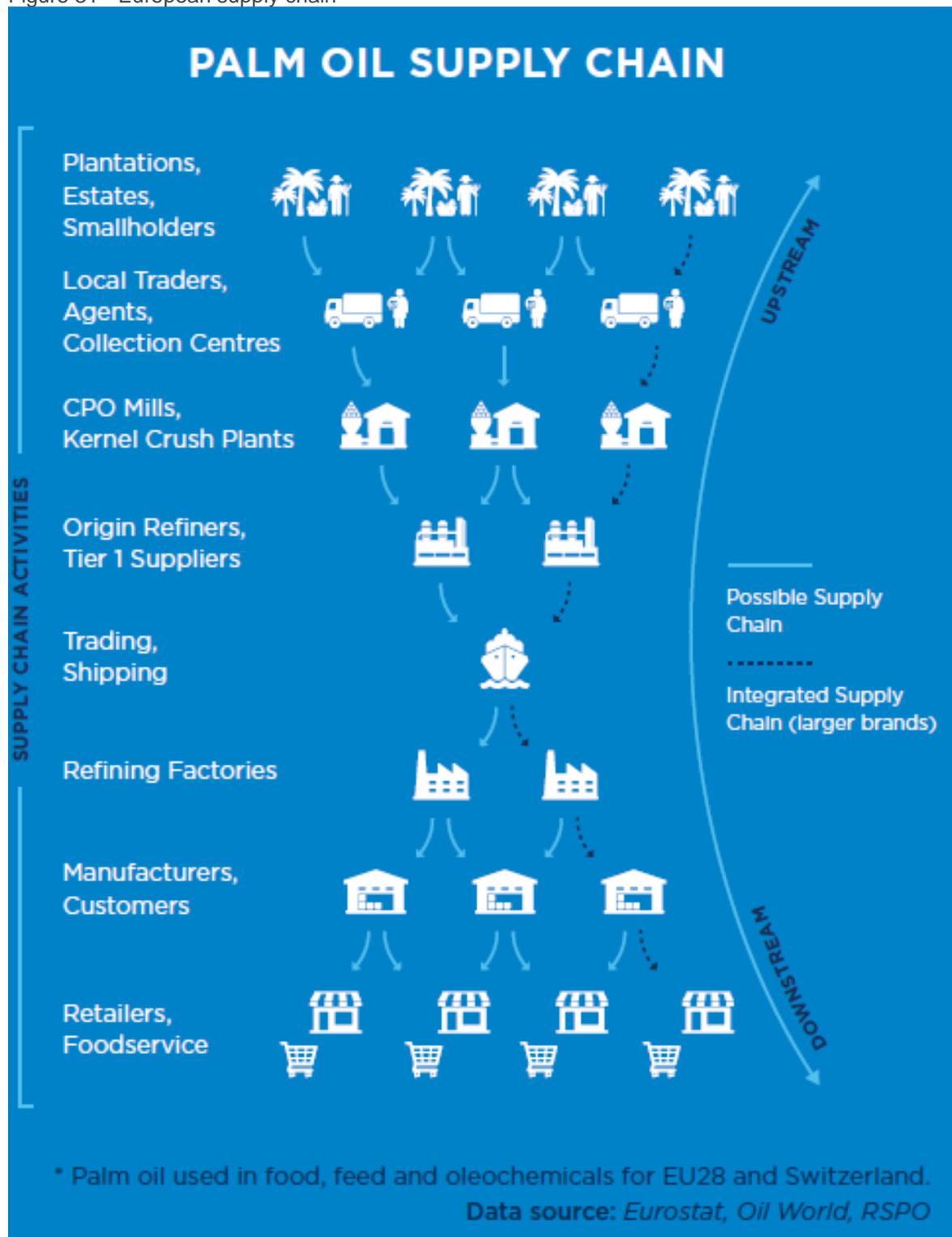
Figure 30 - Leading palm oil companies in world, 2020 (in million USD)



Source: Statista. Available at: <https://www.statista.com/statistics/477252/leading-global-plam-oil-companies-based-on-market-capitalization/>

The chart below from Eurostat provides an overview of the European supply chain. It is identical to the US supply chain from farm to consumer.

Figure 31 - European supply chain



Source: IDH. Available at: <https://www.idhsustainabletrade.com/news/latest-data-shows-86-of-palm-oil-imported-to-europe-sustainable/>

To visualize this in a different way, we provide here below the flow for PepsiCo, a major user of palm oil.

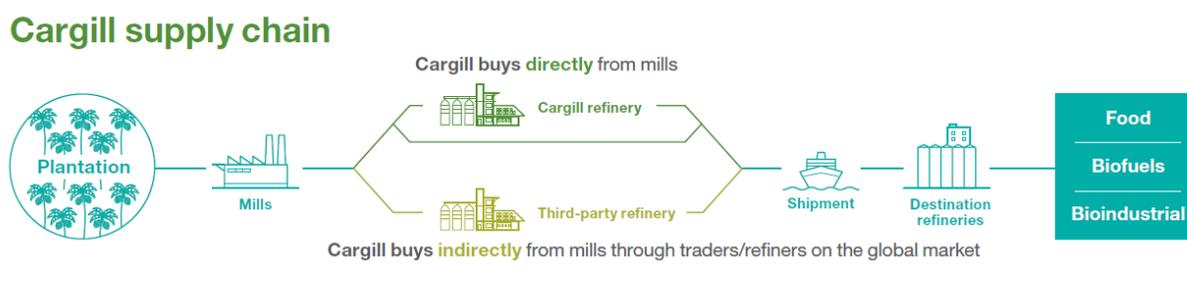
Figure 32 - PepsiCo supply chain



Source: PepsiCo. Avialbalet at: [https://www.pepsico.com/docs/album/esg-topics-policies/pepsico-palm-oil-traceability-protocol-\(1\).pdf?sfvrsn=55daa7e4_6](https://www.pepsico.com/docs/album/esg-topics-policies/pepsico-palm-oil-traceability-protocol-(1).pdf?sfvrsn=55daa7e4_6)

The Cargill supply chain, instead is indicated below.

Figure 33 - Cargill supply chain



Source: Cargill. Avialbalet at: <https://www.cargill.com/sustainability/palm-oil/cargill-supply-chain-footprint>

In the case of Cargill, they are a vertical player in the palm oil industry working from field to shelf. They export palm oil to more than 30 countries.

The concentration of mills and refineries is significant with economies of scale impacting the ability for product to enter the market at a competitive price. While smallholder plantations can be the source for raw materials, the finished product goes through a concentrated funnel of mills and refineries. Many of the large companies, like Cargill, Wilmar, ADM, and IOI are vertically integrated from plantation to consumer.

This is not an industry where multiple autonomous players up and down the value chain can consolidate to compete with the large integrated multi-national as the investment into processing is significant. Cargill, for example, is building a \$200 million USD processing plant in Indonesia. Coupling this with their plantations, ocean carriers and services, and value added production and customer requirements places on the products provides a barrier to entry for smaller players at a high capital and other resource cost.

Production and processing economies of scale are accompanied and amplified by economies of scale in transportation. With leading global producers and traders deeply engaged in ocean transportation, they have a competitive edge over exporters that must work with ocean going containers and market available freight rate. As of this writing, ocean freight rates for containers are increasing regularly as a response to COVID-19, the blockage of the Suez Canal (Ever Given), and hyper global demand for many products. This increase impacts those who ship by FCL (Full Container Load) versus those who ship by tankers who often own or long-term lease the vessels.

Figure 34 - Cargill ocean transportation



Source: Cargill. Available at: <https://www.cargill.com/transportation/our-business>

As illustrated above, Cargill handles 195 million tons of cargo per year on their own fleet of vessels.

Wilmar, the leading global actor in the palm oil trade, has a fleet that provides partial support for their total shipping requirements while the balance of our requirements is met by chartering-in third-party vessels. As of 2019, they owned and controlled tankers / dry bulk vessels with a total tonnage of about 2.5 million MT.

3.4.3. Traceability importance and execution

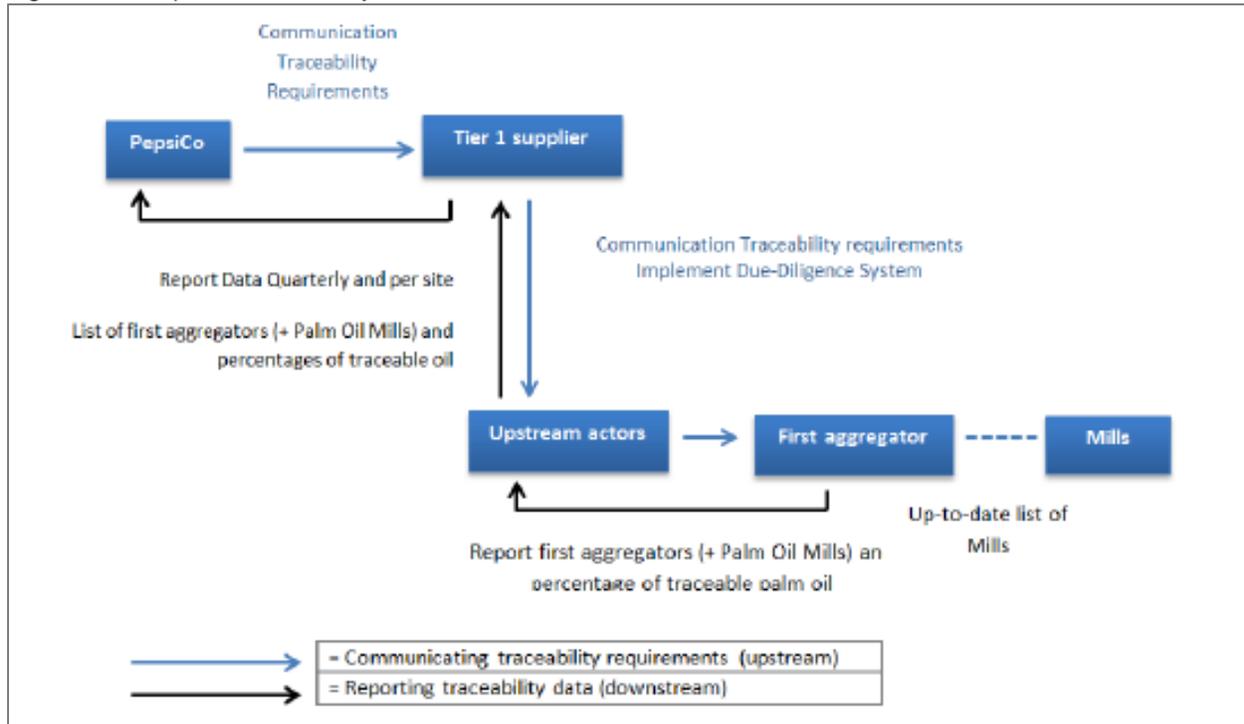
To move palm oil from a strict commodity – defined as a product from one origin that is identical to product from another origin with the same quality specifications – it is critical that the product should be traded from farm to consumer. Without a clearly defined and 100% flawlessly executed traceability system, the certification efforts are invalidated in the process and of no value to the supply chain and end customers.

Traceability programs are in place to follow certified products from farm to consumer but are also utilized in the event of a contamination or recall. The traceability program provides the users with confidence that the product that they are selling meets the specifications, and environmental and social standards. It also provides the buyer with a clear path to identify where a problem entered the system leading them to remedying the problem and adjusting their system to avoid future problems.

Without a solid traceability system in place, it is easy to utilize the certification for one value chain to be utilized with another. For example, a farmer may have 10 hectares of certified land and 10 hectares of non-certified land. Without a valid tracking system in place and practice, it is possible that unintentionally or intentionally yields of the certified land could be 2 times the yields of the uncertified land as the farmer blends product from the two farms to increase the yields and profits on their certified lands. To avoid this, a solid traceability program is required. There is currently extensive work on establishing blockchain traceability for food products.

An example of the traceability flow for palm oil in the PepsiCo system is indicated below.

Figure 35 - PepsiCo traceability data flow



Source: PepsiCo. Available at: [https://www.pepsico.com/docs/album/esg-topics-policies/pepsico-palm-oil-traceability-protocol-\(1\).pdf?sfvrsn=55daa7e4_6](https://www.pepsico.com/docs/album/esg-topics-policies/pepsico-palm-oil-traceability-protocol-(1).pdf?sfvrsn=55daa7e4_6)

Cargill is among 23 suppliers of palm oil to PepsiCo. In order to be attractive to PepsiCo, they need to have a reliable traceability program. Therefore, Cargill set a goal to be 100% traceable to the farm level in 2019. On their efforts to be fully traceable, 2019 Cargill’s Progress Report reflected the its traceability scores below.

Figure 36 - Cargill traceability scores in 2019

Traceability scores



Cargill | Sustainable Palm Oil | 2019 Progress Report

Source: Cargill. Available at: <https://www.cargill.com/doc/1432164654170/cargill-2019-palm-report.pdf>

As you can see from this table, the level of traceability is dictated by the demand of the consumers with 100% traceability at the mill level for the developed and demanding markets of Europe, US, Russia, Malaysia, Mexico, and New Zealand. For markets with less social and economic emphasis on traceability and sustainability, the percentage is less with China being at 56% in the 4th quarter of 2019. Therefore, if one plans to enter the US market and compete with, or even be a supplier to Cargill, they will need to have complete and certified traceability.

The heading on Cargill’s 2017 report states: *“In 2014, Cargill committed to a 100 percent traceable, transparent, and sustainable supply chain by 2020. In 2017, we made progress in each of the four components of our implementation plan, including traceability, supplier engagement, sustainable plantations and smallholder programs.”*

Their objectives include key indicators in the following areas:

1. No deforestation of high conservation value (HCV) lands or high carbon stock (HCS) areas.
2. No development on peat
3. No exploitation of rights of indigenous peoples and local communities
4. The inclusion of smallholder farmers

Cargill fell short of these goals, and therefore the emphasis remains. However, at the end of 2017, 96% of Cargill palm was sourced from traceable mills and 55% of the product is traceable back to the plantation. In order for Sierra Leone to compete, they need to meet or exceed this level of traceability.

Falling short of these objectives, Cargill set their 2018 objectives in the areas indicated in the figures below.

Figure 37 - Cargill 2018 palm sustainability objectives



Source: Cargill. Available at: <https://www.cargill.com/doc/1432119015231/palm-oil-progress-report-2017-and-2018-action-plan-pdf.pdf>

3.5. Traders and Refiners/Processors

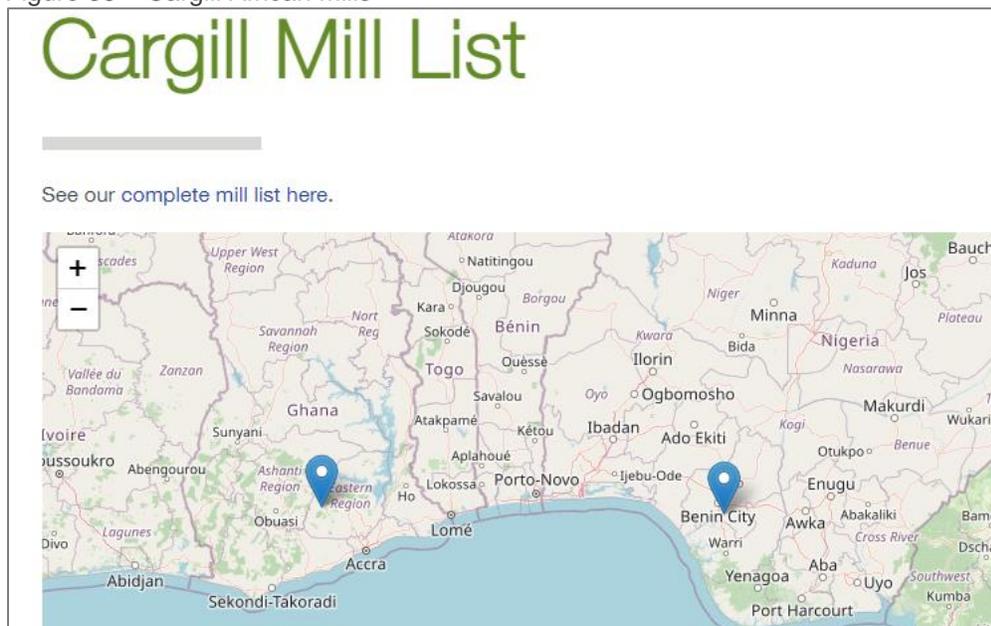
3.5.1. Cargill

Cargill is a privately owned (family) company founded in 1865 with corporate sales exceeding \$114.6 billion with global operations. Despite the fact that it would be nearly impossible for a modern US consumer to go a day without consuming, wearing, or using a product that Cargill did not have some hand in its growing, harvesting, processing, transportation or further adding value to raw materials, most consumers have never heard of Cargill. Because of the nature of their business, coupled with the fact that they are privately owned, Cargill is very closed and secretive about their business. In trading commodities, letting others know of their position (long (surplus) or short (deficit) allows their competitors to position their operations accordingly. In addition to the need for secrecy in trading, Cargill avoids the press to “fly below the radar” to avoid bad press, like they often receive with palm oil with respect to the rainforest and labor issues.

Cargill is an actor at all levels of the value chain with 5 plantations, 11 mills, 19 refineries, 21,908 smallholders and 1,558 third party mills in 2017 (primarily SE Asia) to consumption (globally) puts out an annual palm oil report. Their vertical integration puts them in a position that smaller players cannot achieve.

Their palm oil operations are centered in Indonesia and Malaysia. However, they have two operations in Africa – Ghana and Nigeria. These operations are in place to serve the local market and to provide Cargill with a foothold on the large African market and production potential.

Figure 38 – Cargill African Mills



Source: Cargill. Available at: <https://www.cargill.com/page/cargill-mill-locations>

On November 11th, Cargill US announced the Cargill expansion of segregated sustainable palm oil capacity in North America at their North Carolina facility. This will allow them to sell to customers who require Roundtable on Sustainable Palm Oil (RSPO) certified (see certification section below) palm oil while allowing others who are not requiring these standards to purchase other products, at a lower price due to the lower costs associated with a non-certified product.

In September, RSPO had reported that sales of certified palm oil had increased by 13% in 2019, Cargill said. Cargill facilities are fully HACCP, GMP B2, ISO 9001:2008, ISO 14001:2004, ISO 22000:2005, FSSC 22000, Kosher and Halal certified.

3.5.2. Bunge

Bunge Borne was founded in 1818 and is now headquartered in St. Louis, Missouri, but incorporated in Bermuda for tax reasons. Their annual sales in 2020 were nearly \$40 billion USD down from nearly \$46 billion in 2018.

While Bunge is a publicly traded company, the majority of the shares remained a privately held company of 180 shareholders (including the longtime controlling family interests).

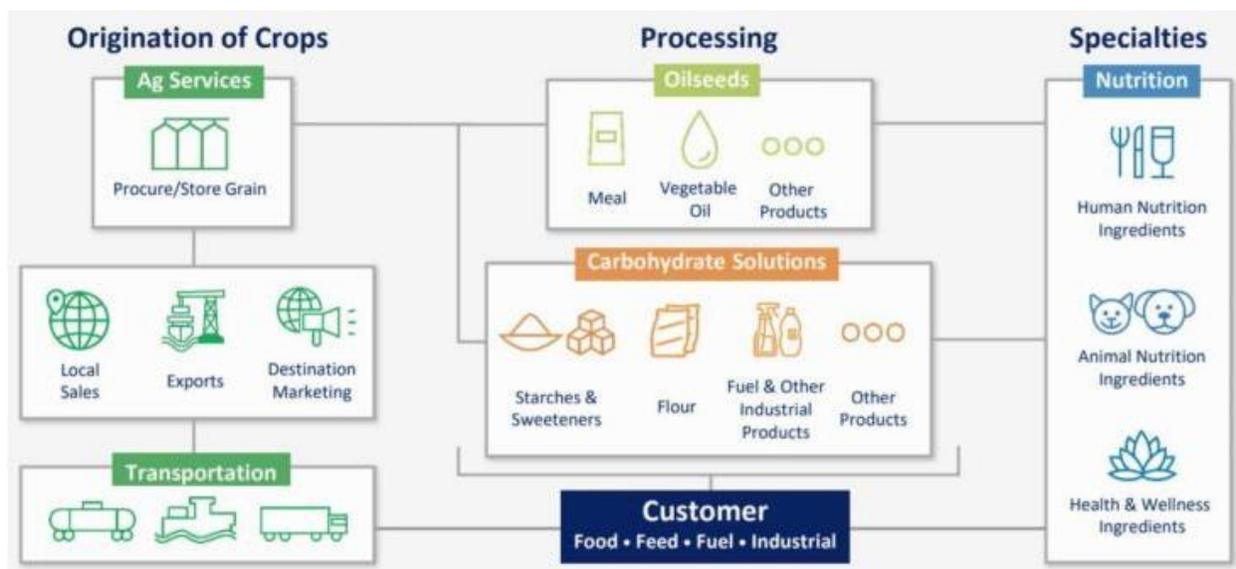
3.5.3. Archer Daniel Midland (ADM)

ADM is a publicly traded agri-business with a global presence.

ADM exclusively offers Roundtable on Sustainable Palm Oil (RSPO) certified sustainable palm oil to North American customers beginning in 2015. ADM is also working with Wilmar International Limited to provide fully traceable, sustainable palm oil that meets the RSPO Mass Balance standards.

ADM has palm distribution and processing facilities in Lincoln, Nebraska; Quincy, Illinois; Valdosta, Georgia and New Orleans that offer certified sustainable palm oil.

Figure 39 - Archer Daniel Midland value chain



Source: Archer Daniel Midland. Available at: <https://www.adm.com/careers/jobs>

3.6. Food service companies

As noted on the list of palm oil users in the US, two food service companies are major consumers of palm oil – McDonalds #7 and Yum! Brands #4 (Yum! operates the brands KFC, Pizza Hut, Taco Bell, The Habit Burger Grill, and WingStreet worldwide, except in China).

It can also be assumed that Walmart #6 Costco #15, and Kroger #19 (retailers) are utilizing a lot of the palm oil that they consume in their own kitchen and foodservice facilities.

Foodservice opportunities for palm oil have seen significantly increasing in recent years due to the fact that the International Food & Beverage Alliance (IFBA) is aiming to phase out industrially produced trans-fats (iTFA) from global food supply by 2023. In 2007, NYC was the first of its kind to target trans fats in restaurants, bakeries, and other food-service establishments. The ban prohibits restaurants from serving foods or using ingredients that contain 0.5 grams or more of trans fats per serving.

As stated in the Union for Concerned Scientists Blog Palm oil steps up to the plate: “As companies have begun to reduce their reliance on partially hydrogenated vegetable oils in response to forced labeling and health concerns, palm oil has been a preferred replacement oil for food manufacturers because unlike most

vegetable oils, is a solid at room temperature. This is due to the high degree of saturation of palm oil, which also has implications for health.”¹⁴

The figure below, is an aid from the Malaysian Palm Oil Council (MPOC) that helps to promote the benefits of palm oil.

Figure 40 - Health benefits of palm oil

Nutritional Benefits & Health Facts

Palm Oil ≠ Coconut Oil or Palm Kernel Oil

- ✓ Contains 50% Unsaturated fats
50% Saturated fats
- ✓ Cholesterol-free
- ✓ Beneficial cholesterol modulating effects
- ✓ Rich source of carotenoids and vitamin E & pro-vitamin A
- ✓ Easy digested, absorbed and utilized as energy
- ✓ No need for hydrogenation



 Malaysian Palm Oil Council  The Professionals in Kitchen Training  17

Source: Malaysian Palm Oil Council

This creates an opportunity for palm oil due to the fact that palm oil is trans-fat free oil that can be the primary choice to replace partially hydrogenated vegetable oils in the market. The IFBA members include world-wide known brands such as Nestle, Unilever, McDonald’s, Ferrero, PepsiCo, and The Coca Cola. This push can be beneficial for palm oil at the foodservice level.

This can be a benefit to the overall consumption of palm oil; however, the foodservice industry does not provide significant niche opportunities as consumers are often not aware of the social and environmental standards of the products that they consume in the foodservice setting. While some restaurants feature organic certified products, that is a small niche where trans-fats may not be a significant counterpart to the organic certification.

¹⁴ *FDA Bans Trans Fats: What Does This Mean for Palm Oil Consumption in the US?*, Union of Concerned Scientists Article available at: <https://blog.ucsusa.org/lael-goodman/fda-bans-trans-fats-what-does-this-mean-for-palm-oil-consumption-in-the-us-761/>

The US foodservice industry is dominated by Sysco Foods with \$52.9 billion in Fiscal 2020, a decrease of \$7.2 billion versus the prior year. Gross profit decreased 13% to \$9.9 billion, adjusted operating expense decreased 6%, and adjusted operating income decreased 37% to \$1.7 billion. This reduction of income and profit is a result of the decrease in on-premises meals as a result of COVID-19.

Figure 41 - Foodservice distributors in US

Company	City	State	Distribution Centers	Phone
SYSCO	Houston	TX	125	(281) 584-1390
U.S. FOODSERVICE	Columbia	MD	100	1-847-720-8000
PERFORMANCE FOOD GROUP	Richmond	VA	25	(804) 484-7700
GORDON FOOD SERVICE	Grand Rapids	MI	12	(888) 437-3663
FOOD SERVICES OF AMERICA	Seattle	WA	11	(206) 933-5000
REINHART FOODSERVICE, INC.	La Crosse	WI	9	(800) 332-8170
SHAMROCK FOODS CO.	Phoenix	AZ	2	(602) 233-6400
MAINES PAPER & FOOD SERVICE, INC.	Conklin	NY	5	(607) 779-1200
BEN E. KEITH FOODS	Fort Worth	TX	6	(817) 759-6000
THE IJ COMPANY	Knoxville	TN	3	(865) 970-7800

Source: Abasto. Available at : <https://abasto.com/en/advice/food-distributors/>

US Foodservice and Food Services of America merged in September 2019 providing a corporation with about \$22 billion USD in 2020.

When a consumers consume a meal at a foodservice venue, they do not know the social aspects of a product, and they eat what the buyer chose for their ingredients. Therefore, retail consumer preferences are overshadowed by the buyer/chef's demands for price and quality. The foodservice buyer still needs to be convinced about the social and environmental aspects of the product, but that is a targeted marketing effort versus a retail market campaign.

None of the companies listed above are direct importers of palm oil. They each, however, have their own standards for procurement and Corporate Social Responsibility (CSR) relating to palm oil. Importers looking to work with these distributors must comply with the standards of the distributor, who in turn, complies with the standards of their customers from Marriott and Fairmont hotels to schools and prisons.

PART III: US PALM OIL – PRODUCT REQUIREMENTS

4.1. Standard of identity

“Standards of identity for food are mandatory requirements that are set by a governing body to determine what a food product must contain to be marketed under a certain name in allowable commerce”¹⁵.

¹⁵ Wikipedia https://en.wikipedia.org/wiki/Standards_of_identity_for_food

The **United States Food and Drug Administration** (FDA or **USFDA**) defines standards of identity as standards that “provide a description of the food, specify its appropriate name, and identify the ingredients that may be used in the manufacturing process and those that must be included in the final product”¹⁶.

The globally accepted standards of identify for crude palm oil (CPO) is documented in the United Nations Codex Standards as follows:

- Free Fatty Acid : $\leq 5\%$ (which means Free Fatty Acid less than or equal to 5%)
- Moisture: $\leq 0.1\%$ (which means moisture of less than or equal to 0.1%)
- Dirt: $\leq 0.02\%$ (which means that dirt in the sample must be less than or equal to 0.02%)

Large oil traders are able to blend products with different analysis to ensure that the product that they sell meets the standards. There is little value in the trading company selling a product that is “better” than these standards. For example, selling a product that has 0.01% Dirt (also known as foreign matter) would be leaving 0.01% “too pure” of product. They can blend foreign matter to increase the foreign matter (which is free) and sell a product that has 0.01% free dirt. In commodities when you are selling millions of lbs of product, 0.01% adds up to significant positive cash.

4.2. Essential standards for palm oil in the US market

The better tailored the standards are to the niche that the company’s product fits into, the better premium that the company can achieve for their product. In some cases, the standards do not add to the price buyers are willing to pay but simply makes it easier to sell and is a requirement by the buyer.

Without the following certificates the effort is a non-starter with most buyers:

- Hazard Analysis and Critical Control Points (HACCP)
- Global GAP
- ISO 9001

A review of the International Trade Center (ITC) Standards Map website shows that there are at least ten standards that could be applied to palm oil from Sierra Leone to the US¹⁷. These standards are the following.

Table 5 - Essential standards to access the US market

Standard name	Description	Logo
EcoVadis	EcoVadis operates the first collaborative platform providing sustainability ratings and performance improvement tools for global supply chains. EcoVadis delivers simple and reliable supplier sustainability scorecards covering 190 purchasing categories.	
Food Safety System Certification 22000	FSSC 22000 contains a complete certification scheme for Food Safety Management Systems and is fully based on the international, independent standards: ISO 22000, ISO 22003 with sector specific technical specifications for PRP's and additional scheme.	

¹⁶ US FDA – Standards of Identity. Available at: <https://bakerpedia.com/processes/fda-standard-of-identity/>

¹⁷ Information accessed on Standards Map on the 02.10.2021. These standards can be consulted at <https://www.standardsmap.org/en/home>

<p>GLOBALG.A.P. Risk Assessment on Social Practice (GRASP)</p>	<p>The GLOBALG.A.P. Integrated Farm Assurance (IFA) Standard covers the certification of the whole agricultural production process of the product from before the plant is in the ground (origin and propagation material control points).</p>	
<p>International Labor Organization Labour Standards</p>	<p>The International Labour Organization (ILO) is a specialized agency of the United Nations, which promotes decent and productive work, focusing on freedom, equity, security, and dignity. Founded in 1919, the ILO has created labour standards.</p>	
<p>Sedex Members Ethical Trade Audit - SMETA Best Practice Guidance</p>	<p>The Sedex Members Ethical Trade Audit best practice guidance (SMETA BPG) is a compilation of social audit best practices to help auditors achieve the consistency needed for social audits to be widely accepted by retailers and brands.</p>	
<p>Sustainability Assessment of Food and Agriculture systems - SAFA</p>	<p>The FAO Guidelines: Sustainability Assessment of Food and Agriculture systems (SAFA), provide an international reference for sustainable management, monitoring and reporting in food and agriculture at all levels of the supply chain.</p>	
<p>Verified Carbon Standard - VCS</p>	<p>The VCS Program provides the standard and framework for independent validation of projects and programs, and verification of GHG emission reductions and removals, based on ISO 14064-2:2006 and ISO 14064-3:2006.</p>	

Source: ITC Standards Map. Available at: www.standardsmap.org

4.3. Other sustainability standards

4.3.1. Roundtable on Sustainable Palm Oil (RSPO)

The RSPO is a voluntary organization (NGO) that certifies palm oil as sustainable. They have over 4,000 members globally and as of this writing, in mid-2020, they claim to have 13% of the world’s palm oil certified through their standards. Their stated objectives are as follows:

- RSPO will transform markets to make sustainable palm oil the norm
- Advance the production, procurement, finance and use of sustainable palm oil products
- Develop, implement, verify, assure, and periodically review credible global standards for the entire supply chain of sustainable palm oil
- Monitor and evaluate the economic, environmental, and social impacts of the uptake of sustainable palm oil in the market
- Engage and commit all stakeholders throughout the supply chain, including governments and consumers.



The RSPO appears to be the leading organization supported by environmentalists both inside of leading value chain actors and in the general public.

4.3.2. Fairtrade

The Fairtrade certification is a system in place to certify companies that provide a fair price to the small producers, producer organizations and agricultural workers. The standards are designed to be a holistic blend of social, economic, and environmental criteria.

The standards contain both core requirements and development requirements aimed at improvements that benefit producers and their communities.

Traders are also covered by the standards, underscoring the commitments companies and businesses must make to contribute to sustainability in their supply chains and operations.



4.3.3. Rainforest Alliance



The Rainforest Alliance (RFA) is an NGO actively engaged with promoting education and legal action to conserve the rainforest. With palm oil plantations replacing traditional rainforest lands 1.4 million hectares per year, a palm oil that is certified by the RFA as being rainforest friendly is a good endorsement for the consumers who recognize the RFA seal pictured here.

4.3.4. Sustainable Agriculture Network (SAN)

Established in 1997, the Sustainable Agriculture Network (SAN) is a global collaborative network of organizations committed to shaping the agriculture the world needs through collective impact. Their members' logos are visible in the following chart.



Figure 42 - Logos of SAN members



Source: Sustainable Agriculture Network (SAN). Available at: <https://www.sustainableagriculture.eco/our-members>

4.4. Sustainability and traceability

There are several NGOs that monitor and rate sustainability and traceability of palm oil. These NGOs perform the role of third party certifying agencies, such as a certifier for NOP, GlobalGAP or Hazard Analysis and Critical Control Points (HACCP). However, the NGOs are not impartial to their efforts as their funding comes from contributors that support their findings and calling out companies that do not comply to the standards.

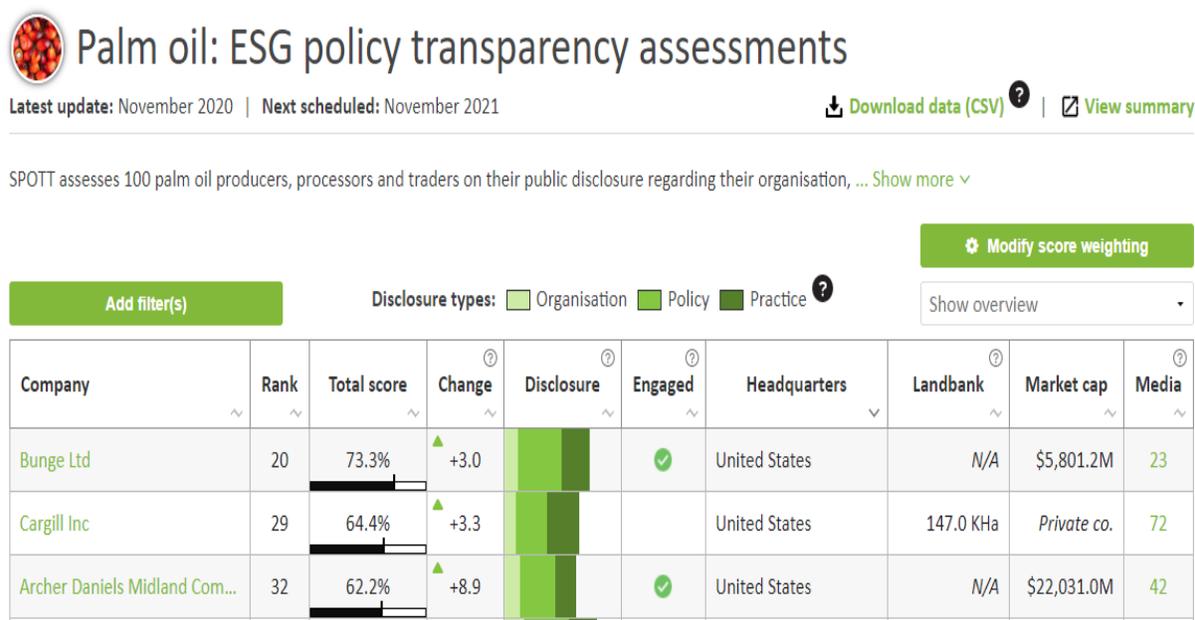
One such NGO is SPOTT – Sustainability Policy Transparency Toolkit. This is a free, online platform supporting sustainable commodity production and trade. By tracking transparency, SPOTT incentivizes the implementation of practices that support sustainability and transparency.

SPOTT assesses palm oil producers, processors, and traders on their public disclosure regarding their organization, policies and practices related to environmental, social and governance (ESG) issues. SPOTT scores the palm oil supply chain annually against over 100 sector-specific indicators to benchmark their progress over time.

Individuals and agencies inside and outside of the value chain can use SPOTT assessments to inform stakeholder engagement, manage ESG risk, and increase transparency.

SPOTT is an initiative developed by ZSL (Zoological Society of London). US Palm oil companies assessed on SPOTT are Bunge, Cargill and ADM.

Figure 43 - SPOTT assessments on palm oil producers, processors, and traders



Source: SPOTT. Available at: <https://www.spott.org/palm-oil/>

Another example of how US corporations are using the ESG standards like SPOTT to formulate and market their products is with brand owner Seventh Generation, which has a complete line of cleaning products that has extensive use of palm oil that has now purchased enough sustainable palm kernel oil certification credits to cover all of the palm kernel oil it uses in its products. In purchasing the credits, Seventh Generation is paying a premium to palm kernel oil producers that use more sustainable production and harvesting practices in order to help them develop programs and infrastructure to expand sustainable actions.

PART IV: US MARKET ENTRY STRATEGIES FOR SIERRA LEONE PALM OIL

4.1. Overview

Sierra Leone palm oil is entering the US market through small exporters serving a niche. Oftentimes this niche is diaspora from West Africa that utilize the palm oil for cooking or as an ingredient in hair care. This is primarily small shipments to small companies involved in the importation and supply of traditional products from West Africa, and often specifically Sierra Leone.

These efforts can continue but will not see a significant increase in volume as this distribution channel typically requires personal relationships and buyer existing knowledge of individuals within Sierra Leone.

Sierra Leone exporters that want to access the US palm oil market, they must:

- a. Secure environmental and social standards – certified and maintained
 - a. RSPO - required
 - b. Organic – significant value add
 - c. Fairtrade – significant value add
 - d. British Retail Consortium (BRC) – required for any product that is retail focused
- b. Find a niche – identify a reason that the buyer would answer “why in the world to buy Sierra Leone palm oil over all others.” This can be tied to the story behind the product. Shea butter has been utilizing this niche market for years with commercially produced shea butter not meeting the social and environmental standards that hand-crafted shea butter can present the consumer. Having a story about how palm oil is good for the environment, good for the people and good for the consumer is a tough sell because first, there has to be a compelling story and secondly, the story has to reach the consumer, with products available for the consumer to purchase.
- c. Once the above factors are addressed, establish an import channel which sells the product on Amazon. Spend money and effort getting publicity on the product – stories of interest to the consumers and drive them to Amazon. Hire a promotion company to promote the product to a high and visible position on Amazon.

The chart below from the SPOTT publication “Palm Oil: A Business Case for Sustainability” provides a SWOT analysis for risks of producing and marketing unsustainable and uncertified palm oil.

Figure 44 - Summary of some of the business risks linked to unsustainable palm oil production, and opportunities available for companies that improve their practices



Source: SPOTT. Available at: https://www.spott.org/wp-content/uploads/sites/3/dlm_uploads/2019/12/Palm-oil-a-business-case-for-sustainability-1.1.pdf

4.2. US imports of palm oil

The US is a large importer, processor, and user of palm oil. This is a large business which benefits from economies of scale and therefore often performs as an oligopoly with a few large players supplied by many raw material suppliers.

The US imports 1,431,786 tons and spends 1.091 billion dollars of palm oil annually as recorded through researching palm oil and palm oil fractions (derivatives) via the following Harmonized System (HS) codes:

- HS 151110: Crude palm oil - (CPO)
- HS 151190: Palm oil and its fractions, whether or not refined (excluding chemically modified and crude) – (POF)

4.2.1. US imports of Crude palm oil (CPO) - HS 151110

With total exports of crude palm oil (151110) in 2020 of just under \$1 million USD, Sierra Leone is not on record as an exporter of Crude palm oil to the US in 2020.

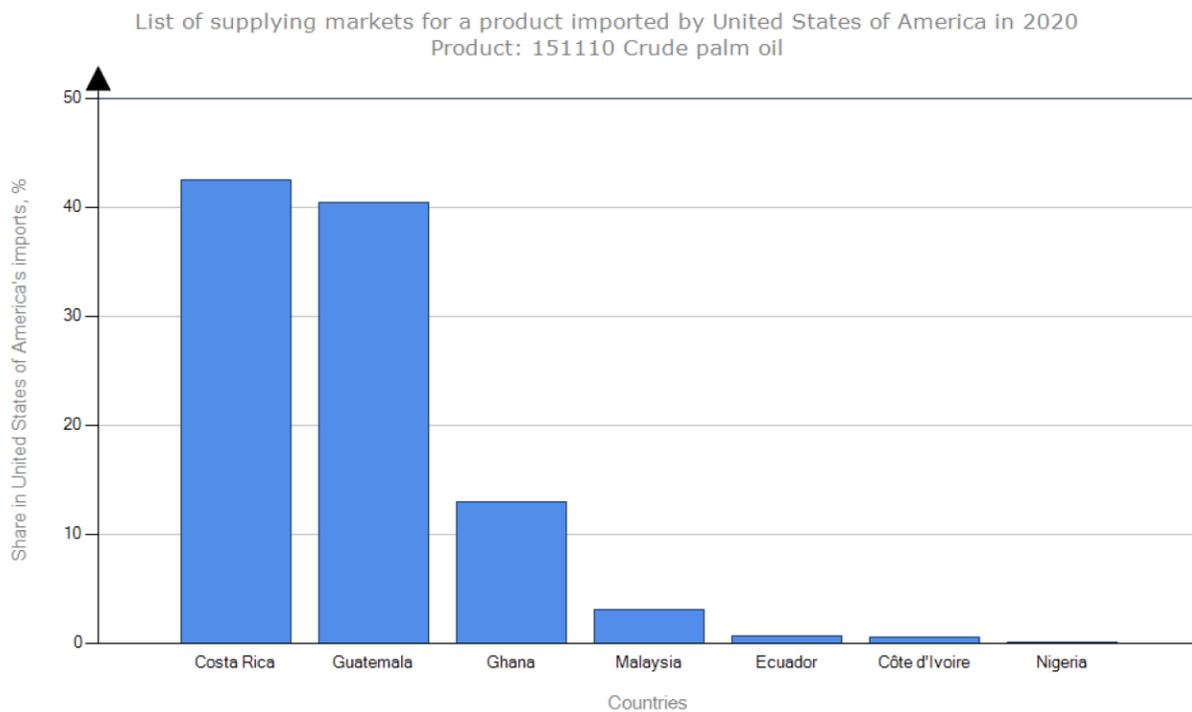
The US market reflects a 2016 – 2020 growth of 36%. It is important to note that the value of Sierra Leone exports to the US had an average price with a premium of nearly 78% of the exports from Sierra Leone globally.

CPO (crude palm oil) uses palm oil refinery to remove free fatty acid, natural pigments, odor, getting refined palm oil (RBD PO) and palm salad oil (RBD PKO). Palm oil fractionation can get different melting points of 24 degrees, 33 degrees, and 44 degrees utilized for different purposes where higher melting points are required.

Representing a small percentage of the total palm oil imports in 2020, CPO imports into the US were a just over \$13 million USD. While this number is not trivial, it takes on a role of insignificance when compared with the volume of small portion of palm oil imported of HS 151190: Palm oil and its fractions with total imports exceeding \$1.078 billion USD.

CPO imports to the US are dominated by suppliers with a regional freight and timing benefit like Costa Rica and Guatemala. Costa Rica recorded only \$21 thousand USD of exports to the US in 2020. This would indicate that Costa Rica and Guatemala do not have large industrial sized refineries. Their juxtaposition to the US market, with short transit times, puts them in a good place to supply raw materials and benefit from low freight rates and the ability to ship in FCL (Full Container Load) quantities rather than in bulk tankers or tanker containers.

Figure 45 - US importing markets under HS 151110, 2020 (in percentage)



Source: ITC Trade Map

Imports of CPO in the US has trended upwards for the last decade. The dip reflected in the chart above may be a result of COVID-19 and the fact that consumers were eating at home (minimizing foodservice

volumes) and consumers were not shopping in person for cosmetics but buying online with their common brands getting the business due to familiarity or since many consumers were on lock-down or not going to an office, perhaps cosmetic consumption overall was down in 2020.

The tables below show the Sierra Leone exporters of HS 151110 and who is buying product from them including their contact information.

Table 6 - List of suppliers in Sierra Leone under HS 151110

Supplier name	Address	Contact Information	Total Shipments	Style of Packaging
WEST AFRICA PRODUCE SL LTD	4C ROSS ROAD, CLINETOWN FREETOWN	PH: 23276255310	848	CTN/JUG/PKG

Source: ImportKey

Table 7 - List of buyers of West Africa Produce SL LTD under HS and its supply chain graphic

Buyer name	Address	Contact Information	Total Shipments	Style of Packaging
RICHWATER FOODS LLC	10531 SOUTH WILCREST DRIVE HOUSTON TX 77099 USA	PH: 2814951004	371	CTN/JUG
SOUTHWEST FARMERS MARKET	9801 BISSONET STREET SUITE U HOUSTON TEXAS 77036 USA	PH: 7137748822	474	CTN
DENCO INTERNATIONAL FOODS INC	8413 ARDWICK ARDMORE ROAD HYATTSVILLE MARYLAND	PH: 2022585571	1	CTN
NATUS VANDY INTERNATIONAL FOODS L	1644 WOODSIDE DRIVE, WOODBRIDGE, VA 2991, USA	PH: 2023912811	1	JUG
WEST AFRICA PRODUCE SL LTD	PATRICK J ODWYER 5606 BLOOMFIELD DR 02 ALEX VA 22312	PH: 2023912811	1	JUG

Source: ImportKey

WEST AFRICA PRODUCE SL LTD do sales to RICHWATER FOODS LLC, SOUTHWEST FARMERS MARKET, RICHWATER FOODS, SOUTHWEST FARMERS, and DENCO INTERNATIONAL FOODS INC.



4.2.2. US imports of Palm oil and its fractions, whether or not refined, excluding chemically modified and crude (POF) - HS 151190

The primary suppliers for the US market are Indonesia (56.9% market share in 2020) and Malaysia (35.3%). No other supplier has a significant market share in the US market with South American countries of Ecuador (1.3%) and Colombia (1.1%) coming in an almost insignificant position with less than 2.5% of the total market.

In terms of dollars average prices from Indonesia and Malaysia are a weighted 749 USD per MT versus greater than twice the price from Colombia and Ecuador at a weighted 1641 USD per MT.

The chart below reflects shipments of HS 151190 from Sierra Leone to the US and who is making these shipments.

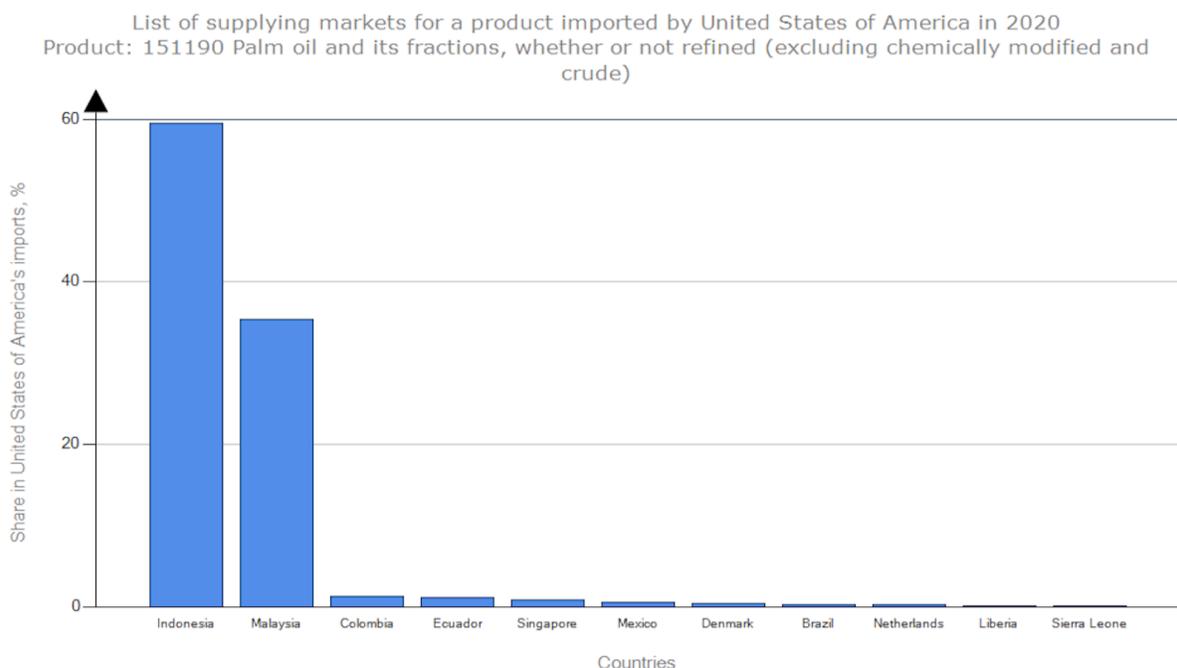
Table 8 - List of suppliers exporting from Sierra Leone to US under HS 151190

List of suppliers from Sierra Leone who supply HS 151190				
Data From ImportKey				
SUPPLIER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
AMTAISHPAT IMPORT EXPORT FOODS	WESTERN RURAL SENNEH GBANKO TOMBO FREETOWN, SIERRA LEONE	PH: 232 7792203	33	PKG/CTN
MSK INTERNATIONAL	34 JONES STREET FREETOWN, SIERRA LEONE	PH: 232 7791740	14	PKG
KOLONKALA ENTERPRISE	2 GERBER LANE MOUNTAIN CUT FREETOWN SIERRA LEONE	PH: 232 7680373	14	PKG/CTN/PCS
R Z INTERNATIONAL	14 PULTNEY STREET FREETOWN SIERRA LEONE	PH: 232 76627395	9	PKG/CTN
ADIMEX GROUP	14 SPUR ROAD FREETOWN FREETOWN	PH: 232 7914611	9	CTN
SIERRA INTERNATIONAL FOOD	47 GUARD STREET FREETOWN FREETOWN SIERRA LEONE	PH: 232 7860980	6	CTN/PCS
JAFFA ENTERPRISE	43 FOURAH BAY ROAD FREETOWN, SIERRA LEONE	PH: 232-77709911	5	CTN
AFRICAN FOOD SUPPLIES	56 WILKINSON ROAD FREETOWN, SIERRA LEONE	PH: 232-79502959	4	PKG
A S B SABOUYA ENTERPRISE	24 GARRISON STREET, FREETOWN SIERRA LEONE	PH: 232-79760316	3	PKG
ALIE BAI KAMARA	7 OFF FREETOWN ROAD LUMLEY FREETOWN SIERRA LEONE		2	PCS
MAHDIYA ENTERPRISE	32 GODERICH STREET FREETOWN, SIERRA LEONE	PH: 232-77774986	2	CTN
BAYAGUI ENTERPRISE	24 ECOWAS STREET FREETOWN SIERRA LEONE	PH: 232-80650223	2	BOT
ZION ORGANIC FOODS AND GENERAL ME	2 SANDY DRIVE, OFF PENINSULAR ROAD FREETOWN, SIERRA LEONE	PH: 232-88484308	2	CTN
BANGSMANS ENTERPRISE	358 BAI BUREH ROAD CALABA TOWN FREETOWN, SIERRA LEONE	PH: 23276866140	1	PKG
TANUE INTERNATIONAL	9 HOWE ST FREETOWN FREETOWN SIERRA LEONE	PH: 232-76730603	1	PKG

Source: ImportKey

As a supplier of 151190 POF to the US in 2020, Sierra Leone came in as the #11 supplier to the US market with just under \$1 million USD at \$924 thousand USD for a total of 642 MT at an average price of \$1,439 USD. Sierra Leone is the number two African country behind Liberia with just over \$1 million USD in purchases and ahead of Nigeria by a factor of two.

Figure 46 - US importing markets under HS 151190, 2020 (in percentage)



Source: ITC Trade Map

4.3. US customs codes for palm oil products

Although the Harmonized System (HS) 6-digit codes used to identify palm oil products are the same across the world, custom offices in the US and Sierra Leone use more specific yet different product codes, called national tariff lines, to further define the product exported/imported for the application of customs duties¹⁸.

Table 9 - Palm oil – National tariff line codes in Sierra Leone and in the US

HS 6	National Tariff Line (NTL) code	Description
151110 - Crude palm oil	Sierra Leone National tariff line codes	
	15111010	Crude palm oil: for the manufacture of soap
	15111090	Crude palm oil: other
	US National tariff line codes	
	1511100000	Palm oil and its fractions, crude, not chemically modified
151190- Palm oil and its fractions, whether or not refined (excluding	Sierra Leone National tariff line codes	
	15119010	Palm oil and its fractions, whether or not refined (excluding chemically modified and crude): put up for retail sale in packings with a net content of 5 litres or less

¹⁸ “[The national tariff line] refers to the classification codes of goods, applied by individual countries, that are longer than the 6-digit level of the Harmonized System (HS). Tariff line codes and the corresponding product descriptions define the products at the most detailed level in the country. This detailed level can differ from one country to another since countries are free to introduce national distinctions for tariffs and many other purposes.

The national tariff line codes are based on the HS but are longer than 6 digits.” From ITC Trade Map – Glossary.

chemically modified and crude)	15119090	Palm oil and its fractions, whether or not refined (excluding chemically modified and crude): other
	US National tariff line codes	
	1511900000	Palm oil and its fractions, refined but not chemically modified

4.4. Import tariffs applied by the US

The US apply 0% import tariffs to palm oil products from all the members of the WTO agreement (of which Sierra Leone is a member since 1995)¹⁹.

The challenge for Sierra Leone palm oil is therefore not related to import tariffs.

If the Sierra Leone palm oil is from a certified HACCP facility and is labeled properly (see next section), there are no significant constraints on export of palm oil to the US.

4.5. Labelling requirements

The label of the product must comply with US Food and Drug Administration (FDA) requirements for all food and cosmetic products which includes the following factors:

- Since palm oil is not considered hazardous, there are no regulated or special labeling requirements relating to handling of the product.
- All products should be accompanied with a Manufacturer Safety Data Sheet (MSDS – see Appendix 28 – Material Safety Data Sheets (MSDS): Example) document (with the shipment or on file with the buyer and manufacturer.)
- Labeling according to EU Classification: Not dangerous, no special label is required GHS: No signal word, pictograms, hazard, or safety phrase required. US: Not regulated, no special labeling required.
- The labeling of food and cosmetic products in the US is regulated by the Code of Federal Regulations (CFR) Title 21, Volume 2, Revised April 1, 2020 – 21CFR101.4.²⁰
- If an exporter is packing product for direct consumer sales (retail or foodservice) where product is not further modified or packaged, it is critical that they have a label attorney review the label, or at a minimum the buyer, importer or distributor should approve the label before production of the label and shipment.

Labeling will also be influenced and controlled by the standards that the product achieves and is certified, for example RSPO, ISPO, Palm oil done right etc.

The image below is an example of a drum shipment from AAK in New Jersey to a company in Chicago, which includes the following elements:

- Producer
- Date of manufacturing
- Production lot
- Release # - a control number
- PO# - the buyers Purchase Order number so that they can clearly identify the product within their system.
- Product description

¹⁹ For more information on import tariffs applied By US to palm oil from Sierra Leone see ITC Market Access Map at <https://www.macmap.org/en/query/customs-duties>

²⁰ Available at: <https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?fr=101.4>

Figure 47 - Drum shipment from AAK in New Jersey to a company in Chicago



Source: Moose Trading LLC. Available at: <http://moosetrading.com/products/palm-kernel-palm-oil-non-hydrogenated-cocoa-butter-sub-55-gallons-cebes-29-02nh>

If a product is for retail food consumption, the following example provides a template for contents required on a label.

An interesting point to note on this label is that it states “Made in USA” while palm oil is not produced in the US. This is allowed because the manufacturer, which may be Bio Nutrition Inc. or a copacker packing for them, added value to the product and packed it in the US. This statement provides a level of confidence for the US consumer, who would be reluctant to purchase a product that is not produced in the US – or a country that they are confident in the food sanitation requirements – like Sierra Leone.

Figure 48 - Example of US label for pal oil products



Source: Bio Nutrition (bionutritioninc.com). Available at : <https://www.netnutri.com/red-palm-oil-15fl-oz>

4.6. Packaging for shipments to the US

Large producers either own or charter bulk liquid vessels to transport product from their first processing mill to their destination country and appropriate in-country mills for further processing.

Producers with smaller volumes, shipping to buyers without port terminals, utilize either drums or Intermediate Bulk Containers (IBCs) and either bulk bins or bladder in a container. These means of shipment are more expensive per liter/kg than bulk but offer the smaller exporter and user a means to transport in a semi-processed format.

Palm oil shipments are not regulated by International Maritime Dangerous Goods (IMDG) Code or the US Department of Transportation as it is classified as a non-hazardous good, and therefore the container utilized for shipment is open to the capabilities of the exporter and the demands of the importers.

Therefore, as documented in the import bill of lading records, US buyers purchase palm oil in a wide range of containers from cartons and bladders to drums and semi-bulk containers and bulk vessels.

The package that exporters provide to their customers will be influenced by the following:

- Economics - the larger the container, the lower the unit cost for packaging
- The buyer's use, volume and handling capabilities
- The niche level and traceability level of the product – lot identity requirements
- The exporters capabilities – however, these need to be adjusted to meet the requirements of the targeted or accepting market.

4.7. Possible market entry points

This report (and its Appendixes) provide details on companies that have in the past imported palm oil, from Sierra Leone and other origins. Exporters and export support agencies should contact each of these companies to determine if there are hurdles that are preventing them from importing additional or initial shipments of palm oil from Sierra Leone. Contacting these companies should be an initial step in developing an export program, either as a company or export support agency.

4.7.1. Events and Trade Shows

The US has multiple tradeshows, virtual or actual, that can help the exporters understand the US market and establish initial contacts. These shows include:

- Institute of Food Technology (IFT) <https://www.iftevent.org/>
- Natural Products Expo <https://www.expoeast.com/en/home.html021>
- Supply Side Expo – West <https://west.supplysideshow.com/en/home.html>
- NYSCC Expo 2021 | New York Society of Cosmetic Chemists (exhpo.com) <https://exhpo.com/int/nyscc/>
- Cosmoprof Las Vegas | B2B Beauty Trade Show | August 29-31 2021 - Cosmoprof - The leading B2B Beauty Trade Show in the Americas <https://cosmoprofnorthamerica.com/>

Attending these events as a visitor will provide the producer, processor, and exporter with an overview of opportunities, challenges, trends, and a network for the US market.

4.8. SWOT analysis

Based upon available research under the scope of this assignment, the following SWOT analysis is provided.

4.8.1. *Strengths*

- Abundant arable land inside of Sierra Leone to convert to palm oil with some reports stating that arable land usage is currently less than 40%.
- Tradition of palm oil use and production
- “Wild” palm oil from trees that are not on a plantation that has replaced the rainforest but rather trees that are part of the rain forest fauna could be utilized to develop the “story” behind Sierra Leone palm oil
- Cheap labor

4.8.2. *Weaknesses*

- Sierra Leone is currently a net importer of palm oil and the country has limited processing capacity
- Price of domestic product is either too high compared to imports or insufficient product is available to compete with low priced imports from Malaysia or Indonesia
- Sierra Leone processors are focused on the domestic market, and the key multinational palm oil processors and exporters are not too active in Sierra Leone.

4.8.3. *Opportunities*

- Small scale producers meeting niche market demands – having all necessary certification and expanding upon that to be Fairtrade, non-GMO, and other social standards.
- Meeting standards that the big producers are unable or unwilling to meet
- Having a “story” that the socially and environmentally conscience consumer supports
- The health benefits of palm oil can be utilized and if something could be identified where Sierra Leone oil is “better” in one factor or another that would be a great opportunity – better Omega oil balance for example.

Entrepreneurs taking steps to capture niche markets

See example in Appendix 9 about a small producer who purchased five sets of palm oil presses from the Doing Factory in China. That farmer, with 200 ha, is looking to utilize his own presses to circumvent having to work with the large processors. It is unclear what his target market is from the data we have found; however, this type of entrepreneur with a niche may be able to enter the US market for niche products based upon the story they have of “taking on” the big companies.

4.8.4. *Threats*

- Inability to meet/exceed social and environmental standards
- Logistics – currently ocean freight rate for containers is going crazy with rates three times or higher than they were 6 months ago. This puts container shipments at a significant disadvantage over industrial bulk shipments.

4.9. *Recommendations for Sierra Leone exporters of palm oil to the US market*

- **Assess the production, processing, and export capabilities:** Utilize the data presented in this

report to perform a SWOT (Strengths, Weaknesses, Opportunity, and Threat) analysis of local capabilities and determine actions to achieve success in the US market. Identify and develop a niche market perhaps building upon a “wild” crop (that is a part of the natural fauna and ecosystem) versus a crop that sacrifices the rainforest. Contact existing importers and work with them in understanding their specific requirements

- **Get certified:** Exports, and good corporate and product management begins with certification. Without HACCP, not only is exporting to the US impossible, but it also exposes the company to serious sanitation issues. In addition to HACCP, GlobalGAP should be achieved and enforced. If possible, get organic, non-GMO and Fairtrade certification. Work to get appropriate sustainability certification and standards working with targeted customers to achieve standards that they require.
- **Identify your niche market:** Due to the many variables involved, it is impossible to identify a targeted customer in the US market without doing a full assessment of the exporting companies’ capabilities. Based upon what is known of the US market and what has been deducted from initial research in the global market, it can be recommended that Sierra Leone exporters identify a niche in the market that they can fill. They do not have economies of scale on their side when competing with large exporters for big volumes; however, they can use their small size, craftsmanship in production (small batch), ability to produce products specifically to meet buyer demand, to their advantage. The producers must find their competitive and comparative advantage and identify a niche that fits their capabilities.

Information Box: US buyers of palm oil

Through access to US Customs and Border Patrol import bill of lading data, the research team has prepared summary information on all imports into the US. This can be found in Appendix 24 – Top buyers of suppliers of Palm oil and its fractions, whether or not refined, but not chemically modified : Crude oil (HS 151110).

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Appendixes

Appendix 1 – Importers

List of importing companies in United States of America for the following product

Product category : Oils, edible

Company name	Number of product or service categories traded	Number of employees	Country	City	Website
Agro Food Groups	9		United States of America	Austin	
Euroamericana Inc	14		United States of America	Hayward	http://www.euroamericana.com
Oils Of Paicines	2		United States of America	Paicines	
Winterhill	2		United States of America	Placerville	http://www.winterhillfarms.com

Source: ITC Trade Map

Appendix 2 – Palm oil products

Palm oil is the main commercial product, but local populations use it daily and in several ways:

- **Crude palm oil (CPO):** this is the oil extracted from the fruit flesh. As one of the main sources of lipids in food, it is the most valuable oil palm product. Depending on the variety, there are different kinds of palm oil, resulting in different prices:
 - “red palm oil”: it is the local population’s favorite oil. This oil is extracted from Dura fruit. It is deep red in color and has a sweet taste. . Red palm oil is the richest dietary source of beta-carotene, a precursor of vitamin A, which is an essential nutrient to prevent night blindness and promote growth. In developing countries, vitamin A deficiency is a major problem among both adults and children and palm oil is a good preventive means (Boateng & al., 2016)
 - “masankay oil”: this oil is extracted from Tenera fruit. It is red but turns yellow when heated. When stored for some time, it starts to solidify instead of remaining red and fluid and must be boiled again. Masankay is mainly used to make soap.
 - “red masankay oil”: it is a mix from Tenera, Dura and Pisifera fruit. Blending may be done either during processing (mix of bunches) or before commercialization (mix of oil). When stored for several weeks, two layers will appear in the container: the yellow layer on top and the red layer below. If the production is intended for commercialization, the seller will mix it again and usually not inform the consumer about its origin. Well informed buyers say that this oil is clearer than red palm oil but in practice few people are able to distinguish between the two kinds of oil. From a taste point of view, red masankay oil is stickier in the mouth
- **Crude palm kernel oil (CPKO):** contrary to CPO, this oil is not extracted from the fruit flesh but from the kernel contained in the nut. CPKO may be used as dietary oil, but it is mainly used to make “Africana soap”. Palm kernel cake is also used as livestock feed.
- **Black soap:** this is a traditional soap used as medicine. Contrary to “Africana soap”, black soap is not made from kernel or palm oil but from spikelets that are burnt to ashes and then boiled. When water has evaporated, the blend is pounded, and suitable leaves are added to obtain therapeutic effects.

Appendix 3 – Featured advantages of palm oil

- Large amount of saturated fatty acid, good oil stability, and less prone to oxidative deterioration.
- Palm oil contains rich vitamin A (500-700PPM) and vitamin E (500-800ppm).
- The fractionated palm oil, solid fat and liquid oil separated from the solid resin, which can be used to replace the expensive cocoa butter to make chocolate. Liquid used as a salad oil, cooking or frying oil, its light and refreshing taste.
- A large number of non-fractionated palm oil used in manufacturing industries. Production of palm oil soaps can play durable foam and strong decontamination ability. Palm oil can be used for rolling tinsplate tin and aluminum foil. Therefore, palm oil is widely used in the world, catering, food manufacturing and oleo chemicals.

Clipped from: <https://www.palmoilmills.org/products/crude-palm-oil-mill/palm-oil.html>

Appendix 4 – Sierra Leone actors

- UK-based Caparo Group through the company Sierra Leone Agriculture holds a concession of 41,000 hectares, 30,000 of which would be planted with oil palm.
- Portuguese Quifel group has signed agreements with local communities for the planting of oil palm, sugarcane, and rice. A total of 40,000 hectares would be dedicated to the production of agrofuels for export.
- UK company Gold Tree plans to process oil palm fruits from both its plantations and those of local communities for the production of biodiesel. The project would involve some 30,800 hectares of land.
- The French Bolloré group through SOCFIN, signed an agreement in 2011 to develop 11,500 hectares of oil palm and rubber.
- The UK Guernsey-based Agritererra Group obtained access to about 45,000 hectares of land for oil palm.
- Singapore-based group SIVA from India, through its subsidiary Biopalm Energy, secured a deal for 80,000 hectares of oil palm plantations
- The Iranian group Sepahan Afrique received access to 10,000 hectares for palm oil and rice development.
- FELDA, a Malaysian state institution got the go-ahead to develop a smallholder oil palm scheme on 2,500 hectares.

Appendix 5 – Profit and loss forecast for Sierra Leone mill

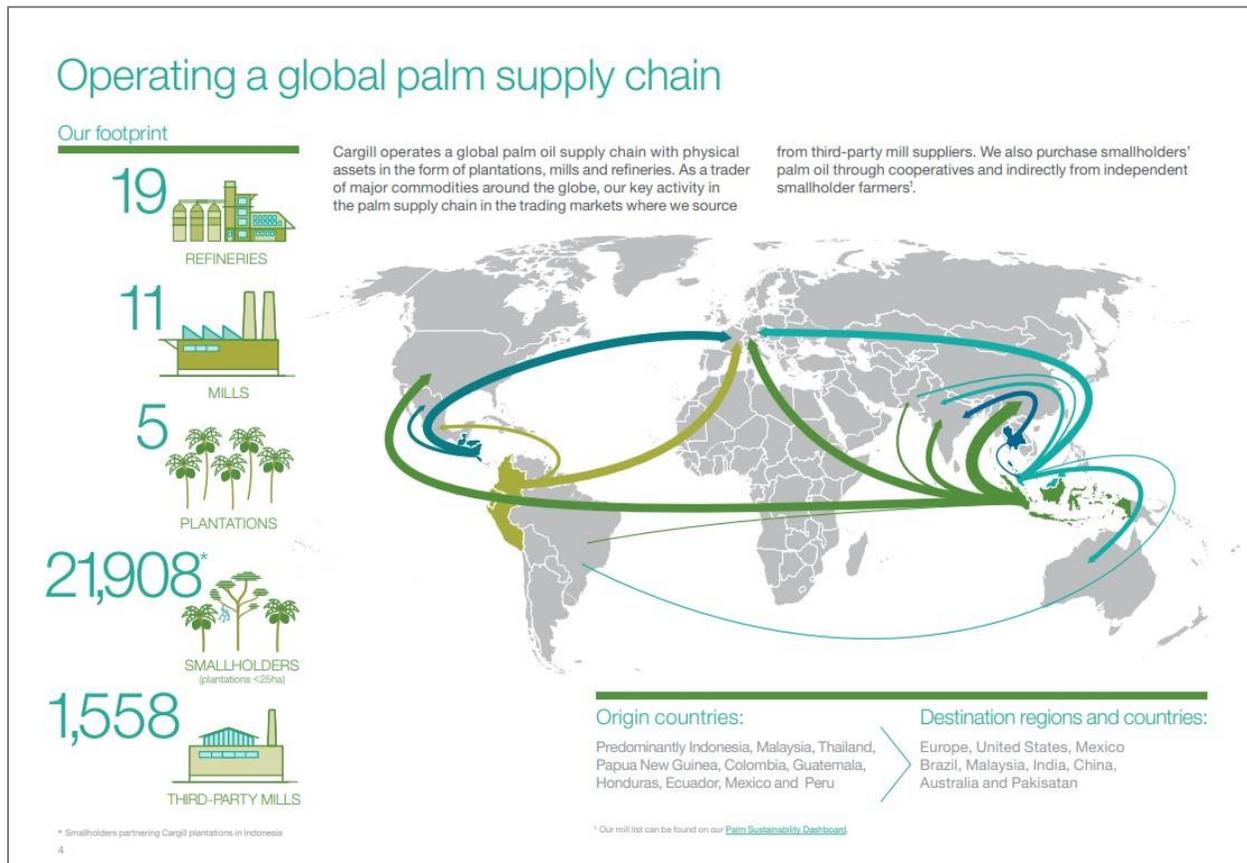
This business model provides a perspective of profitability of palm oil production in Sierra Leone.

**Astratec Africa Limited
(Palm Oil Mill Consultants)**

SL Palm Oil Business Model				
	2016	2017	2018	2019
FFB TOTAL		6,591	8,012	8,303
PRODUCTION				
CPO PRODUCTION		1,121	1,402	1,453
PK PRODUCTION		297	361	374
SOAP PRODUCTION			120	576
REVENUE				
CPO Bulk Sales		924,425	661,720	515,573
CPO in Sachets			871,560	871,560
CPO to Soap Making			29,822	141,293
Total CPO Sales		924,425	1,539,225	1,387,133
Total PK Sales			81,121	84,063
Total Soap Sales			223,920	1,074,816
TOTAL SALES REVENUE		924,425	1,844,266	2,546,012
OPERATING COSTS				
PALM OIL MILL COSTS				
FFB PURCHASING		395,476	480,715	498,150
PERSONNEL TOTAL		65,600	98,520	98,520
FFB TRANSPORT TOTAL		14,469	17,588	18,226
ELECTRICITY SUPPLY TOTAL		47,328	59,062	59,062
MILL MAINTENANCE TOTAL		21,230	26,228	26,228
MILL OPERATING TOTAL		544,104	682,113	700,186
UNIT COST CPO/Tonne		486	486	482
CPO PACKAGING OPERATING TOTAL			104,787	104,787
SOAP MAKING OPERATING TOTAL			74,740	338,167
OPERATING COSTS TOTAL		544,104	861,640	1,143,140
GROSS PROFIT		380,321	982,626	1,402,872
Gross Margin		41%	53%	55%
OVERHEADS TOTAL		41,994	62,804	71,663
DEPRECIATION TOTAL		35,674	73,103	303,671
EBIT		302,653	846,720	1,027,538
Margin		33%	46%	40%
CAPITAL EXPENDITURE				
Palm Oil Mill 1 TPH	346,509			
Palm Oil Mill 1-2 TPH UG		215,376		
Site Civil Works Phase 1	119,670			
Site Civil Works Phase 2		120,197		
CPO Packaging Plant 2TPD		145,800		
Soap Plant 2 TPD			274,800	
8T Truck Costs	20,000	60,000		
CAPITAL EXPENDITURE TOTAL	486,179	541,373	274,800	0
CASH FLOW				
Opening Position		13,821	69,505	927,331
Capital Introduced	500,000	150,000	150,000	
Revenue		991,161	1,844,266	2,546,012
Capital Expenditure	-486,179	-541,373	-274,800	
Operating Expenditure		-544,104	-861,640	-1,143,140
Closing Position	13,821	69,505	927,331	2,330,203

Source: Astratec Africa Limited

Cargill is committed to a 100 percent traceable, transparent, and sustainable supply chain by 2020. In 2017 we made progress in each of the four components of our implementation plan, including traceability, supplier engagement, sustainable plantations, and smallholder programs.

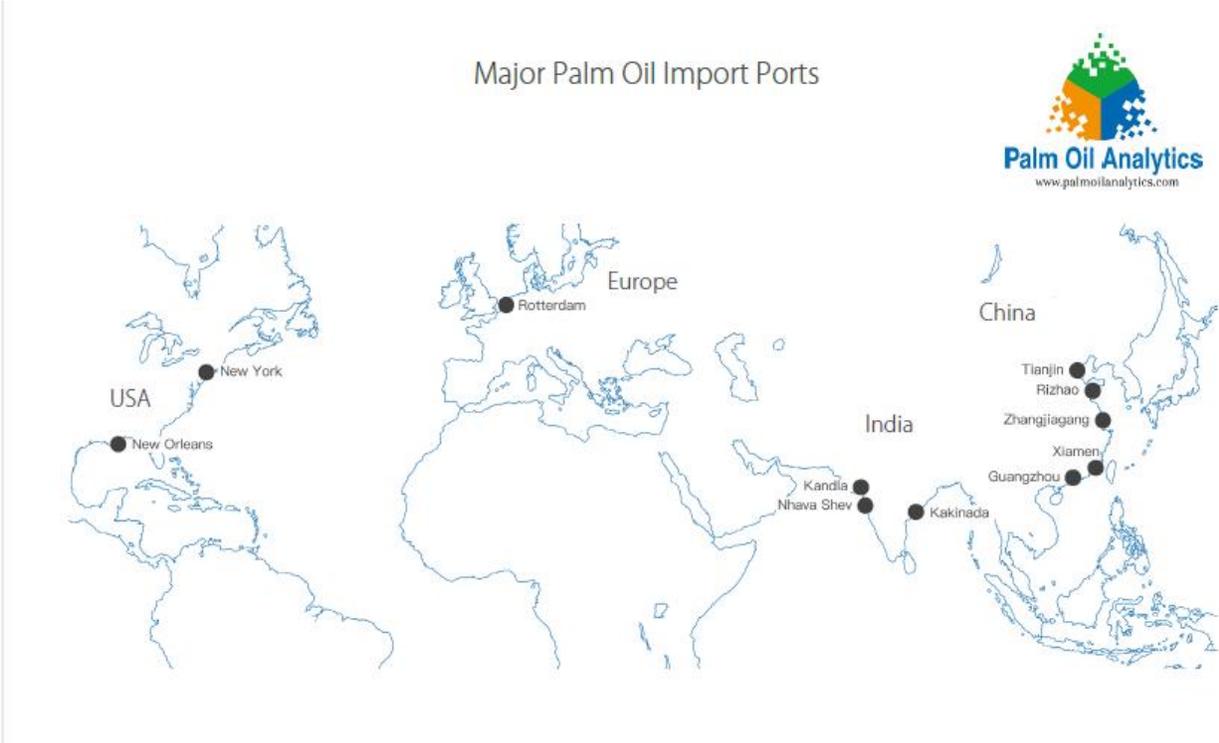


Source: Cargill

Attention Major Brands:
 Demand that Cargill's palm oil is guaranteed to be free of ties to rainforest destruction and slave labor!

Source: Cargill

Appendix 7 - Major palm oil ports



Source: Palm Oil Analytics
https://drive.google.com/file/d/1W69xZ6M_aW5guObZYhbYGLoQy4if8rsR/view

Appendix 8 – Pepsi suppliers of palm oil

1	AAK AB
2	Adani Wilmar Limited
3	AFIA International
4	Agropalma Group
5	Alicorp S.A.A.
6	Allana Group
7	Archer Daniels Midland (ADM)
8	ARMA
9	Bay Valley Foods, LLC
10	Bunge Limited
11	CaiLan
12	Cargill Incorporated
13	COFCO Corporation
14	El Safwa for Industrial Development
15	IFFCO
16	Hondupalma
17	Industrial Danec S.A.
18	Industrializadora Oleofinos SA De CV
19	Lam Soon
20	Louis Dreyfus Company B.V.
21	Marsa Yag San.ve Tic. A.S.
22	Mercasid S.A.
23	Morakot Industries Public Company Limited
24	NaturAceites S.A.
25	Noble Naural Resources India
26	Olenex C.V
27	Palmas del Espino S.A.
28	President Nisshin Corp
29	Soya Hellas SA
30	Stratas Foods LLC
31	Suksomboon
32	Team Foods
33	United Oil Processing & Packaging
34	Willowton Group
35	Wilmar International Limited

Source: Pepsi

https://www.pepsico.com/docs/album/esg-topics-policies/pepsico-palm-oil-supplier-list-2020.pdf?sfvrsn=ba50cea1_6#:~:text=Seventy%20percent%20of%20our%20palm,Group%20and%20Wilmar%20International%20Limited.

Appendix 9 Article on Chinese equipment to Sierra Leone

The whole article that follows is sourced from:

https://www.edibleoil extractionmachine.com/news/doing_news/palm_oil_press_to_sierra_leone_410.html

Two days ago, 5 sets palm oil press machines ordered by the Sierra Leone customer has finished the packing and loading at the Doing Factory. As usual, this batch of palm oil press machines will be sent to Qingdao Port from the factory and then shipped to Sierra Leone by sea.



Source: Doing Holdings

In order to avoid the damage of the palm oil press machines during transportation, all the palm oil press machines will be packed in wooden cases. The following is the delivery photos:



Source: Doing Holdings

This Sierra Leonean client is a small farmer who has 200 hectares of oil palm plantations. Before he bought our palm oil press machine, he made his money by selling palm fruit bunches to local palm oil mills. But the profit is limited. He always wanted to start his own palm oil processing business but couldn't find the right equipment. Luckily, he came across an article on our website about [small scale palm oil press machine](#), he was very interested in it. Since that, he established a connection with our company. As he knew more about the palm oil press machine, he liked our equipment more and more. Finally, he decided to buy 5 sets palm oil press machines from our company.

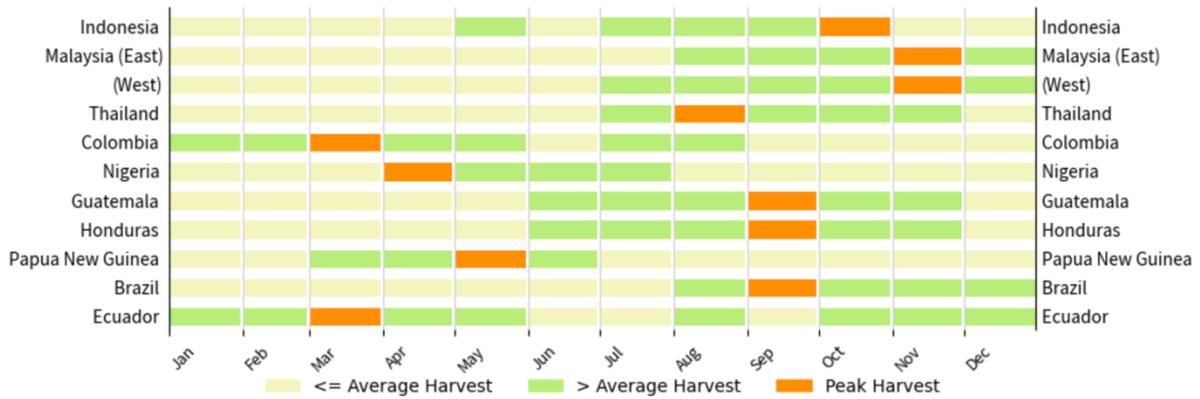
Thanks for customer's trust and recognition. We Doing Group will promise that we'll keep our best quality and great after-sales service to repay all customers' trust. When the 5 sets palm oil press machines start to be installed, I will update the newest pictures. Please pay attention continuously.

Appendix 10 Production calendar

The chart below reflects global palm oil production. It does not reflect production for Sierra Leone; however, research indicates that harvest is June – August, which does not put this in a position to compete with harvest from leading producers of Indonesia and Malaysia. This could be a comparative advantage for Sierra Leone palm oil producers. However, with an extended shelf-life of 2 – 3 years stocks are available year-round with little distinction for crop year or age of stocks (inventory)

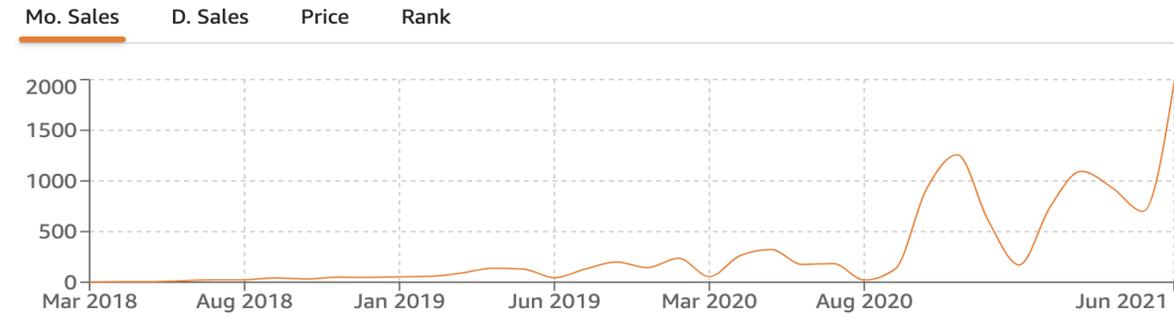
Palm Oil - Crop Calendar

(countries ranked by descending production 2021)



Source: USAID

Appendix 11 – Amazon data top products



Source: Jungle Scout

ASIN: **B07BD3CDK3**   

LQS:	6
Mo. Sales:	2,463
Net:	...
Fees:	--i
Date First Available:	11/18/2018
Tier:	...
Dimensions:	--i
Weight:	--i



Source: Amazon

Sheamoisture Conditioner for Curly Hair Red Palm Oil and Cocoa Butter with Flaxseed Oil 13 oz

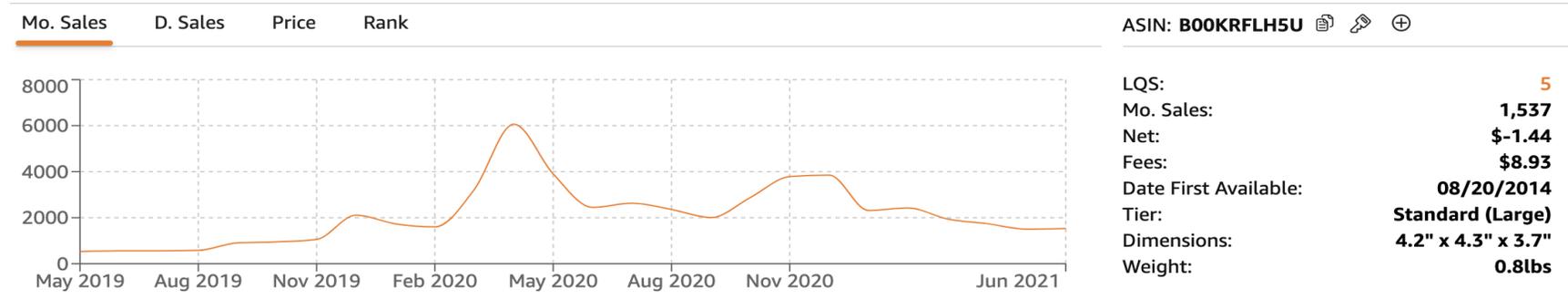
Visit the SheaMoisture Store
 ★★★★★ 2,488 ratings | 14 answered questions
 List Price: \$9.99 Details
 Price: **\$8.50** (\$0.65 / Fl Oz)
 ✓prime Overnight 7 AM - 11 AM & FREE Returns
 You Save: **\$1.49 (15%)**
 Coupon Save an extra 40% on your first Subscribe & Save order.
 Details

Thank you for being a Prime member. Get a \$150 Gift Card: Pay \$0.00 upon approval for the Amazon Prime Rewards Visa Card.

Brand	SheaMoisture
Scent	Coconut
Hair Type	Curly
Liquid Volume	13 Fluid Ounces
Ingredients	Red Palm Oil, Cocoa Butter, Flaxseed Oil

About this item

- SheaMoisture Red Palm Oil and Cocoa Butter conditioner is a leave-in or rinse-out conditioner that can also be used as a co-wash for curls and coils prone to shrinkage
- Blended with Red Palm Oil, this Coconut Oil-free co-wash conditioner helps to stretch curls; can be used daily



Source: Jungle Scout



Source: Amazon

Nutiva Organic Shortening, Original, 15 oz

Visit the Nutiva Store
 ★★★★★ 2,404 ratings | 81 answered questions
 Amazon's Choice for "shortening"

Price: **\$5.39** (\$0.36 / Fl Oz)
Coupon 40% Subscribe & Save coupon
 Coupon available for Subscribe & Save purchase option only.
[Details](#)

Thank you for being a Prime member. Get a \$150 Gift Card: Pay \$0.00 upon approval for the Amazon Prime Rewards Visa Card.

May be available at a lower price from other sellers, potentially without free Prime shipping.

Flavor	Organic Shortening
Ingredients	Organic palm fruit oil, organic unrefined virgin coconut oil, organic unrefined red palm oil
Brand	Nutiva
Weight	15 Ounces
Item Dimensions LxWxH	4.5 x 4 x 4.5 inches

About this item

Mo. Sales D. Sales Price Rank

ASIN: **B00JJ1E83G**   



LQS: **7**
 Mo. Sales: **1,491**
 Net: **\$1.04**
 Fees: **\$10.62**
 Date First Available: **04/07/2014**
 Tier: **Standard (Large)**
 Dimensions: **7.6" x 5.0" x 9.9"**
 Weight: **3.60lbs**

Source: Jungle Scout



Nutiva USDA Certified Organic, non-GMO, Cold-Filtered, Unrefined, Fair Trade Ecuadorian Red Palm Oil, 15 Ounce (Pack of 2)

[Visit the Nutiva Store](#)
 ★★★★★  1,853 ratings

Price: **\$11.66** (\$0.39 / Fl Oz) 

Thank you for being a Prime member. Get a \$150 Gift Card: Pay \$0.00 upon approval for the Amazon Prime Rewards Visa Card.

Color: **Original Version**

Flavor Unrefined
Ingredients Palm Oil
Brand Nutiva
Item Weight 15 Ounces
Package Weight 1.62 Kilograms

Source: Amazon

Mo. Sales D. Sales Price Rank



Source: Jungle Scout

ASIN: **B00VGNQAWM**

LQS: **3**
 Mo. Sales: **628**
 Net: **\$3.46**
 Fees: **\$10.41**
 Date First Available: **09/18/2015**
 Tier: **Standard (Large)**
 Dimensions: **3.1" x 10.8" x 3.1"**
 Weight: **2.18lbs**



Source: Amazon

Praise Red Palm Oil, 1-Litre - Zomi

Brand: Praise
 ★★★★★ 1,045 ratings | 12 answered questions
 Amazon's Choice for "palm oil for cooking"

Price: **\$13.87** (\$0.41 / Fl Oz) ✓prime

Thank you for being a Prime member. Get a \$150 Gift Card: Pay \$0.00 upon approval for the Amazon Prime Rewards Visa Card.

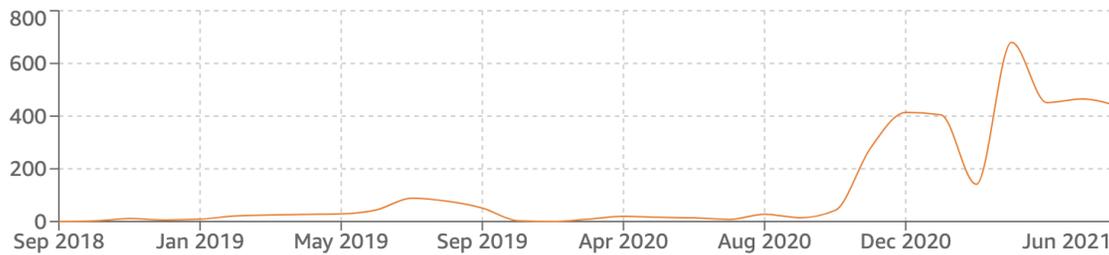
May be available at a lower price from other sellers, potentially without free Prime shipping.

Color: red

\$456.02 (\$45.60 / Count)	\$91.20 (\$45.60 / Count)
\$136.80 (\$45.60 / Count)	\$182.41 (\$45.60 / Count)
\$13.87 (\$0.41 / Fl Oz) ✓prime	--

Ingredients Palm Oil
Brand Praise
Weight 33.8 Ounces
Item 9 x 3 x 3 inches
Dimensions LxWxH
Volume 1 Liters

Mo. Sales D. Sales Price Rank



Source: Jungle Scout

ASIN: **B07F1H2FN8**

LQS: **3**
 Mo. Sales: **505**
 Net: **\$-1.95**
 Fees: **\$8.93**
 Date First Available: **12/26/2018**
 Tier: **Standard (Large)**
 Dimensions: **2.4" x 7.0" x 2.3"**
 Weight: **1.02lbs**



Source: Amazon

Red Palm Oil 16.9 Fl ozs

Brand: OMNI zonmi
 ★★★★★ 489 ratings | 9 answered questions
Amazon's Choice for "red palm oil"

Price: **\$6.98** (\$0.41 / Fl Oz)

Thank you for being a Prime member. Get a \$150 Gift Card: Pay \$0.00 upon approval for the Amazon Prime Rewards Visa Card.

Brand OMNI zonmi
Volume 500 Milliliters
Package 0.47 Kilograms
Weight
Recommended Uses For Product Frying, Baking
Plant or Animal Product Type Palm

About this item

- african cuisine
- manteca de corajo , aceite de palma ,epo.Red palm oil 16.9 fl ozs.100% pure virgin Red Palm Oil.Palm oil has been used for both nutritional and medicinal purposes for thousands of years.it not only supplies fatty acids essential for proper growth And development,but it is packed with an assortment of vitamins,antioxidants and other nutrients important.
- epo,aceite de palma 100% puro,manteca de corajo 100% puro.



Source: Jungle Scout

ASIN: **B017CN5L4C**

LQS: **4**
 Mo. Sales: **152**
 Net: **\$14.84**
 Fees: **\$8.15**
 Date First Available: **03/21/2016**
 Tier: **Standard (Large)**
 Dimensions: **6.3" x 6.4" x 5.9"**
 Weight: **3.33lbs**



Source: Amazon

Grain Brain Organic Palm Shortening (3 lb) Non-Hydrogenated Pure and Natural, Super, Sustainable Certified

Brand: GRAIN BRAIN
 ★★★★★ 673 ratings | 61 answered questions

Amazon's Choice for "palm shortening"

Price: **\$22.99** (\$0.48 / Ounce) ✓prime

Thank you for being a Prime member. Get a \$150 Gift Card: Pay \$0.00 upon approval for the Amazon Prime Rewards Visa Card.

Size: **3 Pound (Pack of 1)**

1.5 Pound (Pack of 1) \$14.99 (\$0.62 / Ounce) ✓prime	3 Pound (Pack of 1) \$22.99 (\$0.48 / Ounce) ✓prime
5 Pound \$34.98 (\$34.98 / Ounce) ✓prime	5 Pound x 4 --

Brand GRAIN BRAIN
Weight 3 Pounds
Volume 48 Fluid Ounces
Package Weight 1.51 Kilograms
Plant or Palm

Mo. Sales D. Sales Price Rank

ASIN: **B06XDTPPK2**   



LQS: **6**
 Mo. Sales: **386**
 Net: ...
 Fees: --i
 Date First Available: **03/01/2017**
 Tier: ...
 Dimensions: **0.0" x 0.0" x 0.0"**
 Weight: **8.08lbs**

Source: Jungle Scout



Roll over image to zoom in

Source: Amazon

Palm Oil - RSPO Certified - Sustainable - Food Grade - Kosher - Not Hydrogenated - 1 Gallon - safety sealed HDPE container with resealable cap

Visit the Essential Depot Store
 ★★★★★ 765 ratings | 11 answered questions

Price: **\$34.26** (\$0.27 / FL Oz)

Save 6% on 2 select item(s). Shop items

Thank you for being a Prime member. Get a \$150 Gift Card: Pay \$0.00 upon approval for the Amazon Prime Rewards Visa Card.

Brand	ESSENTIAL DEPOT
Weight	8.08 Pounds
Item Dimensions LxWxH	5.88 x 5.88 x 11.19 inches
Volume	128 Fluid Ounces
Package Weight	3.9 Kilograms

About this item

- RSPO CERTIFIED - Sustainable - Food Grade - not hydrogenated - no stir - in a microwavable HDPE safety sealed container with a resealable lid
- BOTANICAL NAME: Elaeis Guineensis - PLANT PART: fruit of the oil palm - EXTRACTION METHOD: Physically Milled, Fractionated, Solvent Extracted, Refined, Bleached, Deodorized, Votated - COUNTRY OF ORIGIN: Malaysia and/or Indonesia
- ODOR/AROMA: bland to odorless - TASTE: bland to tasteless - COLOR: White to pale yellow - APPEARANCE: semi-solid - solid at 25C - CONSISTENCY: semi-solid (scoopable) at 25C - FLASH POINT: >500F (260C)

Mo. Sales D. Sales Price Rank

ASIN: **B00GO5MEZY**   



LQS: **5**
 Mo. Sales: **357**
 Net: **\$0.64**
 Fees: **\$9.36**
 Date First Available: **09/10/2013**
 Tier: **Standard (Large)**
 Dimensions: **3.0" x 5.0" x 2.7"**
 Weight: **0.95lbs**

Source: Jungle Scout



100% Palm Oil - 16 Fl Oz

Brand: OKONATUR
 ★★★★★ 670 ratings | 16 answered questions
 Amazon's Choice for "palm oil"

Price: **\$10.00** (\$0.63 / Fl Oz) ✓prime

Thank you for being a Prime member. Get a \$150 Gift Card: Pay \$0.00 upon approval for the Amazon Prime Rewards Visa Card.

Ingredients 100% Organic Palm Oil
Brand OKONATUR
Weight 0.8 Pounds
Volume 16 Fluid Ounces
Material Organic
Feature

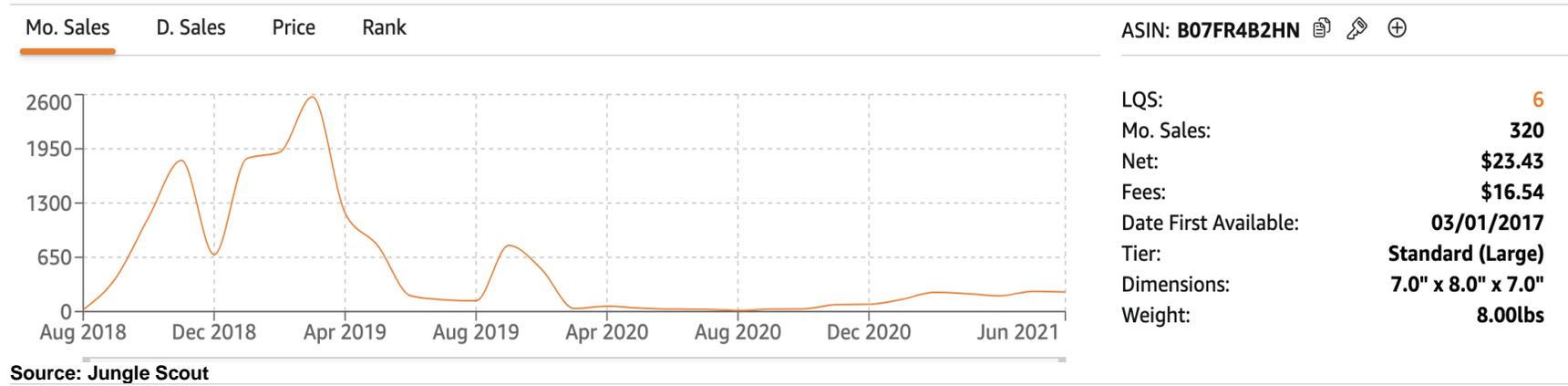
About this item

- 100% Pure Palm Oil -THE RICHEST NATURAL SOURCE OF ANTIOXIDANTS
- Healthy Baking - Great source of vitamin E
- Free of Trans Fatty Acids
- 100% Mechanically pressed palm oil
- Contains Omega 6 - Retains 67% of tocopherols and 73% of tocotrienols of the red palm oil

New (2) from **\$10.00** ✓prime

 Report incorrect product information.

Source: Amazon



Palm Oil - RSPO Certified - Sustainable - Food Grade - Kosher - Not Hydrogenated - 8 lbs in a 1 Gallon Pail - HDPE microwavable container with resealable lid and removable handle

[Visit the Essential Depot Store](#)

★★★★★ 524 ratings | 16 answered questions

Amazon's Choice for "palm oil for soap making bulk"

Price: **\$39.97** (\$39.97 / Count)

Save 6% on 2 select item(s). [Shop items](#)

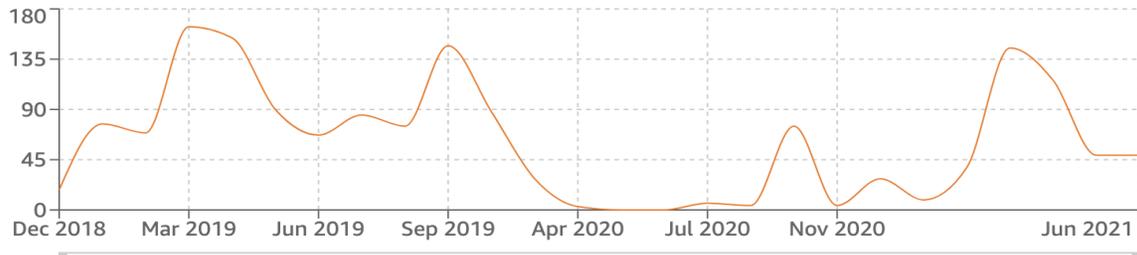
You can earn 5% back and get \$100 off instantly: Pay \$0.00 upon approval for the Amazon Prime Store Card.

Brand	ESSENTIAL DEPOT
Weight	8 Pounds
Item Dimensions LxWxH	7.25 x 7.25 x 8.5 inches
Volume	1 Gallons
Package Weight	3.97 Kilograms



Source: Amazon

Mo. Sales D. Sales Price Rank



ASIN: **B07L71BL2C**

LQS: **5**
 Mo. Sales: **190**
 Net: **\$7.4**
 Fees: **\$11.1**
 Date First Available: **12/07/2018**
 Tier: **Standard (Large)**
 Dimensions: **5.0" x 7.3" x 3.5"**
 Weight: **2.16lbs**

Source: Jungle Scout



Source: Amazon

Palm Oil, Soap Making Supplies. Organic, Sustainable, Kosher, 32 fl oz. DIY Projects.

Brand: [Traverse Bay Bath And Body](#)

★★★★★ 209 ratings

Price: **\$18.50** Prime FREE Delivery & FREE Returns

- Increase Soaps lather and hardness.

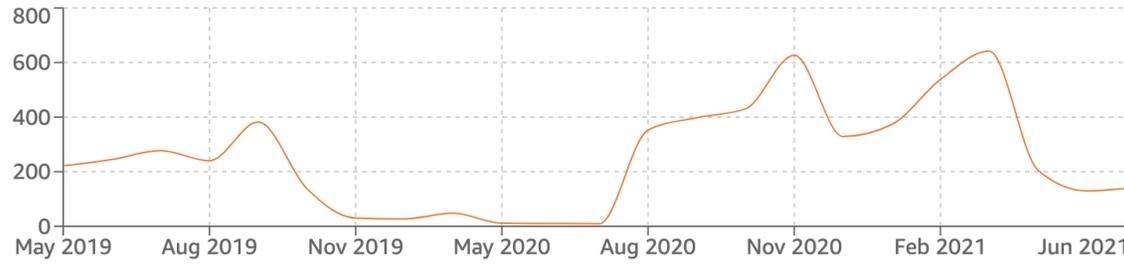
[Report incorrect product information.](#)

Similar item to consider

[NOSTOSON Mica Powder for Epoxy Resin Resin Pigment Powder Soap Dye Organic Pigment Powder Dye for Soap/Bath Bombs/Epoxy Resin/Lip Gloss/Slime/Candle Making Pack of 50](#)
\$16.99 ✓prime
 ★★★★★ (31)

Mo. Sales D. Sales Price Rank

ASIN: **B00563E6ZG**   



LQS: **6**
 Mo. Sales: **151**
 Net: **\$7.01**
 Fees: **\$11.11**
 Date First Available: **06/14/2011**
 Tier: **Standard (Large)**
 Dimensions: **4.4" x 7.5" x 4.3"**
 Weight: **2.35lbs**

Source: Jungle Scout



Source: Amazon

Palm Oil - 1 Quart - 32 oz - RSPO Certified - Sustainable - Food Grade - Kosher - Not Hydrogenated - safety sealed HDPE container with resealable cap

[Visit the Essential Depot Store](#)

★★★★★  1,020 ratings | 29 answered questions

Amazon's Choice for "sustainable palm oil for soap making"

Price: **\$18.12** (\$0.67 / Fl Oz)  **prime** & FREE Returns

Save 6% on 2 select item(s). [Shop items](#)

Thank you for being a Prime member. Get a \$150 Gift Card: Pay \$0.00 upon approval for the Amazon Prime Rewards Visa Card.

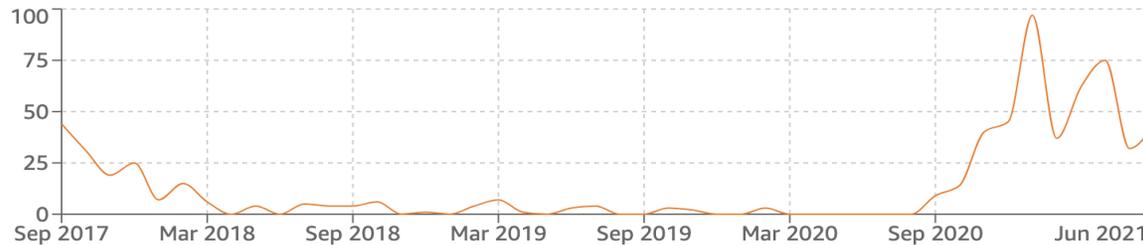
Brand	ESSENTIAL DEPOT
Weight	0.95 Kilograms
Item Dimensions LxWxH	3.25 x 3.25 x 7 inches
Volume	32 Fluid Ounces
Package Weight	1.07 Kilograms

About this item

- RSPO CERTIFIED - Sustainable - Food Grade - not hydrogenated - no stir - shipped in microwavable HDPE safety sealed container with resealable lid

Mo. Sales D. Sales Price Rank

ASIN: **B0716YB72L**   



LQS: **7**
 Mo. Sales: **150**
 Net: **\$9.05**
 Fees: **\$10.9**
 Date First Available: **06/24/2018**
 Tier: **Standard (Large)**
 Dimensions: **3.9" x 8.1" x 2.4"**
 Weight: **1.06lbs**

Source: Jungle Scout



Source: Amazon

MD.LIFE PALM OIL - 32oz - Sustainable Food Grade Palm Oil for Cooking - Great for Soap Making Supplies, Cooking Oil, Creams and Lotions

[Visit the MD.LIFE Store](#)

★★★★☆ 122 ratings

Price: **\$19.95** (\$0.62 / Ounce) ✓prime

Thank you for being a Prime member. Get a \$150 Gift Card: Pay \$0.00 upon approval for the Amazon Prime Rewards Visa Card.

Size: **2 Pound (Pack of 1)**

1 Pound (Pack of 1) \$12.95 (\$0.81 / Fl Oz) ✓prime	2 Pound (Pack of 1) \$19.95 (\$0.62 / Ounce) ✓prime
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Ingredients	Antioxidants, Vitamin-a, Vitamin-e, Beta carotene
Brand	MD.LIFE
Scent	Palm oil
Item Form	Liquid
Skin Type	Oily, Combination, Dry, Normal

Appendix 12 – Global suppliers of Palm oil and its fractions (HS 151190)

SUPPLIER's name	Address	Contact Info	TOTAL SHIPMENTS	Style of Packaging
C I TEQUENDAMA S A S	CRA 1C N 22 58 PISO 11 EDF BAHIA CENTRO SANTA MARTA MAGDA LENA COLOMBIA 470004		1800	BOX
WAWASAN AGROLIPIDS SDN BHD	PLO 493, JALAN KELULI 3, PASIR GUDANG INDUSTRIAL ESTATE, 81700, PASIR GUDANG, JOHOR, MALAYSIA		1588	BAG
PT WILMAR NABATI INDONESIA	GEDUNG B G LANTAI 9 JALAN PUTRI HIJAU NO 10 KESAWAN MEDAN BARAT MEDAN SUMATERA UTARA 20111		844	CTN
DHL GLOBAL FORWARDING INDONESIA	SINARMAS LAND PLAZA 8TH FLOOR ROOM MEDAN SUMATERA UTARA 20152 INDONESIA		647	PKG
EASTWAY EXPRESS LINE SDN BHD	130B JL SUTERA TANJUNG 8 3 TAMAN SU JOHOR BAHRU 81300 MALAYSIA		497	BAG
IFFCO MALAYSIA SDN BHD	PLO 406 JALAN EMAS PASIR GUDANG JOHOR MALAYSIA 81700		399	PKG
PT MUSIM MAS	JL K L YOS SUDARSO KM 7 8 TANJUNG MULIA MEDAN 20241 SUMATERA UTARA INDONESIA		376	LBK
SIME DARBY PLANTATION BERHAD	9TH MILE JLN BANTING KLANG TELOK PANGLIMA GARANG KLANG		304	CTN
PT SMART TBK	SINAR MAS LAND PLAZA MENARA 2 LT 28 30 JL MH THAMRIN NO 51 GONDANGDIA MENTENG JAKARTA PUSAT DKI JAKARTA		287	LBK
K APEX LOGISTICS M SDN BHD	SUITE 23A - 05 LVL 23A, CITY SQUARE JALAN WONG AH FOOK, JOHOR BAHRU 80000 JOHOR, WEST MALAYSIA		261	CTN

Source: ImportKey

Appendix 13 – Amazon top sales by product

TOP 10 Palm Oil Products									
ASIN	Product Name	Brand	Monthly Revenue	Monthly Sales	Daily Sales	Price	Fees	Net	Category
B017CN5L4C	Grain Brain Organic Palm Shortening (3 lbs.) Non-Hydrogenated Pure and Natural Super Sustainable Certified	GRAIN BRAIN	\$9127.00	397	12	\$22.99	\$12.21	\$10.78	Food
B06XDTPPK2	Palm Oil - RSPO Certified - Sustainable - Food Grade - Kosher - Not Hydrogenated - 1 Gallon - safety sealed HDPE container with resealable cap	Essential Depot	\$13224.00	386	12	\$34.26			Food
B00GO5MEZY	100% Palm Oil - 16 Fl Oz	OKONATUR	\$3600.00	360	9	\$10.00	\$9.36	\$0.64	Food
B07FR4B2HN	Palm Oil - RSPO Certified - Sustainable - Food Grade - Kosher - Not Hydrogenated - 8 lbs. in a 1 Gallon Pail - HDPE microwavable container with resealable lid and removable handle	Essential Depot	\$12790.00	320	10	\$39.97	\$16.54	\$23.43	Food
B07L71BL2C	Palm Oil Soap Making Supplies. Organic Sustainable Kosher 32 FL oz. DIY Projects.	Traverse Bay Bath And Body	\$3515.00	190	3	\$18.50	\$11.10	\$7.40	Arts
B00563E6ZG	Palm Oil - 1 Quart - 32 oz - RSPO Certified - Sustainable - Food Grade - Kosher - Not Hydrogenated - safety sealed HDPE container with resealable cap	Essential Depot	\$2736.00	151	15	\$18.12	\$11.11	\$7.01	Food
B0716YB72L	MD.LIFE PALM OIL - 32oz - Sustainable Food Grade Palm Oil for Cooking - Great for Soap Making Supplies Cooking Oil Creams and Lotions	MD.LIFE	\$2713.00	136	2	\$19.95	\$10.90	\$9.05	HABA

B07LD4Q3T4	Palm Oil Soap Making Supplies. Organic Sustainable Non-hydrogenated 32 FL oz. DIY Projects.	Traverse Bay Bath And Body	\$2091.00	113	1	\$18.50	\$11.04	\$7.46	Arts
B077TNKV16	PALM KERNEL OIL FLAKES Organic Pure Unrefined Palm Kernel Oil Flakes for Soap Making & Cosmetics Sizes 4 OZ to 10 LBS (32 OZ)	Soapeauty	\$2408.00	94	2	\$25.62			Arts
B00KB6UMD8	Palm Kernel Oil Pure Cold Pressed Organic 32 Oz / 1 Quart	Dr Adorable	\$1799.00	90	7	\$19.99	\$11.24	\$8.75	HABA

Source: Jungle Scout

TOP 10 Red Palm Oil Products

ASIN	Product Name	Brand	Monthly Revenue	Monthly Sales	Daily Sales	Price	Fees	Net	Category
B00KRFLH5U	Nutiva Organic Shortening Original 15 oz	Nutiva	\$8565.00	1589	69	\$5.39	\$8.61	-\$3.22	Food
B00JJ1E83G	Nutiva USDA Certified Organic non-GMO Cold-Filtered Unrefined Fair Trade Ecuadorian Red Palm Oil 15 Ounce (Pack of 2)	Nutiva	\$17385.00	1491	47	\$11.66	\$10.62	\$1.04	Food
B00VGNQAWM	Praise Red Palm Oil 1-Litre - Zomi	Praise	\$8710.00	628	24	\$13.87	\$10.41	\$3.46	Food
B07F1H2FN8	Red Palm Oil 16.9 Fl oz	OMNI zonmi	\$3525.00	505	17	\$6.98	\$8.93	-\$1.95	Food
B004T45Z9Y	Red Palm Oil (100% Pure) - 33.81 Oz.	Omni	\$1403.00	108	4	\$12.99	\$10.21	\$2.78	Food
B08DZLNDX4	MOTHERLAND GOODS Red Palm Oil 1 Liter of Regular Red Premium Vegetable Oil Ultimate Organic Oil for Cooking 32 oz of Sustainable Palm Oil Packed with Healthy Fatty Acids Vitamins and Rich Taste No Trans Fat	Motherland Goods	\$727.00	56	1	\$12.99	\$10.22	\$2.77	Food
B00WDOU8S0	Praise Red Palm Oil 2-Liters - Zomi	Praise	\$1240.00	46	2	\$26.95	\$13.06	\$13.89	Food

Market opportunities and entry strategies for palm oil products in the United States of America

B005DTEQ26	Red Palm Oil (100% Pure) - 67.63 Oz.	Omni	\$858.00	43	1	\$19.95	\$12.07	\$7.88	Food
B00CLZ1QR8	Nutiva Organic Fair Trade Certified Red Palm Oil 15 Oz	Nutiva	\$840.00	42	3	\$20.00	\$11.09	\$8.91	Food
B08ZJM6SH1	Galaxie Foods Red Palm Oil 1L - From Natural Palm Trees - Product of Africa	Galaxie Foods	\$390.00	30	1	\$12.99	\$10.32	\$2.67	Food

Source: Jungle Scout

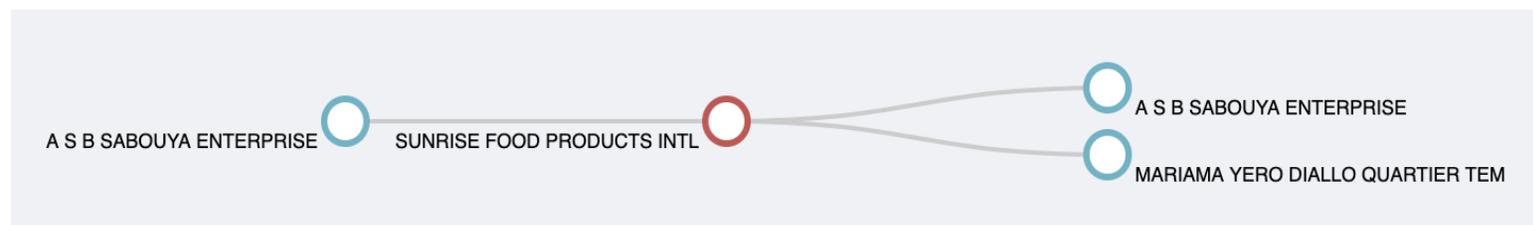
Palm Oil with Coconut Butter									
ASIN	Product Name	Brand	Monthly Revenue	Monthly Sales	Daily Sales	Price	Fees	Net	Category
BooKRFLH5U	Nutiva Organic Shortening Original 15 oz	Nutiva	\$8565.00	1589	69	\$5.39	\$8.61	-\$3.22	Food
B07BD3CDK3	Sheamoisture Conditioner for Curly Hair Red Palm Oil and Cocoa Butter with Flaxseed Oil 13 oz	SheaMoisture	\$20664.00	2431	77	\$8.50			HABA

Source: Jungle Scout

Appendix 14 – Buyers for HS 151190 from Sierra Leone by customer

List of buyers who purchased HS 151190 from A S B SABOUYA ENTERPRISE

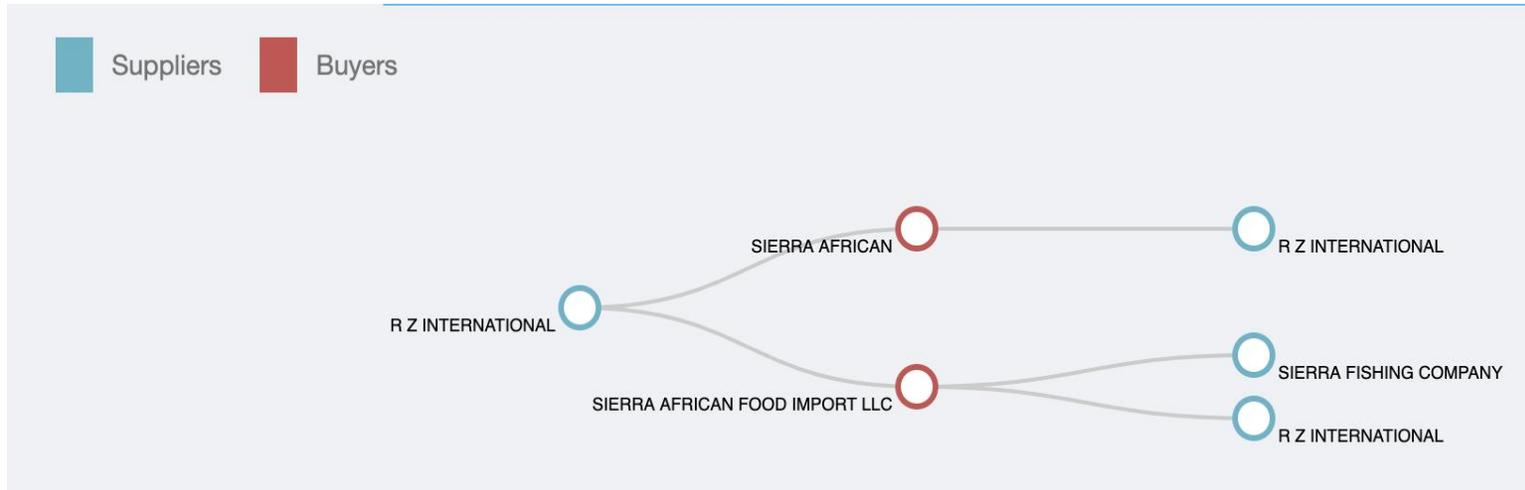
Data From ImportKey				
BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
SUNRISE FOOD PRODUCTS INTL	14207 CHERILENE ET LAUREL MD 20707	PH: 2407510842 EMIAL: NAFAYA EXPRESSE@VERIZON.COM	3	CTN



Note: A S B SABOUYA ENTERPRISE do sales to SUNRISE FOOD PRODUCTS INTL

List of buyers who purchased HS 151190 from R Z INTERNATIONAL

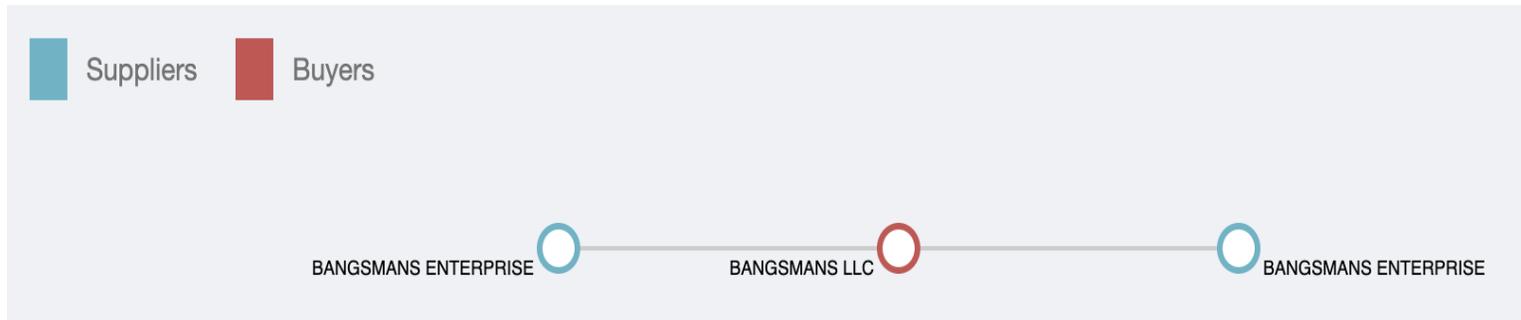
Data From ImportKey				
BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
SIERRA AFRICAN FOOD IMPORT LLC	4376 GUNTHER AVENUE APT 2 BRONX NY 10466 MARTHA MAHOI	PH: 6463180168	9	PKG/CTN



Note: R Z INTERNATIONAL do sales to SIERRA AFRICAN FOOD IMPORT LLC

List of buyers who purchased HS 151190 from BANGSMANS ENTERPRISE

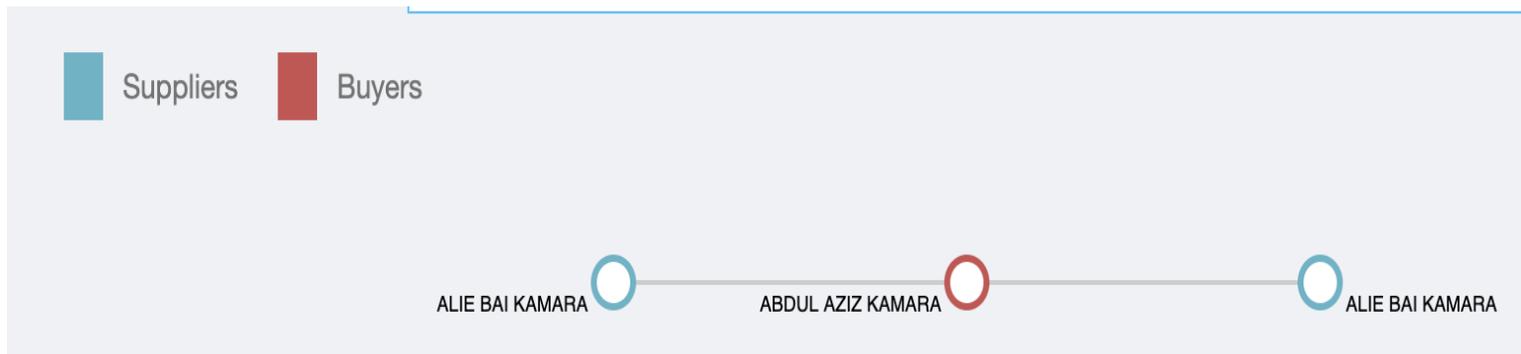
Data From ImportKey				
BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
BANGSMANS LLC	15330 WATERMILL TERRACE 22191 WOODBIDGE	PH: 3015236300	1	PKG



Note: BANGSMANS ENTERPRISE do sales to BANGSMANS LLC

List of buyers who purchased HS 151190 from ALIE BAI KAMARA

Data From ImportKey				
BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
ABDUL AZIZ KAMARA	827 SOUTH JAMES RD APARTMENT 19 COLUMBUS OH 43227	PH: 6073330795	2	PCS



Note: ALIE BAI KAMARA do sales to ABDUL AZIZ KAMARA

List of buyers who purchased HS 151190 from TANUE INTERNATIONAL

Data From ImportKey				
BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging

CHUKWUEBUKA O AGBASI	QUALITY INGREDIENT INC 7000 NORTH FREEWAY 900B HOUSTON TX 77076 USA	PH: 7136922907	1	PKG
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Note: TANUE INTERNATIONAL do sales to COMESTIBLES ALDOR S A S

List of buyers who purchased HS 151190 from MAHDIYA ENTERPRISE

Data From ImportKey				
BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging

BAMOYA INTERNATIONAL FOODS	3003 TRINITY DRIVE ABERDEEN UNITED STATES		2 PCS
MARIATU S KAMARA	911 REGENCY RD 22191 1316 WOODBRIDGE	PH: 7038847363	7 PKG
EARTH ECO ESSENTIALS	ATTN PRASHANTH URS 118 BRIGHT SAND COURT CARY NORTH CARY NC USA		2 PKG
MEMUNATU KAMARA DENNIS	1048 YEADON AVENUE YEADON PA 19050 U.S.	PH: 610-241-6661	5 CTN

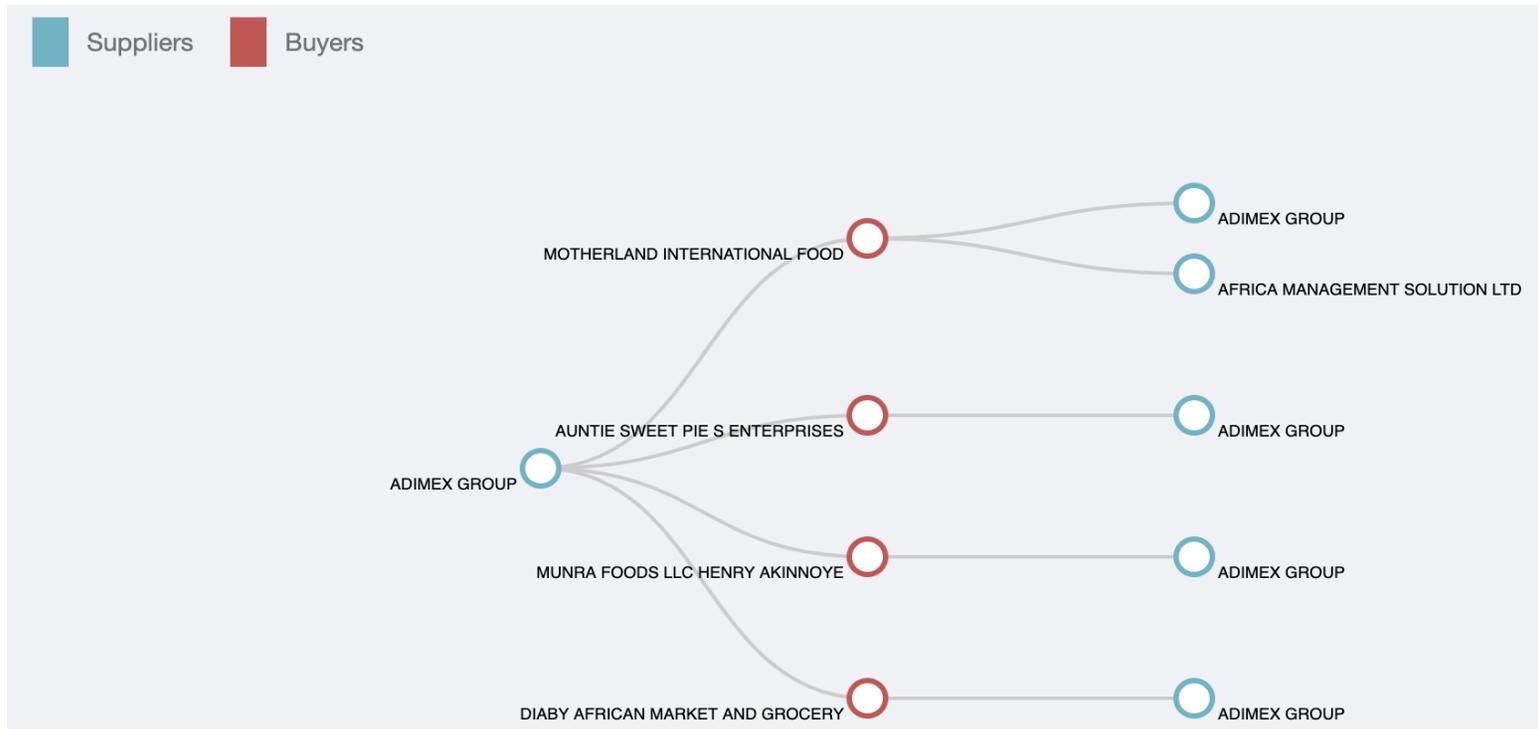


Note: MAHDIYA ENTERPRISE do sales to BAMOYA INTERNATIONAL FOODS

List of buyers who purchased HS 151190 from ADIMEX GROUP

Data From ImportKey				
BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
MOTHERLAND INTERNATIONAL FOOD	7900 MARTIN LUTHER KING JR HWY 20706 - 1508 LANHAM	PH: 2403518613	4	CTN

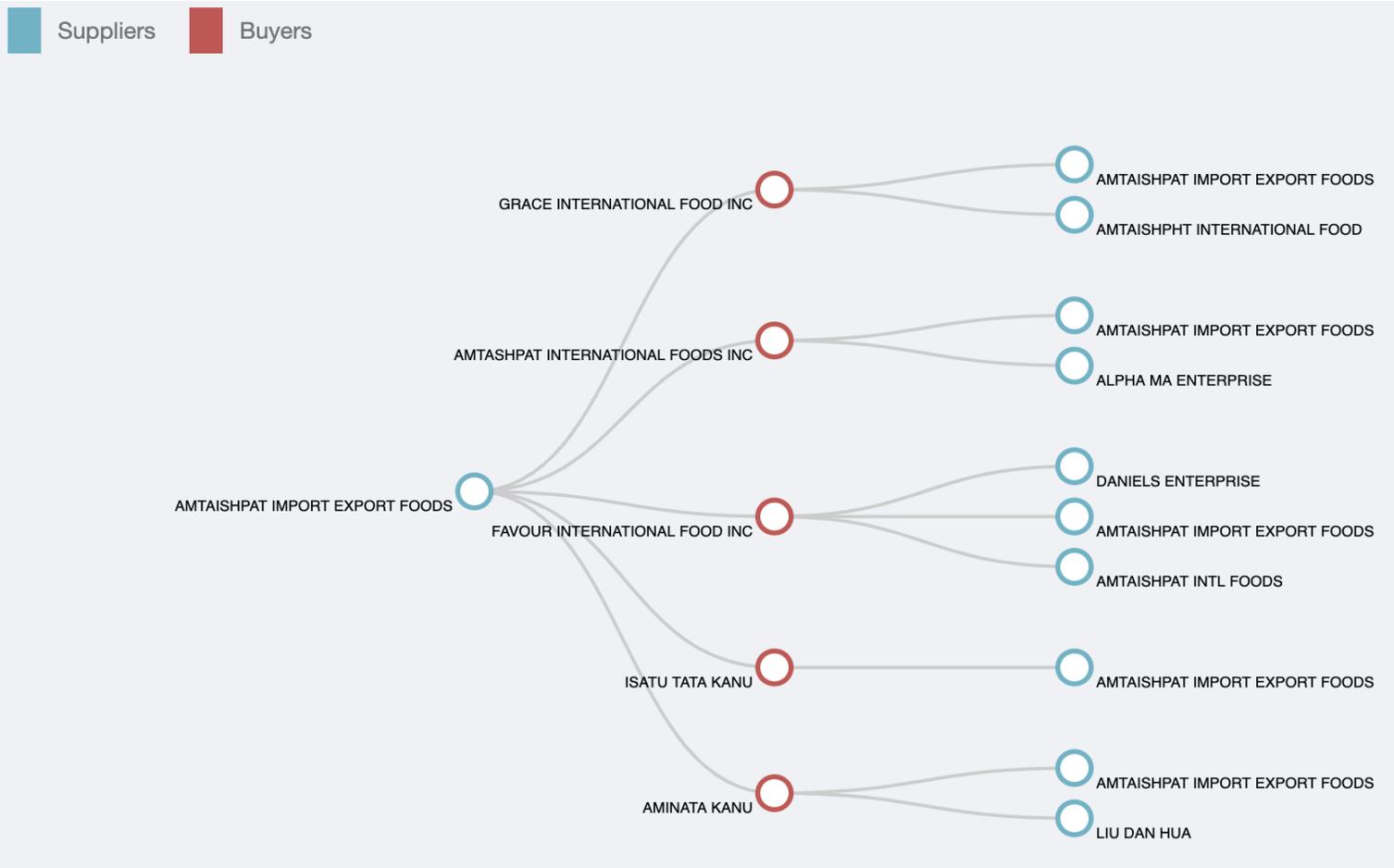
AUNTIE SWEET PIE S ENTERPRISES	9789 GOOD LUCK ROAD APT 4 LANHAM, MARYLAND 20706	PH: 3016401747	2 CTN
MUNRA FOODS LLC HENRY AKINNOYE	1214 FRANKLIN STREET WASHINGTON DC 20017	PH: 2025969949	2 CTN
DIABY AFRICAN MARKET AND GROCERY	1164 FULTON STREET BROOKLYN NEWYORK 11216 PO BOX 11216	PH: 7187830906	1 CTN



Note: ADIMEX GROUP do sales to MOTHERLAND INTERNATIONAL FOOD, AUNTIE SWEET PIE S ENTERPRISES, MUNRA FOODS LLC HENRY AKINNOYE, and DIABY AFRICAN MARKET AND GROCERY

List of buyers who purchased HS 151190 from AMTASHPAT IMPORT EXPORT FOODS

Data From ImportKey				
BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
GRACE INTERNATIONAL FOOD INC	9382 RIDINGS WAY LAUREL MD 20723 EMAIL GRACEINTERNATIONALFOOD	PH: 2022815205	12	PKG
AMTASHPAT INTERNATIONAL FOODS INC	9609 DAPPER TOWN ROW 20723 5882 LAUREL	PH: 3015236300	8	PKG
FAVOUR INTERNATIONAL FOOD INC	9609 DAPPER TOWN ROW LAUREL MD 20723 UNITED STATES		9	CTN
ISATU TATA KANU	8411 ARDWICK ARDMORE ROAD HYATTS VILLE MD 20785 UNITED STATES	PH: 2406462929	2	PKG
AMINATA KANU	33 DIXWELL AVE UPS STORE NEW HAVEN, CT 06511		2	PCS



Note: AMTAISHPAT IMPORT EXPORT FOODS do sales to GRACE INTERNATIONAL FOOD INC, AMTASHPAT INTERNATIONAL FOODS INC, FAVOUR INTERNATIONAL FOOD INC, ISATU TATA KANU, and AMINATA KANU

List of buyers who purchased HS 151190 from BAYAGUI ENTERPRISE

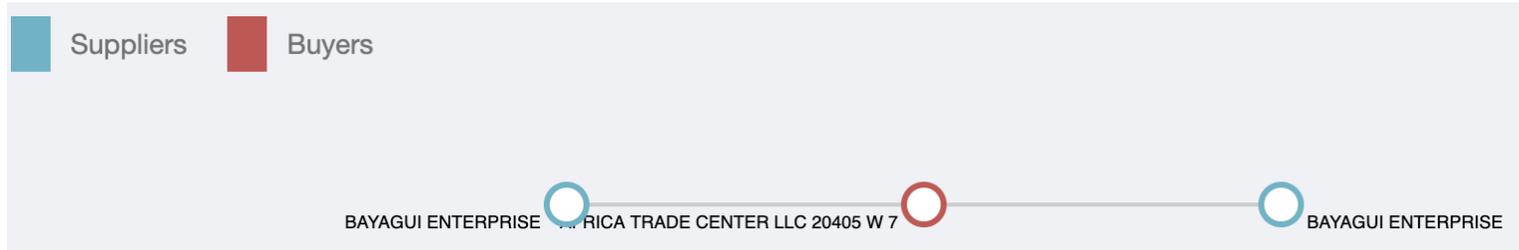
Data From ImportKey				
BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging

AFRICA TRADE
CENTER LLC

20405 W 7

PH: 3133124077 EMIAL:
AFRICAN.TRADE.
CENTER@GAMIAL

2 BOT



Note: BAYAGUI ENTERPRISE do sales to AFRICA TRADE CENTER LLC

List of buyers who purchased HS 151190 from JAFFA ENTERPRISE

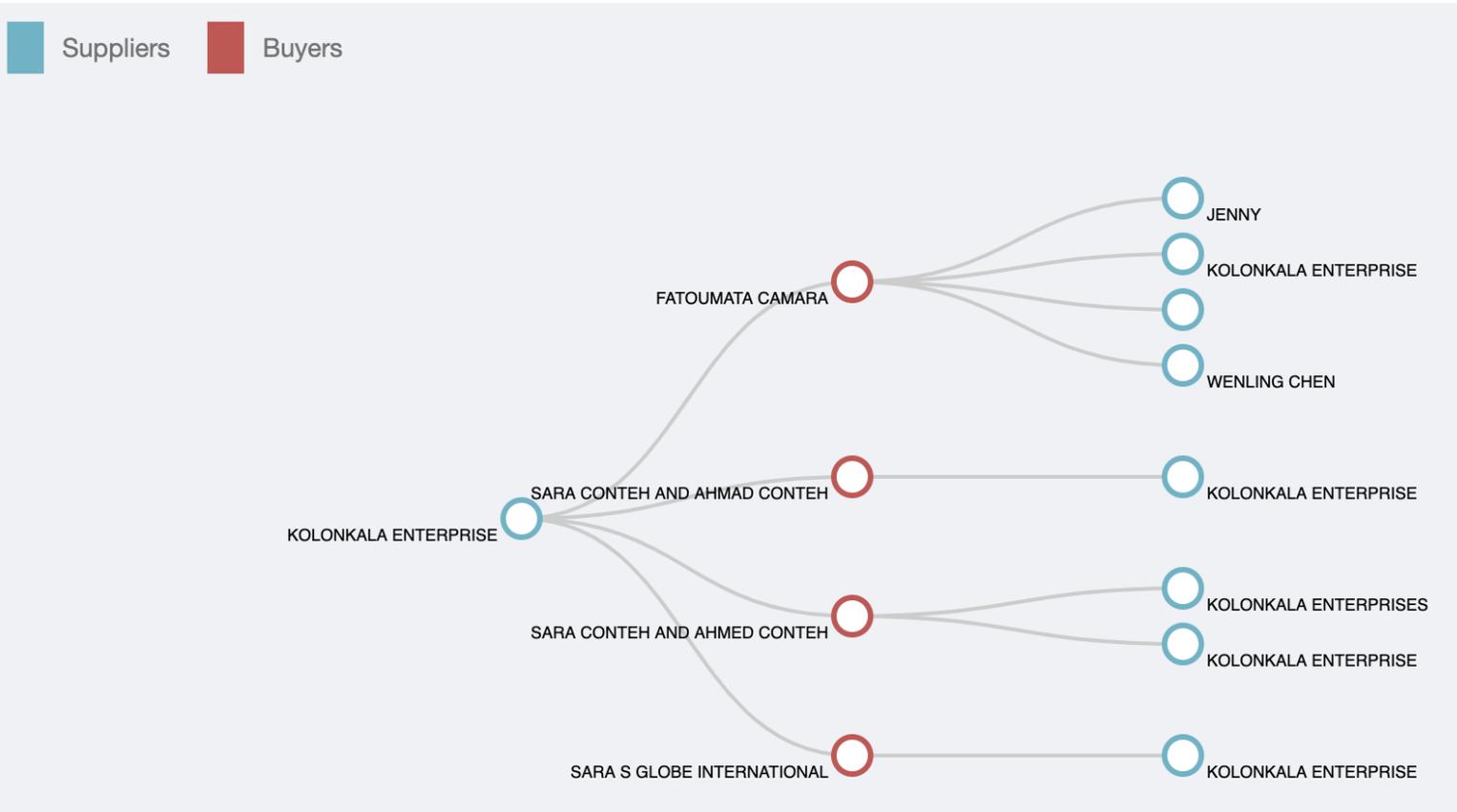
Data From ImportKey				
BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
MEMUNATU KAMARA DENNIS	1048 YEADON AVENUE YEADON PA 19050 U.S.	PH: 6102416661	5	CTN

Note: Supply chain relationship not provided

List of buyers who purchased HS 151190 from KOLONKALA ENTERPRISE

Data From ImportKey				
BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging

FATOUMATA CAMARA	16910 EVENING RUN LANE RICHMOND TEXAS 77407 USA		6 PCS
SARA CONTEH AND AHMAD CONTEH	16910 EVENING RUN LANE RICHMOND TX 77407 USA	PH: 8328906306	8 PCS/CTN



Note: KOLONKALA ENTERPRISE do sales to FATOUMATA CAMARA and SARA CONTEH AND AHMAD CONTEH

List of buyers who purchased HS 151190 from SIERRA INTERNATIONAL FOOD

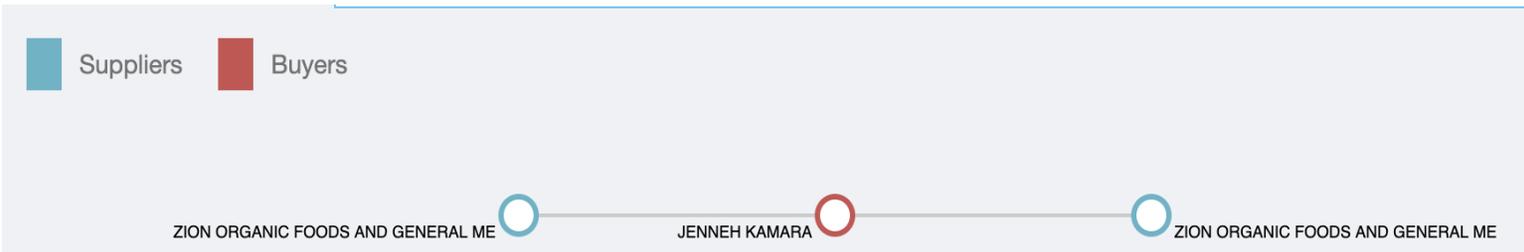
Data From ImportKey				
BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
LERANA LLC	423 RUSSELL SPRINGS DR 24501 7280 LYNCHBURG	PH: 4342090294	4	CTN
SIERRA INTERNATIONAL FOOD SERVICES	810 FAYETTEVILLE STREET SUITE 108 DURHAM		1	PCS
ZAIN FOODS INTERNATIONAL LLC	TARLEY PARDAE 2232, LANDMARK CIRCLE NW MINOT ND 58703 DAKOTA	PH: 4843669596	1	CTN



Note: SIERRA INTERNATIONAL FOOD does sales to LERANA LLC and ZAIN FOODS INTERNATIONAL LLC

List of buyers who purchased HS 151190 from ZION ORGANIC FOODS AND GENERAL ME

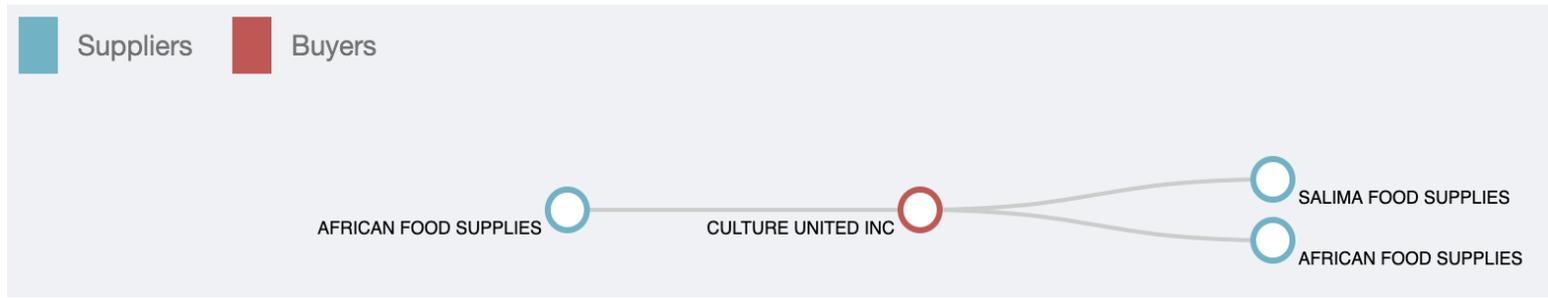
Data From ImportKey				
BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
JENNEH KAMARA	11300 EVANS TRAIL APT 102 20705 BELTSVILLE	PH: 2403538566	2	CTN



Note: ZION ORGANIC FOODS AND GENERAL ME do sales to JENNEH KAMARA

List of buyers who purchased HS 151190 from AFRICAN FOOD SUPPLIES

Data From ImportKey				
BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
CULTURE UNITED INC	281 WEST 6TH STREET LOWELL MA D1850 UNITED STATES	PH: 9784088100	4	PKG



Appendix 15 – Amazon top sales of products container or related to palm oil

ASIN	Product Name	Brand	Monthly Revenue	Monthly Sales	Daily Sales	Price	Fees	Net	Category
B07BD3CDK3	Sheamoisture Conditioner for Curly Hair Red Palm Oil and Cocoa Butter with Flaxseed Oil 13 oz	SheaMoisture	20,664	2431	77	\$8.50			Beauty & Personal Care
B00JJ1E83G	Nutiva USDA Certified Organic non-GMO Cold-Filtered Unrefined Fair Trade Ecuadorian Red Palm Oil 15 Ounce (Pack of 2)	Nutiva	17,385	1491	47	\$11.66	\$10.62	\$1.04	Grocery & Gourmet Food
B06XDTPPK2	Palm Oil - RSPO Certified - Sustainable - Food Grade - Kosher - Not Hydrogenated - 1 Gallon - safety sealed HDPE container with resealable cap	Essential Depot	13,224	386	12	\$34.26			Grocery & Gourmet Food
B07FR4B2HN	Palm Oil - RSPO Certified - Sustainable - Food Grade - Kosher - Not Hydrogenated - 8 lbs in a 1 Gallon Pail - HDPE microwavable container with resealable lid and removable handle	Essential Depot	12,790	320	10	\$39.97	\$16.54	\$23.43	Grocery & Gourmet Food
B017CN5L4C	Grain Brain Organic Palm Shortening (3 lb) Non-Hydrogenated Pure and Natural	GRAIN BRAIN	9,127	397	12	\$22.99	\$12.21	\$10.78	Grocery & Gourmet Food

Market opportunities and entry strategies for palm oil products in the United States of America

	Super Sustainable Certified								
BooVGNOAWM	Praise Red Palm Oil 1-Litre - Zomi	Praise	8,710	628	24	\$13.87	\$10.41	\$3.46	Grocery & Gourmet Food
BooKRFLH5U	Nutiva Organic Shortening Original 15 oz	Nutiva	8,565	1589	69	\$5.39	\$8.61	-\$3.22	Grocery & Gourmet Food
BooGO5MEZY	100% Palm Oil - 16 Fl Oz	OKONATUR	3,600	360	9	\$10.00	\$9.36	\$0.64	Grocery & Gourmet Food
Bo7F1H2FN8	Red Palm Oil 16.9 Fl ozs	OMNI zonmi	3,525	505	17	\$6.98	\$8.93	-\$1.95	Grocery & Gourmet Food
Bo7L71BL2C	Palm Oil Soap Making Supplies. Organic Sustainable Kosher 32 fl oz. DIY Projects.	Traverse Bay Bath And Body	3,515	190	3	\$18.50	\$11.10	\$7.40	Arts Crafts & Sewing
Bo6XDQV8CL	Palm Oil - RSPO Certified - Sustainable - Food Grade - Kosher - Not Hydrogenated - 25 lbs in a 3.25 Gallon Pail - HDPE microwavable container with resealable lid and removable handle	Essential Depot	3,226	45	1	\$71.68			Grocery & Gourmet Food
Boo563E6ZG	Palm Oil - 1 Quart - 32 oz - RSPO Certified - Sustainable - Food Grade - Kosher - Not Hydrogenated - safety sealed HDPE container with resealable cap	Essential Depot	2,736	151	15	\$18.12	\$11.11	\$7.01	Grocery & Gourmet Food
Bo716YB72L	MD.LIFE PALM OIL - 32oz - Sustainable Food Grade Palm Oil for Cooking - Great for	MD.LIFE	2,713	136	2	\$19.95	\$10.90	\$9.05	Beauty & Personal Care

Market opportunities and entry strategies for palm oil products in the United States of America

	Soap Making Supplies Cooking Oil Creams and Lotions								
B077TNKV16	PALM KERNEL OIL FLAKES Organic Pure Unrefined Palm Kernel Oil Flakes for Soap Making & Cosmetics Sizes 4 OZ to 10 LBS (32 OZ)	Soapeauty	2,408	94	2	\$25.62			Arts Crafts & Sewing
B07LD4Q3T4	Palm Oil Soap Making Supplies. Organic Sustainable Non- hydrogenated 32 fl oz. DIY Projects.	Traverse Bay Bath And Body	2,091	113	1	\$18.50	\$11.04	\$7.46	Arts Crafts & Sewing
BooKB6UMD8	Palm Kernel Oil Pure Cold Pressed Organic 32 Oz / 1 Quart	Dr Adorable	1,799	90	7	\$19.99	\$11.24	\$8.75	Beauty & Personal Care
Bo6XDRMZ9P	Palm Oil - RSPO Certified - Sustainable - Food Grade - Kosher - Not Hydrogenated - 2 Gallons - 2 x 1 Gallon Container - safety sealed HDPE container with resealable cap	Essential Depot	1,498	21	2	\$71.32			Grocery & Gourmet Food
Boo4T45Z9Y	Red Palm Oil (100% Pure) - 33.81 Oz.	Omni	1,403	108	4	\$12.99	\$10.21	\$2.78	Grocery & Gourmet Food
B075VJ9SGL	Palm Kernel Oil Soap Making Supplies.Sustainable 7 Pound Gallon. DIY	Traverse Bay Bath And Body	1,319	30	1	\$43.95			Arts Crafts & Sewing
BooWDOU8So	Praise Red Palm Oil 2- Liters - Zomi	Praise	1,240	46	2	\$26.95	\$13.06	\$13.89	Grocery & Gourmet Food
Boo5DTEQ26	Red Palm Oil (100% Pure) - 67.63 Oz.	Omni	858	43	1	\$19.95	\$12.07	\$7.88	Grocery & Gourmet Food

Market opportunities and entry strategies for palm oil products in the United States of America

BooCLZ1QR8	Nutiva Organic Fair Trade Certified Red Palm Oil 15 Oz	Nutiva	840	42	3	\$20.00	\$11.09	\$8.91	Grocery & Gourmet Food
Bo8DZLNDX4	MOTHERLAND GOODS Red Palm Oil 1 Liter of Regular Red Premium Vegetable Oil Ultimate Organic Oil for Cooking 32 oz of Sustainable Palm Oil Packed with Healthy Fatty Acids Vitamins and Rich Taste No Trans Fat	Motherland Goods	727	56	1	\$12.99	\$10.22	\$2.77	Grocery & Gourmet Food
Bo7W6H8LQG	MCT Oil - 1 Liter (32 Oz.) Sustainable Palm Derived - Food Grade - Non GMO - Halal - for Tinctures Sports Nutrition Keto or Paleo Diet Clean Energy	Glycerin Supplier	705	47	2	\$14.99	\$10.58	\$4.41	Health & Household
Bo1N9lCU8V	Praise Red Palm Oil 1-Liter (Pack of 2) - Zomi	Praise	644	23	1	\$27.99	\$13.33	\$14.66	Grocery & Gourmet Food
Bo1CH3NN6U	32 Fl. oz Premium Liquid Gold Palm Kernel Carrier Oil Pure & Organic Skin Hair Health	Liquid Gold	600	30	1	\$19.99			Beauty & Personal Care
Bo7MHFWYLJ	Palm Kernel Oil Soap Making Supplies. Organic Sustainable 32 fl oz. DIY Projects.	Traverse Bay Bath And Body	599	30	1	\$19.95	\$11.32	\$8.63	Arts Crafts & Sewing
Bo7QX23PXL	Praise African Palm Oil Regular 500ml	Praise	530	46	1	\$11.53	\$9.63	\$1.90	Grocery & Gourmet Food

Market opportunities and entry strategies for palm oil products in the United States of America

Bo8B3HKLDM	Raw Unfiltered Black West African Palm Kernel Oil (Adin) (8 Oz)	Awomi Naturals	450	30	1	\$14.99			Beauty & Personal Care
Bo8ZJM6SH1	Galaxie Foods Red Palm Oil 1L - From Natural Palm Trees - Product of Africa	Galaxie Foods	390	30	1	\$12.99	\$10.32	\$2.67	Grocery & Gourmet Food
Bo18ODEHUI	Praise Palm Oil - Regular 1 Liter	Praise	339	25	0	\$13.54	\$10.31	\$3.23	Grocery & Gourmet Food
Bo8DZ2F86S	MOTHERLAND GOODS Zomi Palm Oil 500 ml of Premium Vegetable Oil Ultimate Organic Oil for Cooking 16 oz of Sustainable Palm Oil Packed with Healthy Fatty Acids Vitamins and Rich Taste No Trans Fat	MOTHERLAND GOODS	330	33	0	\$9.99	\$9.38	\$0.61	Grocery & Gourmet Food
Bo77GC55SH	100% Pure Natural Red Palm Oil. 1L. No Cholesterol Cooking Oil with Vitamin E. Cruelty-Free Palm Oil rich in anti-oxidants. Folebe Oil. Cameroon Palm Oil.	Folebe Oil	195	15	1	\$13.00	\$10.23	\$2.77	Grocery & Gourmet Food
Bo0Y19EXLS	Palm Oil Pure Cold Pressed Organic 32 Oz / 1 Quart	Dr Adorable	165	11	0	\$14.99	\$10.66	\$4.33	Beauty & Personal Care
Bo8DZ9SBJS	MOTHERLAND GOODS Zomi Palm Oil 1 Liter of Premium Vegetable Oil Ultimate Organic Oil for Cooking 32 oz of	MOTHERLAND GOODS	143	11	1	\$12.99	\$10.21	\$2.78	Grocery & Gourmet Food

	Sustainable Palm Oil Packed with Healthy Fatty Acids Vitamins and Rich Taste No Trans Fat								
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Source: Jungle Scout

Appendix 16 - Palm oil production process

	Unit operation	Purpose
1.	Fruit fermentation	To loosen fruit base from spikelets and to allow ripening processes to abate
2.	Bunch chopping	To facilitate manual removal of fruit
3.	Fruit sorting	To remove and sort fruit from spikelets
4.	Fruit boiling	To sterilize and stop enzymatic spoilage, coagulate protein, and expose microscopic oil cells
5.	Fruit digestion	To rupture oil-bearing cells to allow oil flow during extraction while separating fibre from nuts
6.	Mash pressing	To release fluid palm oil using applied pressure on ruptured cellular contents
7.	Oil purification	To boil mixture of oil and water to remove water-soluble gums and resins in the oil, dry decanted oil by further heating
8.	Fibre-nut separation	To separate de-oiled fibre from palm nuts.
9.	Second Pressing	To recover residual oil for use as soap stock
10.	Nut drying	To sun dry nuts for later cracking

Appendix 17 – List of 3rd party organic certifying agencies for the US National Organic Program (NOP)

- Agricultural Services Certified Organic ASO
- Baystate Organic Certifiers BOC
- BioAgriCert BAC
- CCOF Certification Services CCO
- Colorado Department of Agriculture CDA
- Control Union Certifications CUC
- Ecocert S.A. ECO
- Global Organic Alliance, Inc. GOA
- Idaho State Department of Agriculture ISD
- International Certification Services, Inc. ICS
- Iowa Department of Agriculture and Land Stewardship IDA
- Kentucky Department of Agriculture KDA
- Maryland Department of Agriculture MDA
- Mayacert MAYA
- Midwest Organic Services Association MOS
- Minnesota Crop Improvement Association MCIA
- MOFGA Certification Services MCS
- Montana Department of Agriculture MTDA
- Natural Food Certifiers NFC
- Nature's International Certification Services NICS United States Department of Agriculture 1400 Independence Avenue S.W. NOP 2403
- New Jersey Department of Agriculture NDA
- NOFA-NY Certified Organic, LLC NOF
- OEFFA Certification OEF
- OneCert, Inc. ONC
- Oregon Tilth Certified Organic ORT
- Oregon Department of Agriculture ODA
- Organic Certifiers OCB
- Organic Crop Improvement Association OCI
- Pennsylvania Certified Organic PCO
- Pro-Cert Organic Systems Ltd. PRO
- Quality Assurance International QAI
- Quality Certification Services QCS
- SCS Global Services NUT
- Utah Department of Agriculture and Food UDA
- Vermont Organic Farmers, LLC VOF
- Washington State Department of Agriculture WAA
- Where Food Comes From Organic WFCF
- Yolo Department of Agriculture YDA

Appendix 18 – Global suppliers of Palm oil and its fractions, whether or not refined, but not chemically modified : Crude oil (HS 151110)

List of Top Suppliers who supply HS 151110				
Data From ImportKey				
SUPPLIER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
CI ACEPALMA SA	NIT 800 141 770 1 CALLE 90 NO 19 41 OFICINAS 303 304 EDIFICIO QUANTUM BOGOTA CO		75	BAG/BLK
CI INDUTRADE COLOMBIA SAS	CRA 24 #1A - 24 OFIC 901 PUERTO COLOMBIA, COLOMBIA COL		37	BAG
EXTRACTORA NATURAL ECUADOR S	VIA VICHE ESMERALDAS KM3 ESMERALDAS E ECUADOR		16	BAG
COMERCIALIZADORA INTL CIECOPALMA SA	CALLE C DEL ESTABLO Y CALLE E CENTRO FINANCIERO SITE CENTER TORRE 11 OF 306 CUMBAYA QUITO ECUADOR		5	BLK
C I BIOCOSTA SA	NIT 900138670 3 EDIFICIO BAHIA CENTRO OF 1201 SANTA MARTA COLOMBIA		4	LBK
GENTING MUSIMMAS REFINERY SDN BHD	COMPANY REGISTRATION NO 1028537 H LOT 13BM POIC PHASE 1 MILES 3 1 2 JALAN KASTAM BARU 91110 LAHAD		3	LBK
MEDPARK FARMS LIMITED	6 IDIAWOERO ILOWE OGIDI IJUMU KOGI STATE, NIGERIA	PH: 8037115218	3	PKG
OLMECA SOCIEDAD ANONIMA	6 CALLE 2-21 ZONA 9 EDIFICIO HERALSO OFICINAS 401 402 Y 404 GUATEMALA, GUATEMALA	EMAIL: ABIMEDUPIN@GMAIL.COM	4	BLK/PCS
PT KARYAINDAH ALAM SEJAHTERA	JL KALISOSOK KIDUL NO 2 SURABAYA 60175 INDONESIA		3	LBK
PT SARI DUMAI SEJATI	JL MH THAMRIN NO 31 KEBON MELATI TANAH ABANG JAKARTA PUSAT DKI JAKARTA RAYA INDONESIA		3	LBK
ECU WORLDWIDE MALAYSIA SDN BHD	O B PRISM GLOBAL LIMITED B 2 2 2ND FLOOR BBT ONE THE TOWERS LEBUH BATU NILAM 1A BANDAR BUKIT TINGGI 41200 KLANG SELANGOR		2	PKG
NATURAL OLEOCHEMICALS SDN BHD	PLO 428 JALAN BESI SATU 81700 PASIR GUDANG JOHOR MALAYSIA		2	DRM
WEST AFRICA PRODUCE SL LTD	ROLAL JUNCTION SUMBUYA VILLAGE KOYA CHEIFDOM PORT LOKO DISTRICT 232 76255310		2	JUG
BIOPALMA DA AMAZONIA S A	REFLORESTAMENTO INDUSTRIA E COMERCIO RODOVIA PA 150 KM 37 ANEXO ZONA RURAL 68450 000 MOJU PARA BR		1	BLK
CARGILL DE COLOMBIA LTDA	NIT 900237877 5 CRA 7 NO 72 13 PISO 3	PH: 5713266780	1	BLK
FRUIT OIL S A	5A AVENIDA EDIFICIO EUROPLAZA TORRE III OFICINA 1101 05 55 ZONA 14 GUATEMALA GUATEMALA C A		1	BLK
GENTING SDC SDN BHD	COMPANY REGISTRATION NO 196201000115 22672 V LOT 13B POIC PHASE 1 MILES 3 1 2 JALAN		1	LBK
KOLOSINTERNATIONAL S A	KM. 6.5 VIA DURAN-TAMBO SN A 300 METROS DE PROCARSA DURAN		1	PCS
LOGISTICS UNLIMITED S A LOGUNSA	JUNIN 114 Y MALECON SIMON BOLIVAR RUC 0992178612001 GUAYAQUIL ECUADOR	PH: 593 4 3716888	1	PCS
ORGANICSUPPLY S A	VIA ESMERALDAS LOTE 7 QUININDE E ECUADOR		1	PKG
PALMA SUR S A	2 AVENIDA 10 30 ZONA 9 GUATEMALA GUATEMALA C A	PH: 502 2386 3800	1	BLK

Source: ImportKey

Appendix 19 – Sierra Leone suppliers of Coconut (copra), palm kernel or babassu oil and fractions thereof, whether or not refined, but not chemically modified : Palm kernel or babassu oil and fractions thereof : Crude oil (HS 151321)

List of suppliers from Sierra Leone who supply HS 151321

Data From ImportKey

SUPPLIER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
KONKOHTONG ENTERPRISE	30A SAVAGE SQUARE FREETOWN SIERRA LEONE	PH: 232 7670494	13	CTN/PKG
INTERCILSA LOGISTICS CIA LTDA	RICARDO SAENZ 317-304 Y JAIE ANDRADE MOSCOSO RUC QUITO-ECUADOR	PH: 1791283600	174199	PCS/PKG/BOX/CAS/BAG

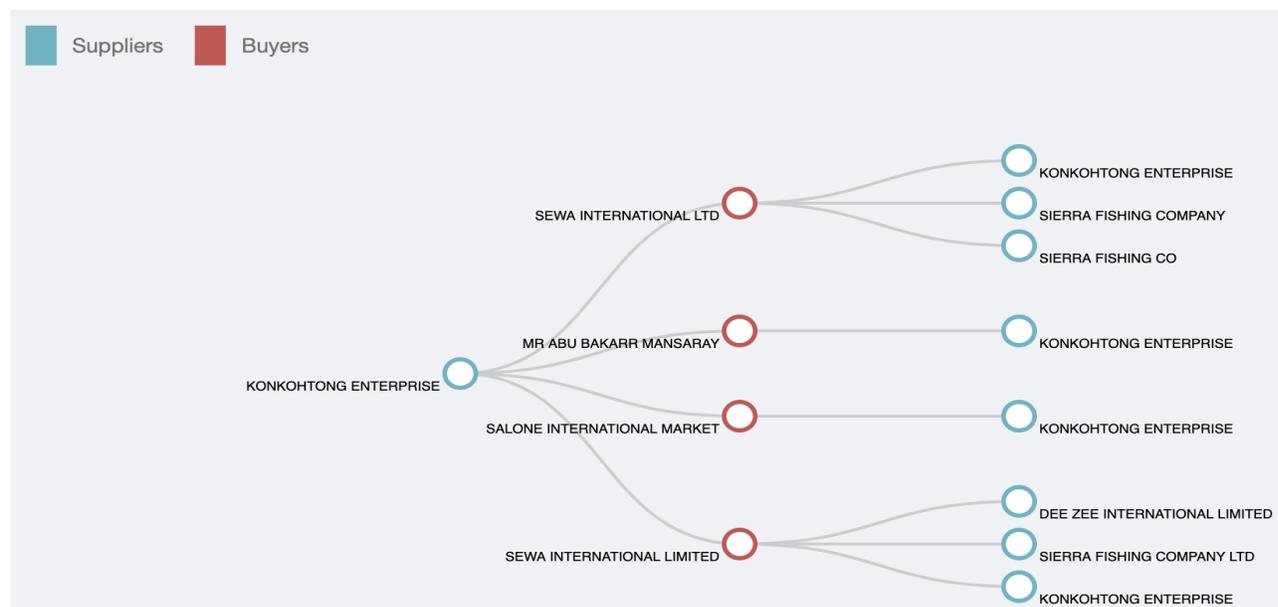
Source: ImportKey

Appendix 20 – Buyers of Coconut (copra), palm kernel or babassu oil and fractions thereof, whether or not refined, but not chemically modified : Palm kernel or babassu oil and fractions thereof : Crude oil (HS 151321) from Sierra Leone, by customer

List of buyers who purchased HS 151321 from KONKOHTONG ENTERPRISE

Data From ImportKey

BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
SEWA INTERNATIONAL LTD	5774 2ND STREET NE WASHINGTON DC 20011 USA	TEL 202635447	11	PKG/CTN
MR ABU BAKARR MANSARAY	15032 CHERRY WOOD DRIVE LAUREL MD 20707 USA	TEL 5168872400	1	PKG
SALONE INTERNATIONAL MARKET	8813 ANNAPOLIS ROAD 20706 LANHAM	TEL 3015184993	1	PKG



Note: KONKOHTONG ENTERPRISE do sales to SEWA INTERNATIONAL LTD, MR ABU BAKARR MANSARAY, and SALONE INTERNATIONAL MARKET, SEWA INTERNATIONAL LIMITED

List of buyers who purchased HS 151321 from INTERCILSA LOGISTICS CIA LTDA

Data From ImportKey

BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
COMI SA	PARC DE TREVILLE 3 ALLE DES MOUSQUETAIRE 91078 BONDUFLE CEDEX FRANCE INTERCILSA	TEL 0169641826	102	BOX/PCS
TRANS OCEAN BULK LOGISTICS INC	10344 NEW DECADE DRIVE PASADENA TX 77507		33826	BAG
BOLLORE LOGISTICS CANADA	3400 DOUGLAS B FLOREANI ST LAURENT QUEBEC CANADA H4S 1V2	TEL 514 956 7870	19470	PCS
SDV LOGISTICS CANADA INC RICHMOND	5200 MILLER ROAD SUITE 2100 RICHMOND BC V7B 1L1 CANADA		5	CTN
AIT WORLDWIDE LOGISTICS INC	701 N ROHLWING ROAD ITASCA IL 6014 3 US		37637	DRM

JF HILLEBRAND USA INC	2147 ROUTE 27 SUITE 401 EDISON NJ 08817 USA	73473	PCS
EMADTRANS LOGISTICS INC	1020 W 8TH AVE UNIT2AB KING OF PRUSSIA PA19406. 8 WEST 40TH STREET 10TH FLOOR NEW YORK	39	BAG
AMC USA INC	FLOOR NEW YORK	10254	PCS
BACARDI CORPORATION	STATE ROAD 165 KM 2 6 C P 00962 CATANO PUERTO RICO	381	PCS
DEMENAGEMENT OUTAOUAIS	150 JEAN PROULX GATINEAU QC J8Z 1V3 CANADA	12	BOX

Appendix 21 – Global suppliers of Coconut (copra), palm kernel or babassu oil and fractions thereof, whether or not refined, but not chemically modified : Palm kernel or babassu oil and fractions thereof : Crude oil (HS 151321)

List of Top Suppliers who supply HS 151321

Data From ImportKey

SUPPLIER's name	Address	Contact Info	TOTAL SHIPMENTS	Style of Packaging
PT PELITA AGUNG AGRINDUSTRI	JL SULTAN ISKANDAR MUDA NO 107 MEDAN 20154 INDONESIA		79	BLK
PT SUMBER INDAH PERKASA	SINAR MAS LAND PLAZA MENARA 2 LT 30 JL MH THAMRIN NO 51 GONDANGDIA MENTENG JAKARTA PUSAT		757	BLK
PT MULTIMAS NABATI ASAHAN	GEDUNG B G TOWER LANTAI 9 JALAN PUTRI HIJAU NO 10 KESAWAN MEDAN BARAT MEDAN SUMATERA UTARA		748	BLK
PT SARI DUMAI SEJATI	JL MH THAMRIN NO 31 KEBON MELATI TANAH ABANG JAKARTA PUSAT DKI JAKARTA RAYA INDONESIA		67	LBK
PT INTIBENUA PERKASATAMA	SPRING TOWER 02 21 JL KL YOS SUDARSO TANJUNG MULIA MEDAN DELI MEDAN SUMATERA UTARA 20241		51	LBK
EXTRACTORA NATURAL ECUADOR S A	EXTRANATU RSPO CA5641 15 CTC FERNANDO DAVA		41	PKG

BINTULU EDIBLE OILS SDN BHD	12TH MILE TANJUNG KIDURONG ROAD PO BOX 256 97007 BINTULU SARAWAK MALAYSIA	35	LBK
SANDAKAN EDIBLE OILS SDN BHD	KM 8 JALAN BATU SAPI KARAMUNTING 90000 SANDAKAN SABAH MALAYSIA	33	LBK

PT PELITA AGUNG AGRINDUSTRI's List of HS 151321 Buyers

Data From ImportKey

BUYER's name	Address	Contact Info	TOTAL SHIPMENTS	Style of Packaging
TO ORDER PT PELITA AGUNG AGRINDUST	JL SULTAN ISKANDAR MUDA NO 107 MEDAN 20154 INDONESIA		66	LBK
CARGILL INC	15407 MCGINTY ROAD WEST MS 20 WAYTAZA MN 55391		752	BLK
VENTURA FOODS LLC	40 POINTE DR BREA CA 92821		270	BLK
TO ORDER OF TO ORDER	DUBLIN, IRELAND DUBLIN IRELAND		1194189	PKG

Note: PT PELITA AGUNG AGRINDUSTRI do sales to ORDER PT PELITA AGUNG AGRINDUST, CARGILL INC, VENTURA FOODS LLC, and TO ORDER OF TO ORDER

PT SUMBER INDAH PERKASA's List of HS 151321 Buyers

Data From ImportKey

BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
VICTORY TROPICAL OIL USA INC	ONE OIL COLUMBUS CENTER SUITE 903 VIRGINIA BEACH VA 23462		368	LBK

PT SUMBER INDAH PERKASA	SINAR MAS LAND PLAZA MENARA 2 LT 30 51 GONDANGDIA MENTENG JAKARTA PUSAT DKI JAKARTA		445	BLK
GOLDEN AGRI RESOURCES USA INC	4500 MAIN ST STE 305 VIRGINIA BEACH VA 23462		231	LBK
FUJI VEGETABLE OIL INC	120 BRAMPTON ROAD SAVANNAH GA 31408 U S A	TEL 1 912 966 5900	1353	LBK
TO ORDER TO ORDER OF	SOMAC ALLEE PIERRE LOTI TITIORO BP N 24 98713 PAPEETE		1192608	PCS
TO THE ORDER OF TO THE ORDER OF	ARAB NATIONAL BANK JEDDAH SAUDI ARABIA AVENIDA ALFREDO EGIDIO DE SOUZA ARANHA 100 100 BLOCO D PAVMTO 12 SAO PAULO 04726170		889053	PKG
BDP INTERNATIONAL SOUTH AMERICA	40 POINTE DR BREA CA 92821		18	BLK
VENTURA FOODS LLC	23708 W DURKEE ROAD CHANNAHON IL 60410		258	BLK
IOI LODERS CROKLAAN	15407 MCGINTY ROAD WEST MS 20 WAYTAZA MN 55391		20	LBK
CARGILL INC DRESSINGS SAUCES AND	STANDARD FURNITURE MANUFACTURING CO PO BOX 1089 801 HWY 31 SOUTH BAY M CTC LUCAS HALL	TEL 1 2519376741	444	BLK
TO ORDER TO	BIOPRODUCTS PLANT 4666 FARIES PARKWAY DECATURIL 62526		2311739	CTN
ARCHER DANIELS MIDLAND CO	5000 BUSINESS CENTER DRIVE SUITE 1000 SAVANNAH GA 31405		2503	TKR
DJ POWERS COMPANY INC			66	PCS



Note: PT SUMBER INDAH PERKASA do sales to VICTORY TROPICAL OIL USA INC, PT SUMBER INDAH PERKASA, and GOLDEN AGRI RESOURCES USA INC

PT SUMBER INDAH PERKASA's List of HS 151321 Buyers

Data From ImportKey

BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
WESTERN PACIFIC FOODS INC	5960 CORVETTE ST COMMERCE CA 90040 UNITED STATES	TEL 1 2132325117	7764	CTN
CAPITOL DISTRIBUTION COMPANY LLC DB	MICA STREET CALIFORNIA CITY CA 90670 UNITED STA		2602	BAG/CTN
BARRY CALLEBAUT USA LLC	600 WEST CHICAGO AVENUE CHICAGO ILLINOIS USA 60654	TEL 1 3124967425	35358	CTN
CAPITOL FOOD CO LLC	13930 MICA ST SANTA FE SPRINGS CA 90670	PH: 1 562 404 4321	944	CTN
KB INGREDIENTS LLC	HATO REY CENTER 1268 PONCE DE LEON SSN 20 1050127 MRN 059 30430012 PO BOX PR 00918 2007	TEL 1 9734269100	268	PAL
ADM INTERNATIONAL OIL	4666 FARIAS PARKWAY DECATUR IL 62526 LAS PALMAS VILLAGE 7 9 ST. CATANO, PR 00962		2401	BLK
ARKYO INTERNATIONAL INC	9 ST. CATANO, PR 00 00962		122	CTN
AARHUSKARLSHAMN USA INC	499 THORNALL STREET 5TH FLOOR EDISON NJ 08837	TEL 1 973 344 1300	1187	DRM/LBK

BARRY CALLEBAUT MEXICO S DE R L	AVE LOS CHOCOLATES 101 LIBRAMIENTO ESCOBEDO NUEVO LEON C P 66050 MEX		2455	CTN
HUILERIES HAITIENNES S A	ROUTE NATIONALE 1 CHANCERELLES PORT AU PRINCE HAITI C O NOBLE DISTRIBUTION SYSTEMS 20500 S FORDYCE AVENUE CARSON CA90810 FOU		971	CTN
WILMAR OILS AND FATS STOCKTON LLC	MA ALONA CUSTOMER SERVICE SUPERVISOR		176	DRM
CARRIBEX S A	9 A 16 ROUTE DE DELMAS PORT AU PRINCE HAITI 780 WASHINGTON STREET QUINCY MA 02169	TEL 509 3751 4681	2098	DRM/LBK
TWIN RIVERS TECHNOLOGIES			128	BLK
TO ORDER PT MULTIMAS NABATI ASAHAN	GEDUNG B G TOWER LANTAI 9 JALAN PUTRI HIJAU NO 10 KESAWAN MEDAN KUALA TANJUNG		9	BLK
TO THE ORDER OF TO THE ORDER OF	ARAB NATIONAL BANK JEDDAH SAUDI ARABIA		889053	PKG
PERDUE AGRIBUSINESS LLC	BALTIMORE TERMINAL CORP WAREHOUSE 6 BALTIMORE MD 21804 UNITED STATES		19635	SAK
RUILERIES HAITENNES S A	PORT AU PRINCE HAITI ATTN ALEX DOLCE PHONE 509 28150000		5	BLK
MERCASID S A PLANTA DE ACEITES	RNC NO 1 01 80768 7 AVENIDA MAXIMO GOMEZ NO 182 AVENIDA MAXIMO GOME 00969		4	CTN
PT MULTIMAS NABATI ASAHAN	GEDUNG B G TOWER LANTAI 9 J PUTRI HIJAU NO 10 KESAWAN MEDAN BARAT MEDAN SUMATERA UTARA 20111		13	BLK

SEPROD LTD	3 FELIX FOX BOULEVARD KINGSTON JAMAICA	88	CTN
TO ORDER PERDUE AGRIBUSINESS LLC	PO BOX 1537 SALISBURY MARYLAND 21802	4	BLK
IOI GROUP LODERS CROKLAAN USA LLC	24708 W DURKEE ROAD CHANNAHON IL 60410	40	BLK
JEDWARDS INTERNATIONAL INC	141 CAMPANELLI DRIVE BRAINTREE MA 02184 UNITED STATES	124	CTN
TO ORDER OF SATIN FINE FOODS	32 LEONE LANE UNIT 1 CHESTER NY 10918 UNITED STATES	2	CTN
TO ORDER TWIN RIVERS TECHNOLOGIES	780 WASHINGTON STREET QUINCY MA 02169	7	BLK
AARHUSKARISHAMN USA INC	131 MARSH STREET PORT NEWARK NJ 07114	46	BLK
BARRY CALLEBAUT USA LLC	1175 COMMERCE BLV D AMERICAN CANYON CA 94503	1	CTN
CARGILL DE MEXICO SA DE CV	COL SANTA FE ANTONIO DOVALI JAIME MEXICO CITY CMX 01210 MEXICO	205	BAG
CARGILL INCORPORATED DRESSINGS	SAUCES OILS 15407 MCGINTY ROAD WEST MS 20 WAYZATA MN 55391	22	BLK
FABRICA DE JABON LA PRINCESA	CALLE 63C NO 198 X 2 Y 4D CORTES SARMIENTO 97168 MERIDA YUC MEXICO	2	BLK
PERDUE AGRIBUSINESS	1897 RIVER ROAD MARIETTA PA 17547 USA	20992	SKD
PROTEINAS Y OLEICOS S A DE C V	CALLE 17 NUMERO 409 A TERCER NIVEL POR 20 Y 28 CIUDAD INDUSTRIAL CP 97288 MERIDA YUCATAN MEXICO RFC	58	LBK/PCS
TO AARHUSKARLSHAMN USA INC	131 MARSH STREET PORT NEWARK NJ 07114 US	5	BLK

TO ORDER OF WILMAR OILS AND FATS S	2008 PORT ROAD B STOCKTON CA 95203	PH: 925 627 1600	3 CTN
WILMAR OLEO NORTH AMERICA LLC	11200 BROADWAY STREET PEARLAND TX 77584 US		3338 TK



Note: PT SUMBER INDAH PERKASA do sales to WESTERN PACIFIC FOODS INC, CAPITOL DISTRIBUTION COMPANY LLC DB, and BARRY CALLEBAUT USA LLC

PT SARI DUMAI SEJAT's List of HS 151321 Buyers

Data From ImportKey

BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
TO ORDER PT SARI DUMAI SEJATI	JL MH THAMTIN NO 31 KEBON MELATI TANAH ABANG JAKARTA PUSAT DKI JAKARTA RAYA INDONESIA		311	LBK
AAK USA INC	499 THORNALL STREET 5TH FLOOR EDISON NEW JERSEY 08837	TEL 1 973 344 1300	892	LBK
CARGILL INC DRESSINGS SAUCES AND	15407 MCGINTY ROAD WEST MS 20 WAYTAZA MN 55391		782	BLK
TO ORDER TO	STANDARD FURNITURE MANUFACTURING CO PO BOX 1089 801 HWY 31 SOUTH BAY M CTC LUCAS HALL	TEL 1 2519376741	2311739	CTN
APICAL RESOURCES AMERICA	1210 CHESTERWOOD DR PEARLAND TX 77581 USA PEARLAND TX 77581		55	CTN

TO ORDER TO ORDER OF	SOMAC ALLEE PIERRE LOTI TITIORO BP N 24 98713 PAPEETE	1192608	PCS
APICAL RESOURCES AMERICA LLC	USA UNITED STATES	8	CTN
PROCTER AND GAMBLE MFG CO	5299 SPRING GROVE AVENUE FHIC HISTORIC BUILDING 4TH FLOOR CINCINNATI OHIO 45217	98	LBK
BUNGE LODERS CROKLAAN	CHANNAHON IL 24708 W DURKEE RD CHANNAHON IL 60410 USA	164	PCS
RIERDEN CHEMICAL TRADING COMPANY	115 WEST CHURCH ST LIBERTYVILLE IL 60048	2059	PKG
JANS ENTERPRISES DBA WIRA CORP	4181 TEMPLE CITY BLVD EL MONTE CA UNITED STATES 91731	2273	CTN
STANDARD CHARTERED BANK NY	1095 AVENUE OF THE AMERICAS NEW YORK NY 10036 USA ATTN TRADE DEPARTMENT	1	LBK
TO ORDER OF TO ORDER OF	LEIXOES 13 PORTUGAL ONE OIL COLUMBUS CENTER SUITE 903 VIRGINIA BEACH VA 23462	590491	BAG
VICTORY TROPICAL OIL USA INC		368	LBK



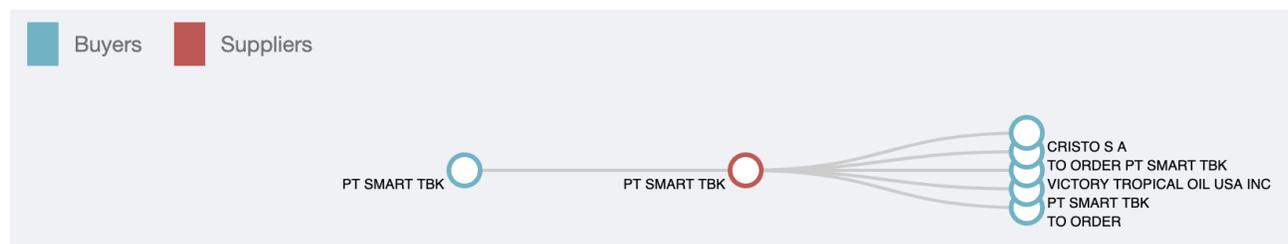
Note: PT SARI DUMAI SEJATI do sales to TO ORDER PT SARI DUMAI SEJATI, AAK USA INC, CARGILL INC DRESSINGS SAUCES AND, TO ORDER TO, and APICAL RESOURCES AMERICA LLC

PT SMART TBK's List of HS 151321 Buyers

Data From ImportKey

BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
CRISTO S A	10 RUE BABANCOURT ROUTE DE L AEROP PORT AU PRINCE HAITI		8281	BAG
VICTORY TROPICAL OIL USA INC	ONE OIL COLUMBUS CENTER SUITE 903 VIRGINIA BEACH VA 23462		370	LBK
TO ORDER PT SMART TBK	SINAR MAS LAND PLAZA MENARA 2 LT 28 JL MH THAMRIN NO 51 GONDANGDIA JAKARTA PUSAT DKI JAKARTA 10350		356	LBK
TO ORDER TO ORDER OF	SOMAC ALLEE PIERRE LOTI TITIORO BP N 24 98713 PAPEETE		1192608	PCS
FUJI VEGETABLE OIL INC	120 BRAMPTON ROAD SAVANNAH GA 31408 U S A	TEL 1 912 966 5900	669	LBK
MULTI COMMODITY INTERNATIONAL LTD	SUNTEC TOWER 3 SUITE NO 3526 8 TEMA SINGAPORE 038988 SINGAPORE		1106	BOX
NATU OIL SERVICES INC	2150 550 SHERLING PLACE PORT COQUITLAM BC V3B 0J6 BRITISH COLUMBIA CANADA	TEL 1 604 941 1791	556	DRM/CT N/BAG
GOLDEN AGRI RESOURCES USA INC	4500 MAIN ST STE 305 VIRGINIA BEACH VA 23462		231	LBK
NESTLE PAKISTAN LIMITED	308 UPPER MALL LAHORE PAKISTAN	TEL 92 425757095	24	CTN
CARGILL INC DRESSINGS SAUCES OIL	15407 MCGINTY ROAD WEST MS 91 WAYZATA 55391		455	LBK
BDP INTERNATIONAL SOUTH AMERICA	AVENIDA ALFREDO EGIDIO DE SOUZA ARANHA 100 100 BLOCO D PAVMTO 12 SAO PAULO 04726170		18	BLK

	STANDARD FURNITURE MANUFACTURING CO PO BOX 1089 801 HWY 31 SOUTH BAY M CTC LUCAS	TEL 1		
TO ORDER TO	HALL	2519376741	2311739	CTN
	23708 W DURKEE ROAD			
IOI LODERS CROKLAAN	CHANNAHON IL 60410		19	LBK
	BIOPRODUCTS PLANT			
ARCHER DANIELS MIDLAND CO	4666 FARIES PARKWAY DECATURIL 62526		2503	TKR
	AVENIDA SAUCES 17 COL BOSQUES D ATIZAPAN DE ZARAGOZA MEX 52919			
INTERQUIMICA SA DE CV	MEXI		2	BOX
	GLOBAL AGRI TRADE CORPORATION 15500 SOUTH AVALON BLVD			
TO THE ORDER OF GLOBAL AGRI TRADE	RANCHO DOMINGUEZ CA 90220 USA	TEL 1 562 320 8550	11144	BAG/PKG
	40 POINTE DR BREA CA 92821		258	BLK



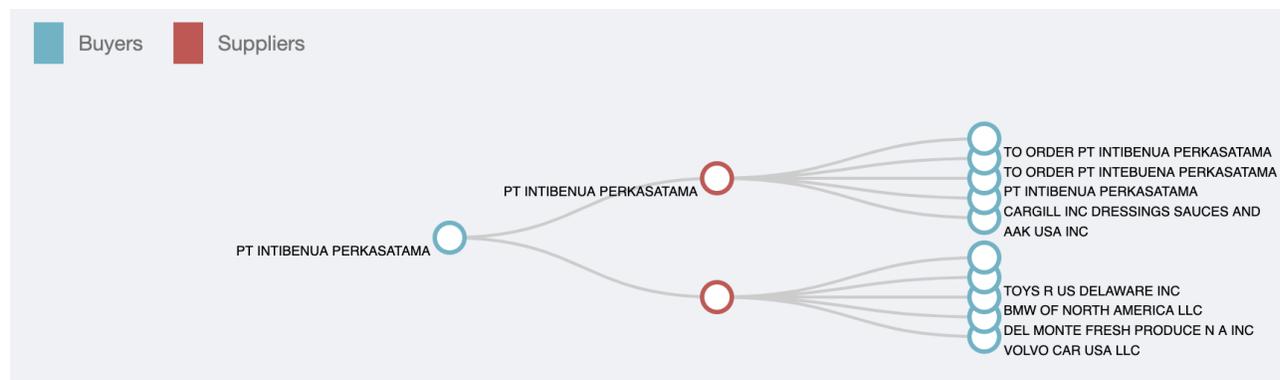
Note: PT SMART TBK do sales to CRISTO S A, VICTORY TROPICAL OIL USA INC, TO ORDER PT SMART TBK, and TO ORDER TO ORDER OF

PT SMART TBK's List of HS 151321 Buyers Continued

Data From ImportKey

BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
TO ORDER PT INTIBENUA PERKASATAMA	SPRING TOWERS JL KL YOS SUDARSO TANJUNG MULIA MEDAN DELI MEDAN SUMATERA UTARA 20241		488	LBK

CARGILL INC DRESSINGS SAUCES AND	15407 MCGINTY ROAD WEST MS 20 WAYTAZA MN 55391		804	BLK
AAK USA INC	499 THORNALL STREET 5TH FLOOR EDISON NEW JERSEY 08837	TEL 1 973 344 1300	895	LBK
TO ORDER OF TO ORDER	DUBLIN, IRELAND DUBLIN IRELAND		1194189	PKG
TO THE ORDER OF TO THE ORDER OF	ARAB NATIONAL BANK JEDDAH SAUDI ARABIA		890328	PKG
PROCTER AND GAMBLE MFG CO	5299 SPRING GROVE AVENUE FHIC HISTORIC BUILDING 4TH FLOOR CINCINNATI OHIO 45217		98	LBK
ICOF AMERICA INC	9600 COLERAIN AVE SUITE 402 CINCINNATI OH 45251 U S A		5340	DRM/LBK
VENTURA FOODS LLC	40 POINTE DR BREA CA 92821		270	BLK
FUJI VEGETABLE OIL INC	120 BRAMPTON ROAD SAVANNAH GA 31408 U S A	TEL 1 912 966 5900	678	LBK
TO ORDER TO	STANDARD FURNITURE MANUFACTURING CO PO BOX 1089 801 HWY 31 SOUTH BAY M CTC LUCAS HALL	TEL 1 2519376741	2315038	CTN
BUNGE LODERS CROKLAAN	CHANNAHON IL 24708 W DURKEE RD CHANNAHON IL 60410 USA		182	PCS/1BLK
TO ORDER OF TO ORDER OF	LEIXOES 13 PORTUGAL 2 FENG SHIH ROAD		591529	BAG
TO ORDER OF SHIPPER	TACHUNG 420 TW		87383	CTN



Note: PT SMART TBK do sales to TO ORDER PT INTIBENUA PERKASATAMA, CARGILL INC DRESSINGS SAUCES AND, and AAK USA INC

PT WILMAR NABATI INDONESIA's List of HS 151321 Buyers

Data From ImportKey

BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
WESTERN PACIFIC OILS LLC	5960 CORVETTE ST COMMERCE CA 90040 UNITED STATES		7755	CTN
CAPITOL FOOD CO LLC	13930 MICA ST SANTA FE SPRINGS CA 90670	PH: 1 562 404 4321	3561	CTN/BAG
WILMAR OLEO NORTH AMERICA LLC	11200 BROADWAY STREET PEARLAND TX 77584 US		3368	TK
JD HEISKELL HOLDINGS LLC	C O PCC LOGISTICS 2602 PORT OF TACOMA ROAD TACOMA WA 98421 TONI GALE		594	BAG
JEFO USA	717 SE 3RD AVENUE DANIA BEACH FLORIDA FL 33004 US		2514	BAG
DARBY TRADING INCORPORATED	1133 WESTCHESTER AVENUE SUITE S 226 WHITE PLAINS NEW YORK 10604 U S A ATTN MICHAEL FALES		5754	BAG

LESCHACO INC	15355 VANTAGE PARKWAY WEST SUITE 195 HOUSTON TX77032	TEL 281 442 1895	71316	TNK
ADM INTERNATIONAL OIL	4666 FARIES PARKWAY DECATUR IL 62526 3700 BUFFALO SPEEDWAY STE 600 HOUSTON TX 77098		564	BLK
CLP CHEMICALS L P	C O NOBLE DISTRIBUTION SYSTEMS 20500 S FORDYCE AVENUE CARSON CA90810 FOU		87	DRM
WILMAR OILS AND FATS STOCKTON LLC	MA ALONA CUSTOMER SERVICE SUPERVISOR		176	DRM
TO ORDER TO	STANDARD FURNITURE MANUFACTURING CO PO BOX 1089 801 HWY 31 SOUTH BAY M CTC LUCAS HALL	TEL 1 2519376741	2315038	CTN
MK MONOMERS LLC	905 BRICKELL BAY DRIVE SUITE 230 MIAMI FL 33131		154	PCS
TO ORDER OF TO ORDER	DUBLIN, IRELAND DUBLIN IRELAND		1194189	PKG
AAK USA INC	499 THORNALL STREET 5TH FLOOR EDISON NEW JERSEY 08837	TEL 1 973 344 1300	1188	LBK/DRM
PT WILMAR NABATI INDONESIA	GEDUNG B G LANTAI 9 JALAN PUTRI HI MEDAN SUMATRA 20111 INDONESIA		357	BOX/BLK
ACME HARDESTY CO	A DIVISION OF JACOB STERN SONS INC 450 SENTRY PARKWAY BLUE BELL PA 19422 USA		7864	PCS/BAG
KB INGREDIENTS LLC	HATO REY CENTER 1268 PONCE DE LEON SSN 20 1050127 MRN 059 30430012 PO BOX PR 00918 2007	TEL 1 9734269100	268	PAL
TO THE ORDER OF TO THE ORDER OF	ARAB NATIONAL BANK JEDDAH SAUDI ARABIA		890328	PKG

ELEVANCE RENEWABLE SCIENCE	2501 DAVEY RD WOODRIDGE IL 60517		55	UNT
BARRY CALLEBAUT USA LLC	600 WEST CHICAGO AVENUE CHICAGO ILLINOIS USA 60654	TEL 1 3124967425	35511	CTN
NUTRION FEEDS NORTH AMERICA INC	807 S POST OAK LN 1501 HOUSTON 77056 TEXAS USA		1343	BAG
ARCHER DANIELS MIDLAND CO	BIOPRODUCTS PLANT 4666 FARIES PARKWAY DECATURIL 62526		2503	TKR
KOVA INC	13528 EXCELSIOR DR SANTA FE SPRINGS CA 90670 UNITED ST		181	DRM
CARRIBEX S A	10 AUTOROUTE DE DELMAS OU HAITI		1059	DRM/PCS
ANDY WAREHOUSING DISTRIBUTION	2955 BOULEVARD JEAN BAPTISTE DESCHA MPS LACHINE QC H8T 1C5		15	DRM
ELEVANCE RENEWABLE SCIENCES	250 S GARY AVE CAROL STREAM IL 60188		27	DRM
WILMAR OLEO QUIMICOS DE RL DE CV	CALLE GUTIERREZ ZAMORA NO EXTERIOR 128 NO INTERIOR 1 LAS AGUILAS ALVARO OBREGON ME 01710		22	BLK
EVANGELICAL BIBLE COLLEGE OF MALAWI	P O BOX 243 BLANTYRE MALAWI BL BLZ		10	BAG
HUILERIES HAITIENNRS S A	PORT AU PRINCE HAITI ATTN ALEX DOLCE	PH: 509 2815 0000	1004	CTN, LBK
IP SPECIALITIES LLC	2724 ERIE AVENUE CINCINNATI OH 45208 US		180	PCS
PERDUE AGRIBUSINESS LLC	BALTIMORE TERMINAL CORP WAREHOUSE 6 BALTIMORE MD 21804 UNITED STATES		19756	SAK
UNIQUE CHEMICAL SOLUTIONS INC	3032 TRENTON STREET DENVER 80238 USA		52	PKG
TWIN RIVERS TECHNOLOGIES	780 WASHINGTON STREET QUINCY MA 02169		128	BLK

ANTONINE 900 TOWN
 1 CH ROBINSON ATTN COUNTRY LANE SUITE 310
 ALLEGRA HOUSTON TX 77024

6 PCS

Note: PT WILMAR NABATI INDONESIA do sales to WESTERN PACIFIC OILS LLC, CAPITOL FOOD CO LLC, WILMAR OLEO NORTH AMERICA LLC, and JD HEISKELL HOLDINGS LLC

EXTRACTORA NATURAL ECUADOR S A's List of HS 151321 Buyers

Data From ImportKey

BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
ORGANIC ANIMAL NUTRITION USA INC	948 NORTH STREET UNIT 7 BOULDE 80304 CO 80624	PH: 615 426 2485	505	SAK
PERDUE AGRIBUSINESS LLC	BALTIMORE TERMINAL CORP WAREHOUSE 6 BALTIMORE MD 21804 UNITED STATES		20480	SAK/BAG
NATURAL HABITATS USA	948 NORTH STREET UNIT 7 BOU CO 80304 CA 94804	TEL 888 958 1967	502	BOX/BAG /PKG
DR BRONNERS MAGIC SOAP	1335 PARK CENTER DRIVE VISTA 92018 CTC BENNY ANDRADE		703	PKG/PCS
NUTIVA	STARR FAIRCHILD 213 WEST CUTTING BL RICHMOND CA 94804 UNITED STATES		1667	BOX/PKG
GLORYBEE	120N SENECA RD EUGENE OR 97402 USA	PH: 541 868 2296	1787	PCS
CAMBRIAN SOLUTIONS INC	627 LYONS LANE SUITE 300 OAKVILLE ON L6J 5Z7 CANADA	TEL 1 905 338 3172	1963	PKG/BAG
PALMA ORGANICA HOLLAND BV	HEEMRAADSSINGEL 188 ROTTERDAM ZH 3021 DM NETHERLANDS		17	BAG
ADAMS VEGETABLE OILS INC	MR LEE SMITH 7250 JOHN GALT WAY ARBUCKLE CA 95912	OFFICE 530 668 2030	9100	FLX/TNK

TAMEFIELD WAREHOUSING DISTRIBUTIO	35 AUTOMATIC ROAD BRAMPTON ON L6S 6C9 CANADA		41	BOX
DEKALB FARMERS MARKET	3000 EAST PONCE DE LEON AVENUE DECATUR GA 30030		12562	CTN
GOLDEN BOY FOODS	7725 V5A 4V8 LOUGHEED HIGHWAY BURNABY BC V5K 0A1 CANADA		1117	CTN
FUJI VEGETABLE OIL INC	120 BRAMPTON ROAD SAVANNAH GA 31408 U S A	TEL 1 912 966 5900	673	LBK
JEDWARDS INTERNATIONAL INC	141 CAMPANELLI DRIVE BRAINTREE MA 02184 UNITED STATES C/O LANDTRAN LOGISTICS 4819-90A AVE EDMONTON, AB T6B 2Y3		124	CTN
BARENTZ CANADA ULC	CANADA TIN 47 GUNSTON WAY 1919		7	PCS
CAMBRIAN PARK KIWANIS	SAN JOSE CA 95134- 2086333		1	BOX
CAMBRIAN SOLUTIONS INC C O	35 AUTOMATIC ROAD BRAMPTON ON TORONTO ON M4E 1E7 CANADA		14	BOX/DR M

Note: EXTRACTORA NATURAL ECUADOR S A do sales to ORGANIC ANIMAL NUTRITION USA INC, PERDUE AGRIBUSINESS LLC, NATURAL HABITATS USA, DR BRONNERS MAGIC SOAP, NUTIVA, GLORYBEE, CAMBRIAN SOLUTIONS INC, PALMA ORGANICA HOLLAND BV, ADAMS VEGETABLE OILS INC, TAMEFIELD WAREHOUSING DISTRIBUTIO, DEKALB FARMERS MARKET, GOLDEN BOY FOODS, FUJI VEGETABLE OIL INC, JEDWARDS INTERNATIONAL INC, BARENTZ CANADA ULC, CAMBRIAN PARK KIWANIS, and CAMBRIAN SOLUTIONS INC C O

BINTULU EDIBLE OILS SDN BHD's List of HS 151321 Buyers

Data From ImportKey

BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
ADM INTERNATIONAL OIL	4666 FARIES PARKWAY DECATUR IL 62526		3647	BLK/TKR

	STANDARD FURNITURE MANUFACTURING CO PO BOX 1089 801 HWY 31 SOUTH BAY M CTC LUCAS	TEL 1 2519376741	2315038	CTN
TO ORDER TO	HALL			
TO ORDER OF TO ORDER	DUBLIN, IRELAND DUBLIN IRELAND		1194189	PKG
TWIN RIVERS TECHNOLOGIES	780 WASHINGTON STREET QUINCY MA 02169		128	BLK
AARHUSKARLSHAMN USA INC	499 THORNALL STREET 5TH FLOOR EDISON NJ 08837		293	DRM
TO THE ORDER OF TO THE ORDER	OF JP MORGAN CHASE BANK NA 1300 E CLEVELAND AL 35049 UNITED STATES		901667	CTN
WILMAR OILS AND FATS STOCKTON LLC	C O NOBLE DISTRIBUTION SYSTEMS 20500 S FORDYCE AVENUE CARSON CA90810 FOU MA ALONA CUSTOMER SERVICE SUPERVISOR		176	DRM
TO THE ORDER OF TO THE ORDER OF	ARAB NATIONAL BANK JEDDAH SAUDI ARABIA		890328	PKG
PERDUE AGRIBUSINESS	1897 RIVER ROAD MARIETTA PA 17547 USA		21113	SKD
TO ORDER BINTULU EDIBLE OILS SDNBHD	12TH MILE TANJUNG KIDURONG RD PO BOX 256 97007 BINTULU SARAWAK		14	BLK
AARHUSKARISHAMN USA INC	131 MARSH STREET PORT NEWARK NJ 07114		52	LBK
PERDUE AGRIBUSINESS LLC	BALTIMORE TERMINAL CORP WAREHOUSE 6 BALTIMORE MD 21804 UNITED STATES		19757	SAK/BLK

Note: BINTULU EDIBLE OILS SDN BHD do sales to ADM INTERNATIONAL OIL, TO ORDER TO, TWIN RIVERS TECHNOLOGIES, AARHUSKARLSHAMN USA INC, TO THE ORDER OF TO THE ORDER, WILMAR OILS AND FATS STOCKTON LLC, TO THE ORDER OF TO THE ORDER OF, PERDUE AGRIBUSINESS, TO ORDER BINTULU EDIBLE OILS SDNBHD, AARHUSKARISHAMN USA INC, and PERDUE AGRIBUSINESS LLC

SANDAKAN EDIBLE OILS SDN BHD's List of HS 151321 Buyers

Data From ImportKey

BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
ADM INTERNATIONAL OIL	4666 FARIES PARKWAY DECATUR IL 62526		3647	BLK/TKR
TO ORDER TO ORDER OF	SOMAC ALLEE PIERRE LOTI TITIORO BP N 24 98713 PAPEETE		1192608	PCS
TO ORDER TO	STANDARD FURNITURE MANUFACTURING CO PO BOX 1089 801 HWY 31 SOUTH BAY M CTC LUCAS HALL	TEL 1 2519376741	2311739	CTN
TO ORDER OF SANDAKAN EDIBLE OILS	SDN BHD KM8 JALAN BATU SAPI KARAMUNTING SANDAKAN 90000		56	BLK
AAK USA RICHMOND CORP	1145 HARBOUR WAY SOUTH RICHMOND CALIFORNIA 94804 3695 USA		253	LBK/PKG
AARHUSKARISHAMN USA INC	131 MARSH STREET PORT NEWARK NJ 07114 780 WASHINGTON STREET QUINCY MA 02169		46	LBK
TWIN RIVERS TECHNOLOGIES			128	BLK
PERDUE AGRIBUSINESS LLC	BALTIMORE TERMINAL CORP WAREHOUSE 6 BALTIMORE MD 21804 UNITED STATES		19635	SAK
ORDER SANDAKAN EDIBLE OILS SDN BHD	KM 8 JANAL BATU SAPI KARAMUNTING 90000 SANDAKAN SABAH MALAYSIA		4211	BLK/TKR/ PCS
TO ORDER OF TO ORDER OF	LEIXOES 13 PORTUGAL		590491	BAG

AARHUSKARLSHAMN USA INC	499 THORNALL STREET 5TH FLOOR EDISON NJ 08837		293	DRM
CHURCH AND DWIGHT CO INC	190 POPE ROAD MORRISTOWN TN 37814		858	CTN
ARCHER DANIELS MIDLAND CO	BIOPRODUCTS PLANT 4666 FARIES PARKWAY DECATURIL 62526 C O NOBLE DISTRIBUTION SYSTEMS 20500 S FORDYCE AVENUE CARSON CA90810 FOU		4183	TKR/PCS
WILMAR OILS AND FATS STOCKTON LLC	MA ALONA CUSTOMER SERVICE SUPERVISOR 1897 RIVER ROAD		176	DRM
PERDUE AGRIBUSINESS	MARIETTA PA 17547 USA		20992	SKD
TO ORDER ARCHER DANIELS MIDLAND	4666 FARIES PARKWAY DECATUR IL 62525 5630 U S A	TEL 63 8027932746	1919	CTN
TO ORDER OFSANDAKAN EDIBLE OILS S B	KM 8 JALAN BATU SAPI KARAMUNTING 90000 SANDAKAN SABAH		5	BLK
CHURCH DWIGHT CO INC	5197 COMMERCE DRIVE YORK PA 17408		3275	BOX
TO ORDER OF SHIPPER	2 FENG SHIH ROAD TACHUNG 420 TW		87279	CTN
IOI GROUP	LODERS CROKLAAN USA LLC 24708W DURKEE ROAD CHANNAHON ILLINOIS 60410 USA 6906 ZION CHURCH ROAD PO BOX 1537		139	BLK
PERDUE GRAIN OILSEED LLC	SALISBURY MD 21804 UNITED STATES		724	BAG



Note: SANDAKAN EDIBLE OILS SDN BHD do sales to ADM INTERNATIONAL OIL, TO ORDER TO ORDER OF, TO ORDER TO, and TO ORDER OF SANDAKAN EDIBLE OILS

Appendix 22 – Ghanaian exporters and buyers in the USA

List of suppliers from GHANA who supply HS 151321

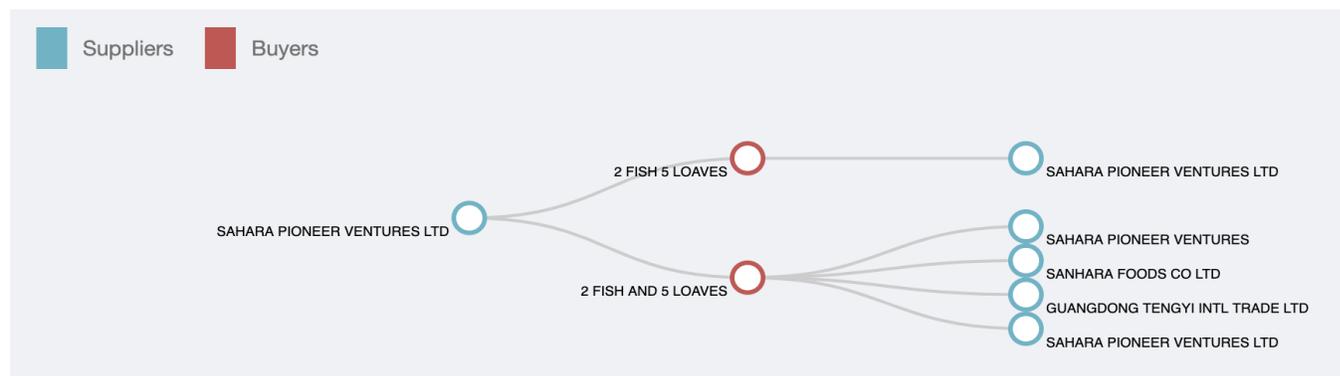
Data From ImportKey

SUPPLIER's name	Address	Contact Info	TOTAL SHIPMENTS	Style of Packaging
GLOBAL HUB LTD	PO BOX 0253 ACCRA 99999 GH 14 LABOUR STREET, TANTRA		1	PCS
SAHARA PIONEER VENTURES LTD	HILLS GREATER-ACCRA ACCRA GH		1	PCS

SAHARA PIONEER VENTURES LTD's List of HS 151321 Buyers

Data From ImportKey

BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
2 FISH 5 LOAVES	8658 OLD ARDMORE RD HYATTSVILLE MARYLAND 20785 USA	TEL 0012407793308	138	PCS



Note: SAHARA PIONEER VENTURES LTD do sales to 2 FISH 5 LOAVES

Appendix 23 – Global suppliers to the US of HS 151110

List of Top Suppliers who supply HS 151110				
Data From ImportKey				
SUPPLIER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
CI ACEPALMA SA	NIT 800 141 770 1 CALLE 90 NO 19 41 OFICINAS 303 304 EDIFICIO QUANTUM BOGOTA CO		75	BAG/BLK
CI INDUTRADE COLOMBIA SAS	CRA 24 #1A - 24 OFIC 901 PUERTO COLOMBIA, COLOMBIA COL		37	BAG
EXTRACTORA NATURAL ECUADOR S A EXT	VIA VICHE ESMERALDAS KM3 ESMERALDAS E ECUADOR		16	BAG
COMERCIALIZADORA INTL CIECOPALMA SA	CALLE C DEL ESTABLO Y CALLE E CENTRO FINANCIERO SITE CENTER TORRE 11 OF 306 CUMBAYA QUITO ECUADOR		5	BLK
CI BIOCOSTA SA	NIT 900138670 3 EDIFICIO BAHIA CENTRO OF 1201 SANTA MARTA COLOMBIA COMPANY		4	LBK
GENTING MUSIMMAS REFINERY SDN BHD	REGISTRATION NO 1028537 H LOT 13BM POIC PHASE 1 MILES 3 1 2 JALAN KASTAM BARU 91110 LAHAD 6 IDIAWOERO		3	LBK
MEDPARK FARMS LIMITED	ILOWE OGIDI IJUMU KOGI STATE, NIGERIA	PH: 8037115218	3	PKG

OLMECA SOCIEDAD ANONIMA	6 CALLE 2-21 ZONA 9 EDIFICIO HERALSO OFICINAS 401 402 Y 404 GUATEMALA, GUATEMALA JL KALISOSOK KIDUL NO 2	EMAIL: ABIMEDUPIN@GMAIL.COM	4	BLK/PCS
PT KARYAINDAH ALAM SEJAHTERA	SURABAYA 60175 INDONESIA JL MH THAMRIN NO 31 KEBON MELATI TANAH ABANG JAKARTA PUSAT DKI JAKARTA		3	LBK
PT SARI DUMAI SEJATI	RAYA INDONESIA O B PRISM GLOBAL LIMITED B 2 2 2ND FLOOR BBT ONE THE TOWERS LEBUH BATU NILAM 1A BANDAR BUKIT TINGGI 41200		3	LBK
ECU WORLDWIDE MALAYSIA SDN BHD	KLANG SELANGOR PLO 428 JALAN BESI SATU 81700		2	PKG
NATURAL OLEOCHEMICALS SDN BHD	PASIR GUDANG JOHOR MALAYSIA ROLAL JUNCTION SUMBUYA VILLAGE KOYA CHEIFDOM PORT LOKO		2	DRM
WEST AFRICA PRODUCE SL LTD	DISTRICT 232 76255310		2	JUG
BIOPALMA DA AMAZONIA S A	REFLORESTAMENTO INDUSTRIA E COMERCIO RODOVIA PA 150 KM 37 ANEXO ZONA RURAL 68450 000 MOJU PARA BR NIT 900237877 5		1	BLK
CARGILL DE COLOMBIA LTDA	CRA 7 NO 72 13 PISO 3	PH: 5713266780	1	BLK

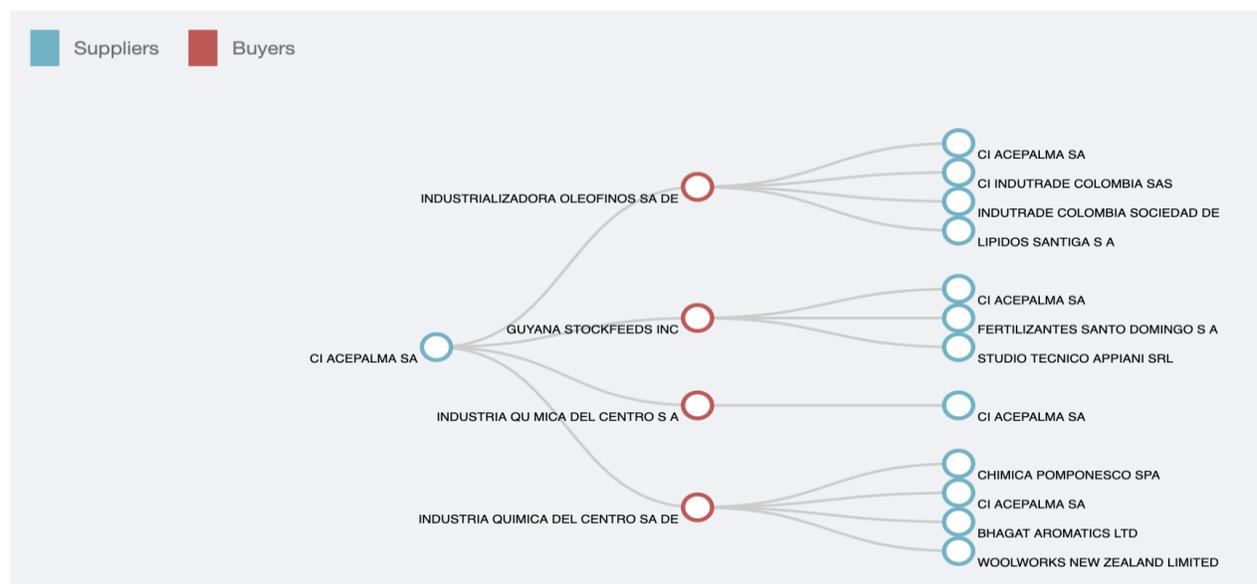
FRUIT OIL S A	5A AVENIDA EDIFICIO EUROPLAZA TORRE III OFICINA 1101 05 55 ZONA 14 GUATEMALA C A COMPANY REGISTRATION NO 196201000115 22672 V LOT 13B		1	BLK
GENTING SDC SDN BHD	POIC PHASE 1 MILES 3 1 2 JALAN KM. 6.5 VIA DURAN-TAMBO SN		1	LBK
KOLOSINTERNATIONAL S A	A 300 METROS DE PROCARSA DURAN JUNIN 114 Y MALECON SIMON BOLIVAR RUC 0992178612001		1	PCS
LOGISTICS UNLIMITED S A LOGUNSA	GUAYAQUIL ECUADOR VIA ESMERALDAS LOTE 7 QUININDE E	PH: 593 4 3716888	1	PCS
ORGANICSUPPLY S A	ECUADOR 2 AVENIDA 10 30 ZONA 9		1	PKG
PALMA SUR S A	GUATEMALA C A	PH: 502 2386 3800	1	BLK

Appendix 24 – Top buyers of suppliers of Palm oil and its fractions, whether or not refined, but not chemically modified : Crude oil (HS 151110)

CI ACEPALMA SA's List of HS 151110 Buyers

Data From ImportKey

BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
INDUSTRIALIZADORA OLEOFINOS SA DE	CV FRANCISCO MONTEJANOS PALACIOS 45221 ZAPOPAN MEXI JA 45221		234	PKG
GUYANA STOCKFEEDS INC	FARM EAST BANK DEMERARA GEORGETOWN GUYANA DE C V CALLE CENTENO NO 546 COL GRANJAS	PH: 592 265 4671 4	25	BAG
INDUSTRIA QUMICA DEL CENTRO SA DE	MEXICO DELEGACI N IZTACALCO		20	PCS



Note: CI ACEPALMA SA's do sales to INDUSTRIALIZADORA OLEOFINOS SA DE, GUYANA STOCKFEEDS INC, and INDUSTRIA QUMICA DEL CENTRO SA DE

Appendix 25 – Buyers of Nigerian exports of Palm oil and its fractions, whether or not refined, but not chemically modified : Crude oil (HS 151110)

List of suppliers from Nigeria who supply HS 151110

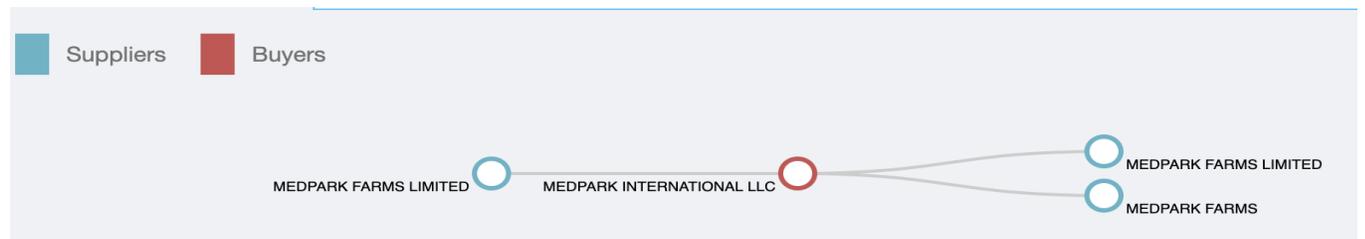
Data From ImportKey

SUPPLIER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
MEDPARK FARMS LIMITED	6 IDIAWOERO ILOWE OGIDI IJUMU	PH: 234 8037115 EMAIL: ABIMEDUPIN@GMAIL.COM	50	PCS/PKG

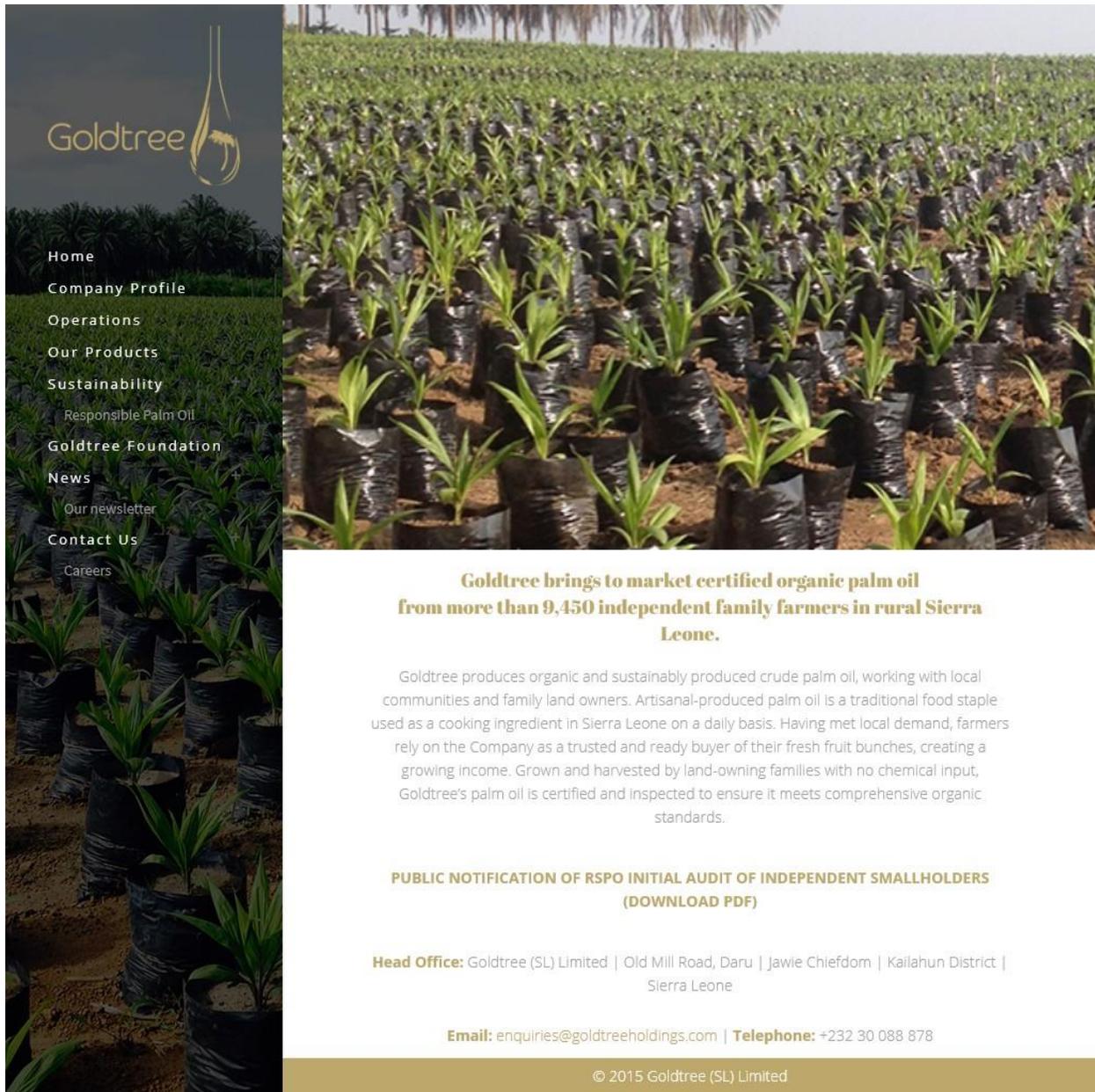
MEDPARK FARMS LIMITED's List of HS 151110 Buyers

Data From ImportKey

BUYER's name	Address	Contact Information	TOTAL SHIPMENTS	Style of Packaging
MEDPARK INTERNATIONAL LLC	225 S MYRTLE AVE TUSTIN CA 92780 CA USA	PH: 1 5625229565	4	PKG



Note: MEDPARK FARMS LIMITED do sales to MEDPARK INTERNATIONAL LLC



Goldtree

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- Our Products
- Sustainability
 - Responsible Palm Oil
- Goldtree Foundation
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 - Our newsletter
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Goldtree brings to market certified organic palm oil from more than 9,450 independent family farmers in rural Sierra Leone.

Goldtree produces organic and sustainably produced crude palm oil, working with local communities and family land owners. Artisanal-produced palm oil is a traditional food staple used as a cooking ingredient in Sierra Leone on a daily basis. Having met local demand, farmers rely on the Company as a trusted and ready buyer of their fresh fruit bunches, creating a growing income. Grown and harvested by land-owning families with no chemical input, Goldtree's palm oil is certified and inspected to ensure it meets comprehensive organic standards.

PUBLIC NOTIFICATION OF RSPO INITIAL AUDIT OF INDEPENDENT SMALLHOLDERS (DOWNLOAD PDF)

Head Office: Goldtree (SL) Limited | Old Mill Road, Daru | Jawie Chiefdom | Kailahun District | Sierra Leone

Email: enquiries@goldtreeholdings.com | **Telephone:** +232 30 088 878

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Source: Goldtree

Appendix 27 – Additional resources

Additional resources on palm oil can be found via these web sites:

Resource	Source	Link
PALM PRICE TRACKER	Palm Oil Analytics	https://palmoilanalytics.com/palm-price-tracker/
Palm oil labelling	Ethical Consumer	https://www.ethicalconsumer.org/palm-oil/palm-oil-labelling
Palm Oil Quality Standards for Trading	PORAM Course on “Operational and Commercial Aspects of Palm Oil Trade”	http://docshare04.docshare.tips/files/21856/218565617.pdf
Good Fats/Bad Fats: How to know the difference	New York City Department of Health and Mental Hygiene	https://www1.nyc.gov/assets/doh/downloads/pdf/public/dohmhnews9-01.pdf
Palm Oil — What is it used for?	Ethical Consumer	https://www.ethicalconsumer.org/food-drink/palm-oil-what-it-used
Brands and Companies that use Palm Oil	Ethical Consumer	https://www.ethicalconsumer.org/palm-oil/brands-companies-use-palm-oil

Appendix 28 – Material Safety Data Sheets (MSDS): Examples



Safety Data Sheet
(Palm Oil)
DATE PREPARED: 11/15/2017

Section 1. Product and Company Identification

Product Name Palm Oil
CAS Number 8002-75-3

Parchem - fine & specialty chemicals
415 Huguenot Street
New Rochelle, NY 10801
☎ (914) 654-6800 📠 (914) 654-6899
🌐 parchem.com ✉ info@parchem.com

EMERGENCY RESPONSE NUMBER
CHEMTEL
Toll Free US & Canada: 1 (800) 255-3924
All other Origins: 1 (813) 248-0585
Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

Not classified as a hazardous material and does not contain any hazardous ingredients.

Hazard and precautionary statements

None

Section 3. Composition / Information on Ingredients

Common Name Palm Oil
CAS Number 8002-75-3

Section 4. First Aid Measures

Eyes: Flush with plenty of water or eye wash solution for 15 minutes. Get medical attention if irritation persists.

Skin: Wash with soap and water

Ingestion: Rinse mouth, do not induce vomiting unless directed by medical personnel.

Inhalation: Remove to fresh air, seek medical attention if irritation persists.

Section 5. Firefighting Measures

Extinguishing Media: Foam, carbon dioxide, dry chemical powder

Unsuitable Extinguishing Media: Do not use Water-may spread fire by dispersing oil

Flash point: >435°

Special Equipment: Self-contained breathing apparatus and full protective clothing is recommended in case of fire.

Hazardous combustion products: CO, CO₂

Section 6. Accidental Release Measures

Personal Precautions: Wear protective clothing



Safety Data Sheet
(Palm Oil)
DATE PREPARED: 11/15/2017

Spill Cleanup Methods: Absorb spill with vermiculite or other inert material, place in a suitable container for disposal. Wash floors with soap and hot water. Rinse with hot water

Environmental Precautions: Avoid discharge into storm drains, water courses or onto the ground.

Section 7. Handling and Storage

Handling: Keep away from ignition sources

Storage: Keep container closed and in dry area away from heat & light

Section 8. Exposure Controls / Personal Protection

Engineering Controls: N/A

Eye Protection: Wear safety glasses

Hand protection: Wear Neoprene or latex gloves

Skin protection: Apron and/or Long Sleeves

Respiratory Equipment: none

Section 9. Physical and Chemical Properties

Color: Pale Yellow oily Liquid, White when solid (Refined, Mass Balance), Reddish Orange when solid, Dark Amber, red when liquid (Crude)

Odor: characteristic/ vegetable oil

pH: Neutral

Physical State: Liquid, Solid

Specific Gravity (H₂O=1): 0.9

Melting point: Solid at room Temp, 95-100 F

Freezing Point: N/A

Flash point: > 435° F

Flammability limits: N/A

Solubility in Water: Insoluble

Partition Coefficient (n-Octanol/water): N/A

Viscosity: N/A

Section 10. Stability and Reactivity

Stability: Stable

Conditions to Avoid: Contact of oil impregnated porous materials such as rags or paper with air, as spontaneous combustion may occur.

Incompatible Materials: Strong Oxidizing agents

Hazardous Decomposition Products: No data available

Possibility of Hazardous Reactions: Will not occur



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Section 11. Toxicological Information

Acute Toxicity: No test results available

Section 12. Ecological Information

Ecotoxicity: Not expected to be harmful to aquatic organisms. No data available

Mobility: No data available

Degradability: No data available

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

Not Regulated

Section 15. Regulatory Information

Labeling according to EU Classification: Not dangerous, no special label is required

GHS: No signal word, pictograms, Hazard or safety phrase required.

USA: Not regulated, no special labeling required.

HMIS

Health: 0

Flammability: 1

Reactivity: 0

PPE: A

NFPA

Health: 0

Flammability: 1

Reactivity: 0

PPE: A



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Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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