

Export-Readiness Assessment for Ramón Seeds in the Maya Biosphere Reserve Communities (MBR) in Péten, Guatemala: Optimized Export Capacity Enabling Resilient Livelihoods [†]

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Acronymous

ACOFOP	The Association of Forestry Communities in Péten
CONAP	Consejo Nacional de Areas Protegidas (Spanish) ~ The National Council for Protected Areas (English)
ERA	Export Readiness Assessment
FORESCOM	Asociación de Comunidades Forestales de Petén
MBR	The Maya Biosphere Reserve
NTFPs	Non-timber forest products
RA	Rainforest Alliance

Executive Summary

This report offers an integrated evaluation of the results of the current export-readiness assessment conducted on Ramón nut in the Petén region of Guatemala. The study was commissioned by the University of Minnesota and Rainforest Alliance as part of an international effort to promote the conservation of forest reserves in the Mayan Biosphere Reserve (MBR) of Petén. Under the principles of sustainable livelihoods, the graduate consultants had to identify and evaluate the level of export readiness and export potential of Ramón nut in the US markets. The results of the assessment are used as the basis for the export market entry strategy for both international markets. Expanding the international market penetration for Ramón would allow local people to improve their family income and quality of life without affecting the natural forest conservation of the region, or rather, contribute to the protection of the reserves by following the international market sustainability standards.

During June-August 2021, the graduate consultants conducted the assessment of the Ramón nut by conducting field interviews with diverse key stakeholders involved in the Ramón export value chain, from the Ramón community harvesters to Ramón seed aggregators to the Ramón exporter to the U.S. Ramón importer. The report ends by offering suggestions on export market entry strategies for the forest communities in Péten to expand the commercialization of Ramón to be able to handle all the aspects of the export process independently in a self-sustainable way, from transport to payments to operations in the new market based on what we have identified during the course of our investigation, providing them with some sort of agency.

Major Findings

- I. At the input supply level, we have found that:
 - The Ramón harvesters encounter workplace-related risks due to rough harvesting site conditions in terms of commuting and functioning in intensive rainy climate, difficult terrain character of forest, and exposure to snake and bugs bites, without even having adequate personal protective equipment, which makes it more severe for women.
 - The community harvesters want to have some sort of agency through getting the support that allows them to develop their capacity to act independently and to make their own free choices. This includes setting the price for their Ramón yield when

selling it to community cooperatives, as well as acquiring the adequate capacity-building assistantship in terms of training and assigning more working capital towards purchasing equipment which allow them to be efficiently involved, with higher motivation, in the export value chain of Ramón.

- Climate change impose a high risk on the harvesting yield upon which marginalized forest communities rely for their livelihoods.

II. At the production level, we have found that:

- Devoting funds towards up scaling the storage capacity can play a significant role in extending the capacity of Ramón production as well as ensuring optimal supply management especially during periods of low Ramón yields. This will ensure communities can supply their commitment to the US export market demand for Ramón, and hence guarantee an increased cash income and other indirect opportunities for the Ramón harvesters due to the expected increase in the harvested amount of Ramón seeds during the two harvesting seasons. Therefore, adopting this strategy is also expected to have a positive gender and livelihood impact as women in the MBR usually do not have many opportunities to generate cash income, and hence, they will be able to support their children's education.
- The quality control process and processing of Ramón into other products are basic level process which gives provides employment opportunities as those activities can be accomplished using manual labor and very minimal machines at the grinding and roasting stages. However, upgraded equipment or equipment for other production stages such as packaging and labelling would be needed.

III. The export readiness assessment for the communities at this point do not have enough capacity and capabilities to export themselves. More training and facilities need to be provided for the communities in the MBR to be ready to export themselves. However, these communities still have the potential to export on their own if they addressed their gap areas in the following:

- Lack of English language;
- No prior export experience;
- Lack of awareness of US food regulatory framework;

- Inconsistency of Ramon supply to meet US demand regularly due to climate change;
- Unawareness of the US yearly demand; each community just supply all what it has to the community enterprise;
- Lack of traceability mechanisms to track the whole food system of Ramon, including its wage payments, pricing, transactions, shipment logistics, which is highly needed for the communities and community partners to make informed decisions.

Introduction

Scope of Work

The Rainforest Alliance is a global non-profit organization that works in partnership with farmers, forest communities, companies, and consumers around the world to create a society where people and nature thrive together. In Guatemala, the Rainforest Alliance works with forest communities in the Maya Biosphere Reserve (MBR) in Petén to increase the economic value of the timber and non-timber forest products (NTFPs) by providing technical assistance and allocating funds coming from international organizations, mainly from USAID and other external grants to assure that the products are managed in a responsible way. However, the work goes beyond the certification. The development plan includes sustainable forestry management and adequate labor conditions, taking into consideration the human rights of the farmers and their families, gender responsiveness, and nature and biodiversity conservation for the Petén region. This plan focuses on an innovative and sustainable approach to conserving the forest and developing viable and sustainable livelihoods through engaging local communities in economic activities of sustainably harvesting and selling timber and NTFPs locally and globally. This is in collaboration with the government, other non-governmental organizations including community partners, such as ACOFOP and FORESCOM, and responsible businesses.

The success of the existing MBR model depends in large part on the resilience and sustainability of forest livelihoods within MBR communities. These communities have received from the government the right to make their living from the forest where they live as long as the management plans are approved by the responsible entities. This model is called “forest concessions” where the communities create community companies that manage those forest concessions. This model of administration of reserved areas generates environmental benefits for society and socioeconomic benefits for communities. The concessions livelihood strategies include and often depend on NTFPs, through direct use and markets within and outside the region.

The department of Petén has been generating various positive changes in people's lives, the environment and in the way organizations in the area work to promote rural development (De Souza, 2016). The development of community-based enterprises became an important part of the path for positive change in the MBR. These initiatives have focused on expanding and facilitating

access to greater markets and exportation (CATIE 2013). Nowadays, there is a consensus that practices improving producers' access to higher-value markets and exportation imply a clear orientation towards demand and greater collaboration between different value chain actors (De Souza, 2016).

In this report, we aim to strengthen the community forest enterprises through supporting and expanding their international market opportunities to contribute to the local livelihoods. Specifically, we explore the resiliency of communities and their business in response to economic and environmental vulnerability. Of particular interest is Ramón seed, which is used as a food crop and an ingredient in food and beverages. Variability in supply due to climate change, inability to continuously harvest due to nature-related risks and post-harvest processing quality control have substantial negative effects on NTFPs international market success. In light of this, understanding the resilience of these agro-forestry enterprises allowed us to come up with recommended action plans that serve community desires to export to the US.

Background information

The Ramón seed comes from a tree scientifically named *Brosimum Alicastrum*, of the Moraceae family. Historically, the harvesting of Ramón has been a common activity in the Peten area since pre- Columbian times with the Mayan civilization. For the Mayan civilization this seed had a huge importance in times of famines and droughts since they mixed Ramón with corn to increase the quantity of food in their cities. The Ramón name has been extracted from "Ramóneo" which means "Act of cutting or lopping branches" for livestock. The Ramón seeds served as food for both people and animals. As food for animals, the Ramón seeds ensure food supply for wild animals native to the region, as well as the leaves of the Ramón tree being used as a feed for the cattle of the communities and a rich source of protein. Tour guides take tourists into the forest to visit Mayan ruins will often search out Ramón trees to feed their horses Ramón leaves.

For human consumption, there are different ways in which the seeds can be consumed. It can be consumed by drying the seeds in the sun for days, roasting and milling them. Depending on the amount of roasting, two different products can be acquired from that process: a powder like flour for breads, cookies and similar products, and a powder similar to coffee in taste and color but that doesn't contain caffeine, on the contrary, its high content of tryptophan help generate serotonin

which makes these drinks and preparations a natural painkiller (Slow Food Foundation, 2018). In addition to being a nutritionally rich seed and providing a source of food for the families that live in the MBR, the activity of harvesting the seed of Ramón is one of the most important activities performed in the MBR due to the abundance of the seed throughout the territory. It also serves as a tool for community integration. Collecting Ramón is a way to bring the community together and the commercialization of the seeds is another source of income to these families. It is also a source of empowerment to the women and the youth of the community because they can achieve a kind of financial independence while the harvest takes place.

Purpose of the report

In this report we will conduct an export readiness assessment to identify the existing gaps and opportunities related to increasing communities involvement in exporting Ramón seeds to the US market. The communities have been supplying Ramón seed for the US market since the early 2000's through a Guatemalan processor/exporter to a US company. The product has been recognized in the U.S export market as a specialty food product. Although the seed and its derivatives (coffee and flour) are already being exported to the U.S., they need more market penetration there, and possibly to the global market in the long run.

This report focuses on investigating the U.S. export market needs and requirements and comparing the Ramón current export performance, to identify the export gaps that need to be addressed for expanding its market penetration in the U.S. In exporting these Ramón products, the exporters have to take into consideration the unique characteristics of the U.S. market. According to the information mentioned in the USAID 2017 report of "U.S. end market analysis for Kenyan specialty coffees", specialty food is almost exclusively imported by the U.S. They play a vital role in identifying customer preference and selection. We deduced that U.S. importers may pay higher premiums for the distinct characteristics of specialty food, especially roasted coffee. For instance, in roasted coffee, they prefer to maintain control over the transformation process (e.g. roasting, grinding, packaging). For them, we recognized that this operational process of coffee can accentuate or destroy the very characteristics for which they have paid premiums (USAID, 2017). Our main goal is to increase the value-added exports from the local communities in Péten, Guatemala to global markets. To accomplish this goal, we examined different processes,

frameworks, and standards of NTFPs, focusing on Ramón to assess these communities' ability to export to the global market, specifically the U.S. market. This work serves as a pilot study for assisting Rainforest Alliance in conducting a full-scale export development framework for the concession in Péten that can be implemented through future graduate students' work.

This report is organized in 3 sections to cover the whole export value chain process of Ramón and assess what has been done efficiently and effectively and what is not throughout the export trajectory, starting from the harvesting process till reaching the US consumers. The first section includes the methodology that defines our investigation framework and the limitation we have encountered. The second section discusses and analyzes our field work results, comprised in two parts. The first part illustrates the whole export value chain process and involved stakeholders. The second part assesses the export readiness of Ramón for the US market taking into consideration the organizational, the technical and operational capacities, along with the product attributes. The third part concludes the overall export performance, capacity and capability of Ramón, coming up with a set of recommended action plans.

Methodology

To achieve the goal of this export readiness assessment (ERA) report of identifying and evaluating the export readiness and capabilities of involved local communities and community partners to export Ramón into the US market, the consultants decided to use a mixed-methods approach to collect and analyze the data. This is due to the complex nature of the subject, considering the nature of the concessions' framework through which the economic and social impacts on these communities residing in the Maya Biosphere are generated out of their harvesting and commercial activities.

Throughout the research process, the selected methods were non-linearly modified to adapt to the realities of the local communities and the limitations of time we faced during the summer field work. The consultants worked on three phases: The first phase included developing the Export-readiness questionnaire forms, the methods for application, and the assessment and evaluation techniques. The second phase was the implementation of the methodology. Lastly, the third phase was carrying out the export readiness evaluation and analysis. As the export-readiness assessment was new to this project and the project client 'Rainforest Alliance', we conducted a pilot testing questionnaire interview with one of the stakeholders that helped the consultants establish "whether or not the method of data collection, as well as the questions being asked, are eliciting target responses" (Russ-Eft and Preskill, 2009)¹. Hence, several questionnaire forms were developed to fit the role related to each stakeholder involved in the export value chain.

We were targeting a diverse set of key stakeholders involved in this Ramón export value chain; from the Ramón community harvesters, to Ramón seed aggregators, to community partners, to Ramón main exporter to U.S. Ramón main importer. The aim of this wide segmentation in our sampling plan is to capture a holistic understanding and evaluation of the current export value chain based on the different experiences and perceptions of these stakeholders. The evaluation process depended on the data obtained from semi-structured questionnaires, secondary data sources, such as financial and business documents received from the participants along with desk-research, and field observations in order to generate confirmatory results.

¹ Russ-Eft, D. F., & Preskill, H. S. (2009). *Evaluation in organizations: A systematic approach to enhancing learning, performance, and change*. New York: Basic Books.

With regards to the use of qualitative techniques in this research, to collect data and to understand the capabilities and readiness of the value chain of the Ramón seed, we developed our questionnaires through consolidating some of the questions used in an export readiness assessment implemented by two international organizations: United States Agency for International Development (USAID) and Centre for the Promotion of Imports from developing countries (CBI). Those organizations are devoted to promoting the transition towards inclusive and sustainable economies globally through the expansion of fair and universal trade. This reconciliation of ideas from the successful practices of ERA was based on the selection of the most positive and relevant aspects of each of these methodologies that match the socio-economic characteristics and realities of community forest enterprises in Mesoamerica.

To answer the questionnaires, we used a non-random sampling method using snowball sampling technique to find pre-selected participants who are key informants of the stakeholders related to the supply chain of the Ramón seed. Due to the technical nature of the questions, our inclusion criteria to choose the respondents to the questionnaire includes that the interviewed person has to have a role in the export value chain of the Ramón seed. We involved some demographic criteria related to gender and occupation into our sampling structure. In that context, our target sample size was 20 participants, including 7 female and 7 male Ramón harvesters, the President and Vice President of the Ramón committee, 1 representative of the concessionary association, 1 representative of FORESCOM (as a community partner), the co-founder of Cafinter (one of the main Ramón exporters), the founder and CEO of Teccino (one of the main importers of Ramón in the U.S.). The last two are well-positioned in our study as they gave us relevant information to address export-specific issues of Ramón. However, due to time limitations and Covid-19 restrictions, we were able to apply for 17 interviews with 5 different stakeholders as follows: 3 male and 8 female harvesters from the communities of Amul and Uaxactun from Amul and Uaxactun communities, 3 representatives for community partner organizations (2 were from RA and 1 from FORESCOM), a representative for Ramón export distributive partner Cafinter, founder and CEO of Teccino (main US buyer and reseller of Ramón) and 1 subject-matter graduate research assistant from the University of Minnesota.

To analyze the perspective of the concessionaires and the social and economic impacts of the export activity of Ramón, we conducted in-depth semi-structured interviews with the interviewees to analyze their perspective on the export of Ramón and the difficulties that they face throughout the Ramón export chain. During the interview, the consultants spent considerable time probing

participants' responses, encouraging them to provide detail and clarification. These data, along with field observations and submitted commercial documents from community partners, were critically analyzed and then evaluated to provide an overall assessment of the communities' capacity and capability to export Ramón to the U.S. market. This is along with secondary data from desk-research as well as previous university alumni work that were used to explore the findings.

Limitations

One of the limitations we faced in conducting our study is the time limit. Since the project focus was not chosen until reaching the field site, at the researcher level the study's limitations began with the novice understanding of the non-timber forest products value chain. Our learning process was in the form of steep learning curve in trying to obtain a solid grasp of the export process in a very short time. This led us to narrow our export readiness assessment to focus on Ramón. In this regard, we tried to develop this report in replicable format to be utilized for other NTFPs in future work.

The state of Covid-19 during the execution of this research posed several limitations for us. It limited our access to a wide range of key informants of the Ramón export value chain. Also, as the field study was conducted during the non-harvesting season, the consultant team were not able to observe and assess the Ramón harvesting and processing phases themselves, which is an important part of assessing the readiness of exporting Ramón. Because of that, as mentioned, we adjusted our selection criteria to expand our sampling unit through using a wider segment of stakeholders involved in the export value chain. Hence, our sampling unit was adjusted to also include community partners representatives and export intermediaries as our gatekeepers beside the concession harvesters themselves.

Another potential limitation for this research is that using convenience and snowball sampling for identifying additional informants and stakeholders resulted in data collected limited to a certain group and lacking a fair representation. Also, our interviewees might have their own biases in describing their livelihood and work experiences in harvesting, drying, and selling Ramón to intermediaries based on their respective roles. Moreover, biases were expected to be generated based on the chain of referrals because our networking point might have his own referring biases too. In order to mitigate this limitation, the team attempted to triangulate all data with the help of secondary data resources as much as possible.

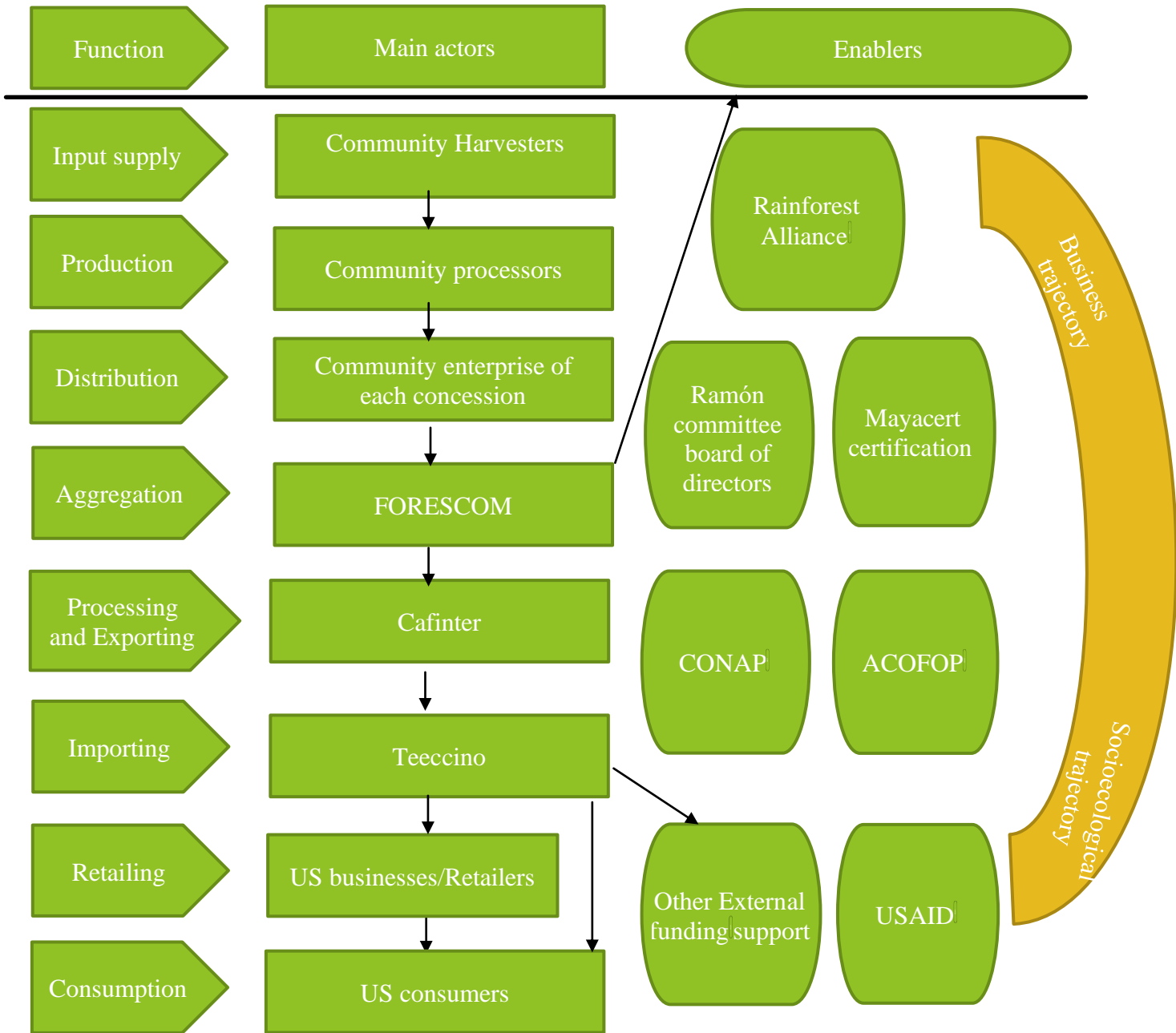
As mentioned previously, our research can also be biased by our limited time and number of interviews. We were only able to draw upon 17 in-depth interviews in two-month duration, so our results for this project should be taken with caution. Thus, our findings are not fit for generalizing purposes and future work could test these results in a quantitative study. Furtherly, the Ramón export experience's findings could be examined and linked with different dimensions of export market information.

To avoid any additional bias, the questions from the questionnaire were followed up by questions that were meant to enable us to better navigate and garner their perceptions. Also, we included questions in our interview guide to allow participants to explain how they personally define and perceive the Ramón harvesting and commercializing process; to give them the breadth to characterize it, negatively or positively, based on their experiences. This aims to avoid any pre-judgment from our side about their experience in a way that serves our research question interest. We also tried to make our sampling unit diverse to come up with holistic findings deduced from different actors in the Ramón export value chain. Despite the above-mentioned potential biases, this research paper still offers insightful findings and analyses that serve as a pilot assessment of what these community harvesting groups are experiencing in the MBR.

Results and analysis

Ramón export value chain analysis

Figure1. Ramón Export Value Chain



Assumptions:

- Local communities are willing to supply Ramón seeds- their indigenous food- to the US market.
- Government agencies, including CONAP, permit the local communities to use their harvested Ramón for export activities.
- There is a pre-existing demand for the Ramón products in the US market.

Illustration

Throughout the interview and research process, we were able to identify functions and assumptions that make up the Ramón export value chain shown above in figure 1. Also, we had the opportunity to understand how the stakeholders are involved in the value chain of Ramón. It was possible to access both the existence of different stakeholders and understand the importance of each of them in the Ramón chain, as well as the importance of one stakeholder to another. Thus, they are categorized into two groups, main actors who are directly involved in the export value chain process, and enablers who are indirectly supporting the whole export value chain process as illustrated in figure 1. Accordingly, the export value chain is divided into three kinds of stakeholders: Primary, secondary and tertiary stakeholders depending on their level of involvement and their related functions. The primary stakeholders are considered to be the main actors of the chain.

Enablers

The enablers that we refer to in figure 1 include funding and technical support bodies that enable the value chain to function. It is important to mention that the Ramón chain has its ultimate objective the conservation of the rainforests and the promotion of better livelihoods for the communities living in the concessions of the MBR. Technical assistance and funding form two trajectories. One is related to the business functioning of Ramón economic activity and the other one is related to its socioecological aspect of it.

The socioecological trajectory, which is the main objective of the whole programme, is equivalent to the existing social mobilization around the Ramón economic activity, the improvement of the quality of life of the community, and the constant conservation of the environment through execution of management plans and audits in order to maintain the leases of the concessions. A common topic brought up in the interviews was that because of the existence of the Ramón activity, the community was able to improve the quality of life of the citizens, particularly for both the people who actively participate in the harvest and sale as well as for people who are not directly involved but who are also benefited, such as small business owners and service providers.

The business trajectory is related to the Ramón market's trend and demand for the product both locally and internationally. A point recurrently mentioned in the interviews is that, at the moment, it is only possible to start harvesting activities after you are sure about a possible order. Thus, movement in this context becomes codependent on the market. The export value chain is made up of actors and assumptions that contribute to the harvest and delivery of the product, from the creation of the

management plan, the inspection of the favorable locations for harvesting, harvesting, processing and delivery to the exporter, importer and final consume.

Main actors


Actors involved in the export value chain include the US retailers, distributors, processors, suppliers and chain regulators, all roles and functions given to specific actors within this value chain. Market actors in general are actors involved in both the sales market and technical research on the product as well as scientific research. The US retailers are the actors responsible for sales in the US market and may or may not be responsible for international transactions, but in the case of Ramón seed this is not common because there is an intermediary. Distributors are responsible for distributing nationally and internationally. Processors are responsible for generating added value to Ramón seed, such as the production of Ramón flour, cookies and a tea bag cut before it becomes the final product delivered to consumers.



The chain regulators are the entities responsible for evaluating, approving, and supervising management plans, such as the National Council of Protected Areas and the Ministry of Agriculture. As was already mentioned, the goal of this operation is the preservation of the protected areas of the MBR and the improvement of the livelihoods of the communities that live there. The existing business planning and technical assistance is reflected in the assistance for sustaining the community's production capacity, logistics, marketing, and commercial support and obtaining the organic certification for the Ramón products. In this complex system, there is also the influence and importance of agencies and institutions that donate resources so that communities also have access to technical assistance and professional monitoring to improve their businesses. This role is undertaken by regional and local community partners who are Rainforest Alliance, ACOFOP and FORESCOM.


The following table illustrates a mapping for stakeholders involved in the export value chain of Ramón:



Table 1. Stakeholders Map

Type	Degree of involvement	Stakeholders	Functions and responsibilities
Primary stakeholders (Main actors)	Directly involved in the export value chain (High degree of involvement)	Ramón harvesters (Part of community members)	<p>The Ramón harvesters are people who live in the communities and have the Ramón activity as part of their livelihood. Part of the household income of those harvesters comes from this activity. In the case of the Ramón seeds, the harvesters are at the base of the chain. They are the most vulnerable to any type of change in the chain, be it price changes, demand changes or even external factors related to nature. These harvesters are essential for the export value chain as being the main subject of the MBR programs and activities. However, they are the last ones to feel the rewards of the Ramón commercial activities in terms of income and other socioeconomic returns.</p>
		Community processors	<p>They are involved in other Ramón supply activities including inspecting Ramón harvesting areas, doing the quality control check, drying, processing Ramón into other products such as flour using grinders...etc. Afterwards, these members are responsible for packaging the Ramón seeds or its derivative products such as flour in warehousing and packaging operations.</p>
		Community enterprise of each concession	<p>Concessions: The concessions or forest communities of Petén protect 70% of the MBR, which has 2.1 million hectares of forest full of biodiversity and resources. These concessions are government authorizations given to pre-existing communities that reside within the MBR as resident concessions or outside of the MBR as non-resident concessions. It is important to state that each community has a different</p>

		<p>background and formation process. The existence of community concessions of the Maya Biosphere Reserve in Petén, Guatemala, generates environmental benefits for society and socioeconomic benefits for the communities and in return the government grants the rights of use and management of those resources (Corzo Marques, 2018). Currently, there are 9 community forestry concessions granted by the government.</p> <p>Community enterprise:</p> <p>Each community concession is legally represented and constituted as an enterprise which is the legal actor representing the community. Those community enterprises are legally responsible for the rights and duties assigned to the concessions. The community enterprises have their own statutes and hold regular elections to elect their administrative body. Studies show there is evidence of positive environmental impacts and advances in the socioeconomic sphere together with the documented evidence of positive environmental impacts (deforestation rates close to zero in active community concessions) and a positive relationship between advances in the socioeconomic sphere (income, investment, savings, capitalization of community enterprises, asset formation of associated families and organization) (Corzo Marques, 2018).</p>	<p>background and formation process. The existence of community concessions of the Maya Biosphere Reserve in Petén, Guatemala, generates environmental benefits for society and socioeconomic benefits for the communities and in return the government grants the rights of use and management of those resources (Corzo Marques, 2018). Currently, there are 9 community forestry concessions granted by the government.</p> <p>Community enterprise:</p> <p>Each community concession is legally represented and constituted as an enterprise which is the legal actor representing the community. Those community enterprises are legally responsible for the rights and duties assigned to the concessions. The community enterprises have their own statutes and hold regular elections to elect their administrative body. Studies show there is evidence of positive environmental impacts and advances in the socioeconomic sphere together with the documented evidence of positive environmental impacts (deforestation rates close to zero in active community concessions) and a positive relationship between advances in the socioeconomic sphere (income, investment, savings, capitalization of community enterprises, asset formation of associated families and organization) (Corzo Marques, 2018).</p>
		<p>FORESCOM</p> 	<p>FORESCOM is a community forest services company that emerged as a result of the expansion of 9 community forest concessions in Petén. The company markets and sells wood and NTFPs under strict world standards, which guarantee the sustainability of natural resources managed by community forest concessions in the MBR and at the same time generate employment and social development for Guatemala. In the Ramón supply chain, the communities collect the Ramón seeds and take them to FORESCOM to dry the seeds in the oven that belongs to FORESCOM. Once the work is done at FORESCOM, the communities send the</p>

			Ramón seeds to the distribution centers. At this stage FORESCOM is solely a service provider and is related to marketing and commercial support.
		Cafinter 	Cafinter is the main export distribution partner for Ramón seeds in Guatemala. The relationship of associations with Cafinter is old and reliable. However, since that way this export system is already established is based on a single market, it makes no much room for new orders from other US buyers, and hence making it more risky on the longevity of Ramón international business activity on the long run because it is just a single demand.
		Teccino 	Teccino is the main buyer and reseller in the US of the Ramón seeds and their products produced in Petén. Teccino also contributes to supporting the value chain base through partially funding the Ramón seed collection and drying process. This is through passing an upfront payment through Cafinter to be allocated to the harvesting and drying activities. Both distributors and intermediary buyers have a risky relationship in this system as they are very dependent on each other and do not have alternative sources of supply and/or markets.
		US Businesses/ Retailers (intermediary buyers)	They are intermediary business clients of Ramón products who purchase from Teccino, through a B2B process using its marketplace or taking orders through phone calls, to resell them on their retailing shelves to be sold to final consumers.
		US consumers	The end user (final user) of the Ramón product (Whether flour, caffeine-free coffee, biscuits, etc.) who might purchase Ramón products directly from Teccino without passing through the US retailing channel. This is done through a B2C process or through an intermediary buyer.
Secondary stakeholders		Rainforest Alliance	A non-profit organization. RA provides technical assistance and training support to community partners. RA is responsible for providing technical assistance to support communities in MBR in organizational skills, harvesting and processing

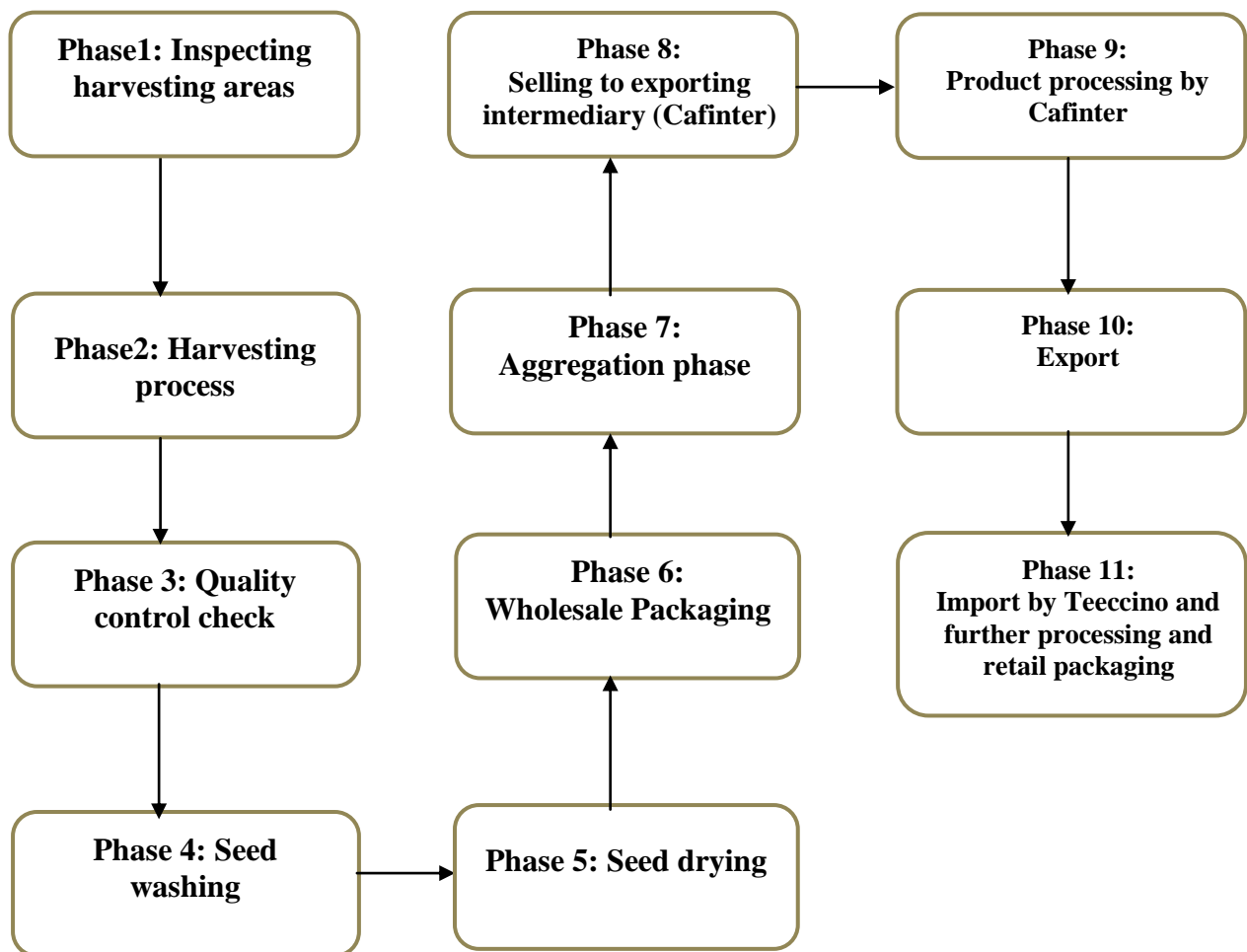
<p>(Enablers)</p> <p>Indirectly involved in the export value chain</p> <p>(High level of involvement)</p>		<p>of Ramón in collaboration with other community partners including ACOFOP and FORESCOM. Their role in supporting Ramón exports relies on their continuous funding support from the USAID, accessing funds and allocating resources to different projects, one of which is the Ramón project. They also contribute to the Ramón export promotion in the US through attending tradeshows such as Expo West to facilitate the Ramón penetration into the US market. Additionally, they make strategic interventions in the market through their regional offices in USA that helps in connecting and networking with potential US clients for Ramón.</p>
	<p>ACOFOP</p> 	<p>ACOFOP is an organization formed by the community associations to protect the biodiversity and the architectural and cultural heritage of the MBR through a community forestry model that, in addition to conserving forests, generates economic and social benefits for those living in and caring for the woods, taking advantage of the resources of the forest and also the management of tourist services. ACOFOP is the political and social arm of the communities and represents them in the Ramón committee meetings. ACOFOP helps the communities get funding that supports them in terms of training for the communities, but they don't get involved in the marketing (the commercial) piece.</p>
	<p>Ramón committee</p>	<p>The committee consists of board members responsible for increasing the local communities bargaining power in MBR as these associations understand that together they had more strength to bring local communities concerns to the table. In this way, the joining of associations and partner organizations creates the Ramón committee. The committee is a place to debate and define opportunities, challenges and prices related to Ramón commercial activities. As mentioned, the committee is formed by the organizations and institutions that help and support the harvesters and the concession enterprises. The committee is an advocacy body through which the communities can get more voice and power in front of clients and bureaucracies and become stronger.</p>
	<p>USAID</p>	<p>The main source of funding for the MBR projects in collaboration with the Rainforest Alliance and other community partners including FORESCOM and</p>

			ACOFOP who are responsible for the allocation and utilization of these funds through the implementation of USAID funded projects.
		CONAP 	‘The National Council for Protected Areas (CONAP) is the government agency who has broad management, monitoring and regulatory responsibilities in more than 300 protected areas covering approximately 30 percent of Guatemala, two thirds of which corresponds to the Maya Biosphere Reserve. The agency is also charged with protecting biological diversity throughout Guatemala. The agency is also responsible for signing the concession approval (Kessler, 2016). CONAP is responsible for approving the management plans and harvest and transport permits for the community concessions. They are also responsible for ensuring that the communities live up to the requirements of the concession agreements.
Tertiary stakeholders (Enablers)	Indirectly involved in the export value chain (low level of involvement)	Mayacert	Mayacert, a third-party certification company, is responsible for providing organic certification and other types of certifications. The organization issues organic certification for Ramón products needed and often required by the US market.
		External funders	These are miscellaneous funding resources coming from other community partners, NGOs and businesses. These entities provide limited scale grants and aids as a way to contribute to different aspects of the forestry and business management plans for timber and NTFP production and processing activities. These funds and grants are essential to finance specific parts of the project.

Workflows

Almost all respondents who work directly with the Ramón production process described the same cycle. In this way, it can be understood that the current workflow, as shown in figure 2 below:

Figure2. Workflow Chart



Production process

Ramón's two main seed harvesting periods take place in March and September every year. The first phase is undertaken by assigned harvesting inspectors from the community who are responsible for assigning the ready-to-harvest areas that are free of snakes and any other risks. Once these harvesting areas are identified, the inspectors then assign these areas to community harvesters to undertake phase 2 by going deep into the selected forest areas to collect the Ramón

seeds. When they return to their homes a new process starts in phase 3. In this phase, the inspectors do quality control check to identify and remove ruined and torn out Ramón seeds. Afterwards, seeds are washed (Phase 4) followed by phase 5 which involves seed solar drying through sunlight. Once dried, the seeds go through phase 6 which involves packing the Ramón seeds in conventional packaging to be prepared for the wholesaling process in phase 7.

Product aggregation and preparation process

When the sales period for the community enterprises arrives, the farmers take the seeds to these enterprises and sell them. From there each community enterprise take its Ramón seeds supply to be aggregated at FORESCOM storage facilities (Phase 7). Sometimes, during high demand periods and orders rush, FORESCOM, as a community partner, assists the communities in processing the Ramón seeds when it comes to washing and drying the seeds using its facilities. Thereafter, FORESCOM sell the aggregated seeds to the exporting and international distribution company, in this case ‘Cafinter’ (Phase 8). In turn, Cafinter grinds the dried seeds, and intermediates and sells the seeds to Teccino, the US distributor client, in the form of dark French roast, tea bag cut, flour or any other form demanded by Teccino (Phase 9).

Exporting process

Subsequently, Cafinter export processed Ramón products in its demanded formats to Teccino (Phase 10). Teccino then sells to the end customers its Ramón-blended products, mainly US customers, through direct and indirect transactions. The direct transactions to US consumers take place through Teccino’s ecommerce platform, while the indirect transaction takes place through selling to US retailers who then sell the Ramón products on their store shelves or through contracting third parties like Amazon who then sell its Teccino-branded Ramón products in its marketplace. (Phase 11).

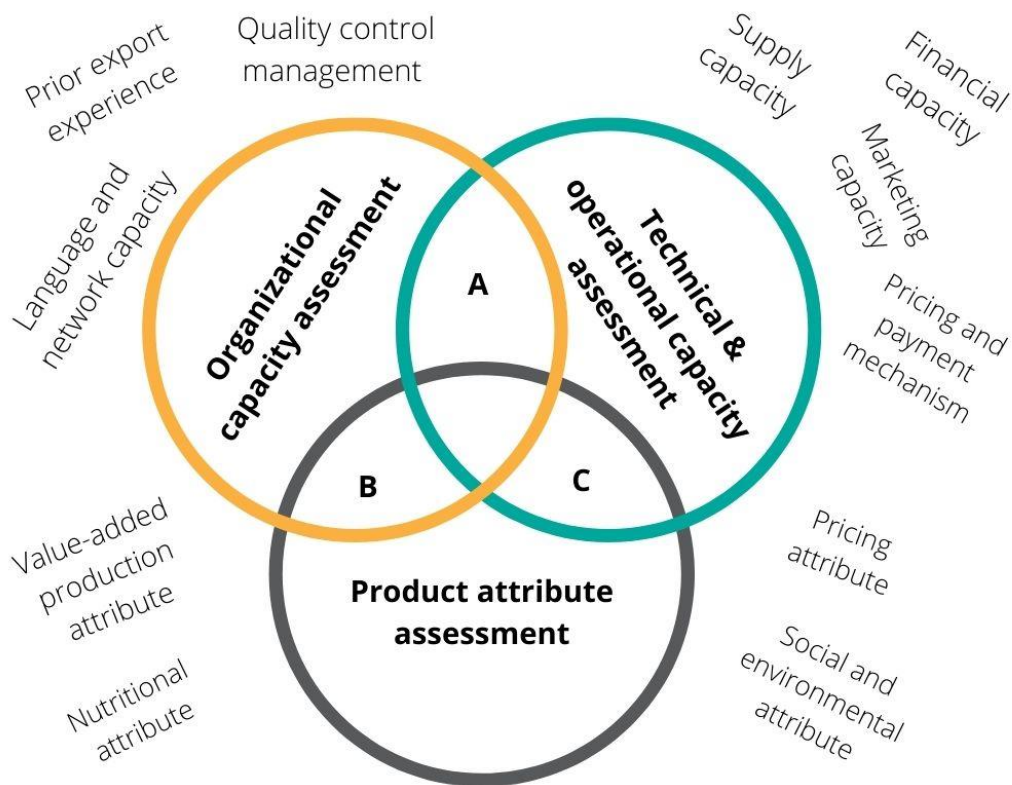
Export Readiness Assessment (ERA)

Based on analysis of interview responses and secondary data resources, we investigated the extent to which the local communities in the MBR are prepared to access U.S. markets to export their Ramón produce. We came up with three main requirement areas, which are organizational capacity, operational and technical capacity and product attributes factors. We found that assessing these factors solely is not enough to address the development of Ramón exports in a socio-economic context. Organizational capacity along with the operational and technical capacity are key to ensure an effective and sustainable export performance of any enterprise². Also, the product attributes are key for assessing whether the Ramón characteristics are exportable and have any unique attributes attractive to the U.S. market. However, community resilience and benefits are essential for business strength and durability. Thus, we have tried to assess the current export performance, reconciling the community resilience context to it, to highlight the export gaps that need to be addressed by the Ramón producing communities with the assistance of Rainforest Alliance and FORESCOM and intermediaries involved in the export value chain.

The Venn diagram model of figure 3 below illustrates the three main export requirement areas identified as organizational capacity, technical and operational capacity, and product attributes. The areas of A,B and C illustrates the logical relationship between each category. In other words, improving one category will result in indirect benefits in the other category, and vice versa. For instance, in area A, improving the organizational capacity will result in optimized technical and operational capacities in terms of efficient production of Ramon and hence increasing Ramon Supply to meet US demand. Similarly, area B illustrates the common feature between the organizational capacity and the social and environmental attribute of the Ramon product as the communities who represent the social attribute of the product are also considered to be a main pillar of the organizational framework of the Ramon export value chain. Also, area C represents overlapping impact of the social and environmental attribute as key marketing attribute in the technical and operational capacity of Ramon sold to the US market. These key assessment categories are illustrated as follows:

² <https://www.export.gov/article2?id=Sample-Export-Plan>

Figure 3. Main Export Requirements



Organizational capacity assessment

From our study, we came up with the main factors that need to be assessed in a community enterprise's organizational structure and behavior needed for U.S. market penetration. Our contribution in this area is that we tailored these requirements to match the concessionary context, taking into account its unique management structure.

Prior export experience and knowledge

One factor we are assessing in this report is whether there is any prior experience exporting Ramón produce. Unawareness of whether the Ramón and its value-added products fit the U.S. trade and food safety regulatory framework, which is known to be so bureaucratic, could hinder the Ramón community business from entering the U.S. export market. Also, having at least an experienced Ramón exporter to the U.S. in the value chain facilitates the Ramón trade process,

incurring lower trade costs overtime as a result of export experience. Also, this exporter might be the driving force for new exporters to be encouraged to enter the export market of Ramón by observing the experienced exporter's decisions and learning from his market entry strategies.

The Ramón exports take place through indirect exporting through an intermediary private enterprise named Cafinter which has been involved in that activity for around 15 years. The owner's experience in navigating the global marketplace and bureaucratic trade requirements for other products besides Ramón plays a key role in facilitating the process of exporting Ramón to the U.S. market. Exporting Ramón through indirect export removes from the concessionary communities the burden of being involved in rigorous export-related administrative and logistical operations. It also helps them get accelerated access to the U.S. market without requiring any expertise or major cash expenditures, which is suitable for the concessionary communities who are not familiar with exporting. (Capela, 2015, p.64)

Language and networking capability

The language and networking capability are another key factor we have taken into account in our assessment. Having a staff member with adequate English language skill is essential to conduct business with U.S. importers and their intermediaries. Moreover, networking skill is required for trust-building with the U.S. importers. This can be met with adequate knowledge of the business ethics and culture of the international client. It also requires the Ramón exporter to be fully knowledgeable of its Ramón product marketing attributes to build rapport with prospective U.S. clients while convincing them to import Ramón.

Rainforest Alliance and FORESCOM mentioned that they don't have any one in their staff who speaks English, including the regional manager of Rainforest Alliance. But they cope through using interpreters. Both are aware of this problem, noting that in interviews, especially in finding and dealing with new US clients. Thus, in order to network with U.S. buyers, Rainforest Alliance has its own office in the U.S. whose staff speak English being mainly responsible for finding and attracting new clients in the U.S. to import NTFPs, including Ramón from Guatemala.

Additionally, establishing a presence for Ramón and its derivative products at trade shows would give a powerful ground for meeting new clients in the U.S. and building a more established and reliable presence of the Ramón product attributes among U.S. prospective

clients. There are already good efforts from FORESCOM, Cafinter (Ramón exporter intermediary) and community members in taking advantage of attending trade shows in the U.S. and having conversations with different U.S. distributors about trading Ramón with them. In fact, in March 2018, ACOFOP, with the support of the Rainforest Alliance and the University of Minnesota, participated in the trade fair entitled "Natural Products Expo West", one of the largest events in the United States with the objective of promoting and exploring markets for NTFPs produced by the Communities of the Maya Biosphere. Yet, more efforts need to be made towards expanding the Ramón presence in trade shows and exhibits.

In order to promote the communities' self-agency through the export process, training in English language and networking skills are key to optimize their export opportunities. If these communities had the opportunity to learn English and develop their negotiation skills, they may be able to convince traders to buy at relatively higher prices, compared to what was usually obtained working through an intermediary. They would be able to communicate their work in trade shows directly instead of using intermediaries, which brings more authenticity to their broadcasting of Ramón's product attributes along with their stories to U.S. businesses. In addition, this is expected to help establishing traders more committed to Ramón.

Quality Control Management Standards

Bei & Chiao (2001) argued that the quality of goods is the most significant factor. Also, the World Bank (2010) has stated the importance of solid infrastructure for norms, standards, and quality control which guarantees a proper product commercialization for either domestic or foreign markets. Through our field observations and interviews with farmers and community partners' staff, it was possible to identify the procedures related to quality control established throughout the Ramón supply chain. For the people interviewed involved in the harvesting process, the quality standards for that part were well known and established based on traditional knowledge of the community, following these criteria:

- The harvesting should only take place in pre-demarcated areas. For the demarcation of the areas, there are Ramón's collection supervisors that determine where the harvesting should take place. This is an important step so that the seeds don't get contaminated by pesticides from neighboring plantations of beans and corn;
- Select only whole seeds, without any type of crack or damage;
- Wash the seeds so that no dirt remains;

- Dry the seeds in an airy place and store them away from impurities until the day of sale to the associations.

For the people interviewed who are related to Ramón's purchasing associations, the criteria mentioned were that during the purchase of seeds there is an investigation of the quality and integrity of the grains. Associations do not accept the purchase of rotten, broken or dirty seeds.

Regarding certifications, the Ramón seeds produced in the Mayan Biosphere have two certifications: the organic certification and the Kosher certification. The organic certification states that all the materials involved in the production of Ramón's seed were of organic origin. This is one of the reasons why seeds that fall close to neighboring areas that use pesticides have to be excluded during the Ramón harvesting phase. While the Kosher Certification assures that both product and its production process adhere to all Kosher Law requirements, which means that they checked the product's ingredients, production facility and actual production to ensure all ingredients, derivatives, tools and machinery have no trace of non-kosher substances. The Kosher Certified symbol assures consumers that both the actual product and its production adhere to all Kosher Law requirements. The certifications have been obtained as they are a prerequisite for selling Ramón to Teccino. In a like manner, the Ramón enterprises should be prepared to obtain additional certifications if required by potential clients if certification can be obtained while maintaining the profitability of the enterprise.

Technical and operational capacity assessment

Supply capacity and continuity

The supply capacity of the operation is related to the capacity of the concessions to supply the demand required by the market. In the current state of the operation, the concessions' ability to supply market demand depends directly on three variables (1) the harvest period for Ramón trees, (2) storage capacity and (3) cash available for working capital to purchase seed for reforestation.

Ramón harvesting periods

The harvesting period for Ramón seeds happens twice a year, one around March and the other around September. The harvest season lasts approximately a month. The harvesting period appeared several times in the answers of several interviewees as a determining factor in

the amount of Ramón available to the market and the conditions in which they harvested the seeds. According to a female harvester in Uaxactun community ³, the amount of seed available and when they will be available depends on when and how those harvests are going to be. The same interviewee goes on and says that “climate change affected the harvesting season. We cannot be 100% sure when the harvesting season is going to be. It is more unpredictable”. For another female interviewee of the same community⁴, climate change is interfering with the amount of seeds available.

The harvest period and the quantity of the harvest are important to supply the demand when it is related to the availability of the product in the communities. During informal interviews and visits to communities, some residents mentioned that in the past harvest there were areas that did not give any seed, which for them was very strange. Thus, due to the nature of the activity and because Ramón is a 100% natural and organic product, pre-existing in the area, the unpredictability of the harvest is already a known problem and needs to be strongly addressed.

Storage capacity

With regards to the storage capacity, a female harvester commented that in 2020 during the pandemic, the communities had a very good harvest, but they could not sell much of what they collected because the associations no longer had a place to store the harvest. The interviewee also explained the reason why this happened. According to the interviewee, during the pandemic, the demand for Ramón seeds fell far below normal, which caused this problem.

A representative from FORESCOM⁵ declared that they are able to store around 342⁶ to 400⁷ quintals of Ramón green seeds at the moment. They are also able to store 1000 quintals⁸ of dried Ramón seeds and are working on creating more space so the communities can store production for future sales. In this way, the problem now is to secure enough working capital to pay the workers for the harvest before receiving the payments from the clients for it.

³ Interview 1907F05 with Uaxactun community member, interviewed by Karla Godoy and Noran Aly on July 19th, 2021.

⁴ Interview 1907F06 with Uaxactun community member, interviewed by Karla Godoy and Noran Aly on July 19th, 2021.

⁵ Interview 2907M13 FORESCOM staff, interviewed by Karla Godoy and Noran Aly on July 29th, 2021.

⁶ 34,2 tons.

⁷ 40 tons.

⁸ 100 tons.

Working Capital and productivity

From the exporting side, based on our interview with Cafinter and Teeccino, they both claimed that there is a significant gap in Ramon supply to meet the US demand. This is due to climate change that negatively impacted the harvesting season as well as the yield. As shown in figure 4 which illustrates the historical trend of Ramón export activity from 2014 till 2021, Teeccino’s CEO claimed that they are facing troubles in getting enough supply from Cafinter to meet the US demand for Ramón which is 30 tons (equivalent to 27.22 thousand KGs). In the last five years, there was shortage of 52%, 65%, 64%, 36% and 65% from 2016 to 2021. Besides that, getting the information from Teeccino about the inspected US demand for Ramon would help the communities a lot if they will export themselves. This is because there used to be some difficulties in in communicating Teeccino’s demand to communities in order for the communities to expect the future demand which might be one of the reasons of the resulting supply and demand gap in Ramon exports.

Figure. 4 Historical trend of Ramón export activity in the last 5 years (2014-2021)

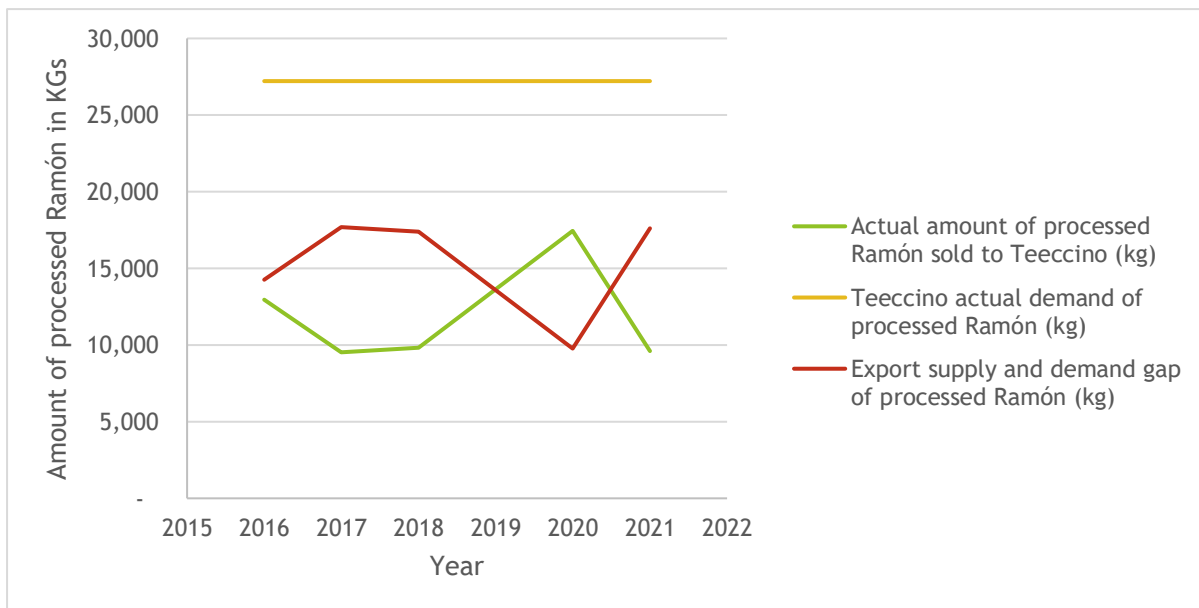


Figure 5

Year	Actual amount of processed Ramón sold to Teeccino (kg)	Teeccino actual demand of processed Ramón (kg)	Export supply and demand gap of processed Ramón (kg)	Gap % of actual demand
2016	12,935	27,215.55	14,280.55	52%
2017	9,525	27,215.55	17,690.55	65%
2018	9,820	27,215.55	17,395.55	64%
2020	17,445	27,215.55	9,770.55	36%
2021	9,625	27,215.55	17,590.55	65%

From the community side, in addition to what has already been discussed on the matter, having access to fund that is specifically assigned to working capital is a recurrent challenge. According to 3 female harvesters interviewed from Uaxactún committee, this working capital is mainly needed to assist their communities in planting more Ramón trees, to increase their yield of Ramón seeds during the two harvesting seasons, and in financing the storage facilities needed to cover the increased supply of Ramón seeds. Also, most the harvesters pointed out to the problem of unsafe work environment of harvesting due to exposure to snakes and harmful bugs as well as difficulty in accessing harvesting areas due to heavy rain.

Additionally, a significant number of the interviewed harvesters claimed that they are keen on being more involved in the Ramon export value chain through having their own independency in Ramón processing besides the harvesting part. This was reflected in their answers when we asked them about their perspectives of what are the main strategies needed to improve the Ramon production and exportation. Their answers involved their need to have their own Ramon processing equipment and storage facilities, specifically mentioning roasting ovens and packaging equipment. They justified that it would eliminate the problems they face with the community enterprises reselling their produce to export market.

Financial capacity assessment

According to the identified difficulties, most of them related to financing working capital, in order to identify the financial capability of the communities, we assessed the availability of financial resources needed to cover export investments and relevant contingent expenses. In order to match the non-profit and social context behind this export activity, we considered the availability of grants provided through the channels of community partners like ACOFOP and Rainforest Alliance to support the export business of these communities as a component of this financial capacity assessment. This is beside the reinvested profit from their Ramón sales to make it self-sustainable. It also includes the accessibility to bank credits and whether they are obtained easily. These financial resources are not only to fulfill the export requirements but also indirect costs such as operational or marketing expenses that are also important to ensure the self-sustainability of the export business of these local communities.

Grants

ACOFOP has access to funding from a number of bilateral donors and foundations such as USAID, Ford Foundation and The Overbook. The projects financed by those institutions are generally 2-3 years long, which means that they have to keep writing proposals to keep the projects going on. According to a male interviewee from the , the organization is doing a really great job maintaining continuous support for the programs that already exist. This provides a potential source of funding for export operations and working capital for purchasing and storing Ramón for later sale.

In the case of the Rainforest Alliance, they have USAID funding as well as their own private donor funding that can provide up to 5 to 10 year projects. However, the RA's projects are now more focused on maintaining sustainable landscapes. It means that those funds are directed to the management of the forest areas with the buffer zones. The actors involved in the value chain of Ramón are leveraging the funds from USAID so they can improve the Ramón harvesting through purchasing equipment, developing their storage capacity, and also investing in more working capital to pay the harvesters so that they don't run into the supply issues.

Loans

Due to the nature of the venture developed by the communities, they have access to a different category of loans from funding programs with zero interest rate. With those loans the communities just need to pay back the funds they receive. This kind of loan works as a payment for environmental services to help forest conservation and empowering community enterprises to get them up to speed.

Pricing and payment mechanism

Many harvesters who have been interviewed complained about the pricing and payment for their Ramón yield. The pricing does not cover the risks they are exposed to in their harvesting activities such as being exposed to snake bites and harmful bugs. This is in addition to overcoming the long distance they have to cover in order to reach the harvesting areas as there is no availability of cars to transport them to these harvesting sites. Female interviewees were the ones who complained a lot about the pricing systems, claiming that they are the most vulnerable to the harvesting activities due to their lack of access to adequate transportation facilities and harvesting equipment that help them go harvesting especially during heavy rains, imposing risks on their lives too. Additionally, the current pricing system doesn't allow them to benefit from the price increases of the U.S. market, going against the ultimate goal of the

whole Ramón operation in the MBR communities of optimizing their livelihood. Also, a female harvester and quality control inspector in the Uaxactun community mentioned that they struggle with price changes set by the community association aggregating their Ramón produce to be prepared for the exporters. The harvesters are not getting involved in the Ramón resource management due to the lack of a formal contractual agreement on pricing and purchasing guaranteeing their reward rights. Many of the harvesters who have been interviewed mentioned that their Ramón collection activity is important to securing their livelihood and sending their children to schools and colleges. So, if the harvesters are not getting well-compensated for their hard work in Ramón collection that might impose a risk on the continuity of the Ramón export business. The pricing structure should be reviewed and the harvester concerns addressed.

Marketing capacity

We came up with this indicator to assess the Ramón community's awareness of the international market needs and requirements. It also includes the communities' efforts and procedures to develop their Ramón production, to match the export market prerequisites. This is because Ramón is considered as a food that has not been consumed to a significant degree by U.S. consumers, which requires a study-based Ramón products sampling plan in trade shows.⁹

The Ramón organic certification is one of the many ways that Ramón producers can increase their U.S. market access and penetration. Also, sustainability in sourcing and along the export value chain brings direct benefits to people and nature while bringing business benefits (Rainforest Alliance, 2021). Many research studies have demonstrated positive business impacts of putting sustainability standards into their marketing business strategy. For instance, 98% of businesses experience sales and marketing benefits after adopting sustainability standards. Such benefits include areas such as improved reputation (60%), increased profitability (53%), cost reduction (30%) and increased production (30%) (ISEAL, 2017). Also, 78% of US household heads feel better when purchasing products that are sustainable or better for the environment (Unilever, 2019).

⁹ Interview 1507M01, Cafinter staff with administrative role, interviewed by Karla Godoy and Noran Aly on July 15th, 2021.

Value chain traceability

Nowadays, market needs are rapidly changing as consumers' consciousness is developing day by day and hence they became highly interested in looking for sustainably and responsibly produced goods (Forbes, 2021). In that sense, simple marketing claims might be no longer sufficient to assure sustainability of Ramón production. Thus, fulfilling consumer centricity opens a venue for Rainforest Alliance to develop a food traceability system that provides transparent information on the quality and safety of Ramón value chains. We think that such an integrative monitoring system would optimize the export value chain in two areas. The first one is the ability to access good data throughout the value chain relating to Ramón harvesting date and location, quality, inventory tracking to help Rainforest Alliance and other community partners make more informed decisions. The second one is through increasing community profitability of Ramón by raising customer satisfaction and confidence in the product quality and the responsible production process. These traceability information can be provided online on website or QR code on the Ramon products' packages which will attract the socially aware class of consumers in the US, showing that Ramon harvesting and production is done in a responsible and environmentally conservative manner.

Product attribute assessment

Developed countries, including the USA, are driven by the preferences of aging populations and growing diet-related health concerns. Accordingly, their consumers' demand now seems to shift toward food of higher quality, more natural, and healthier (Regmi, 2001). In this report, we are assessing the nutritional, pricing, social and environmental, and value-added production attributes of Ramón seeds, identifying whether it satisfies the U.S. market preferences and requirements. Based on the field interviews we conducted with the communities' and intermediary actors' investigating their perceptions of Ramón potentiality for export market, we deduced its extraordinary value as it possesses a combination of niche characteristics.

Retail price attribute

According to a previous study implemented by Motschke (2019), he illustrated the pricing differential attribute of Ramón when it's sold as an organic flour versus to being sold as organic superfood seeds, compared to their similar products in the US market. From this study, we deduced that it has a retail price disadvantage compared to the prices of similar products in targeted markets. For instance, as seen in table 2, the average retail pricing of one pound of

Ramón seed flour (USDA organic certified) (\$13.66) is higher when compared to that of other common types of organic flours, most of which are gluten-free (GF).

Table 2: Retail Price Evaluation of Organic Flour Types

Organic Flour Type	Average Price (per lb)
All Purpose White (Unbleached)	\$ 1.75
Whole Wheat	\$ 1.79
Tapioca (GF)	\$ 3.27
Corn (GF)	\$ 3.31
Brown Rice (GF)	\$ 3.59
Buckwheat (GF)	\$ 3.66
Oat Flour (GF)	\$ 4.19
Sorghum (GF)	\$ 4.97
Cassava (GF)	\$ 5.45
Coconut (GF)	\$ 5.51
Quinoa (GF)	\$ 7.01
Chickpea (GF)	\$ 8.54
Almond - NOT ORGANIC - (GF)	\$ 9.80
Ramón (GF)	\$ 13.66

Source: Motschke, 2019.

However, the same study illustrated the pricing differential when Ramón is sold in seed form in the super foods market, demonstrating that it has a price advantage compared to other similar kinds of superfoods. As shown in table 3, the average retail pricing of one pound of Ramón

seeds (\$13.66) is lower than that of one pound of other common types of superfoods presented in the table below, except for flax seeds which has an average retail price of \$8.59.

Table 3: Retail Price Evaluation of Organic Superfood Powder Types

Superfood Powder Type	Average Price (per lb)
Açai (fruit)	\$ 60.98
Camu camu (fruit)	\$ 59.72
Chlorella (algae)	\$ 48.69
Spirulina (cyanobacteria)	\$ 40.28
Boabab (fruit)	\$ 35.60
Moringa (leaf)	\$ 33.85
Maca (root)	\$ 25.97
Lucuma (fruit)	\$ 22.91
Hemp (seed)	\$ 20.77
Chia (seed)	\$ 18.34
Tumeric (flowering plant)	\$ 17.77
Cocoa (seed)	\$ 16.49
Ramon (seed)	\$ 13.66
Flax (seed)	\$ 8.59

Source: Motschke, 2019.

Nutritional attributes

Despite the retail-pricing disadvantage of Ramón compared to other similar products, it brings health and nutritional benefits for both the end-consumers and the communities themselves who are at both ends of the Ramón value chain. Most of the interviewees have acknowledged the nutritional benefits the Ramón brings to them and their children. The study results of Wasowicz-Kirylo & Stysko-Kunkowska (2011) showed that nutritional labelling is considered as another piece of information to put on the packages of the products to be noticed

by consumers. For instance, as shown in figure 4 in the appendix, the organic Ramón flour labelling did a great job as it clearly illustrates to the US consumer the percentage of nutritional ingredients in terms of Potassium, Sodium, Carbohydrates and Protein, as well as the total calories. According to studies, generally, consumers' preferences for nutrition-labeled goods is determined by their evaluation for the visual attractiveness and willingness to use them (Grunert & Wills, 2007). The label form and content may also influence the inferences consumers make about product healthfulness (Wasowicz-Kirylo & Stysko-Kunkowska, 2011). The consumers inference process about the product nutritional attributes is complex and involves many cognitive processes as it depends on the purchasing context and on prior knowledge of the consumer (Kardes, Posavac, Cronley & Herr, 2008).

Also, according to the Ramón seed nutrition chart in figure 5 in the appendix, it indicates that Ramón has a nutritional competitive advantage compared to other similar products. It has the highest ingredient proportions of fiber, tryptophan and calcium and approximately the least proportions of fats, calories, saturated fats and trans fats. Thus, we can deduce that highlighting the nutritional advantage attributes of Ramón products might be an important influential factor for the US consumers to prefer purchasing Ramón products over other similar ones when they identify its nutritional comparative advantages. This is expected to help overcoming the challenge of the higher retail price when compared to similar products.

Value-added attribute

Ramón has a great marketability advantage as it can be used to produce multiple value-added products. Once Ramón seeds are dried, roasted, and ground, they can be used as a gluten-free flour substitute, complement in baked goods, or as a caffeine-free coffee alternative (Motschke, 2019). In addition, ongoing research by the Department of Food Sciences and Nutrition at the University of Minnesota is exploring a range of additional products that can be produced from Ramón. The Ramón's diversification potential would allow for the maximum utilization of existing resources and capabilities as well as expanding its customer base in the US export market. Hence, the Ramón industry has the potential to achieve profit-maximization through diverse segments in the US market, attracting different consumers tastes. As shown in Motschke (2019), the list of Ramón's potential value-added products is wide. That indicates the high potential for diversified Ramón buyers. For instance, Ramón seeds can be sold in the US market as whole Ramón seeds, Ramón flour, caffeine-free coffee, protein bars, bakery,

snacks bars, herbal supplements which might foster its relationships with wider range of prospective US buyers.

Social and environmental attributes

Another factor of interest on Ramón from U.S. buyers is that it's harvesting process and history is connected to social and environmental benefits. As an example, when being interviewed¹⁰, Caroline MacDougall, the CEO and founder of Teeccino, provided important insights relating the Mayan history and social and environmental benefits of Ramón. She claimed that it is a key marketing attribute for Ramón to increase US consumer awareness about it.

Moreover, certifications for NTFPs are presented as a way to achieve the 12th goal of the United Nations' SDGs which is responsible production and consumption, compromising both the environmental and social aspects (UN, 2021). An enterprise can purchase sustainability-related certification for its forest produce to broadcast its responsible purchasing decisions. One of its positive advantages is that consumers can perceive their purchase of these eco-friendly certified products as they too are contributing to the promotion of responsible and ethical decisions through their purchases. For some target export countries like the U.S., it goes beyond the above-mentioned voluntary schemes as it might be required to be met

Ramón producers already have the Organic certification because they are subject to obtaining such certification to sell their products to Teeccino, which is one of the main consuming markets for organically certificated products. However, the exported Ramón from MBR does not have a Fairtrade certification yet set by the Fairtrade Labelling Organizations International (FLO)¹¹ which is also an important certification standard that is looked for by socially aware American consumers. It is important because it guarantees to the conscious U.S. consumers that a minimum fair price is paid to Ramón harvesters. In fact, the US is the largest Fairtrade import market, with 85% of its imports coming from Mexico and Central and South America, where a considerable number of consumers are advocates of responsible production

¹⁰ Interview 2907M13 with FORESCOM staff, interviewed by Karla Godoy and Noran Aly, July 29th, 2021

¹¹ <https://www.fairtrade.net/about/key-benefits-of-fairtrade>

and business practices (International Trade Center, 2011). Thus, having a combined Fairtrade and Organic certification for Ramón would serve as evidence to conscious U.S. consumers that Ramón harvesters are getting paid fairly and hence they will be encouraged to take part in sustaining the harvesters livelihoods through purchasing Ramón.

Conclusion and recommended action plan

To sum up, after listening to perspectives of different stakeholders in the value chain, we found that more budget needs to be allocated towards working capital but in a way that promotes Ramon production efficiency. The dilemma we faced in this area is the conflicting interests; having communities independently exporting to the US by cancelling Cafinter channel might contradict with meeting goal of production efficiency. In other words, inserting and renting warehousing and storage facilities in each community would impose more costs than the cost incurred from renting one warehouse through FORESCOM. Also, if the communities considered exporting themselves, more work has to be exerted towards raising their competitiveness in the US market as they will be entering the market as new players. Additionally, due to the fact that Teeccino, who is the main buyer of Ramon in the US, is insisting to buy through Cafinter, this would impose a huge risk on the communities to maintain their relationship with Cafinter and gain their trust. However, it is not impossible but needs huge work showing compliance to their quality standards and commitment to their demand. By considering communities to export independently, this has to be started with providing these communities with self-agency tools. For instance, this can be through assisting these communities in accessing external sources of fund by teaching them the know-how of writing grant proposals to finance Ramon production, such as funds offered by Teeccino to reforestate and optimize Ramon production. Also, teaching communities English language is essential for them to generate new leads especially when they attend trade shows and also empowering them to get approval on grant proposals. This is because, even though Rainforest Alliance have their own offices in the US who speak English, the communities need to learn English language as it is a universal language that will open many doors for them to access new buyers and not to be stuck with Teeccino only. To overcome the risk of these communities being mainly dependent on Teeccino, future work needed from prospective UMN graduate students to assist and empower these communities by assessing their export readiness and developing market research on the EU market, and hence it becomes as an alternative source of potential buyers. Last but not least, developing a food traceability system for the whole export value chain of Ramon can be an important social accountability and transparency tool. Having such an integrative monitoring system would optimize the export value chain through accessing good data throughout the value chain relating to Ramón harvesting date and location, quality, inventory tracking to help Rainforest Alliance and other community partners make more

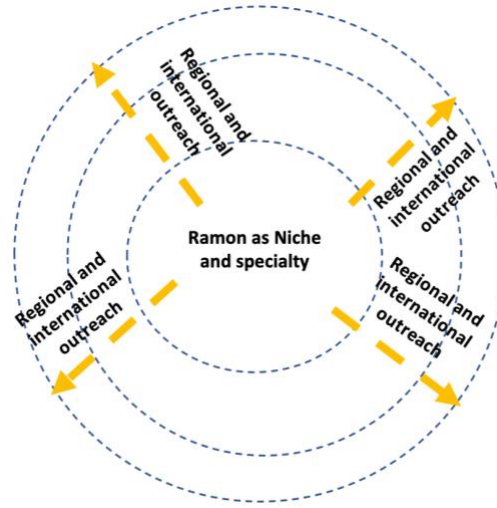
informed decisions and hence might allow the communities to do exports themselves. It also could serve as a marketing tool by illustrating the socio-economic attributes to conscious US consumers on a website or a QR code showing them how Ramon is being safely and responsibly harvested and produced by paying farmers fairly and how food quality control practices are undertaken, along with forest conservation practices. Besides that, having a monitoring system will also facilitate exporting by the communities as they can access to data related to international market demand and hence being more committed to US buyers in supplying the amount of Ramon they demand. Finally, despite the high price of some Ramon products compared to their similar products, its high nutritional attribute combined with, as mentioned previously, its socio-economic attributes especially if it is being exported by communities themselves might give a high potential for Ramon to penetrate the US market. Accordingly, we developed the recommended action plans below by trying to reconcile the different interests of stakeholders, making sure we are using communities concerns as a main input of it and making sure that these options are feasible as well.

Issue	Recommended action plan	Pre-conditions
<p>Profitability mechanism that involves Ramon harvesters</p>	<ul style="list-style-type: none"> The pricing regime should follow a profit-sharing mechanism that allows the Ramón harvesters to share the benefits of higher Ramón export returns. This can be through considering multi-layer pricing and reward system. <p>This approach will involve setting up system where farmers will profit from upward price movement in international market for any product and help the farmers improve their livelihood in proportionately</p> <p>Level 1: A base price that harvesters will be paid irrespective of international price of the product. This can be the current ruling price. Ramón collectors (harvesters) will receive this as soon as they sell.</p> <p>Level 2: A certain percentage of the upward price movement in the export market. This will be an additional payment to the base price paid in level 1.</p> <p>Notes:</p> <ol style="list-style-type: none"> There can be more than 2 levels provided. There is a mechanism to set price ranges beyond which extra percentage of the increase will accrue to the Ramón collectors (harvesters). For this to work, there must be a culture of transparency and accountability between the Ramón collectors (harvesters) and the agency handing the export. 	<ul style="list-style-type: none"> A prior analysis of the pricing structure. Rainforest Alliance and FORESCOM applies a solid traceability system to monitor and evaluate the change in pricing mechanism and payment to Ramón harvesters.

	<p>This profitability mechanism might be a way to increase productivity by encouraging harvesters, which might result in an increased yield of Ramon, and hence contributing to reducing the export supply and demand gap of Ramon in the US market.</p>	
<p>Optimizing the harvesting operations and increasing safety measures as a way to address Ramón supply variability</p>	<p><i>Capital:</i></p> <ul style="list-style-type: none"> • The Ramón harvesting operations need to be optimized. FORESCOM and RA need to devote funding towards working capital including Ramón seed collecting equipment to ensure efficient harvesting operations for the community harvesters. • Local communities need more funds allocated to finance their purchasing their own warehousing facilities to expand their storage capacity. This is expected to allow them to store and process Ramón seeds themselves instead of passing through several intermediaries, which incurs accumulated costs. However, it might incur additional costs due to renting more than one warehousing facility, however it would be socially beneficial by creating more jobs for the communities. <p><i>Safety measures:</i></p> <ul style="list-style-type: none"> • Allocating funds to provide harvesting safety kits, be it anti-venom that is already provided to Xate collectors, for Ramón collectors to take them to the forest in case of snake bites. This would allow increasing their harvesting areas through safely access risky Ramón harvesting areas without being attacked by snakes. Also, funding is needed to finance offering the collectors trucks that can safely transport them to and back from the harvesting areas, especially during heavy rain falls. <p><i>These are considered as short-term solutions to address the Ramón supply</i></p>	<ul style="list-style-type: none"> • Community partners including Rainforest Alliance and FORESCOM have access to external sources of funds to finance these activities. • Financial and Economic Cost-benefit analysis needed to test the viability of supplying communities with warehousing facilities.

	<i>variability problem in the multiple-use zone due to climate change until applying the long-term solution of getting the approval to operate in the buffer zone of the MBR.</i>	
Accessing the buffer zone	It will help increasing the Ramon yield and hence allow the communities to meet the US demand but it is a long term solution due to rigidity of getting harvesting approval from CONAP. This has to be done through a blended strategy by ensuring not to take out the motivation or incentive to harvest in multiple use zone areas because harvesting activities there incentivize the communities to protect the forests there, as one of the successes of the concessions which allows them to renew the communities concessionary leasing has been the low deforestation.	<ul style="list-style-type: none"> • A financial and economic cost-benefit analysis need to be conducted to test the viability of this option.
Community self-agency	<ul style="list-style-type: none"> • Appropriate institutional arrangements that allow the shifting of authority over Ramón resource management backwards in the direction of small community harvesters by involving them in the production, processing, and pricing activities. • Creating community exporters through building an e-commerce platform that suits the MBR community characteristics. Growing interconnectedness directly with U.S. consumers makes exporting feasible for Ramón at a lower cost. Ramón and its derivative products have local niche and specialty characteristics that give them a high potential to be 	<ul style="list-style-type: none"> • Distribution points in the US that allows for direct sales from community enterprises. This can be handled through the regional offices of the Rainforest alliance in the US. • A strategic marketing plan that tackles the problem of high expenses associated to small quantities shipments. • A strong logistical knowledge and experience. This can be done through FORESCOM and Rainforest alliance hiring or outsourcing export managers to be responsible for the export logistics process.

	<p>promoted directly to the U.S. consumers through e-commerce marketplaces besides business clients.</p> <ul style="list-style-type: none"> Hence, creating a digital intermediary that allows business transactions directly between the community partners such as FORESCOM, who will be responsible for Ramón merchandise and the U.S. consumers as well as business clients would help the communities to expand their small business customer base, regionally and even internationally. 	<ul style="list-style-type: none"> Community enterprises are willing to take part in the export process.
<p>Capacity-building expansion</p>	<ul style="list-style-type: none"> Supporting the communities to access diverse external sources of funds in MBR. This is through the involving UMN students and other universities partners in teaching these communities the know-how of writing a grant proposal and developing feasibility studies . Their role to support and teach these communities how to organizing the data and information they already have in a way that well-communicates their needs and prove their commitment to the intended deliverables . This is expected to empower communities access small external funds to develop their financial and operational capacity and export on their own. Providing English training for the communities to be able to network with US buyers and possibly EU clients if they considered expanding to other 	<ul style="list-style-type: none"> Future Student researchers are able to handle the difficulty to write a persuasive yet captivating proposal accurately narrating the community enterprises' needs in MBR in the grant proposal-→ know-how provided They have to be able to well communicate a strategic evaluation plan that highlights the



	<p>international market.</p>	<p>communities' commitment towards addressing the projects needs.</p> <ul style="list-style-type: none"> ● Including a cost benefit analysis to the grant proposal to highlight the project's financial and socio-economic returns as well as its viability. ● Availability of data needed for the cost-benefit analysis.
<p>Supporting the communities in accessing new market</p>	<ul style="list-style-type: none"> ● Future work in conducting export readiness assessment for the communities to export to the European market is encouraged. Accessing new markets in Europe will allow the communities to have a wider base of clients other than Teeeccino which impose a huge risk on their business activity as being the only buyer. 	<ul style="list-style-type: none"> ● This can be done in collaboration with future MDP graduate students. ● Implementing food novel studies to understand the strict requirements of the EU markets

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Appendixes

I. US Export Guide

I. Tariff requirements:

USITC tariff structure

The U.S. International Trade Commission (USITC) publishes and maintains the U.S. Harmonized Tariff Schedule (HTS) and provides technical information on its tariff structure and modification for imported goods and services to the USA, published on this [webpage](#). Positively, both green and roasted coffee – regardless of grade – receive duty-free entry into the U.S. under the Generalized System of Preferences (GSP). To access the whole tariff schedule of coffee click on this [link](#).

Harmonized Tariff Schedule of the United States Basic Revision 6 (2021)

Annotated for Statistical Reporting Purposes

II
9-2

Heading/ Subheading	Stat. Suf- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
0901		Coffee, whether or not roasted or decaffeinated; coffee husks and skins; coffee substitutes containing coffee in any proportion:				
0901.11.00		Coffee, not roasted:				
		Not decaffeinated.....		Free ^{1/}		Free
	15	Arabica:				
	25	Certified Organic.....	kg			
	45	Other.....	kg			
	55	Other:				
	55	Certified Organic.....	kg			
	55	Other.....	kg			
0901.12.00		Decaffeinated.....		Free ^{1/}		Free
	15	Certified Organic.....	kg			
	25	Other.....	kg			
0901.21.00		Coffee, roasted:				
		Not decaffeinated.....		Free ^{2/}		Free
		In retail containers weighing 2 kg or less:				
	35	Certified Organic.....	kg			
	45	Other.....	kg			
	55	Other:				
	55	Certified Organic.....	kg			
	65	Other.....	kg			
0901.22.00		Decaffeinated.....		Free ^{2/}		Free
		In retail containers weighing 2 kg or less:				
	35	Certified Organic.....	kg			
	45	Other.....	kg			
	60	Other.....	kg			
0901.90		Other:				
0901.90.10	00	Coffee husks and skins.....	kg	Free ^{1/}		10%
0901.90.20	00	Coffee substitutes containing coffee.....	kg	1.5¢/kg ^{1/}	Free (A+, AU, BH, CL, CO, D, E, IL, JO, KR, MA, OM, P, PA, PE, S, SG)	6.6¢/kg

While for the Ramón flour, it is subjected to a 17.5% tariff duty as shown in figure () below. To access the whole tariff schedule of Ramón flour click on this [link](#).

Harmonized Tariff Schedule of the United States Basic Revision 6 (2021)

Annotated for Statistical Reporting Purposes

IV
19-3

Heading/ Subheading	Stat. Sur- fix	Article Description	Unit of Quantity	Rates of Duty		
				1		2
				General	Special	
1901		Malt extract; food preparations of flour, groats, meal, starch or malt extract, not containing cocoa or containing less than 40 percent by weight of cocoa calculated on a totally defatted basis, not elsewhere specified or included; food preparations of goods of headings 0401 to 0404, not containing cocoa or containing less than 5 percent by weight of cocoa calculated on a totally defatted basis, not elsewhere specified or included:				
1901.10		Preparations suitable for infants or young children, put up for retail sale:				
		Preparations suitable for infants, put up for retail sale:				
1901.10.05	00	Containing over 10 percent by weight of milk solids: Described in general note 15 of the tariff schedule and entered pursuant to its provisions.....	kg.....	17.5% ^{1/}	Free (A+, AU, BH, CL, CO, D, E, IL, JO, KR, MA, OM, P, PA, PE, S, SG)	35%
		Other:				
1901.10.11	00	Infant formula containing oligosaccharides: Described in additional U.S. note 2 to this chapter and entered pursuant to its provisions.....	kg..... kg cmsc	17.5% ^{1/}	Free (A+, BH, CL, CO, D, E, IL, JO, KR, MA, OM, P, PA, PE, S, SG)	35%
1901.10.16	00	Other ^{2/}	kg..... kg cmsc	\$1.035/kg + 14.9% ^{1/}	Free (BH, CL, JO, KR, MA, OM, SG) 13.8¢/kg + 1.9% (PE) 34.5¢/kg + 4.9% (PA) 41.4¢/kg + 5.9% (P) See 9823.08.01-9823.08.38 (S+) See 9913.04.25 (AU) See 9915.04.30.	\$1.217/kg + 17.5%

Bureau of Customs and Border Protection (CBP) tariff structure:

However, the Bureau of Customs and Border Protection (CBP) of the Department of Homeland Security is solely authorized to interpret the HTS, to issue legally binding rulings or advice on the tariff classification of imports and their treatment upon entry into the United States, and to administer customs laws. This document includes all their published product entry mandates through this [link](#).

2. Non-tariff requirements:

Having a transparent picture about US market access conditions is a key element for a successful export market entry by the producing communities in Péten . To start with, meeting the nutritional safety requirements by the U.S.Food and Drug Administration (FDA) and he U.S. Customs and

Border Protection agency (CBP) is mandatory to import Ramón as a food product into the USA. Thus, the following guidelines have to be followed by Ramón exporters in Péten to easily penetrate the U.S. market. There are no restrictions or quotas on green, roasted, or brewed (in bottles) Ramón raw coffee.

Registration with the FDA

The exporting facility (whether ACOFOP themselves or intermediaries such as Cafinter) has to be registered with the FDA and they give prior notice to the FDA of food shipments. They have to register through this [link](#).

Designating a U.S. food agent

Exporters of Ramón must have a U.S. food agent to act as a liaison for FDA communications regarding their incoming shipments of Ramón products. The FDA will communicate with the agent to schedule inspections and to verify that all food safety requirements are being upheld. Fortunately, the FDA offers this service online through the FDA website, called [Registrar Corp](#), which can act as an agent but virtually and assist the importing partners to comply with the U.S. FDA standards online. It offers a number of services that serves as a one-stop shop to the services an agent would provide, including:

- a. Registration renewal
- b. Certificate of registration
- c. Detention assistance: through communicating with the FDA on your behalf to seek the release of a detained shipment.
- d. FDA Compliance Monitoring: which is a unique system that continuously monitors the importer's FDA compliance status.

Standards and Certifications

Exporters of Ramón need to comply with the U.S. Customs and Border Protection (CBP) guidelines of obtaining additional permits, health certificates and/or other specialized certifications. Thus, for Ramón to gain entry into the U.S. specifically, regardless of grade or form, it must pass the various documentation, sanitary, and phytosanitary standards of the Customs and Border Patrol (CBP), USDA, and Food and Drug Administration (FDA).

Packaging and labelling

Orderly packing and proper invoicing are key to speed up the clearance process of the Ramón through the Customs and Borders Protection (CBP) agency. The packing has to be as follows:

- e. Invoicing Ramón products in a systematic manner,
- f. Showing the exact quantity of each item of these goods in each box, bale, case, or other package
- g. Putting marks and numbers on each package,
- h. Imported goods have to be in packages where the contents and values of which are uniform in order to facilitate CBP examination

Overall, the Ramón product must be typically imported in 60 kg (132 lb.) natural fiber sacks – burlap, sisal, or jute. Some countries package in 70 kg bags (152 lb.), but this is less common. However, most specialty coffee roasters continue to prefer the traditional 60 kg bags.

Each bag of Ramón products must be individually labelled on the outside with the country of Origin. And the U.S. end purchaser. Both the names of the originating country and the ultimate U.S. purchaser must be presented in English in the most conspicuous, legible, and permanent manner allowed by the product or packaging. The FDA mandates the importers to label their exported food products with the updated Nutrition Facts Chart format, serving sizes, daily values, and more, as in the figure below. For more detailed information about the labelling requirements, check the food labelling guide report by FDA through this [link](#).

Quality control standards of the U.S. importers specific to Ramón coffee beans:

In the specialty coffee industry, neither roasted coffee nor soluble coffee is regularly exported to the U.S. Mostly, U.S. importers purchase green coffee (raw) coffee for two primary reasons¹²:

1- The roasting process is integral to the specialty roasted industry in the USA.

Because for the Americans, there is both an art and science to transforming beverage beans into roasted ones. For that matter, consumers develop preferences, not just for growing regions, but also for roasting styles and roaster brand identities. An unskilled roaster can ruin even the highest quality specialty roasted Ramón seeds, relegating it to a generic, unremarkable, commodity-grade caffeine-free drink. Thus, U.S. importers in their choice of specialty products like Ramón, they are expected to include the distribution size (e.g. local, regional, or national), quality, reputation, name recognition, and overall competitiveness.

2- *Rigidity of U.S. packing standards for Ramón exporters*

For Ramón being exported as roasted coffee substitute or flour, it must be placed immediately in air-tight packaging with a one-way gas outlet valve to preserve freshness as it has only a several-day shelf-life if left exposed to air. No matter its high-level caliberness, if its freshness is not retained, it is worthless for the U.S. importers.

Additionally, larger retailers prefer to use pre-printed retail packaging with their own branding and specificities for ink and material quality. Smaller retailers often cannot afford to brand individual resale packages. Instead, they might choose to use the community's branding of Ramón products within their own stores and appreciate the consistent look of the branding of a single roaster for all

¹² USAID 2017 report of U.S. MARKET ANALYSIS FOR KENYAN SPECIALITY COFFEE

their bulk offerings. These tight measures require Ramón importers to be more skillful in quality control of all levels of Ramón preparation, from drying, to roasting, to packaging.

3- Customs procedures

Responsibilities of Ramón exporters (Guatemala)	Responsibilities of Ramón importers (USA)
<p>1. During the whole export process, Ramón exporters are responsible for ensuring that copies of all shipping documents are with the shipment itself.</p>	<p>1. Ramón products shipments into the U.S. involve three government agencies: the CBP, the FDA, and the USDA.</p> <p>Fortunately, many U.S. importers purchase coffee on “ex dock”¹³ duty through which they handle all logistics related to shipment and lading, including customs clearance and inspections by the FDA and USDA, which might apply for Ramón roast as a coffee substitute.</p>
<p>2. Guatemalan Government: Customs clearance documents need to be present in Guatemala:</p> <ul style="list-style-type: none"> - Customs entry document. - Export License - Purchase order or Letter of credit. - Certificate of Origin on each Ramón merchandise. - Certificate of Purchase that provides descriptive details of each Ramón merchandise. - Customs declaration. 	<p>2. CBP:</p> <ul style="list-style-type: none"> - The Importer Security Filing (ISF), also known as “10+2,” is a CBP regulation that requires U.S. importers to provide data to CBP. This data is used to determine potential threats from in-bound ocean shipments. An ISF must be filed no later than 24 hours prior to the shipment being placed on the vessel destined for the U.S., although some data points may be updated up to 24 hours prior to the

¹³ the seller is responsible for taking the goods off the ship in a particular port, and making them available there, but not for transporting them anywhere. The seller is said to own the goods until they are unloaded on the dock at the port of discharge, retrieved from <https://definitions.uslegal.com/e/ex-dock/> .

<ul style="list-style-type: none"> - Transportation documents signed by Guatemalan certifying agent 	<p>shipment’s arrival into the U.S. ISFs are secured by a Customs Bond, which is a financial guarantee in the case that CBP cannot collect required fees from the importer. A Customs Bond is required to clear shipments through CBP and takes approximately five business days for CBP to process.</p> <ul style="list-style-type: none"> - Although not required, the Customs-Trade Partnership Against Terrorism (C-TPAT) is a program within CBP’s cargo enforcement strategy that works with international supply chains to improve U.S. border security and reduce potential burdens on commerce. C-TPAT is a voluntary, public-private partnership that encourages close cooperation among producers, exporters, consolidators, carriers, brokers, and importers. Coffee-related industry stakeholders are encouraged to participate in C-TPAT and allows them to utilize the NCA C-TPAT shared information platform to collect and update documentation more efficiently.
<p>3. Following CBP guidelines:</p> <p>As described in the “Packaging and Labelling” section above, the country of origin must also be clearly marked on each bag as prescribed by CBP.</p>	<p>3. U.S. Department of Agriculture (USDA):</p> <p>The objective of the USDA inspection is to examine plant material to detect and refuse entry to any prohibited articles and to find pests and prevent their dissemination without unnecessarily damaging the articles or material.</p> <p>Importers must file USDA Plant Protection and Quarantine (PPQ) ‘587’ application to import plant or plant products no less than 45</p>

days prior to a shipment’s planned arrival because approval can take up to 30 business days to process. Once USDA issues a permit to the importer, the importer will send a copy to his Guatemalan export agents, who can begin their customs process. The link to the PPQ 587 application can be found at <https://www.aphis.usda.gov/library/forms/pdf/PPQ587.pdf>, and additional information is available at www.aphis.usda.gov .

Sampling requirements based on USDA inspection requirements:

No. of units per shipment	USDA Sample for examination
1-59 units	3 units
60-359 units	5 %
Over 360	18 units

4. Following FDA guidelines:
All Ramón products imported into the U.S. are subject to review by the FDA, which determines their admissibility. Before the shipment’s arrival into the U.S., the Ramón exporter from Guatemala must register with the FDA and file a Prior Notice that details the contents of each shipment, a process that can be completed at:
<http://www.fda.gov/Food/GuidanceRegulation/ImportsExports/Importing/ucm2006837.html>.
The FDA also provides guidance on product labeling (e.g. roasted Ramón as a coffee alternative).

4. Food and Drug Administration
USDA Sample for examination
Exporters will register with the FDA and file a Prior Notice before the shipment arrives into the U.S. Upon arrival, the FDA will also inspect a number of bags within the shipment, depending on the total number of units. This can result in additional charges.
Any U.S. import facility that handles and processes coffee-related products must register itself as an FDA Food Facility, which can be done at this [link](#).

Also, Ramón exporters can contact the Guatemalan Customs authorities directly to provide them with the latest information about customs regulations and export-import procedures.

Guatemalan Customs contact information

Address: 8Av. 10-43, Zona 1 Ciudad de Guatemala

Telephone: +50224120488

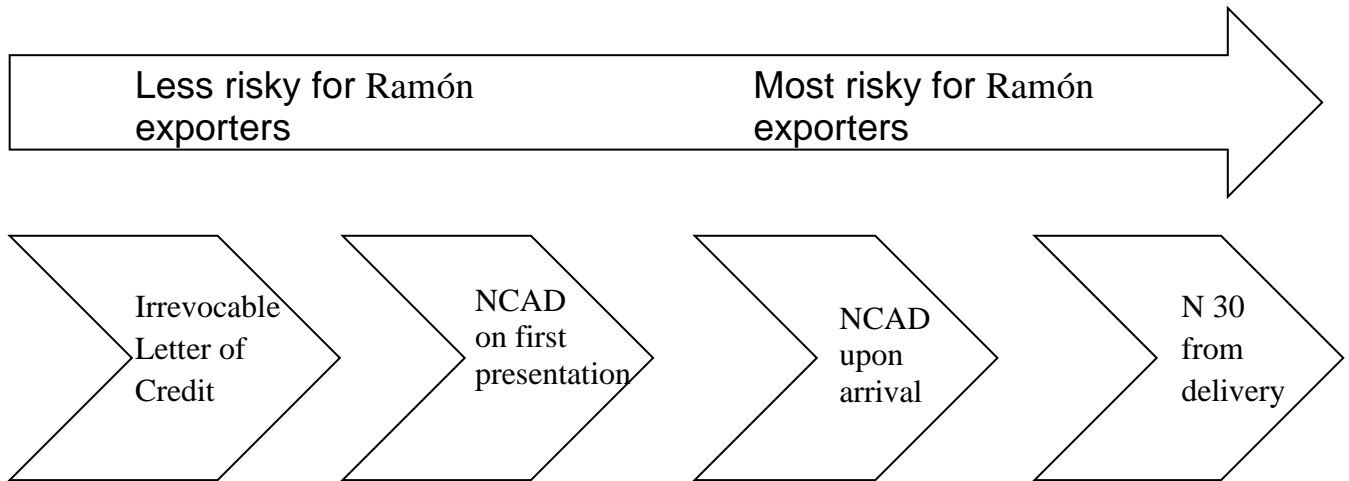
Website: <http://www.mineco.gob.gt/>

4- Contract and payment terms

The most common terms of payment used for specialty food purchases (including Ramón) are:

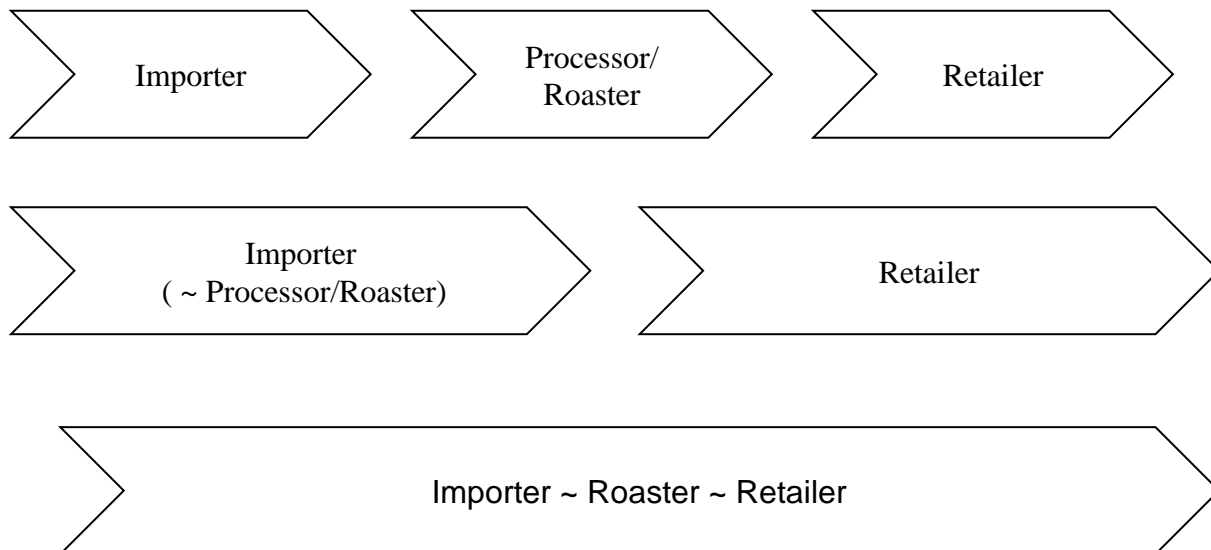
- **Irrevocable Letter of Credit payment:** a contract between a buyer's bank and a seller's bank that guarantees transfer of payment against certain shipping documents. These documents include an invoice, quality certificate, certificate of origin or bill of shipment. It cannot be cancelled once established. Its advantage is that it gives the seller assurance that funds will be available as long as valid documents have been presented.
- **Net Cash Against Documents (NCAD) on First Presentation payment:** The buyer makes payment when valid shipping documents are first presented. This is a common option either for buyers with whom sellers have developed a trusting relationship or for buyers with a well-known reputation for creditworthiness.
- **NCAD Upon Arrival payment:** The buyer makes payment when the shipment arrives at the final port of destination. It is important for sellers to include a stipulation that payment must be made by a certain point, regardless of whether goods have arrived or not.
- **Net 30 from Delivery payment:** The buyer makes payment within 30 days after the shipment has arrived. While these are the most preferred terms for buyers, they leave sellers without product or the cash equivalent for an extended period of time and expose them to the risk of buyer bankruptcy.

Figure 6



As shown in figure 6 above, Ramón export must determine the perceived risk associated with potential Ramón U.S. buyers. However, the ease and accessibility of payment methods should be considered too. For instance, despite the least risk associated with using the Irrevocable Letter of Credit payment method, the cost and inconvenience associated with acquiring one of it might prevent an interested U.S. buyer in Ramón from purchasing from a seller who requires it. While on the other hand, an NCAD upon Arrival payment which dictates that payment will be made “not later than 30 (or 60) days after date of bill of lading” and it has to be clearly stated, however, if the shipment is lost altogether, the Ramón seller may never receive payment. Thus, the Ramón seller has to be conscious in choosing the payment method to guarantee the longevity of their Ramón international business.

5- Potential distribution channels of imported Ramón products into the U.S. market:



II. Interviews questionnaires

Interviewers: Karla Godoy & Noran Aly

English version

Interview Guide Form for Communities

Ramón

Concessionary: _____

Name of person interviewed: _____

Years of experience with Ramón harvesting: _____

Function: _____

Gender: _____

Age: _____

Contact details:

Tel. _____

Address: _____

Date of visit: _____

Graduate consultant name(s): _____

Opening:

First, we would like to thank you for taking the time to talk to us today.

This is Karla Godoy and Noran Aly, and we'll be talking with you today. As you know, this interview is part of our graduate summer project at University of Minnesota for Rainforest Alliance and ACOFOP. The purpose of this interview today is to learn more from you about your experience with Ramón harvesting. This interview will take approximately 60 minutes. If you allow, this meeting will be recorded for purposes of interview transcription. Keep in mind that any information that you share here will be kept anonymous and you can stop the interview at any time if you feel uncomfortable.

Objective 1: Identifying the constraints that concessionaires farmers face in Ramón harvesting process

Please tell us a little about how you gather Ramón and what are the things that might make it more difficult?

How do you turn it into the Ramón committee?

And do you face any difficulty with that process?

Tell me how the Ramón price is set between you and the Ramón committee?

And do you face any difficulty with that?

In the payment process, is there any contract system between you and the Ramón Committee? If not, do you face any problems with that?

Objective 2: Identifying what (external) events could impact the success and sustainability of their produce?

Given the constraints you already mentioned, what kind of external events/shocks (like climate change, covid 19 etc) you think might impact the success and sustainability of your Ramón produce?

Objective 3: Identifying what support systems need to be in place for concessionary farmers?

What are the things that could be done to improve the Ramón harvesting?
(e.g. equipment, training, adding more money to Ramón harvesting inputs, increasing labor, any other thing like that might enhance the Ramón production,..)

How do you think the process of gathering and providing the Ramón to the committee could be improved?

Objective 4: Identifying whether the farmers are aware of the Ramón quality requirements by the international market

Are there any quality control practices you undertake set by the Ramón committee? or Are there any standards you are held to and potentially penalized for if the quality is not met?

If yes, can you tell me what they are?

Closing question: How important Ramón harvesting is to you?

Wrapping up

Those were all very useful answers. We are sure they will strengthen our work. Those were all the questions that we had for you. Is there anything else you would like to tell us? Is there anything you would like to ask us?

Thank you so much for your time.

Spanish version

Guia de entrevista para el Ramón

Nombre de la Concesión:

Nombre de la persona entrevistada: _____

Años de experiencia con la cosecha de Ramón: _____

Función: _____

Género: _____

Edad: _____

Datos de contacto:

Tel. _____

Fecha de visita: _____

Nombre del consultor entrevistador: _____

Abertura:

Primero, nos gustaría agradecer por tomarse el tiempo para hablar con nosotros hoy.

Me llamo Karla Godoy y esta es Noran Aly, y hoy hablaremos con usted sobre el proceso de cosecha de Ramón. Como sabes, esta entrevista es parte de nuestro proyecto de verano de posgrado en la Universidad de Minnesota para Rainforest Alliance y ACOFOP. El propósito de esta entrevista de hoy es aprender más de usted sobre su experiencia con la cosecha de Ramón. Esta entrevista durará aproximadamente 60 minutos. Si lo permite, esta entrevista será grabada para efectos de la transcripción. Tenga en cuenta que cualquier información que comparta aquí se mantendrá en el anonimato y que puedes terminar la entrevista en cualquier momento si te hace incómodo.

Objetivo 1: Identificar las limitaciones los agricultores concesionarios enfrentan en el proceso de cosecha de Ramón

Por favor, cuéntenos un poco sobre cómo se hace la cosecha de Ramón y cuáles son las cosas que dificultan las actividades.

¿Cómo se hace la entrega de la cosecha de Ramón al comité de Ramón?

¿Y tiene alguna dificultad con ese proceso?

Dígame, ¿cómo se fija el precio de Ramón entre usted y el comité de Ramón?

¿Y tiene alguna dificultad con eso?

En el proceso de pago, ¿existe algún sistema de contrato entre usted y el Comité Ramón? Si no es así, ¿tiene algún problema con eso?

Objetivo 2: Identificar qué eventos (externos) podrían afectar el éxito y la sostenibilidad de la cosecha.

Dadas las limitaciones que ya mencionaste, ¿qué tipo de eventos / acontecimientos externos (como el cambio climático, covid 19, etc.) crees que podrían afectar el éxito y la sostenibilidad de tu producción de Ramón?

Objetivo 3: Identificar qué sistemas de apoyo deben existir para los agricultores concesionarios.

¿Cuáles son las cosas que se podrían hacer para mejorar la cosecha de Ramón? (por ejemplo, equipaje, capacitación, dinero para los insumos de cosecha de Ramón, aumentar la mano de obra o cualquier otra cosa que pueda mejorar la producción de Ramón)

¿Cómo cree que se podría mejorar el proceso de cosecha y entrega del Ramón al comité?

Objetivo 4: Identificar si los agricultores conocen los requisitos de calidad de Ramón por parte del mercado internacional.

¿Existe alguna práctica de control de calidad que sea establecida por el comité de Ramón?
¿Existe algún parámetro que se le imponga y que se pueda ser penalizado si no se cumple con la calidad?

Si es así, ¿puede decirme cuáles son?

Pregunta final: ¿Qué importancia tiene para ti la cosecha de Ramón?

Concluyendo

Esas fueron respuestas muy útiles. Estamos seguras de que fortalecerán nuestro trabajo. Esas fueron todas las preguntas que teníamos para ti. ¿Hay algo más que le gustaría contarnos? ¿Hay algo que le gustaría preguntarnos?

Muchísimas gracias por su tiempo.

III. Informed consents

Written in Spanish- the native language of the community

FORMULARIO DE CONSENTIMIENTO EVALUACIÓN DE LAS DEFICIENCIAS PARA EXPORTACIÓN DE RAMÓN

Se le invita a participar en un proyecto de investigación sobre las deficiencias existentes para exportación de Ramón en la biosfera Maya. Reconocemos que este es un proyecto práctico vinculado al programa de Maestría en Desarrollo Sostenible de la Universidad de Minnesota. Usted fue seleccionado como posible participante porque tiene experiencia trabajando con Ramón. Este proyecto se está llevando a cabo por Karla Godoy y Noran Aly, estudiantes del programa de Maestría en Desarrollo Sostenible como parte de su trabajo con Rainforest Alliance. Pedimos que lea este formulario y pregunte lo que quiera antes de aceptar ser participante.

Contexto

El propósito de este proyecto es comprender las deficiencias existentes para la exportación de Ramón para los Estados Unidos. Para eso, vamos a entrevistar residentes (mujeres y hombres) de las concesiones Maya que trabajan con semillas de Ramón. Tenemos la intención de entrevistar a hombres y mujeres de diferentes concesiones de la Biosfera Maya.

Procedimientos:

Si usted acepta participar en este estudio, le pediremos que participe en una entrevista de hasta 60 minutos sobre su trabajo con las semillas de Ramón y opiniones acerca de su trabajo.

Riesgos y beneficios de participar en el estudio

Esta investigación presenta riesgos mínimos para los participantes, como un riesgo leve de confidencialidad de los datos y temas sensibles que surgen a través de las preguntas. Para minimizar esos riesgos, almacenaremos toda la información en una carpeta protegida con contraseña y se utilizará un sistema de codificación para rastrear las entrevistas que se almacenarán en un archivo protegido con contraseña. Estos identificadores no se compartirán con nadie más. También existe el riesgo de que algunas preguntas le resulten incómodas. No investigaremos informaciones sensibles ni personales ni experiencias que no desee compartir. Puede optar por no responder a estas preguntas y retirarse de la entrevista en cualquier momento sin consecuencias para usted.

Compensación:

No hay compensación por participar en este estudio.

Confidencialidad

Esta investigación es confidencial y anónima. Los resultados de este estudio serán utilizados en presentaciones académicas pero de forma que no se pueda identificar los entrevistados. Las notas y las grabaciones de video / audio se almacenarán protegidas de acuerdo con la política de la UMN para la protección de la confidencialidad. Después de transcribir las entrevistas, se eliminarán los archivos de video / audio.

El formulario de consentimiento se almacenará en una unidad protegida por una contraseña durante el tiempo que dure nuestra investigación. Después de ese período, lo eliminaremos de nuestros dispositivos. También podemos solicitar un consentimiento verbal si es necesario.

Naturaleza voluntaria del estudio

La participación en este estudio es completamente voluntaria. Su decisión de participar en este estudio no afectará sus relaciones actuales o futuras con la Universidad de Minnesota ni cualquiera de las organizaciones que se está beneficiando. Si decide participar, es libre para no responder a ninguna pregunta y retirarse de la entrevista en cualquier momento y por cualquiera motivo, sin ninguna consecuencia.

Contactos y preguntas

Los estudiantes que realizan este estudio son Karla Godoy y Noran Aly. Si deseas, puedes hacer cualquier pregunta que tenga ahora. Si tiene preguntas más adelante, le recomendamos que se comunique con Noran Aly en aly00008@umn.edu y / o Karla Godoy en godoy021@umn.edu. Si necesitas, puedes contactar con el maestro responsable por este proyecto, Dean Current en curre002@umn.edu.

Se le dará una copia de esta información para que la guarde en sus registros.

Declaración de consentimiento:

___ Acepto que se graben mis respuestas [audio / video].

___ No acepto que se graben mis respuestas [audio / video].

He leído la información anterior. He recibido las respuestas a todas las preguntas que hice sobre este proyecto. Doy mi consentimiento para participar en el estudio.

Firma del entrevistado: _____

Fecha: _____

Firma del investigador: _____

Fecha: _____

Figure 4

Certified Organic Ramon Nut Flour

Nutrition Facts	
Serving size 100 g	
Servings per container to be specified	
Amount Per Serving	
Calories 350	Calories from Fat 0
<small>%Daily Value*</small>	
Total Fat 0 g	0 %
Saturated Fat 0 g	0 %
<i>Trans</i> Fat 0 g	
Cholesterol 0 mg	0 %
Sodium 15 mg	1 %
Potassium 1100 mg	31 %
Total Carbohydrate 76 g	25 %
Dietary Fiber 19 g	76 %
Sugars 9 g	
Protein 9 g	
Vitamin A 0 %	• Vitamin C 0 %
Calcium 15 %	• Iron 6 %
* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your Calorie needs.	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Potassium	3,500mg 3,500mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9	Carbohydrate 4 Protein 4

U.S.A. NUTRITION LABEL

Serving size was provided by the client. Note, the equivalent household measure corresponding to the declared serving weight must be indicated. Note, the USFDA reference amount for this product category (flour) is 30 g. Manufacturers must choose serving size that closely approximates the reference amount.

Cross Reference: COA-CHG-31763670-0
Sample ids: 309317985 and 309447127

Figure 5

Ramón Seed Nutrition Charts

