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*Marketing survey of Camu Camu and Noni in the European Union
and the Czech Republic*

by

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Statement

I, Kateřina Steklá, state that the thesis entitled “Marketing survey of Camu Camu and Noni in the European Union and the Czech Republic” was written on my own and all used literature resources are reported in the List of References. The thesis fulfils requirements needed for gaining the Master Degree on the Institute of Tropics and Subtropics, Czech University of Life Sciences Prague.

V Praze 20.duben 2008

.....
Kateřina Steklá

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Abstract

The functional food sector is a fast growing market that provides a great opportunity for new products. Functional food falls in an area between conventional food and medicine and includes products like Camu Camu and Noni. These products represent new “superfruits” that claim health enhancing effects. Camu Camu contain the biggest amount of ascorbic acid than any other food source so far discovered and Noni is considered to be one of the most nutritious fruits with health benefits and containing unique substances that will not have been yet discovered in any other plant. The products have already been introduced to some of the traditional markets so the thesis analyzes offer and demand of these two products through the marketing research survey. The output of the thesis will be findings from the Czech and European market survey and recommendations for another distribution in the supply chain.

Key words: Camu Camu, Noni, functional food, market survey

Sektor s funkčními potravinami je novým rychle rostoucím trhem, který poskytuje příležitost pro uplatnění nových produktů. Funkční potraviny jsou zařazeny mezi potraviny, u nichž se zdůrazňují vlastnosti, které posilují zdraví organismu. Mezi tyto potravinové doplňky můžeme zahrnout i produkty Camu Camu a Noni. Camu Camu je ovoce s nejvyšším obsahem přírodního vitamínu C ze všech doposud známých plodin a Noni je tradičně využíváno pro své mimořádné léčivé účinky na lidský organismus. Oba tyto produkty jsou již k dostání na vybraných světových trzích. Tato práce se zabývá analýzou poptávky a nabídky výše zmíněných produktů v Evropské Unii a České Republice. Výsledky marketingového průzkumu a následná doporučení budou sloužit pro další případnou distribuci na tyto trhy.

Klíčová slova: Camu Camu, Noni, funkční potraviny, marketingový průzkum

Acronyms

CBI	Centre for the Promotion of Imports from developing countries
CIP	Centro Internacional de la Papa (International Potato Center) (Peru)
EIU	Economist Intelligence Unit
FAO	Food and Agriculture Organization of the United Nations
GFU	The Global Facilitation Unit for Underutilized Species
GTZ	The German Gesellschaft für Technische Zusammenarbeit
IFIC	International Food Information Council
IFOAM	International Federation of Organic Agriculture Movements
IPGRI	International Plant Genetic Resources Institute
IPPN	Instituto Peruano de Productos Naturales (Peruvian Institute of Natural Products)
NOS	US National Organic Standards
UNCTAD	United Nation Cooperation for Trade and Development
WB	World Bank
WHO	World Health Organization
WTO	World Trade Organization

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1. Introduction

The functional food sector, one of the fastest growing categories in the food industry, includes products that claim to improve health and wellbeing. A new market research reports forecasts that products featuring functional ingredients, such as high-nutrient "superfruits" and antioxidants, will continue to flood the grocery market going forward. Exotic flavors, such as, Camu Camu, goji berries and Noni are expected to come to the force and will be the hot trend in the wellness category. The novel fruit in the food market like Noni or Camu Camu also belongs to category functional food. Raw materials harvesting and planting in developing countries with wide biodiversity also provide great source of new health ingredients or supplements. This kind of production can contribute to increase the socioeconomic conditions of producers and farmers in rural areas. Therefore, functional food can become one of main exporting commodity. All features mentioned above are the main reason why the marketing research on the new health products Noni and Camu Camu is done. These exotic products have already been introduced to the USA or European markets. They can also be found on the Czech market but present still big news for Czech consumers, as well as for distributors. The objectives of this study are to describe opportunities for new products Camu Camu and Noni on the European Union and the Czech market and evaluate customers as well as distributors demand for them, describe the offered products through marketing mix analysis and represented the main strategic points for another marketing plan in SWOT analysis.

The first chapter presents the current situation with functional food market. How was said at the beginning, this market trend provides great opportunity for new products development. Relating to the newest Datamonitor, the healthy survey's functional ingredients being seen in a widening array of food and beverage products sold through health and natural foods stores. This chapter describes main features and main markets suitable for functional food. It also reported supply chains and main economic advantages for developing countries. Just the developing countries represented great source of raw materials and ingredients for functional food market so at the end of this part is described an case study from Peru and Brazil relating to that.

The second part deals organic products, describes main definitions and conditions how to obtain label *organic product*. The main requirements that have to be met to get organic certification are important element especially for developing countries. Consequently, the second chapter mainly described important process and additional procedures in the United States and the European Union. This part also presents the other ways how the product can be labeled for example in

developing countries.

The last theoretical part contains legal framework aspects that basically affect the Novel food like Camu Camu and Noni. The main legislative constrains are mainly related to Camu Camu and represent crucial barrier to import this product to European Union. In contrast to that is described situation with Noni that is unique Novel Food on the European market. Both case studies are to be found in this chapter.

Methodology deals with main methods that have been used in marketing survey. The part is divided into six sections and describing basic process of data collecting, design of questionnaires, electronic questionnaires and processing method. Basic data and details from the survey are to be found in this part.

In the fourth chapter are reported main data and available information about Noni and Camu Camu. It follows up the botanic description main harvesting and processing methods and economic use of products.

Part reporting the Diploma Thesis results are dividing into two basic sections. First part consider Camu Camu product, the second one consider Noni product. Each one is dealing with three main objectives that were set up. They are the Current Product Analysis, SWOT Analysis and own results from marketing questionnaire survey.

The Diploma Thesis title was set up in relation to ongoing project on the Institute of Tropics and Subtropics in Prague called “Sustainable Management of Natural Resources in Peruvian Amazon“. This project pass of under aegis of the Ministry of Agriculture of the Czech Republic in year 2007 – 2009 and is based on developing cooperation of Institute of Tropics and Subtropics with the Republic of Peru. The outputs and recommendations of the Thesis will be used for another activities relating to the project and providing a source of information for potential distributors or sellers.

2. Objectives of the Thesis

The main objective of this study is marketing analysis of the tropics products Camu Camu and Noni. They have already been introduced to the market but just in some parts of the traditional markets. This study has focused the demand and opinions of consumers on the Czech market and screened already established markets in the European Union. The list of main recommendations and identifications for further supply to the European and Czech market is provided as the outputs of the thesis conclusions.

The specific objectives are divided into two sections relating to different researched products, Camu Camu and Noni.

The Camu Camu specific objectives are:

- ▶ Demand analysis
- ▶ Current Product Analysis
- ▶ SWOT analysis

The specific objectives for Noni are:

- ▶ Demand analysis
- ▶ Current Product Analysis
- ▶ SWOT analysis

Description of new potential market place “Functional Food” (definitions, supply chain and market environment favorable for this sector), basic information about certified and organic products and the legislative framework of Novel food products are included as background information for this thesis. Moreover, data of the Czech market research and data about foreign competitors are provided in the last part of this study.

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used for another activities relating to the project and provide source of information for potential distributors or sellers.

3. Methodology

3.1 Introduction

Marketing research process is a long term activity that systematically designing, collecting, analyzing, and reporting of data and findings relevant to a specific marketing situation.

The main methods for marketing survey research used in the thesis were:

- ▶ Data collection by questionnaires
- ▶ Personal interviews with retailers
- ▶ SWOT analysis

For data collecting was used method of standardized questionnaires (Appendix I, II.). There were used two types of questionnaire in the thesis. One part was designed for the internet users who have free access to internet as well as to computers. The main target group were people interested in health life style, organic or bio food. The second part conducted target group of people who were shopping in the pharmacy or in the shops with health food.

The second participants of this market survey were target retailer or dealers with organic or health food. I have differentiated between retailers who offer products Camu Camu and Noni and retailers who did not know them. Retailers who had not offered products Camu Camu or Noni were selected according to their sales orientation. I have selected shops with health food or organic products and pharmacies. Afterwards the target retailers were contacted through phone calls or personal meetings. These retailers were on the meetings asked to complete a printed questionnaire with questions relating to their activity on the market or knowledge Camu Camu or Noni. (Appendix V., VI.) Retailers who have already offer these products were asked to complete modified questionnaires. (Appendix VII., VIII.) The third and last participants in this survey were wholesalers who also answered two types of questionnaires relating to their offer and knowledge of Camu Camu and Noni products.

(Questionnaires in Appendix IX. – XII.)

The environment of the Czech and European market were screened through Internet, (search engines like EbscoHost, Science Direct or advanced Google search). I also used the available secondary literature sources which are listed in the reference at the end of the thesis. Economic

data were used from international organizations databases and statistics and the comparative analysis. The basic survey describing offer of Camu Camu and Noni products on the market originated from internet web sites and on line shops.

3.2 E-Questionnaire

E-business is a hot item for many businesses all over the world. Products Camu Camu and Noni are mainly offered through e-shops. At this point originated my idea to use electronic questionnaire for research. There are many companies on the internet where it is possible to buy a license and create own questionnaire or just set priorities and the main objectives of the research and the company create ideal questionnaire themselves. In these days more and more people spend most of their time with internet so that is why sending electronic form of questionnaire is very favorable.

This e-marketing survey was supported by a commercial company (www.easyresearch.biz) that provides technological support for creation and processing on line questionnaires. For thesis marketing research I used their web sides where is a possibility of choice of the appropriate research template or language for questionnaire designing. The only condition for proper use of this platform is non commercial purpose. The system is working in following steps: At the beginning is created questionnaire account with respective questionnaire. Respondents can fill the questionnaire freely at the websites and the applicant has a possibility to get one hundred responds for free. This electronic system processed the sourced answers as each questionnaire is ready and closed. The company will send immediately the results of the respective questionnaire. The license (it means the availability of questionnaire) is designed for one month.

I created three types of electronic questionnaires. Two were designed for Camu Camu, in Czech and English language, and one for Noni only in English. (Appendix III., IV.)

3.3 Design of questionnaires

The electronic questionnaire and as well printed questionnaires for consumers were divided into five parts:

- Basic information about the tropical fruit product
- Opening questions about health life style
- Questions regarding to the knowledge about product
- Specific questions to characteristic of the product

- Demographic data questions

At the beginning of the questionnaire was short introduction of Camu Camu. The questionnaire consisted of 15 basic questions that should screened basic knowledge and attitudes from the respondents. All questions used in the questionnaire were closed and respondents have a one or multiple choice of answers. Survey respondents were screened for their active personal involvement in health life style. In the survey respondents answer their knowledge about the market products Camu Camu and Noni and they should expressed their opinions about product design, price and place where they want to buy it. The third and fourth questions were selective that means whether respondent does not know product Camu Camu skipped question four, five and continue with question number six. The question 4 and 5 asked about the taste and flavor of the products. Sixth question find out the interest of potential consumers of free tasting of Camu Camu or Noni. The next question asked whether the respondent would have preferred the certified bioproducts rather than not certified. The other two questions find out preferences of the form of use and place of shopping products Camu Camu or Noni. The last question relating to products asked whether the price of offered amount of appropriate product is acceptable for them. The last part of questionnaire provide demographic questions relating to gender, reached education, age, place of living and what respondents do for living.

Questions for retailers and wholesalers who did not offer Camu Camu or Noni products were designed in the similar way as for consumers. Only questions related to the origin of the company or their activities in the market were added. Questionnaires for companies that offer product Camu Camu or Noni were specified to amount of orders, price of product, way of another distribution or size of purchase.

3.4 Details of the Survey

Noni and Camu Camu market research conducted a survey among 320 respondents. These questionnaires were divided into:

Camu Camu electronic version (Czech and English version)

Camu Camu printed version

Noni electronic version (English version)

Noni printed version

3.4.1 Printed Camu Camu and Noni questionnaire

The first part of questionnaires was in the printed form and aimed overall 60 respondents from those 46 Camu Camu and Noni questionnaires were completed successfully. Camu Camu printed survey was undertaken in November 2007 and was target to selected respondents who were asked in the pharmacy, bio shops or specialized shops with health food in Prague.

Noni market survey was conducted in January 2008 and introduced in printed version questionnaires in the Czech language. The sample of respondents was achieved in the same way as in Camu Camu market survey.

3.4.2 On line Camu Camu and Noni questionnaire

The second part of surveys took place during November, December 2007 and over January 2008 among consumers using an electronic internet-based survey platform. 203 in 260 of electronic questionnaires were completed successfully. The first Camu Camu e-questionnaire was designed for Czech potential costumers. This starting period of Camu Camu survey was of the electronic questionnaire and started on the beginning of November, finished on the 28 of November 2007. The starting phase of Camu Camu survey was of adult living in the Czech Republic, Prague. The sample of 100 potential consumers was chosen in order to achieve a spread of responses across all age groups. Residents selected for the sample were sent an electronic questionnaire through the email and asked to complete it. It was designed in the Czech language. The e-questionnaire was responded by 100 people, 71 women and 29 men.

The second Camu Camu survey was introduced with the English electronic platform. A response rate of 25% was achieved; this equates to twenty two completed questionnaires from a sample of 30 people. It was target to students in Ireland with the cooperation of the University College of Cork and to Erasmus Students from Germany, Spain and Portugal.

The Noni electronic survey began in the middle of the December and finished at the end of the January. Noni questionnaire was designed only in English and target to Erasmus students (as in Camu Camu market survey) and to people employed in the international company Deloitte or people interested in health nutrition. Employees of Deloitte provide a sample of international respondents who are older 30 year and are working. All of them have also free access to internet and the questionnaire was sent through the company's intranet. This market survey aimed 130

people but only 81 questionnaires were completed successfully. From the whole number of respondents there were 35.8% of men and 64.2% of women.

3.5 Data processing

Data collecting by the method of quantitative analysis by questionnaires were processed by the research company *Easyresearch*. Statistical method summarized and described a collection of data. Descriptive statistics was used to summarize the data gathering from the qualitative method, numerically or graphically, to describe the sample. Graphically summarizations include various kinds of charts and graphs provided in the chapter with results and discussion.

3.6 SWOT analysis

It provides information that it is helpful in matching the firms resources and capabilities to the competitive environment in which it operates. SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats. The SWOT analysis headings provide a good framework for reviewing strategy, position and direction of a company or business proposition. The SWOT analysis is an extremely useful tool for understanding and decision-making for all sorts of situations in business and organizations. The basic findings about Camu Camu and Noni marketing were written for the purpose of the thesis and were summarized in the Results chapter.

3.7 Personnel interviews with retailers and wholesalers

The retailers and wholesalers were selected during December 2007 and over January, February 2008 according to the current product analysis of the thesis that screened Czech market environment through internet web sites. According to the low offer of products Camu Camu and Noni on the Czech market the appropriate number of wholesalers and retailers was not available. The target companies that offer product Camu Camu were Arnaud, Purusmeda, PharmDr. Pavel Řádek, pharmacy Cerna Ruze, Bylinne produkty, Nutri-extract and Najadashop. Most of the products were offered just with flavor or additives of Camu Camu and retailers usually did not even know that their product contains Camu Camu. Three in seven target companies offering Camu Camu were able to complete the questionnaire. Retailers offering Noni juice were usually internet shops that had not reacted on my questionnaires they were Aloeverashop, 001shop.cz, noni-tahity.cz or spagyria.cz. Stone shops were target as well they were Urtica, Grampus, Jaja.

Two in seven retailers filled the questionnaire.

The Camu Camu and Noni retailer survey in Prague target also retailers who have not offered these products. They were, specialized shop with health food Mata, Diana, Farah, Bio life, Racio Smisenka Evelyn, Natuar life style, Viva, Country life, Zdrava vyziva. Retailers were asked to fill the questionnaire or asked directly according to the questions from questionnaire. The survey aimed 3 retailers willing to cooperate.

The traditional big companies supplying retailers like Pharma Activ, who specialized Noni Vita, or Popov and Pursumeda were not willing to answer or cooperate. That is the reason for none of completed questionnaire from wholesalers. The questionnaire for wholesalers who do not offer Camu Camu or Noni was target to chain of supermarkets Ahold, internet shop Probio and Slunecnibrana. These shops were sent an email with questionnaire or they were reaching by phone interviews. Only Ahold was able to provide completed questionnaire and the answers are reported in the part with results.

4. Functional food market and organic certification

4.1 Functional Food

4.1.1 Role of functional food in health life and well being

Functional foods have entered the global markets with force in the past decade and have rapidly gained market share as value added products. Although the term “functional foods” currently lacks a common definition, this category is generally thought to include products that influence specific functions in the body and thereby offer benefits for health, well-being or performance, beyond their regular nutritional value (Kotilainen et.al. 2006).

For the purposes of this thesis: *”Functional or health-enhancing foods are food-type products that influence specific physiological functions in the body, thereby providing benefits to health, well-being or performance, beyond regular nutrition, and are marketed and consumed for this value added property.* In recent years, there has been growing consumer awareness about health, nutrition and the food safety especially in developed countries. The link between nutrition and human health has also been strongly established by modern science (WHO, 2003). Countries worldwide are going through a nutritional transition and are now affected by double burden of nutritional problems. There is also a growing awareness of the health-enhancing properties for prevention and treatment of health concerns beyond the basic nutritional component of lot of food. In addition to providing new options for improving health and well-being, the functional foods sector offers potential for new economic opportunities (Kotilainen et.al, 2006).

For developing countries, economic opportunities in this sector are likely to result from growing domestic markets and from export possibilities to the dominant markets of USA, Europe and Japan. Many developing regions host vast biodiversity that can be tapped for new sources of functional foods or ingredients. The economic returns from health or performance-enhancing functional foods in consumer markets can offer improved opportunities for all members in the supply chain: from raw material producers to retailers. Unique local biological resources may provide much raw material for the functional foods industry (IFIC, 2002).

Most complications in marketing functional foods arise from this lack of a suitable legal framework. Distinguishing functional foods from dietary supplements and natural or herbal medicine is especially difficult, and cultural perceptions on this vary. The regulatory aspects are an important consideration in bringing new functional foods to market. Besides a well-defined regulatory framework, factors that enable a successful market for functional foods include: consumer awareness of health issues and the role of diet in them; consumer acceptance of active components and food solutions to health issues; sufficient disposable income level; organized retail sector; and mature markets for processed foods (Menrad, 2003).

Statistics on international trade of functional foods are not directly available as functional foods are traded in the tariff code categories of “among other foods”. Similarly, a large portion of botanical ingredients are funneled into the pharmaceutical, natural medicine or dietary supplement markets, along with the portion used in the production of functional foods making commodity trade figures of limited informational value (Roberfroid, 2002).

Noni and Camu Camu products originated from Peru and Polynesia so they present exported commodities for these developing countries. In relation to these, the following challenges in this sector in developing countries were identified:

- Legislation and regulatory frameworks require further clarification and strengthening.
- Continued presence in the functional foods market requires scientific evidence for product effectiveness. In the case of Camu Camu especially even though certain foods may have been used for a long time for health-enhancement purposes, the definitive scientific support is often lacking. This necessary research requires time, financial and human resources, especially for products into the export markets, and for home markets as local regulations become stricter.
- Knowledge of end-market demand and regulatory requirements is lacking especially at the level of primary producers and ingredient processors (Chatelaine teal, 2006).

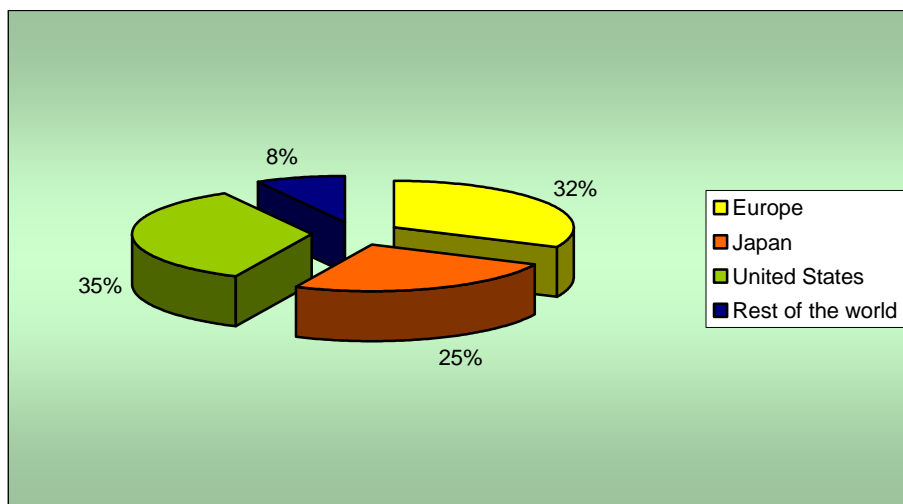
4.1.2 Growth in Functional Food Demand in world’s selected markets

The United States, Japan and Europe are dominant global markets, contributing over 90 percent of total sales (Chart 1). In the heterogeneous European markets, there are large regional differences in use and acceptance of functional foods traditionally, southern Europeans have

appreciated natural, fresh foods and consider those good for health, in northern Europe many food technology innovations have experienced remarkable market success such as the daily dose probiotic dairy products which have been the most popular product category across Europe (Menrad, 2003; Arai 2002). European consumers tend to use functional foods mostly for their health-promoting or disease risk preventing properties (Arvanitoyannis, 2005).

Skilful marketing and consumer oriented product development are key features of the American market. In a recent survey, food product labels were found to be one of the three most common reasons for change of diet, along with information from health professionals and family and friends (IFIC, 2006a).

Chart 1: Share of Global Functional Food Market in 2003



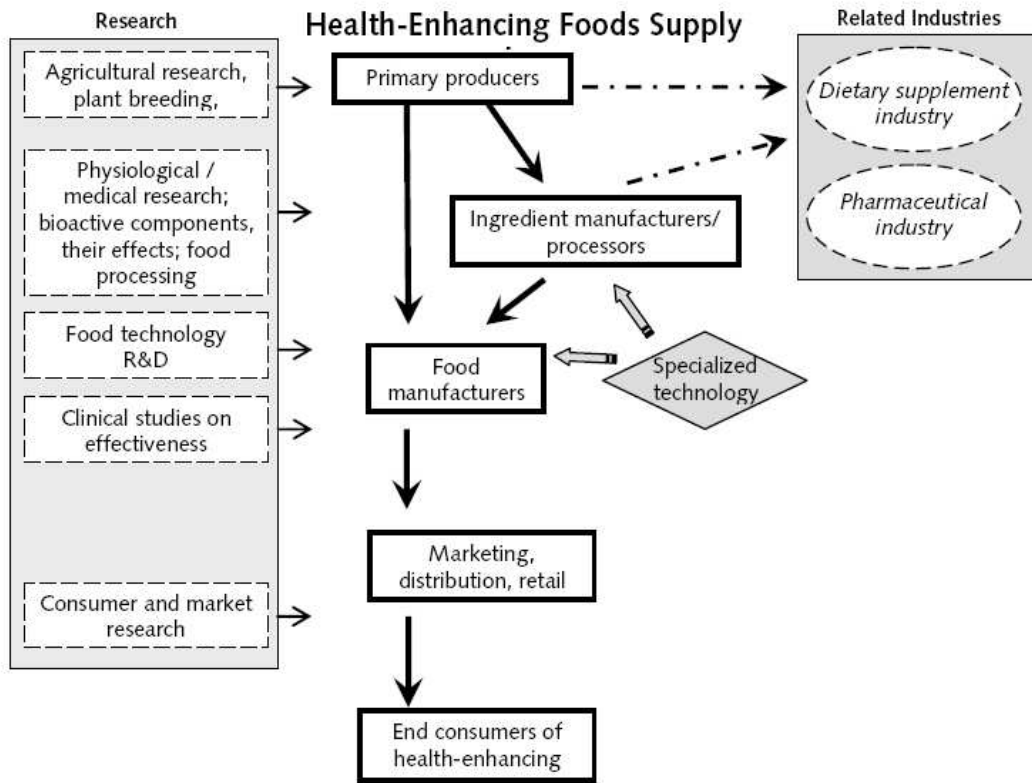
Source: Datamonitor 2004

4.1.3 Supply Chains in Functional Foods

Functional foods are selling at higher prices as well as organic bio products and carry usually larger profit margins than conventional foods. Despite the higher initial research and development (R&D) costs, this makes it an attractive sector for all: from raw material producers to retailers (Kotilainen et al, 2006). Figure 1 illustrates the main stages involved in the functional foods supply chain from primary producers of raw materials to the end consumers. The functional foods sector has the potential to provide product diversification for producers and an alternative source of income. Primary agriculture is traditionally viewed as a bulk products industry, and competition based mainly on price and quality. Product differentiation is a key feature of successful competition in today's food industry. Health benefit claims are an example of an adding value to a product in order to differentiate this product from other similar products.

Product differentiation affects production and often at the beginning of the supply chain with production of raw materials of improved quality and meeting strict buyer specifications (Menrad, 2003).

Figure 1: Supply Chains in Functional Food



Source: (Kotilainen et.al, 2006)

Building consumer awareness is critical in the case of novel foods or ingredients or newly found health benefits of functional foods. Acceptance of products is linked to prior knowledge and understanding of the health enhancing ingredients and the associated health benefits (Menrad, 2003). Typically the product and its marketing must be adjusted to meet both the local regulatory environment (standards, scientific support for health claims when applicable) and deliver preferences to local consumer. Consumer demand for functional foods tends to be high in all of the countries as foods have traditionally been used for health-enhancement purposes and increasing levels of disposable income enable the purchase of new value-added products. However, the lack of organized retail chains and the poor physical infrastructure in some countries limits both the domestic market penetration of functional foods and export capacity (Hobbs, 2006).

Medicinal plants for functional foods, dietary supplements, pharmaceuticals and cosmetics, are a growing export sector for developing countries. For example in Peru are farmers too far away from the functional food market. They are mostly unaware of how their crops are finally sold or the health claims made by processors and concept marketers and sometimes these claims match with their traditional knowledge (CIP, 2004).

Medicinal plants are primarily processed into extracts, which can be used in the production of health foods, drinks, and dietary supplements. Ecuador, Columbia, Peru and Brazil have established and are expanding activities for harvesting and production of medicinal plants. While private companies are involved in the processing into extracts, the supply chain is dependent on business support services and technical assistance from international organizations (Kotilainen et.al, 2006).

Regulation in export markets have been identified as a challenge for the functional foods industry that is aiming at export activities. Both novel food legislation and the strength of scientific support for health benefits are involved in this (Gutierrez, 2004). In addition to health enhancement, other market value properties, such as “certified organic” could be promoted for both ingredients and end products. Assistance to upgrade facilities to meet standards or to certify products or processes could be provided, as necessary and appropriate (Kotilainen et.al, 2006).

4.1.4 Market Environment Favorable for Functional Foods

Key determinants for the maturity of functional foods markets discussed in the preceding sections relate to consumer characteristics, general market properties, and general business environment including government policies. Success in domestic markets has certain prerequisite conditions, some of which are outside the direct influence of manufacturers and even marketers. These requirements for individual products include but are not limited to: consumer need and awareness of health benefits; acceptable price level; optimal convenience, adequate retail or out-of-home availability and a clear regulatory framework for making health claims (Weststrate et al 2002).

Public health statistics reveal that a need for functional foods exists in nearly any market but specific characteristics of consumer response to health problems and/or risks vary across cultures; in Asian cultures, for example, it is natural to use food for health purposes (FAO, 2004).

In general, northern Europeans tend to be more open to engineered foods than southern Europeans (Benkouider, 2004). Cultures with a strong belief, that people can take control of their own health, view functional food innovations favorably (IFIC, 2006a).

Education of consumers is complicated. Foods that are functional from a nutrition science point of view are not all marketed using this competitive advantage. Some consumers may purchase them as conventional products, others in mature markets may base purchase decisions on prior knowledge and/or beliefs of certain ingredients or other properties and may purchase products as functional, even in the absence of such marketing claims (Menrad, 2003).

Priority areas in market development for industry participants include appropriate labeling regulations, consumer education, taste parity with regular products, and proof of efficacy (Fogliano, 2005). Consumer education, national regulation on functional foods and harmonizing regulations with international standards, have been emphasized in many contexts as the key developments still needed to strengthen this sector, particularly in the currently less developed markets and countries (Tee et al, 2002; Fogliano, 2005).

4.1.5 Case Study in Peru and Brazil: Growing Production and Export Activities for Functional Foods

The vast biodiversity of Brazil, Peru and of the Amazon and the Andes holds remarkable potential for the discoveries of new health-enhancing ingredient. Functional food activities in Peru focus strongly on the possibilities of utilizing its exceptionally rich biodiversity. In these efforts, functional foods are one sector among others including dietary supplements, cosmetics, and pharmaceuticals, all of which use natural ingredients. A natural ingredients sector assessment from 2004 identified ten species for further analysis on the basis of their potential in world markets. Of these, at least Maca, Camu Camu, maize morado (purple corn), and Yacon have health-enhancing applications. The value of exports of health enhancing plants Purple corn, Camu Camu and Yacon have boomed, growing an average of 467 percent and 335 percent annually, respectively, in the years 1998-2002. The website of Peruvian Institute of Natural Products (IPPN), lists 16 plants under investigation for commercial use, some of which are at this stage more suitable for dietary supplements and natural medicines than functional foods (BioTrade Peru, 2004).

The market for functional foods in Brazil is relatively young, but growing. Despite the narrow target consumer segment, the total population size, developed retail network and local demand increase the attractiveness of this market. Currently products are mainly focused on micronutrient fortification, probiotic products, and cholesterol lowering spreads. Regardless of the needs, health foods have a limited presence in the Brazilian market but the sector is relatively young, growing rapidly and has significant room for further growth. The small size of domestic target market has discouraged local companies from stronger market development efforts (Fonseca 2005). The Brazilian functional foods market is currently a small niche market that, however, has been forecasted to reach value sales of US\$1.9 billion by 2009. However, the growth of 29 percent in per capita spending on functional foods during this period is considerably lower than forecasts for some other emerging markets (Benkouider 2005).

The market for healthful products in Peru, in general, is still in early stages, but has potential for growth. As in the entire region, demand for better-for you type low-fat and sugar-free products is increasing, but mainly among high-income consumers with rising health consciousness (Gutierrez 2004; EIU 2005). Local demand in for more specific functional food products seems to be directed at products made with local edible plants traditionally believed to have functional or even therapeutic properties, even though the effects have often not been substantiated by scientific studies. Processed functional or health-enhancing foods are also sold in Peru by at least the local branches of the largest multinational companies. Consumer attitudes regarding functional foods in Peru are a research gap. Barriers to the growth of the functional foods market in Peru include low income level of consumers, lack of organized retailing, and absence of clear regulations especially in labeling. Lack of analytical laboratory capacity, and the need to meet stringent quality demands for export would require more resources (Kotilainen et.al, 2006).

4.2 Requirements for producing and exporting organic products to major markets

4.2.1 Convention and certified quality

Products labeled as "organic" are those certified as having been produced through clearly defined organic production methods. In other words, "organic" is a claim on the production process rather than a claim on the product itself (Mallet, P. 2000). Organic agriculture is best known as a farming method where no synthetic fertilizers and pesticides are used. However, this description does not mention the essence of this form of agriculture, which is the holistic management of the

farming system. According to the definition of the Codex Alimentarius, "organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity (Ten Kate, K; S.A. Laird. 1999).

Additional trends in the area of raw materials, applying also to ingredients, include the value-added from ecologically friendly and ethical production, for which demand has been growing. Marketing advantage may be gained further from functional foods by offering, for example, products that are "certified organic" (Brinkmann, 2003). These innovations through differentiated strategies and certification can be crucial to some developing countries to enable them to gain niche markets internationally.

4.2.2 Basic criteria for the production, storage and transport of export organic fruit and vegetables

One of the essential elements distinguishing organic farming from other forms of sustainable agriculture is the existence of production standards and certification procedures. There are no universal standards for production and handling of organic fruit and vegetables. Initially, organic standards were developed by private associations, entitling members to use the respective associations' organic brands and labels when marketing their products. The International Federation of Organic Agriculture Movements (IFOAM), a non-governmental organization promoting organic agriculture internationally, has established guidelines that have been widely adopted for organic production and processing. As organic agriculture has become more widespread, many developed countries have defined their own organic standards. Since the early 1990s, EC countries have endorsed a common organic standard which is spelled out in Regulation EEC 2092/91. More recently, Canada, the United States and Japan have adopted organic standards and regulations. The Committee on Food Labeling of the FAO/WHO Codex Alimentarius Commission adopted "Guidelines for the Production, Processing, Labeling and Marketing of Organically Produced Foods" in 1999. Organic standards are usually similar as they derive from IFOAM's guidelines for organic production (Mallet, P. 2000).

4.2.3 Certification: a necessary step for exporting fruit and vegetables as organic

4.2.3.1 Basic definition

Producers and exporters of organic fruit and vegetables seeking to sell their products in developed countries which have adopted organic standards and regulations will have to meet the rules established by the importing country concerned. In the United States, Japan and the EC countries, the largest markets for organic products, the standards applying to domestic organic production also apply to imported organic products (IFOAM, 2006).

Producers and exporters wishing to export fruit and vegetables with the organic label will have to obtain organic certification. Organic certification is a procedure for verifying that the production process conforms to certain standards. In other words, certification is primarily an acknowledgement that these products have been produced according to organic production standards. The basic role of a certification body is to confirm that these adhere to a specific organic standard (usually the one established by the importing country or by the certification body itself). The certification label attests to conformity with certain standards and is itself not a trade mark. However, in most countries the certification label is also registered as a trade mark (Viana, V.M., A.R. Pierce, R.Z. Donovan, 1996).

The cost of certification can be high, although it varies in relation to farm size, volume of production and which certification body is chosen. Relatively few developing countries have certification bodies within their borders (although the situation is changing), and even when sufficient resources are available to pay for certification, farmers often lack the information to find credible inspectors (Mallet, P. 2000).

To date, government regulations essentially deal with references to the organic production method on labels. They do not define standards for the use of private trade marks or certification marks. This implies that government regulations may be supplemented by private quality seals based on private organic standards (IFOAM, 2006).

4.2.3.2 Import requirements of the major markets

United States

Effective October 2002, any fruit and vegetable labeled or shipped as organic will require certification by an approved certifier based on the US National Organic Standards (NOS). Until then, there is no Government regulation or oversight on organic declarations of fruits and vegetables, which means that imports of organic products are usually undertaken by a United States importer in cooperation with a United States certification body (FAO, 2001).

European Community (EC)

In the EC, Regulation EEC 2092/91 determines the minimum requirements for organic farming in all the member states and is a directly applicable law.

Under Regulation EEC 2092/91, there are, in practice, two options to gain authorization to export organic products to the EC (IFOAM, 2006):

- 1) When a third country has established and implemented organic standards, it may apply to the European Commission for inclusion into the EC List of Article 11. The European Commission will evaluate the country's organic standards and its certification measures. Experience shows that it is a difficult and long process for a country to be included into the list. As of June 2001, only 6 countries were on this list (Argentina, Australia, the Czech Republic, Hungary, Israel and Switzerland).

- 2) If the exporting country is not on the Article 11 list, the exporter should ask its importer in the EC country to apply for an individual permit for import. Under this provision, the importer should apply to the designated authorities in the EC member country for import permission and the application should be accompanied by documentation on the equivalence of standards and control measures. The producer and the exporter will have to be certified in accordance with EC procedures, which have to be done in co-operation with an accredited certification body (FAO, 2001).

4.2.3.3 Certification's label

The advantage for the exporter is that the logos of these bodies are well known and trusted by consumers in their countries, thus giving the product a better visibility and commercial advantage. The major drawback is that this type of certification can be very expensive, especially when inspectors need to come from the country of the certification body. In order to reduce costs to producers and exporters, international certification bodies tend to use local organic inspectors. Many international certification bodies, such as Ecocert, OCIA or BCS-Öko, have established local branches in developing countries. These branches tend to recruit local staff, which reduces costs (IFOAM, 1997).

4.3 Legislative framework

Many of the traditional food species of the developing countries meet the changing needs of developed country markets. Marketable attributes of these species include nutritional and culinary excellence, distinct health-promoting properties (high contents of vitamins or functional nutrients, non-allergenic properties, etc.) and aesthetic appeal. Further contributing to their consumer appeal is the fact that often these products are derived from environmentally sustainable and ethically managed production systems (organic agriculture, small farmers). A growing number of companies embrace fair trade principles and build supply chains back to poor farmers, who benefit in terms of contract farming, higher prices and/or purchase guarantees. Other sources of exotic traditional food are wild species that are gathered (Camu Camu, Lucuma) (UNCTAD, 2004).

4.3.1 The EU Novel Food Regulation: Procedures and implementation since 1997

Since 1997 the EU Novel Food Regulation (NFR) has been in place to regulate the placing of “novel foods” in the 15 member states of the EU. Its objective is to protect public health by ensuring food safety. The NFR defines novel foods as foods and food ingredients that were not used for human consumption to a significant degree within the EU before 15 May 1997. It would seem that this concerns the majority of exotic traditional foods, which only recently are beginning to make their way into foreign markets (Westlike, 2005).

It seems EU legislators had basically GMOs on their mind when designing the regulation, as well as foods with “new molecular structure” and those derived from novel processes. Food categories established in article 1 of the NFR do not expressly recognize or accommodate traditional foods from outside the EU. By exempting “foods and food ingredients obtained by traditional propagating or breeding practices, and having a history of safe use” the regulation appears to exclude traditional foodstuffs, but the wording is unclear and contradicts current interpretations and practice of the NFR (CBI, 2006).

4.3.2 Camu Camu as Novel food

Thanks to policies aimed at promoting non-traditional exports and international cooperation efforts including resources from member States of the European Communities, the trade potential of exotic traditional products has developed considerably over the past few decades. High potential Peruvian products such as Camu Camu, Maca, Araza juice, Lucuma and other Amazonian fruits are being imported into major markets like Japan and the United States.

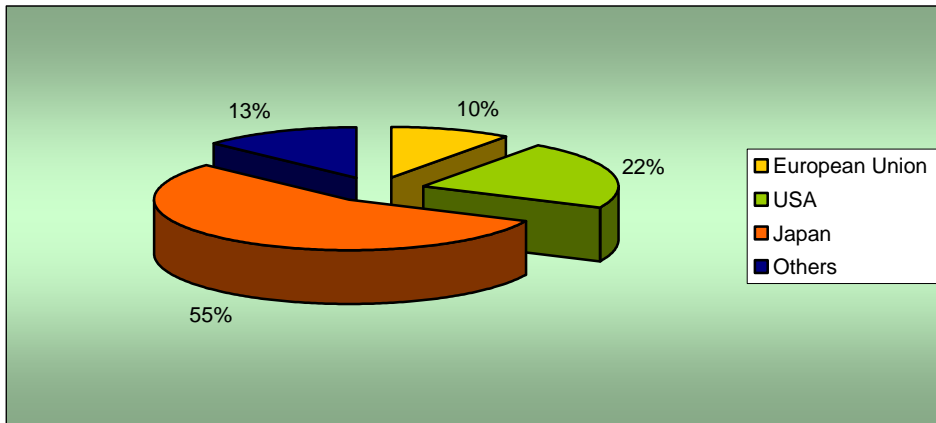
The Andean tropics, which cover part of Peru, are the source of significant photogenic resources, accounting for an estimated 35 per cent of the world's agrifood and industrial production, contributing to world food security. Peru's concern is that the implementation of the Regulation on novel foods is directly affecting trade in exotic traditional products from the country's megabiodiversity, blocking their entry into the EC market. While Peru respects and understands the need to protect consumer health, Regulation 258/97 constitutes, in practice, an unjustified barrier to trade. Indeed, in the period of almost eight years since the Regulation was brought into force, exotic traditional products have suffered discrimination merely because they were not significantly marketed in Europe prior to a totally arbitrary date (May 1997), although these products have a long history of safe human consumption in their countries of origin (WTO, 2006).

According to Regulation No. 258/97, for food qualified as novel to be able to enter Europe, it must go through a long, complex and very costly registration process which includes providing scientific information on the safety of the product. The Regulation 258/97 requirements involve clinical studies that call for significant investments for each product to be registered, and would take three to five years to complete (CBI, 2006).

“The stringent food safety assessment for novel foods required by the EU places an

unreasonably high burden of proof on those bringing traditional food products from the South to the EU market. The regulation has emerged as a non-tariff barrier for trade in food items that are often derived from under-utilized crops and are viewed as “exotic” from the EU perspective. Current practice of the regulation has discouraged investment in supply chains, and particularly in market development.” (Herman, 2004)

Chart 2: Average Marketshare “novel” traditional Food



Source: IPPN 2005

4.3.3 Noni Fruit as Novel Food

By November 2003, only one product has been authorized as novel food, namely a juice of the Noni fruit (*Morinda citrifolia*), produced by Morinda Inc., a large US based company (Neville Cradocks Associates, 2005). Noni is widely used in Polynesia as a traditional food and folk medicine. In the initial assessment, the company’s application was rejected, based on a series of specific objections raised by member states. Only after the company had produced extensive food safety evidence from compositional, toxicological and allergenicity studies and clarified suggested intake level (30 ml per day), did the EU grant authorization in June 2003. It is important to note, that the authorization is limited to this particular product. The placing on the market of any other Noni products (say jam, the spray-dried juice, or the dried whole fruit) would require a separate authorization. But not only is the authorization specific to a particular product, it is also directed to the applicant, meaning a competitor could not market it, unless evidence was presented of substantial equivalence. This practice of the NFR has granted Morinda Inc. a unique market position – at least momentarily – as the sole supplier of Noni juice on the EU market. It has infuriated a host of smaller companies with total annual sales probably under Morinda’s research budget, and that cannot afford the needed research to seek authorization for their own Noni products (Neville Cradocks Associates, 2005).

Larger corporations have research budgets to tackle this task, but rarely justify such expenses in view of the still embryonic market size (Morinda Inc. as a company operating from the established Noni US market being a notable exception).

On the other hand, the NFR curtails the entrepreneurial initiative of small and medium-sized companies, who typically have the agility and pioneering spirit to develop niche products but cannot afford the research to gain regulatory acceptance (WTO, 2006).

5. Botanic description of Camu Camu and Noni

5.1 Camu Camu (*Myrciaria dubia*)

5.1.1 Botanic description

General name: Camu-camu, bayberry fruit

Scientific name: *Myrciaria dubia* (H.B.K.) McVaugh

Sometimes known as: Rumberry, guava berry, guaveberry, mirto, murta, guayabillo, cococarette, merisier-cerise, bois de basse batard, cabo de chivo, escobillo, mije, mije colorado, mijo

The Camu Camu is a low-growing shrub found throughout the Amazon Rainforest in the Republic of Peru. The shrub is indigenous among the Amazonian flood plains and riparian zones of Brazil and Peru. The distribution established by McVaugh (1969) extends from the center of Pará, state, Brazil, along the mid and upper Amazon River to the eastern part of Peru. The plant is specialized to tolerate flooding, it can withstand up to five months with the roots and much of the aerial parts submerged in water. Harvest are seasonal and occur only once per year. Plants flower at the end of the dry season and fruit during the rainy season (Penn, 2006).

Fig 2: Camu Camu partially flooded



It grows mostly on alluvial soils with a clay-silt texture, a pH 5 (Alvarado 1969, Gutierrez 1969, Calzada 1980, Ferreira 1986, Chavez 1988, Falcão et al. 1989). It adapts reasonably well on the poor, acidic (pH 4-4.5), upland soils in Iquitos and Manaus (McVaugh 1958, Chavez 1988, Falcão et al. 1989). It grows well with mean annual temperatures of 20-30°C, an annual rainfall of 1,500-3,000 mm, and an annual relative humidity of 78-82% (McVaugh, 1969).

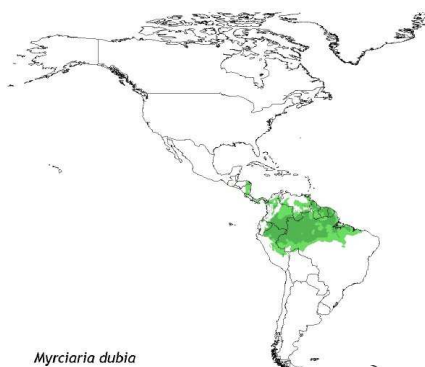
Source: *Universitat Bonn, 2008*

The Camu Camu is an important element of the riparian vegetation in western Brazil, eastern Colombia and Peru and southern Venezuela (McVaugh 1958, Alvarado 1969, Peters & Vasquez 1986/87).

In natural populations, C. Peters (NYBG, pers. com.) has found as many as 12,310 plants/ha (McVaugh, 1969).

It grows to a height of about 2-3 m. It produces round, light orange-colored fruits about the size of lemons, which contain a significant amount of vitamin C. Its high vitamin C content has created a demand for Camu Camu fruit in the natural products market. The berries of the native Camu Camu bush are wild harvested by hand in canoes in the Amazon rainforest during periods of high water or flooding. Immediately after harvest Camu Camu berries are cooled until they reach the manufacturing facility for further processing (Penn, 2006).

Figure 3: Distribution of Myrciaria Dubia in South America



Source: USDA, 2008

5.1.2 Propagation and cultivation methods

Camu Camu is normally propagated from seed (Gutierrez 1969, Calzada 1980, Ferreira 1986, FAO 1986, Picon et al. 1987). Seed sown in composted sawdust or sandy loam start to within 10 days and finish after

another 20 days (Ferreira 1986). FAO (1986) reports that seed sown within two days after removal from the fruit will germinate rapidly and completely (14 to 21 days); after 3 days germination will be incomplete (90%) but rapid; seed sown 30 days after removal from the fruit and maintained in the local environment will not germinate (FAO, 1993). In the floodplain, especially during peak flood period, no pests and diseases can attack it when most of the plant is under water. Additionally, at least in white water areas, it is always in a good nutritional state since all required nutrients are supplied by the river. This further enhances its resistance and tolerance (Penn, 2006).

5.1.3 Collection methods and processing

The potential yields of Camu Camu in the wild in Peru are limited by the natural flood levels of the rivers each year (Peters, Vasquez, 1986/87). Alvarado (1969) found that individual plants in wild populations yield an average of 12 kg of fruit/plant and extrapolated this yield to the hectare

level, assuming a spacing of 4 × 4 m (625 plants/ha), and estimated a total yield of 7.5 MT. C. Peters (NYBG, pers. com.) and Peters et al. (1989) consider an average wild population to contain about 1,224 fruiting plants/ha, with a yield potential of 9.512.6 MT of fresh fruit. On upland soils near Manaus and Iquitos, fruit production starts in the third or fourth year after planting out (Penn, 2006).

Figure 4: Transport of Camu Camu



Fruit harvest in the wild or in cultivation occurs generally between December and April, with the greatest intensity in January and February (Alvarado 1969, Chávez 1988). A small harvest may be expected in June and July on the upland soils near Manaus (Chávez 1988).

Source: Chuck Peters, 2006

Harvesting is labor intensive, as the ripe fruit is picked from the shrub. In natural populations near Iquitos this is done from a canoe in the late afternoon or very early morning, so that they can then be transported to the morning market (Alvarado 1969, Calzada 1980). In cultivation the harvest should be done two or three times per week and the fruit sent to market immediately (FAO 1986, Chavez 1988). Both in Brazil and in Peru there are large natural populations of Camu Camu that are worth evaluating in terms of collecting from the wild and preparing products for the internal and export markets (Peters et al. 1989). These could be exploited during January to April, by establishing a small preprocessing plant in the community to wash and select fruit and to extract seeds, and then export the cleaned product to the major cities (Manaus or Iquitos) for use and export (Clement, 1993).

Keeping the berries cool until fully processed is imperative to preventing nutrient loss. Purified water is added to the berries to create a juice, the pulp is removed, then the juice is concentrated and spray-dried with 100% certified organic Cassava starch as a carrier and standardized to 20% vitamin C. The product is next tested to assure that the microbiological and physical specifications are met. By composition the finished product is composed of ≤70% Camu Camu

powder extract and $\geq 30\%$ of 100% Organic Cassava root starch. To elaborate on the necessity of further processing of the Camu Camu berries after harvest, the juice of the berries must be concentrated to the required Vitamin C potency. Secondly the Camu Camu berry is susceptible to rapid nutrient loss without specialized processing (Wright, 2007).

Freeze drying (also known as lyophilization) is a dehydration process typically used to preserve a perishable material or make the material more convenient for transport. Freeze drying works by freezing the material and then reducing the surrounding pressure and adding enough heat to allow the frozen water in the material to sublime directly from the solid phase to gas (Kennedy et al., 1993) Start a lyophilization plant in Pucallpa (in Peru) for the lyophilization of Camu Camu it is a new way how Camu Camu could be processed. Through the lyophilization the volume of the product is reduced 10 fold, the content of Ascorbic Acid (Vitamin C) is increased 10 fold, and the price could be 20 times greater (James, 2007). Normally the Camu Camu is processed as pulp, then is refrigerated and transported in reefers to the port of Callao in the Peruvian Coast, and from Callao to the rest of the world also in reefers. It is grown around Pucallpa, a zone that lacks of good roads. The transport from Pucallpa is very expensive and not exempt of problems. Another important problem is that the pulp is basically composed of water. So the water is mainly transporting (more than 90%), and paying high freight for it. The process of lyofilization reduces the volume in 10 times, basically eliminating all the water from the pulp, through a sublimation process, that means that the water passes from a solid state, ice, to a gaseous state, avoiding passing through the liquid state. This process allows increasing the concentration of ascorbic acid from 2 to 3% to a minimum of 20%. And also increases the value of the product about 20 times, and allows also the transport by airfreight (James, 2007).

5.1.4 Uses and economic potential

Camu Camu fruit has the highest recorded amount of natural vitamin C known on the planet. Oranges provide 500-4,000 ppm vitamin C, or ascorbic acid; Acerola has tested in the range of 16,000 to 172,000 ppm. Camu Camu provides up to 500,000 ppm, or about 2 grams of vitamin C per 100 grams of fruit (Zapata, 1993). The major potential use of Camu Camu is as a source of organic vitamin C, since this may attain 2.99 g/100 g of fresh fruit (Table 1). Mendoza et al. (1989) affirms that this value is 60 times that of the lemon (*Citros Limon*) which contains only

44 mg/100 g. In comparison to oranges, Camu Camu provides also ten times more iron, three times more niacin, twice as much riboflavin, and 50% more phosphorus (FAO, 1993). The vitamin C is present in both the pulp and the fruit rind, both of which are generally used (Calzada, 1980). J. Andrade (INPA, pers. com.) has found that the fruit rind contain" up to 5 g/100 g (Zapata, 1993).

Figure 5: Split Fruit Camu Camu

Alvarado (1969) explored several different uses for the concentrated juice; it makes an excellent flavoring for ice creams and can be diluted to make juices or mix with other fruits for fruit punch. In Iquitos, Peru, the most common use is as a fresh juice



Source: Amazon Herb Company, 2008

(Alvarado 1969, Gutierrez 1969, FAO 1986, Peters & Vasquez 1986/87). Use in jams, jellies, wines, liquors and pie fillings have been reported (Alvarado 1969, Gutierrez 1969, Calzada 1980, FAO 1986). Alvarado (1969) considers the juice, either concentrated or prepared for immediate consumption, and tablets, made from the fruit pulp and rind for organic vitamin C, to be exportable products. The vitamin C contained in several prepared products is presented in Table 2. Camu Camu has never been documented as a traditional herbal remedy for any condition in the Amazon region. In fact, it was not widely eaten as a fruit by the indigenous people, due to its sour, acidic taste. In recent years, the fruits have become popular in Iquitos, Peru, where they are made into drinks and ice creams (Penn, 2006).

Alvarado (1969) and Whitman (1974) commented that, in 1967, Nutritional Specialties, Inc. of Puerto Rico, in collaboration with the Banco de Fomento Agropecuario Del Perú, imported several tons of Camu Camu fruit to the US, with which they prepared several experimental products and marketed "organic" vitamin C tablets, sold under the name "Camu-Plus". The reasons for the failure of this effort are not given by these authors. Perhaps this product was marketed somewhat ahead of its time, since the real boom of organic vitamins came in the mid-1970, or it was not marketed creatively enough by nutritional specialties (Penn, 2004).

Table 1. Chemical analysis of nature fruit of Camu Camu (g/100g of pulp)

Component	(g)	Minerals	(mg)	Vitamins	(mg)
Calories	17.0	Calcium	27.0	Carotene	Trace
Humidity	94.4	Phosphorus	17.0	Thiamin (Vit.B1)	0.01
Protein	0.5	Iron	0.5	Riboflavin (Vit.B2)	0.04
Oil	-			Niacin (Vit.B5)	0.62
Carbohydrates	4.7			Reduced ascorbic act.	2,880.00
Fiber	0.6			Total ascorbic acid	2,994.00
Ash	0.2				

Source: Roca, 1965

Table 2. Reduced and total ascorbic acid in several products elaborated from Camu Camu

Product	Reduced	Total
Ice cream	102	-
Sweetened juice 1	334	1050
Sweetened juice 2	579	1041
Marmalade 1	250	796
Marmalade 2	214	639
Jelly without pectin	917	1680
Jelly with pectin	290	1041

Source: Roca, 1965

Figure 6: Camu Camu



Source: Universitat Bonn, 2008

There has been no research conducted or published on any medicinal or therapeutic properties of Camu Camu. However, there are a few herbal supplement companies in the United States marketing Camu Camu extracts in powders and pills and alluding to claims of its benefits-from curing viral infections and colds/flu and cold sores and autoimmune disorders to even weight loss. In the North American nutritional market, suggested daily servings are based upon the vitamin C content in the product sold, which can vary. Adjust the serving size or dosage based upon the amount of vitamin C the product contains. Camu Camu fruits have increasing commercial potential in local, regional and international markets due to their high Vitamin C content. The government of Peru has been promoting the cultivation of the tree in support of a new export industry and to increase rural incomes (Chávez, 1993).

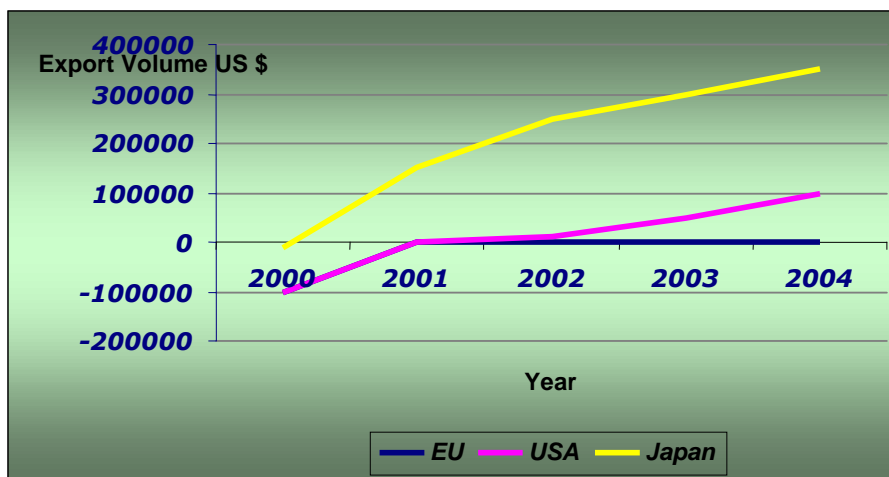
5.1.5 Peruvian Export

Basic problem with Camu Camu export resulted from incorrect application or interpretation from the Novel Food Regulation (NFR) and has generated a global trade problem. The NFR has become an important technical (non-tariff) trade barrier. Most exotic traditional foods come from environmentally sustainable production systems managed by small farmers. EU Market is probably the most attractive market for exotic traditional foods (Hein, 2005). Peruvian Products banned from EU Market:

- Jungle Fruit: Richest source of natural vitamin C
- Andean Root: Richest source of natural FOS
- “Inca Peanut”: Richest source of plant-derived Omega 3 oil

- Over 1,000 products that may enhance nutritional quality of European diets and that enrich the pallet of offered flavors, colors, textures, etc. (Hein, 2005).

Chart 3: Export development – Camu Camu fruit Trend lines



Source: IPPN 2005

5.2 Noni (*Morinda citrifolia*)

5.2.1 Botanic description

General name: Noni

Scientific name: *Morinda citrifolia* L.

Sometimes known as: canary wood (Australia); *fromager*, *murier indien* (French) *i* (Kosrae); Indian mulberry (English); *kikiri* (Solomon Islands); *kura* (Fiji); *mora de la India* (Spanish); *noni* (Hawai'i, Marquesas); *nono* (Cook Islands, Tahiti)

Morinda citrifolia, known commercially as Noni, grows widely throughout the Pacific and is one of the most significant sources of traditional medicines among Pacific island societies. This small evergreen tree or shrub is native from Southeastern Asia (Indonesia) to Australia, and now has a pantropical distribution. Noni is noted for its extremely wide range of environmental tolerances. It can grow in infertile, acidic, and alkaline soils and is at home in very dry to very wet areas. It is found naturally in relatively dry sites or lowland areas in close proximity to shorelines, or as an important forest under storey species in low-elevation Pacific island forests and rainforests. Noni's extensive range of environmental tolerances also includes exposure to wind, fire,

flooding, and saline conditions (McClatchey, 2002).

Figure 7: Morinda Citrifolia



Although not considered to be invasive to a degree that threatens ecosystems, Noni is treated as a weed in some settings, is very persistent and difficult to kill, and is one of the first plants to colonize harsh waste areas or lava flows. All parts of the plant have traditional and/or modern uses, including roots and bark (dyes, medicine), trunks (firewood, tools), and leaves and fruits

Source: Scot C. Nelson, 2006

(food, medicine). The medicinal applications, both traditional and modern, span a vast array of conditions and suited for intercropping within traditional agroforestry subsistence farming systems or as a monocrop in full sun. The tree has attained significant economic importance worldwide in recent years through a variety of health and cosmetic products made from its leaves and fruits. These include fruit juices as well as powders made from the fruit or leaves (Nelson, 2006). Noni is a small evergreen tree or shrub 3–10 m in height at maturity. The plant sometimes supports itself on other plants as a liana. There is much variation in overall plant form, fruit size, leaf size and morphology, palatability, odor of ripe fruit, and number of seeds per fruit (Nelson, 2006).

Figure 8: Noni flower



Flowers are perfect, with about 75–90 in ovoid to globes heads. Leaves are opposite, pinnately veined, and glossy. Blades are membranous, elliptic to elliptic-ovate, 20–45 cm long, 7–25 cm wide, and glabrous. The fruit (technically known as a syncarp) is yellowish

Source: TAHITIAN NONI®, 2008

white, fleshy, 5–10 cm long, about 3–4 cm in diameter, and soft and fetid when ripe (McClatchey, 2002).

5.2.2 Distribution

Morinda citrifolia is commonly assumed to have originated in Southeast Asia and subsequently distributed by humans or other means into the islands of the western Pacific. *Morinda citrifolia* seeds could be distributed by floating in the ocean and probably secondarily by birds and other animals. The plants could have distributed themselves naturally throughout the Pacific islands. Phylogenetic research in New Caledonia has demonstrated that *Morinda citrifolia* is nested within a clade of Southwest Pacific endemic species, making it possible that it originated there rather than in Southeast Asia. Many people as well as researchers believe that the plant was intentionally distributed as a medicinal plant by the ancient voyagers who colonized the Pacific Islands. They believe the plant to be naturally distributed throughout the western Pacific and human-distributed in the Eastern Pacific islands including Tahiti and Hawaii (Nelson, 2006).

5.2.3 Propagation and cultivation methods

Seeds have a distinct air chamber, and can retain viability even after floating in water for months. Noni has a rooting habit similar to that of citrus and coffee, with an extensive lateral root system and a deep taproot. (Association of Societies for Growing Australian Plants 2000) Noni is relatively easy to propagate from seeds, stem or root cuttings, and air-layering. The preferred methods of propagation are by seed and by cuttings made from stem verticals (Nelson, 2006). Fruits are harvested when they start turning white, or even when they have become fully ripe, i.e., turned soft, translucent, and characteristically odorous (Nelson, 2001). Germination is high for fresh seeds, often over 90%. There are approximately 40,000 seeds/kg (18,000 seeds/lb) for Hawaiian Noni. Without pretreatment, Noni seeds germinate sporadically over 6–12 months (Morton, 2002). Annual fruit yield varies among Noni varieties or genotypes and depends upon the environment (soil, water) and cultivation system and/or ecosystem. Yearly yield may be only a few pounds per year for tall, spindly plants growing under heavy forest shade. Annual yields of up to approximately 80,000 kg/ ha (71,000 lb/ac) or more may be realized with large-fruited genotypes grown in monoculture (about 716 plants/ha [290 plants/ac]) in full sun with heavy fertilization. Yields depend upon many factors, including soil fertility, environment, genotype, and planting density (Nelson, 2001).

5.2.4 Uses and Products

Morton has reviewed the economic uses of various parts of *M. Citrifolia* include the use of fruits and leaves for food and medicine (Morton, 2002). The references cited by Morton are mostly those written by botanists as part of floral treatments and not those of social scientists or nutrition scientists with direct observations of human activities. Terra reported some nutritional characteristics of the leaves and fruit, noting good levels of ascorbic acid (24-258 mg/100 g dried fruit) (Terra, 1966).

Figure 9: Split fruit Noni



Source: General Natural Labs, 2008

Fruit

Used in local medicines (juice, poultice) and as a famine food (e.g., by Hawaiians, Australian aborigines). Unripe fruits are cooked in curries and ripe fruits are consumed raw with salt (e.g., Burma). Fruit is cooked and mixed with coconut and eaten as stimulant on long sea voyages (e.g., Nauru) (Salomon, 2000).

Leaf vegetable

Very young leaves are cooked as vegetables and eaten with rice in Java and Thailand; mature leaves are wrapped around fish before cooking and then eaten with the cooked fish. The terminal bud is used as food (e.g. Kiribati) (Salomon, 2000).

Beverage/drink/tea

Dried leaves or fruits are used to make infusions and teas for medicinal use. Medicinal leaves, fruits, stems, and roots are used in various medicinal preparations, healing protocols, and treatment methods throughout the Pacific region (McClatchey, 2002).

Medicinal uses (traditional)

Noni possesses a wide variety of medicinal properties which originate from its differing plant components. The fruit and leaves of the shrub exert antibacterial activities. Its roots promote the

expulsion of mucus and the shrinkage of swollen membranes making it an ideal therapeutic for nasal congestion, lung infections, and hemorrhoids. Noni root compounds have also shown natural sedative properties as well as the ability to lower blood pressure (Kefford, 1997).

Leaf extracts are able to inhibit excessive blood flow or to inhibit the formation of blood clots. Noni is particularly useful for its ability to treat painful joint conditions and to resolve skin inflammations. Many people drink Noni fruit extracts in juice form for hypertension, painful menstruation, arthritis, gastric ulcers, diabetes, and depression. Recent studies suggest that its anticancer activity should also be considered (Salomon, 2000).

Noni is probably the best source of proxeronine that we have today. Studies and surveys combined support the ability of Noni to act as immune implant, inhibit the growth of certain tumors, enhance and normalize cellular function and boost tissue regeneration. It is considered a powerful blood purifier and contributor to overall homeostasis. Xeronine, which appears to be able to regulate the shape and integrity of certain proteins that individually contribute to specific cellular activities. Interestingly, this effect seems to occur after ingestion, inferring that the most active compound of noni may not be present in uneaten forms of the fruit or other plant parts. Some practitioners believe that Xeronine is best obtained from a Noni fruit juice precursor compound (Kaltsas, 2001).

5.2.5 Commercial products

The primary commercial products from Noni include beverages (fruit juice, juice drinks), fruit powders (for manufacture of reconstituted juice or juice drink products made from dried ripe or unripe fruits), toiletries (lotions, soaps, etc.), oil (from seeds), and leaf powders (for encapsulation or pills) (Kefford, 1997).

Fermented fruit juice

Ripe fruits are washed and sometimes pulped before they are placed into large fermentation containers, sometimes with added water. With time, the juice separates naturally from the fruit pulp, and ferments naturally via a bacterial (acidification) process. The preferred minimum processing (fermentation) time for fermented juice products is 60 days; thereafter the juice is

drained from the fermentation vessel and bottled. Fermented juice (when uncontaminated and with low pH, e.g., approximately 3.5 – 4.0) will store well at room temperature without pasteurization. The juice is bottled in glass or plastic containers (Solomon, 2000).

Figure 10: Possible products of Noni



Source: Noni healing juice company, 2008

Fresh-squeezed fruit juice

The juice is pressed directly from ripe fruits using a mechanical device and bottled directly into glass or plastic containers and not allowed to ferment. These products are either pasteurized or refrigerated to preserve their integrity. Re-constituted fruit juice and fruit juice drinks. These products are made from dehydrated fruits (green or ripe) (Solomon, 2000).

Fruit juice drinks

Raw juice is mixed in various proportions with other compatible liquids (e.g., other fruit juices, coconut milk, etc.).

Fruit juice concentrates

Fermented juice is subjected to flash evaporation or other evaporation technology to produce concentrated juice (a percentage of water is removed). The concentrate may be used to produce a range of juice products or cosmetics.

Fruit powders

Fruits (whole or seedless, green or ripe) are dried and crushed into powders and sold wholesale to drink or tablet/ capsule manufacturers.

Fruit leather

Another product is Noni fruit leather, which is a thin sheet of dehydrated fruit pulp (McClatchey, 2002).

5.2.6 Market

Noni has remained relatively unknown to the rest of the world and up until 1996 there was no Noni market to speak of. Today, however, many companies have expanded the world Noni market over 200 companies have begun commercially selling Noni products (Valentine, 1999).

Figure 11: Newly planted commercial field



Source: S.C. Nelson, 2006

It is currently distributed in more than 50 countries across the globe, and its health benefits have been realized by millions of consumers. The market for products is worldwide, with the largest markets in North America, Mexico, Asia, and Australia. The worldwide market for Noni products was an estimated US\$400 million in 2002 (Valentine, 1999).

6. Results and Discussion

6.1 Camu Camu

6.1.1 Current Product Analysis (4P)

The four-P framework means basic marketing canals how the product is analyzed. The marketing mix describes the product and its characteristics, the price, decide how to distribute products, and mention methods for promoting. The data are summarizing the results of all three main means of data collecting and provide information about the Czech, European and some of US markets.

Product

Product Camu Camu is offered in four main forms – powder, concentrate, juice or capsules. The other possibility is as a flavor. For example in the Czech market we can find Natural mixture of dried tropical fruit flavored with Camu Camu. It attracts the awareness of consumers because of its value added effect (Camu Camu highest concentration of natural vitamin C) as well as it originates from Amazonian rainforest. In Japan or France is added to ice creams, jellies or energy drinks. The latest novel on the market is Camu “C serum” that contents the most concentrated source of vitamin C. The sellers advertise it as anti aging treatment serum. The concentrate form often called Pure Camu offers 30 small packages of dehydrated pulp of Camu Camu in a plastic bottle. Each package contains recommended amount of the concentrate that you shake up in a bottle of water to get a refreshing beverage.

Figure 12: Camu Camu Juice



Source: Amazon Herb, 2008

Camu powder is one of the first product appeared on the market. It provides easy way of use for consumers. Dehydrated Camu Camu fruit pulp of plant (powder) is offering in the 27g, 100g jar or 100g small

plastic bottle. Rate of servings and the recommended amount of powder per day is presented in the product’s flyer. 100 grams of powder provide almost 200 servings.

Camu Camu juice is on the European market quite rarity. On the web sites is usually offered as the 32 oz (946 ml) bottle. Camu Camu fruit is very source itself so that is the reason why is added to traditionally consumed juices.

Capsules are most often offered form. It appears in the e-shops as well as in the pharmacy or shops with health food. Distributor provide usually amount of 100 tablets or capsules that contain approximately 350 mg of the dehydrated Camu Camu fruit pulp. The capsules differentiate according to the material they are made of, gelatin or vegetable.

Figure 13: Camu Camu Capsules



Almost ninety percent of all offered forms of Camu Camu are labeled as an organic. This wild harvested plant is grown naturally in the Peruvian Amazon without any pesticides or fertilizers. This fact is strongly used by producers, distributors or sellers because organic products are still big boom in the food market and help to differentiate product.

Source: Amazon Tree, 2008

On the other hand the organic certification was not found in the market screen. Sellers often use just clarification that product was harvested in rainforest where is guarantee that any pesticides or other additives were used. They do not usually use the certified label.

Place (distribution)

The availability of product Camu Camu is different in relation to the country. Camu is orderable by phones, mail, fax and internet shops everywhere. The frequency of e-shops is the highest in the USA and Japan. These two countries are also the biggest importers of Camu Camu. Today's consumers are able to order more goods in more ways from the home. In the consumer market a growing battle is now emerging between homes based shopping and store based shopping. For example Amazon Herb Company reformulating its product line and introduced the herbal nutritional supplements (mainly from Peru and Brazil) directly to the public through a network marketing program. Network electronic marketing is very often way how to attract people to be a part of Camu Camu business. Many of the distributor companies offer home-based business. Survey about Camu Camu on the Czech market showed that products are offered in the pharmacy and in the health food shops and than the offer is very rare. Czech distributors put up

capsules or tablets. Camu Camu business is still at the starting level in the Czech Republic so the level of available information is low and only small number of distributors or wholesalers is willing to provide any information. Stone shops with this product are concentrated mainly in the capital and bigger cities.

Price

This analysis could match only prices from internet shops and prices from Czech sellers. Producers or sales agencies offer different prices for importers. Most of the screened companies tried to motivate customers to take “as much as possible” with the advantage of free delivery or with additional package for free of charge. The well branded companies as Amazon Herb Co or Rain Tree Nutrition created a range of offerings at different amount and price points. Their product line offers to consumer wide range of choice of Camu Camu providing with different prices as well as sizes of packages.

Promotion

The fourth P of the marketing mix, promotion, covers all those communication tools that can deliver a message to a target audience. The tools fall into five broad classes: Advertising, sales promotion, public relations, sales force and direct marketing. Camu Camu products are offered to target consumers mainly through advertising. The distributors and exporters build awareness of product service and idea through web sites. The advertising campaign creates image of Amazons naturally pure product from rain forests. These advertisements can be found especially on web sides that focus on health, wellness, healthy and functional food. In Japan are products Camu Camu advertised by TV ads and the promotion campaigned is much more huge than in USA or Europe. The American companies also offer Camu Camu products by sales promotions when they invite specialists, scientists in health food or doctors to recommend this product. These recommendations can be found on the web sites also in audio quality.

6.1.2 SWOT analysis

This analysis aims main points that were found after screening the European and Czech market. As the most crucial constrains which can be defined as Threat or Weakness as well are legislative constrains. As it was mentioned in the theoretic part the Peruvian export tries to reach the European market as the new opportunity for its products. However the European demand is not so low there are many legislative constrains from The European Commission. The big

opportunity is revealing for research institutes or private investors. They can put the investment into the product development. Afterwards could originate some professional research recommendation that will make the European import procedures much easier. On the other hand Camu Camu has a great potential to be a functional food boom. There has not been revealed any uniform product on the European market. Moreover quality of the product as well as level of the demand has been already examined on Japan market. According to that one important threat is revealing and it is the possibility that this product will be patented by other country. This case have already happened with Japan who patented Camu Camu as their own product. Great opportunity of increasing world demand of Camu Camu means for the local people and farmers. The possible revenues from Camu Camu business could help to improve their socio economic conditions and help to increase level of economic development. This product is growing in the sustainable environment in the rain forests of Amazonian. This fact means excellent advantage for the product differentiation and increasing consumer's interest. Current market demand focuses on nutritionally health food and especially on the organic products. Processing and principally the distribution represent the biggest part of costs. This means that the product is quite expensive for the consumers in the European Union. This fact also provides opportunity for another research or introducing new technologies in the processing but also a threat for product demand. Another threat represents competitors in this market. Although this industry is quite young the functional and organic food has now gone mainstream and to be more developed and progressive. The main points of SWOT analysis provided by the author are presented in the Table 3.

Table 3: SWOT table - selected examples

Strengths	Weaknesses	Opportunities	Threats
Environmentally sustainable	Production costs are too high	Product Development	Domination within a particular industry by a few enterprisers
Organic product	Industry too small	Assessing many infant industries	Insufficient Research & Development funding
Raw products are healthy and safe – clean image	Lack of continuity of supply	More government consultation	Competition from other countries
Health product	Seasonal product	New functional food	Legal framework
Exotic label		Contribution of Rural Economy and Regional Development	Lack of awareness of people

Source: Author

6.1.3 Camu Camu Czech On-Line Survey

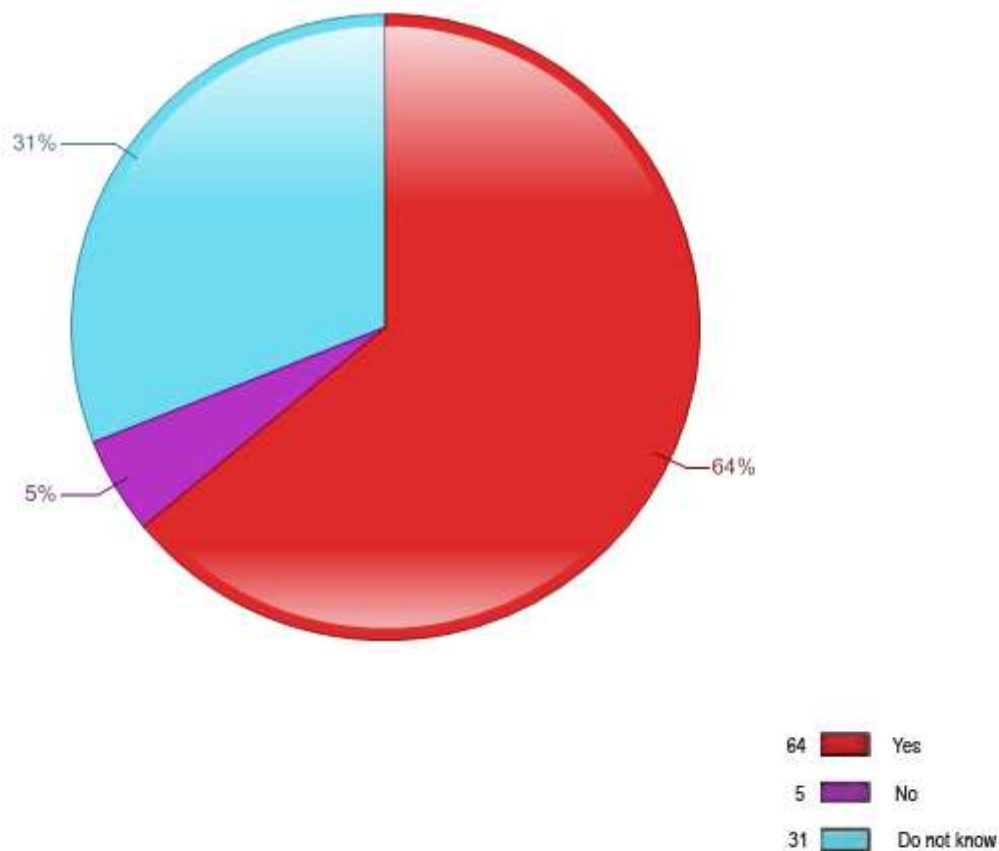
The most frequent answered group of Czech respondents are people aged 21 – 30 years old (71%). 56 % of the respondents gain the university education, 39 % high school degree education, 3% of the respondents had the secondary school education and two people have the elementary education.

However the market research was on-line and could cover every city in the Czech Republic, 61% of the respondents live in Prague, 20% live in Middle Bohemia and the rest of the respondents live for example in Ustecky kraj or Jihomoravsky kraj.

Most of the Czech respondents (41%) are working. Twenty five respondents state that they are

only studying and twenty six are working and studying together. This questionnaire was filled by two pensioners.

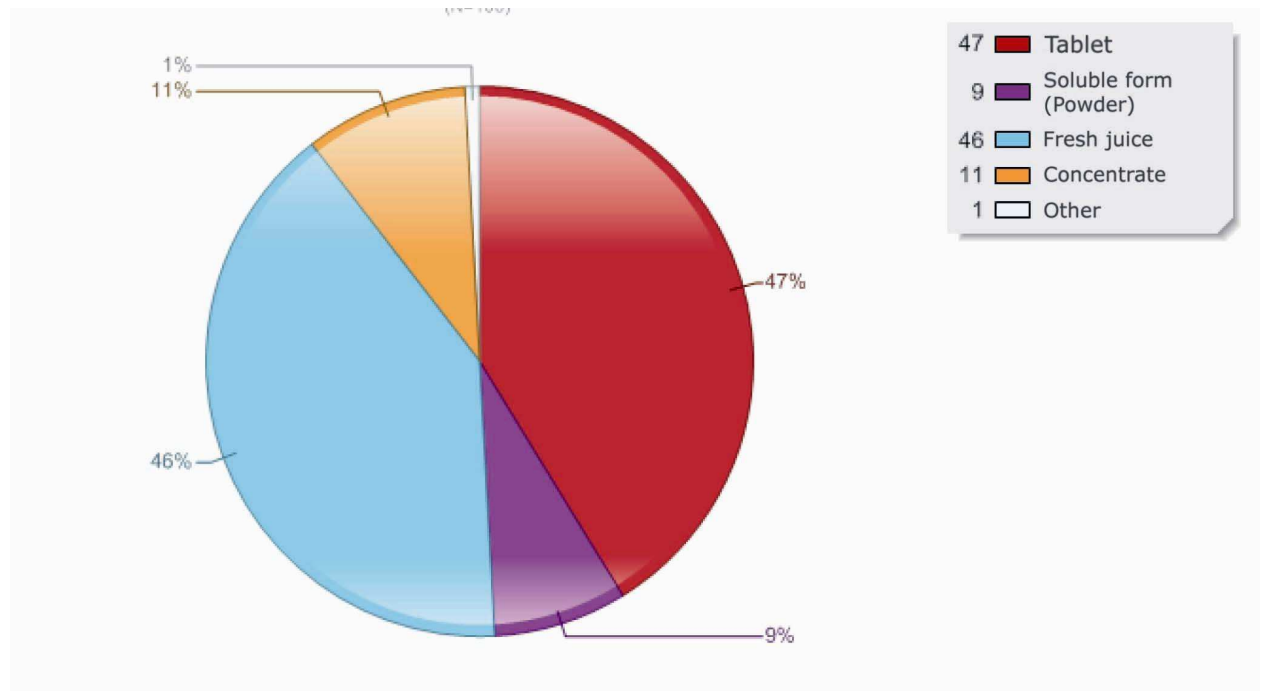
The first questions attracted the interest of respondents and asked about the respondent's interest in health food. In the first part 89 % of respondents are interested in health food. The second survey's answer shows that 26 Czech people (from 100 respondents) buy health food products regularly and 57% just sometimes. When asked about their knowledge about Camu Camu products, eight in one hundred Czech respondents stated they know Camu Camu. That means that nobody from 100 respondents have ever tasted Camu Camu product. This statement confirms Herman's conclusion that Camu Camu has not aimed the European market. Consequently there is no answer for Question number 5 that asked about the preferences of taste and flavor. There was no significant difference in proportion with a positive view of their willing to taste Camu Camu for free. In average 89% respondents from this research want to taste the product for free. Question number 7 determined the priority of respondents about certified or non certified products Camu Camu. Followed from Graph 6 majority of Czech respondents would prefer certified products and only 5 strictly answer that they would not. Thirty one respondents state that they do not know. This statement is supported by the survey from the Czech Ministry of Agriculture conducted in the Czech Republic in 2004 (Vědecký výzkum pro potraviny, 2004). The survey stated that biggest barrier to selling certified bioproducts is lack of knowledge and information of Czech consumers. Consequently the Czech Ministry of Agriculture has started the education campaign (according to Action plan) on bioproducts 2007 - 2010. It was also confirmed what Menrad (Menrad, 2003) said about functional food and specific consumer's demand. Relating to question number eight there are obvious different priorities of using form of the product between Czech and European consumers.

Chart 4: Would you prefer certified products Camu Camu rather than not certified?

Graphical representation introduced in Chart 6 and Chart 9. Czech respondents prefer tablets and fresh juice as the most comfortable form of use. At the same level of preferences are concentrate and the powder (Chart 6). Only one *other* question was filled and the respondent mentioned the fresh fruit as the most preferred form of use.

The most favorite place for shopping Camu Camu on the Czech market are the pharmacy and the specialized shop with health food (Table 4). Respondents should express their preferences according to the school grades (1 is the best 5 is the worst). They find the least favorite place for

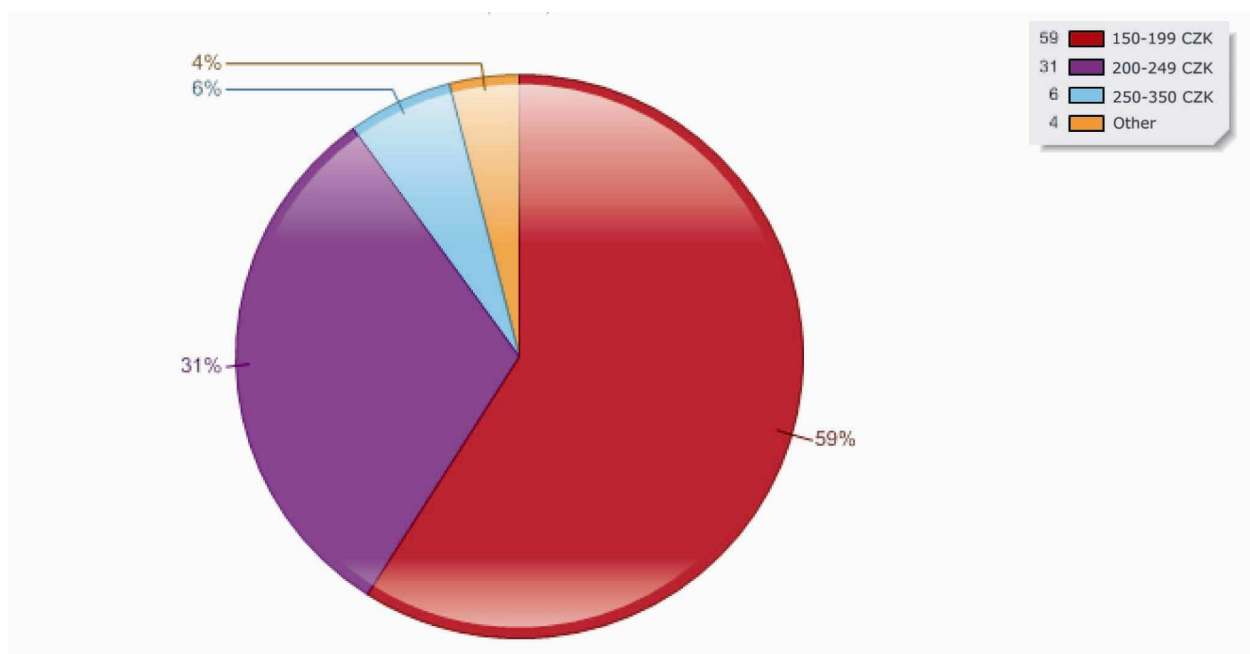
getting this product on-line shop. Grade three (good) give Czech respondents to hypermarkets as well as to supermarkets. This finding is in conflict with current situation. As was mentioned in the current product analysis internet shops have already been the most frequent place of offer.

Chart 5: (Czech market survey) What form of Camu Camu is the most comfortable for you?

Question No 10 found out what is the most suitable price for the consumers. Resulted from Graph 7, that 59% of the Czech respondents prefer the lowest price on the market. 31% tagged the price range 200 – 249 CZK as suitable for them. Only 6 % of respondents prefer the highest price 220 –350 CZK for package of 100 tablets of Camu Camu. The other prices are filled by 4 % of respondents and they prefer as the most suitable price under 200 CZK.

Table 4: Where would you prefer to get this product?

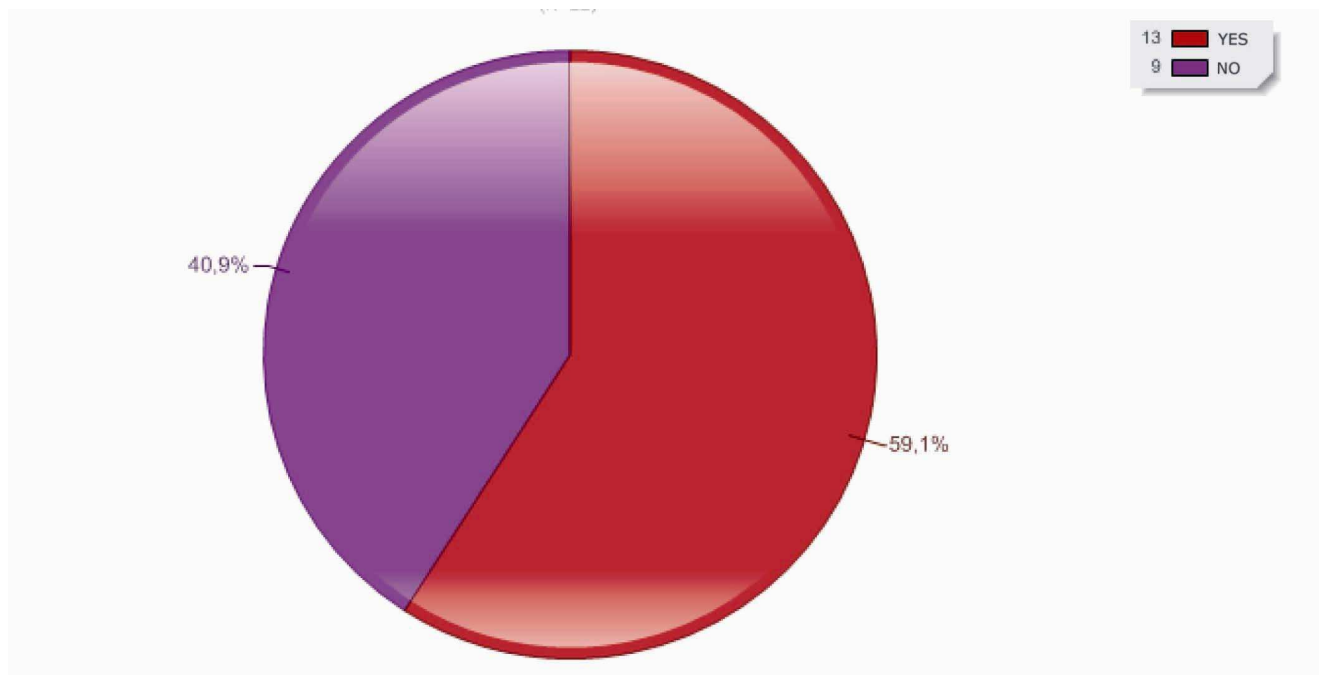
Place for shopping	School grades (1 best, 5 worst)				
	1	2	3	4	5
Supermarket	21	14	28	18	19
Pharmacy	64	18	10	1	7
Hypermarket	14	14	29	19	24
Specialized shop with health food	64	18	10	4	4
On line shop	18	15	21	20	26

Chart 6: What price for package of 100 tablets will be reachable for you?

6.1.4 Camu Camu English On-Line Survey

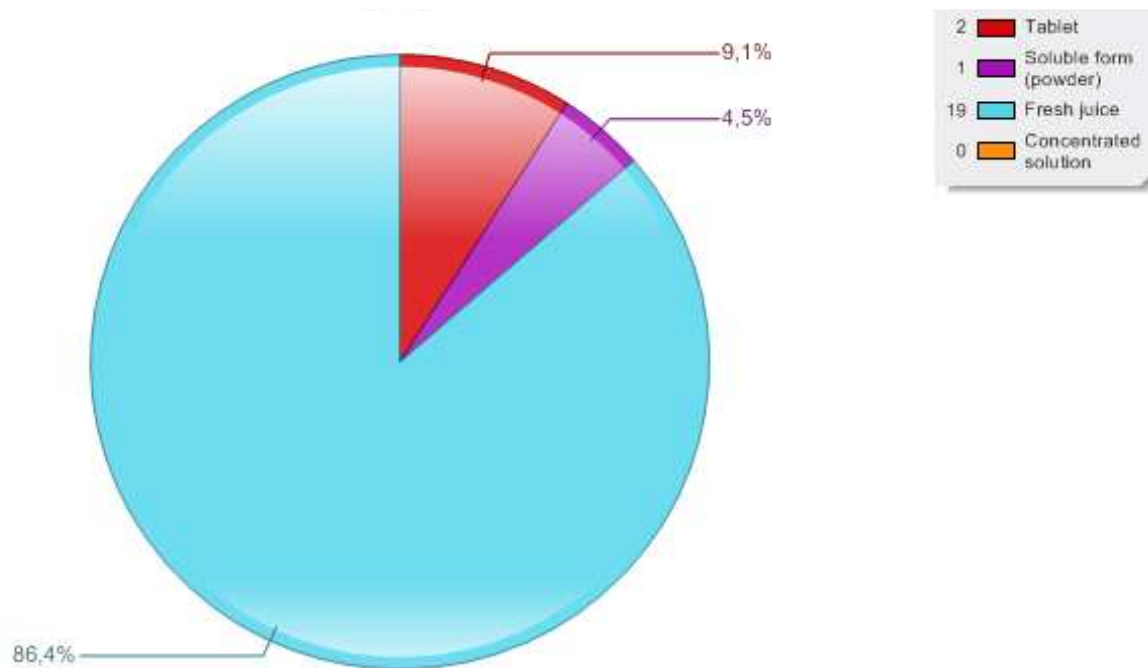
The second part of on-line platform of questionnaires was introduced in English. Reached students and respondents were target from university cooperation and covered different countries and cities. The represented students were from Ireland, Spain and Portugal. Three respondents live in West Germany and two come from Italy, Poland and Great Britain. The average age group is same as in Czech on-line survey 21 – 30 years. The second on line questionnaire reached 98% of students and only two working respondents.

In this English version nineteen in twenty two respondents say they are interested in health food. Only eight European students buy regularly health products and eleven sometimes. Twenty two percent of European students stated they have heard about Camu Camu. Nevertheless none of them have ever tasted it. That means that nobody from 100 Czech as well as from 22 European respondents have ever tasted Camu Camu product. In average 89% respondents are willing to taste the product for free. Question number 7 determined the priority of respondents about certified or non certified products Camu Camu. Thirteen in twenty two European respondents prefer certified products. (Chart 8)

Chart 7: Would you prefer certified product Camu Camu rather than not certified?

The priorities finding out the most favorite form of use of Camu Camu of European respondents are little bit different than of the Czech consumers. (Chart 9) Eighty six percent of respondents prefer fresh juice against concentrated solution. This form of product (concentrate) does not prefer anybody from the European on line survey. The big percentage disparity between Czech and English version of on-line survey could be caused by different number of respondents in each survey.

The results from the European respondents are almost the same. The most favorite place for shopping Camu Camu is specialized shop with health food. On the second stage is pharmacy and supermarkets together with hypermarkets are on the same third stage. On-line shops said to be the most unsuitable place for shopping. The European survey has different setting of the price because of the currency. The lowest price level aims six to eight EUR that correspond to 156 – 208 CZK. This price is the most suitable for respondents from European market survey.

Chart 8: (European market survey) What form of Camu Camu is the most comfortable for you?

6.1.5 Camu Camu Marketing Survey in Prague (printed version)

In contrast to previous on-line survey this survey aimed focus group of people aged around 40 – 60 years old. Every second respondent was working and one quarter of respondents was in pension. They were reached near pharmacies or health food shops as was mentioned in the part with Methodology. This survey was conducted among Prague's consumers that mean that all respondents come from Prague.

Twenty in twenty six respondents are interested in health nutrition and most of them are shopping the health food products regularly. 88, 5 % of target respondents said that they have never heard about products Camu Camu. The same situation with question four and five has occurred as in the previous on line survey. Nobody has ever tasted product Camu Camu and could not assess the flavor.

Question number six find out that majority of respondents (65%) would like to taste Camu Camu for free. On the other hand seven respondents state that they do not know. This is the consequence of lack of information and awareness of consumers. This finding confirms what Menrad (Menrad, 2003) said about functional food products and the building of consumers awareness.

Nineteen respondents state that they would prefer certified products rather than none certified, five would have not prefer certified products and only two respondents state that they do not know. Three in five responded people explain that they would not have preferred certified products because of the higher price.

Table 5: What is the most suitable form of use of Camu Camu?

Forms of use	Number of responds
Tablet	13
Soluble form (powder)	3
Fresh juice	8
Concentrate	2

According to respondent's age or experience their preferences on the form of use of this product has changed. It is presented in the Table 5. Respondents from the older age group were more likely to choose as the most favorite form of use *tablet*. 30% of respondents prefer as the second most favorite form of use fresh juice. With respect to the personal interviews older people prefer tablets before juice because it is much easier for regular use.

In the next question were respondents asked about their preferences of shopping place. Relating to the place where were the people reached is obvious that the most favorite place is pharmacy. On the second and third place are with same rate of answers supermarket and the specialized shop with health food. On the other hand internet shops have appeared in the preferences on the third place in contrast to previous survey. The clear fourth stage obtain hypermarket as the second worst place for shopping Camu Camu.

Table 6: Where would you prefer to get this product?

Place for shopping	School grades (1 best, 5 worst)				
	1	2	3	4	5
Supermarket	5	4	8	3	0
Pharmacy	14	6	3	0	1
Hypermarket	1	2	2	10	3
Specialized shop with health food	4	8	3	3	2
On line shop	2	5	6	3	3

The last question in this printed questionnaire asked about the price for 100 tablets of Camu Camu. Price range 200 – 249 CZK was the best reachable for eight in twenty six respondents.

This is different preference in contrast to previous survey (Chart 8) where the lowest price 150 – 199 CZK was the most favorite. 27 % of respondents state that they prefer lowest price and six respondents did not answer. The preference of higher price can be caused by different target group of people. The older respondents are more experienced and are able to pay higher price for more quality products.

6.1.6 Wholesalers and Retailers Survey

The product Camu Camu is really unique on the Czech market. Generally the amount of offered product is low as well as the number of retailers who know the product. The target producer PharmDr.Pavel Řádek operates on the Czech market two years. He states that Czech consumers are use for consumption of natural extracts in the form of tablets. This responds to current situation on the market but relating to the thesis demand survey potential consumers in younger age group would prefer fresh products. This producer imports extract of Camu Camu from Brazilian company Yerbalatina. The cooperation is based on the standardization of the extract's substances. This producer is doctor of pharmacy and he is focusing the health plants in Latin America so he has learned about Camu Camu on his own. The package of one hundred tablets is selling by 250- 270 CZK. The amount of sell was not reported from the respondent as well as the purchase price. The product is not labeled as bio product and do not use any certification. The product is supplied to pharmacies and specialized shop focusing the plant extracts by the distributing company Purusmeda. During the survey one of the target retailer has stated that the demand for Camu Camu is so low and the price for consumers too high that the sell of the product had to bee stoped. The purchase from the producer was less than once a month. This retailer operates on the Czech market from 2 to 6 years and had imported the product in the form of dried fruits that are flavored with the Camu Camu juice. The package of 100 g bought the retailer for price less than 249 CZK. The producer is Peruvian company Santa Natura. The retailer do prefer product in ecological quality but do not use any certification. The retailer's view on certificated bioproducts was that the price is still too high for Czech consumers who are not still prepared or willing to spend too much money for these products.

The wholesaler who did not offer product Camu Camu, supermarket Ahold, was willing to fill the questionnaire. Respondent states that the quality and high demand of the product are the most important points for deciding whether to introduce or not new product. The least important in

this deciding process is fashion trend or if the supplier offers some promo actions. As the most attractive way of advertisement respondent find out flyers in the shops together with tasting for free. The most comfortable form of use is fresh juice and the most suitable price range from 150 – 199 CZK. This respondent would prefer certified products before not certified.

6.2 Noni Results and Discussion

6.2.1 Current Product Analysis

Product

Noni is a new functional food that could be finding on the market in one major form of use - Noni juice. This product can be also found as a powder, capsules or cosmetic product. This product attracted the consumer interest because its healing characteristics that are claimed by famous scientists or physicians. The origin from Polynesia and the long history of health use can also help to differentiate this product from the competitors.

The most common form of sell is in a plastic or glass bottle. Relating to scientific research and medical professionals the suggested doses per day are 30 – 60 ml. Ninety percent of Noni products guarantee no chemical additives and 100% pure juice. Different offer of juice is for example Tahitian Noni juice that contains 89% of Noni juice with 11% of grapes and blueberry extract. In 2007 were introduce two another flavors, tropical cherry Acelora and Blackcurrant to Europe. These forms are available only in 60ml glass bottles and only in special shopping centers in Germany or in Austria.

Figure 14: Noni Juice bottle



Design of the package or bottle depends on the producer or producer. The biggest company that offer product Noni is Tahitian Noni®Juice. This company supports its trade mark by traditional Tahitian character. On the

Source: Tahitian Noni Juice, 2008

bottles are usually fruits of *Morinda Citrifolia* or Tahitian healers (Figure 14). On the other hand European producers of Noni does not use so exotic label and designed just the fruit Noni (Figure

14). The average volume of bottles is one liter, 946 ml (32 oz), 330 ml (12oz) or 500ml (17oz).

The juice can be offered as a concentrate that is recommended to mix with another juice or water or as a pure juice. The other form of this product is package of 28 small servings containing 30ml of juice.

Figure 15: Noni offer from Italy

The soluble form of Noni – powder – was the first form of this product introduced to the market but has almost disappeared. As new products are more favorite cosmetic products as skin cream, shampoo, scrubs, butter or body milk. These products are recommended as an anti-aging so they are target to older women. Very popular form of using Noni is energy drink with added Noni juice.



Source: Succo di Morinda Citrifolia, 2008

This product is offered mainly in the United States Noni juice can be also labeled as organic or bio product by European distributors. The Czech company Spagyria use certificate EKOCERT or the Cook IslandsNoni® use certificate BioGro officially designed in the EC Organic Production Regulation. Herbex Ltd originated in Fiji also reaches the European market with specified organic label. Relating to certification most of American companies do not use organic label for their products

Figure 16: BioGrade label certification



Source: Cook Islands Noni, 2008

Figure 17: Australian



Source: Good Noni®, 2008

Place (distribution)

The real availability of this product could be properly screened only on the Czech market. Noni is offered through internet shops that focus health or functional food. It can be found as well in the pharmacy but the most common place for get this product are specialized shops with health food or bio products.

Noni has a great popularity mainly in the United States where originated the biggest company with products Noni, Tahitian Noni International. This company was the first who had obtained the European Commission's Regulation, registered Noni product as novel Food and reached the European market.

In the European Union is offered by different distributors or producers mainly in Germany, Austria, Netherlands, Spain or Poland. To the Czech market was introduced product *Noni Vita* by the company Pharma Activ. It is also the biggest supplier in the Czech market and also producer of Noni in the Central Europe. Pharma Activ is subsidiary company to Poland company „Laboratoria Natury“. Almost all of mentioned companies use exclusively the on line shops for offering Noni.

Promotion

The promotion tools for Noni products offering contain advertising, sales promotion and public relations. Noni products are mainly advertised through web sites focusing health food or special nutrition. In the United States is Noni promoted through public media. TV spots or internet audio records are used. Noni distributors very often use famous celebrities or professionals to recommend product Noni directly on some meetings or conferences relating to the functional food or indirectly in printed advertisements. American company “Tahitian Noni International” use for promotion and another distribution of Noni the tool of multilevel marketing. It can be also called sales promotion. Relating to this way of promotion arises in the United States big affair with Noni multilevel marketing. There are warning web pages on the internet where consumers as well as distributors warned people against irregular business opportunities relating to Tahitian Noni. Noni product is offered through special meetings or sessions and the distributors allure visitors to be a new distributor or consumer. They refer to special healing effects of Noni that has never been confirmed by the scientific research (healing cancer, AIDS, etc.) and also promise unbelievable revenues from the business. This threatens the product character and another companies offering Noni because potential consumers' confidence can be broken or lost.

Price

The level of price ranges in dependence on amount of Noni and place of shopping. On the Czech market is the price set by European suppliers from 740 to 790 CZK per one liter. On the other hand there are also distributors for example from Hawaii who offer 960 ml for 1430 CZK. The 500 ml bottle cost around 360 CZK and it is unique dosage in the market. The European as well as American companies try to expand the line of Noni products to reach every potential consumer. So as was mentioned before the new product line for example with Noni cosmetics can catch interest in different target group than Noni juice. The sellers also use special price offers for example with “take two bottles the third for free”.

6.2.2 SWOT analysis

The objective of this part is to describe main points of Noni product in the view of strategic marketing plan. The main strength of Noni is new exotic label which can attract target group of consumers. Another opportunity is target market – functional food or health market that becomes more and more attractive for producers and consumers. The certification of bio product differentiates Noni from other health products. This could be also opportunity for other producers because resulted from the product analysis big American companies do not use certifications. In contrast to Camu Camu product Noni has obtained the Novel Food label from the European Commission that makes Noni much easier to penetrate European markets. This is big opportunity for distributors and producer of Noni products. On the other hand still low level of costumers’ awareness and available information threat good sale ability of Noni. Noni industry also offers good space for Central Europe cooperation with traditional companies in pharmaceutical industry. According to the CBI e-business research experts valued the importance of e-marketplace as medium. Use of e-marketplace is in offering Noni very usual and it is big advantage for small producers to see and be seen and how to get into contact with potential business partner. Resulted from the Noni retailers’ survey this is the most common way how retailers got information about Noni. One of the big weaknesses of Noni product is especially for Czech consumer’s high price. This is also weakness of expensive logistic because most of Noni products are imported from USA or New Zealand. How was said in the Current product Analysis in accordance with Noni arises a wave of disagreement in the United States because of the tricky multilevel marketing. Affairs like that can really bad harm name of the product and threat consumer’s confidence. The warning pages are free available and usually shows situations from the United States.

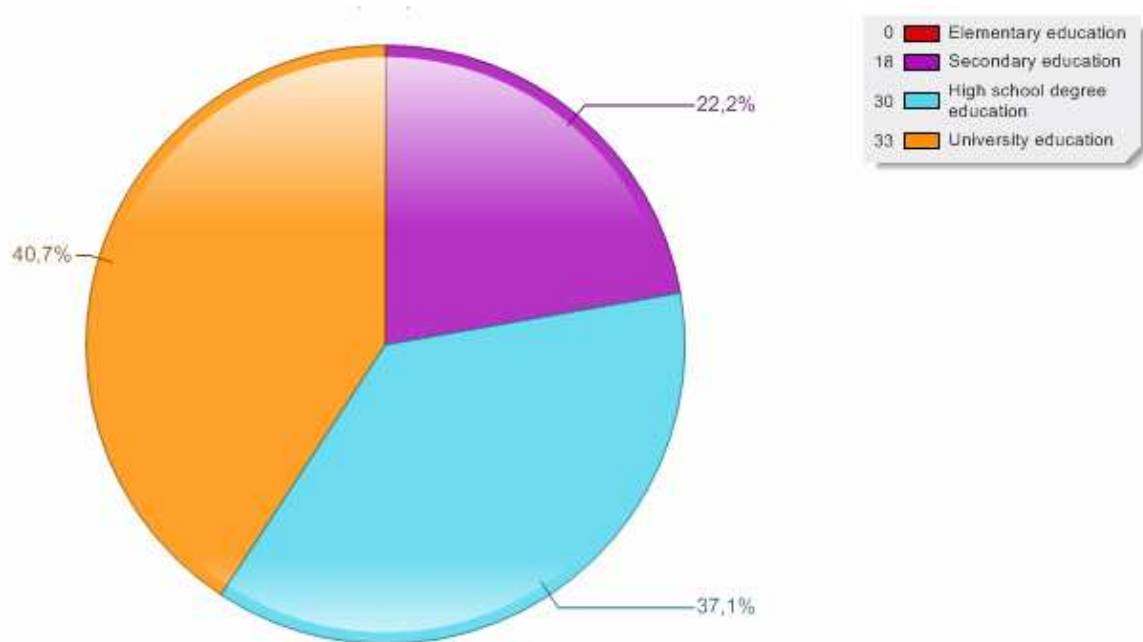
Table 7: SWOT table - selected examples

Strengths	Weaknesses	Opportunities	Threats
Long history of use	Lost of consumer's confident	New functional food	Domination within a particular industry by a few enterprisers
Availability on EU market	Industry too small	E-marketplace	Multilevel marketing
Exotic product	High price	New target markets	Competition from other countries
Organic certification	Seasonal product	Change of mentality about health food	Lack of awareness of people

Source: Author

6.2.3 Noni On-Line Questionnaires

This marketing survey aimed the European cities. Fifty seven in eighty one respondents are from the Czech Republic, nine live in Spain (Barcelona, Madrid), five respondents state they live in Germany (Berlin), five come from Ireland (Dublin, Cork) and the others are from Great Britain, Canada or Belgium. The main target group of people is 31 – 40 years old. 70, 4 % of respondents are working and 40, 7% gained university education. The second largest group of people aged 21 – 30 years old, 16 % of them are studying and thirty in eighty one respondents gained high school degree education.

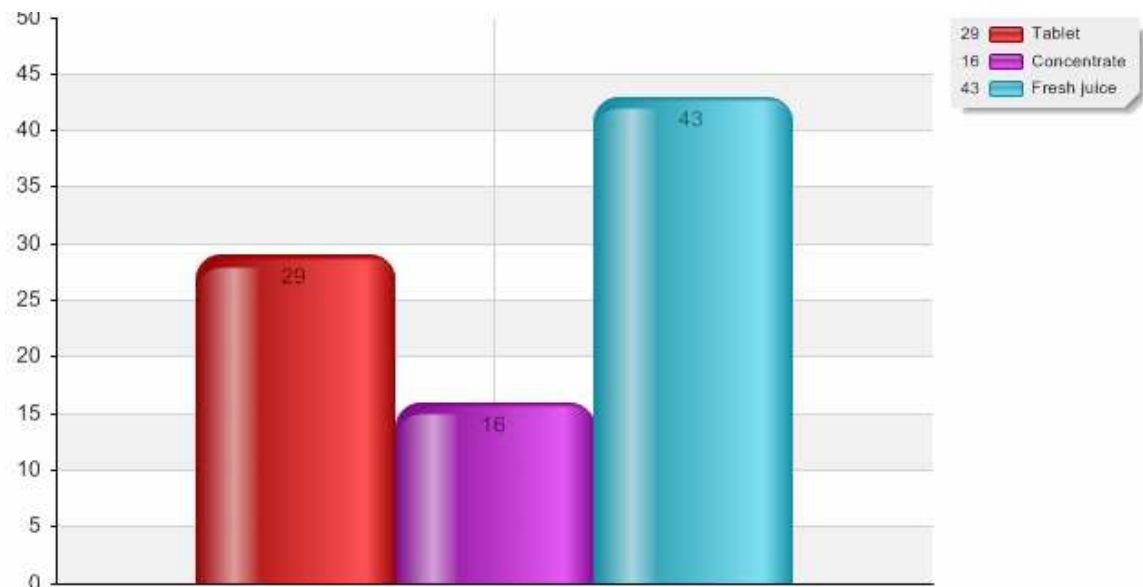
Chart 9: Educational attainment

The vast majority reported they are interested in health food. Just under half of respondents buy health products regularly and 58% buy them only sometimes. Eleven respondents state they do not buy products that enhance their organisms anyway.

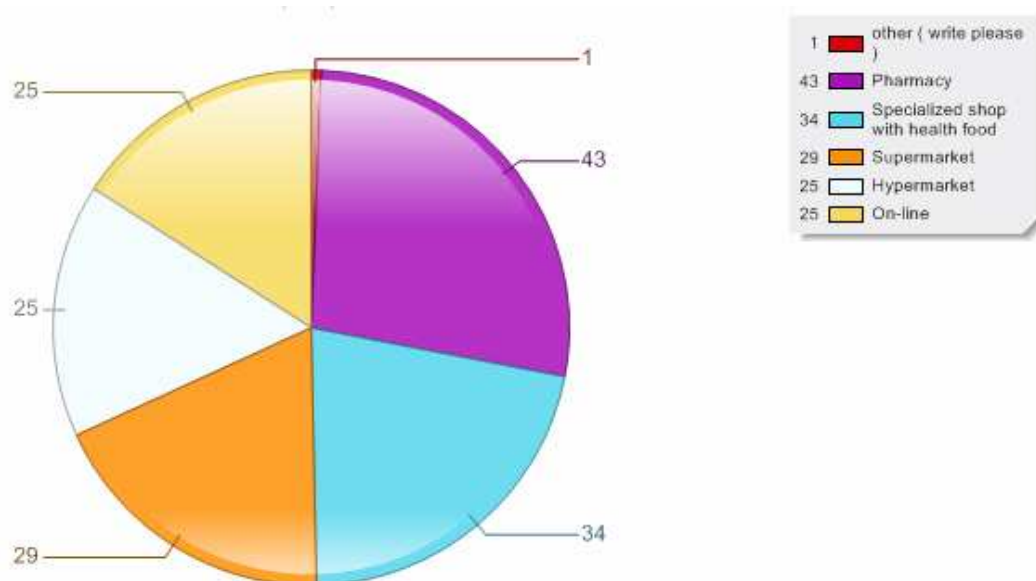
In contrast to the previous Camu Camu survey fifteen in eighty one respondents reported they positive knowledge about Noni products. On the other hand only one respondent had tasted Noni and was only one who could state his/her preference about taste or flavor. The respondent values his or her preference in the taste as quite good.

Question six find out the preference of respondents of certified and non certified Noni products. The finding is that 55, 6 % of respondents state they would prefer certified products rather than not certified and 44, 4 % reported they would not.

Seventy five percent people are interested to taste Noni product for free. Only sixteen respondents do not know and 5% strictly refuse. According to the question seven respondents should express they preference about the most comfortable form of use of Noni. For 53, 1 % of respondents are the most comfortable form of Noni fresh juice. Similar to printed version of Camu Camu survey respondents mark that the second favorite form of use is tablets. (Chart 10)

Chart 10: Preference of form of use

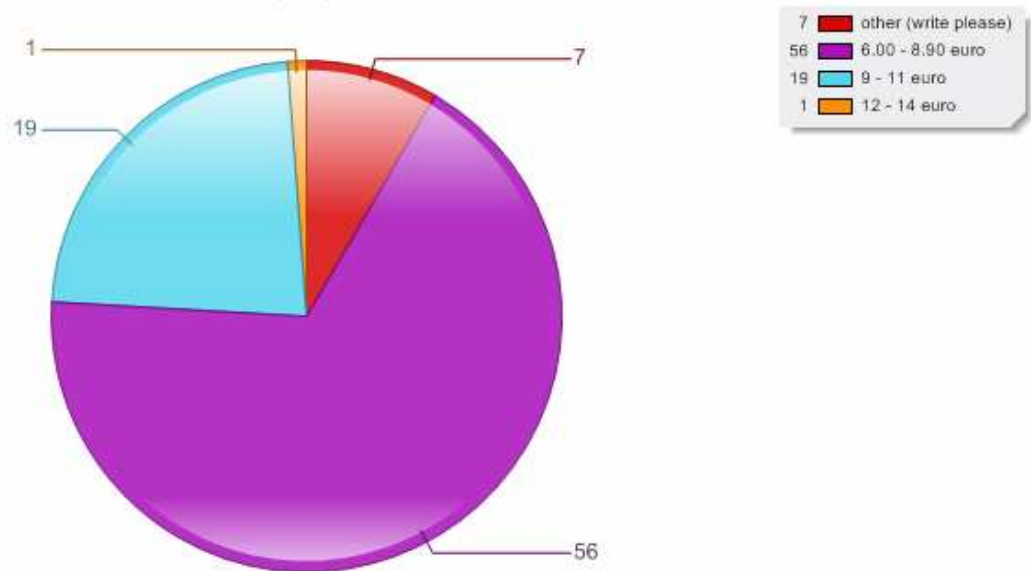
More than one third of people stated they would like to buy Noni product in the pharmacy. 42 % of people want this product to buy in the specialized shop with health food. In these two results is not so big difference so the preferences are similar to previous survey on Camu Camu. At the same level of preferences were hypermarket and supermarket. In contrast to previous surveys' results 30, 9 % of respondents want to buy Noni in on-line shops. Only to other questions are written and the respondent wish to have Noni product in Bio bars or in restaurants.

Chart 11: Place for shopping Noni

The most frequent price level of Noni was stated 6 – 8 EUR. This price level is preferred by 56

in 81 respondents. 23, 5 % of people are willing to pay 9 – 11 EUR. Seven respondents report other price that was in average around 3 EUR.

Chart 12: What price for 32 oz of Noni will be acceptable for you?



6.2.4 Noni Prague's Survey (printed version)

The target group of respondents ranges from 50 years old and older. Women were more willing to fill the questionnaire than men. One half of respondents are pensioners and all respondents are from Prague.

Fourteen in twenty people are interesting in health food but only 31% buy health products regularly. Nobody from twenty respondents know product Noni. From question four resulted that none of respondents have ever taste it. This older target group of respondents is more willing to get Noni for free. More than half of respondents would like to taste it. This finding supports SWOT analysis where is lack awareness of people describes as one of the biggest weakness of Noni.

Question three asked about respondent's preference in the field of certified Noni bio products. 60 % state that they would prefer certified products on the other hand 40 % would not prefer certified products. The most usual barrier for not prefer certified products is higher price for consumers

According to the level of preferences tablets are the most suitable form of use of Noni product. It

does not responded to the current offer of Noni because most of products are selling as a juice. One third of respondents reported that they do not believe that such juice can have value added effect. Some of them suggested new form of Noni that should be like for example Actimel. The most favorite place for shopping Noni product is on the same level of rate pharmacy and supermarket. Older people tend to shopping in supermarkets because it is easier for them to buy all products they need together.

Table 8: Preference for get Noni product

Place for shopping	School grading (1-best, 5-worst)				
	1	2	3	4	5
Supermarket	6	5	4	3	2
Pharmacy	8	3	4	2	3
Hypermarket	2	8	4	4	2
Specialized shop with health food	3	3	5	6	3
On line shop	2	1	7	5	5

As the second comfortable place to get this product is pointed hypermarket and with same sum of respondents but on the third place is on-line shop. This finding is very interesting according to the older target group that is usually less able to use internet or computers. The second worst place for Noni respondents find out specialized shops with health food.

Table 9: Form of usage Noni

Forms of use	Number of responds
Tablet	12
Fresh juice	6
Concentrate	2

However tablets are the most favorite form of use of Noni the most often offered form is juice. Question ten asked about respondent's preferences of price. The second highest price level, 250 – 350 CZK were reported as suitable only from twenty percent of people. Range of 200 – 249 CZK is available for eleven in twenty people. Seven respondents reported 150 – 199 CZK as suitable for them.

6.2.5 Noni Retailers and wholesalers survey

Noni products are generally more often in shops than Camu Camu. This findings support what IPPN's (Hein, M. 2005) report has pointed. It is statement that European Commission Regulation on Novel foods became import barrier for many importers. The representative of specialized shop with health products that operate on the Czech market seven years state that the consumption of Noni products is lower than two liters per month. The retailers also confirm that people usually do not know about this product so the sell is casual. Both retailers prefer certified products because of high demand of bio products from Czech consumers. The shops exhibit products in the shop window and sell as the most often form 0,5l of Noni concentrate or one liter of Noni juice. There are two main distributors of Noni product they are Pharma Activ and Spagyria. The responded retailers have learned about Noni directly from these distributors. The retailers were not willing to provide information about price so another survey was not possible.

The questionnaires from target wholesalers include PharmaActiv and Spagyria were not available. Only one wholesaler who did not offer Noni was compliant to fill the questionnaire. The manager of supermarket Ahold stated that the most important element in deciding process of new products is quality and high demand of the product. Than the preferences are about the special offer conditions from distributor as well as price and the last important element is if the product is mainstream or trendy. As the tool of promotion that will attract company's interest he reported flyers in the shop and promo actions with tasting for free. He prefers the concentrate form of use and pointed 200 – 249 CZK as the most suitable price. The respondent prefer certified product rather than not certified.

7. Conclusions and Recommendations

Camu Camu and Noni are according to the latest analysis from marketing surveys in the world typical products of the functional food sector. This statement contains many advantages but also some disadvantages for these new products. Resulted from the Czech market survey Camu Camu is a unique product in Czech shops and new for potential consumers as well. Some of the barriers are caused by the insufficient definitions of functional food in relation to the international trade and some are still caused by lack of legislation in the European Union. On the other hand Camu Camu is one of the fastest growing products in relation to the demand in Japan and it is a favorite supplement of the health food in the United States so another development in distribution of Camu Camu products need to be done.

The main problem of import this product to the European Union is that Camu Camu is not the traditional food in the EU and has not been introduced to the EU before year 1997. Even though certain foods like Camu Camu may have been used for a long time for health-enhancement purposes, the definitive scientific support for claims as a functional product is often lacking. This involves identifying functional compounds in Camu Camu and assessing their physiological effect, taking into account bioavailability in humans and potential changes during processing and food preparation and clinical trials on product efficacy in order to gain approval for health-enhancing marketing claims. This research requires time, financing, and skilled labor, especially for export markets. This resulted in high cost of scientific reports that confirm specific health effects and no side effects and other difficult steps in the legislative process. Than the product is too much expensive for the consumers and as well for sellers who have to pay high costs also because of insufficient transport infrastructure. Resulted from the questionnaires, most of the consumers are interested in health food and would like to taste the product for free so good marketing strategy in advertising and promotion is still missing. Improving processing and marketing is another key issue for developing international trade in functional food market. One of the comparative analyses from Peru introduced new already used technology of processing fruit Camu Camu and it is called lyophilization. This new process could present dropping of costs in process cycle and also provide more possibilities how the product can be exported on the world's markets for example by the air.

One of my recommendations is focusing on the international distributors that supply Amazonian

product like Maca or Acelora that are in demand also on the Czech market. This would enable improved strategic decision-making and better coordination and collaboration between the players in the supply chain. Specialized market development and export promotion services might offer a way to address this challenge. The better advertising from distributors as well as from producers needs to be improved. Than is possible to increase an awareness of consumers and than also wholesalers will be interested in buying these new products because resulted from the wholesalers' questionnaire the high product demand is one of the most important element in decision process.

Noni juice is presented on the European market as *Novel Food*. Relating to the retailers interviews this statute is for Noni juice quit disadvantage. Especially on the Czech market is this kind of form very unusual and resulted from the consumer questionnaire sometimes also unsuitable form of use. The Noni juice has on the other hand big advantage against Camu Camu and it is a great scientific and research support. This makes it easier to penetrate European market and target potential consumers. The product is very often labeled as bio product that supports the awareness of Czech consumers who more often prefer certified products. The low sales are caused by lack of information of consumers and sellers as well. Better cooperation between private distributors and retailers could improve the supply chain and may be improve the advertising tools that need to be strengthened. When the supply chain is improved may be the price dropped. One of the big disadvantages of Noni juice is also high price for potential consumers. Noni juice would have according to the Czech market survey good opportunity to attract older group of people who are more sensitive to health enhancing products. I would recommend more huge promotion mainly in pharmacy in combination with promo actions of free tasting. However this presents a big financial investment the possibility of international cooperation could make it easier. On the other hand Czech market health products has a tradition of chemically prepared vitamins or minerals so here is need to support consumer's trust in functional food that is offered like juice. The space for introducing Noni juice in ecologic quality appears as a great opportunity also for wholesalers. Resulted from the retailers' questionnaire distributors are not only looking for diet products now as they were four or five years ago but they are looking for very specific health benefits.

Functional foods can be an opportunity for economic growth for many developing countries endowed with rich biodiversity and traditional knowledge of the health effects of certain indigenous plant species. Some developing countries can also be competitive in production due

to lower labor costs. Functional foods could help in improving sustainability of agriculture and environmental preservation. The another promotion of juice with addition of Camu Camu or Noni juice has in my opinion opportunity to be introduced also in the supermarket. As a great example of success can be promotion of Aloe Vera juice. Before two years was this product available only in the specialized shops with health food and today can be found in the supermarkets. Both products could also be promoted with another label as a Fair trade product. The label helps to differentiate products from competitors and selects target consumers. Identification of specific markets, improvement of regulations, certification, and development of marketing and consumer demand dictate the possibilities for development.

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Internet Resources

<http://www.just-food.com>

<http://www.ipgri.cgiar.org>

<http://www.underutilized-species.org>

<http://www.gtz.de>

<http://www.cbi.com>

<http://www.biotrade.com>

<http://www.importers.com>

<http://www.livinginperu.com>

<http://www.fao.org>

<http://gaian.amazonherb.net>

Appendix

Appendix I. Questionnaire product Camu Camu

Camu Camu je plod keře *Myrciaria dubia* původem z deštných pralesů v Amazonii. Vyznačuje se nejvyšším obsahem vitamínu C ze všech známých plodů na světě. Díky tomu je také velmi účinným antioxidantem, který pomáhá v prevenci proti rakovině, srdečním onemocněním a zánětům. Zároveň obsahuje důležité vitamíny a vysoké množství aminokyselin, které pomáhají rychle regenerovat buňky a zpomalují procesy stárnutí. Toto ovoce se na trhu objevuje nejčastěji v sušené rozpustné formě, případně jako tableta nebo ovocný nápoj. Produkty **Camu Camu** jsou ekologicky certifikované a k dostání v lékárnách nebo na internetových stránkách.

1. Zajímáte se o zdravou výživu?
 - a) Ano
 - b) Ne

2. Nakupujete podobné výrobky (vitamínové tablety, bylinné extrakty atd.)?
 - a) Ano
 - b) Ne
 - c) Občas

3. Slyšel/la jste už někdy o výrobcích **Camu Camu**?
 - a) Ano
 - b) Ne (pokračujte otázkou č.6)



4. Ochutnal/la jste někdy tento výrobek?
 - a) Ano
 - b) Ne (pokračujte otázkou č.6)

5. Jak jste byl / la spokojen s jeho chutí?
 - a) Hodně
 - b) Vůbec
 - c) Docela ano
 - d) Uvítal/la bych i různé příchutě

6. Pokud byste měl/la možnost tento produkt zdarma ochutnat, měl/la byste zájem?
 - a) Ano

- b) Ne
- c) Nevím

7. Upřednostnil/la byste certifikované produkty **Camu Camu** před necertifikovanými?

- a) Ano
- b) Ne

8. V jaké podobě je pro Vás výrobek nejpohodlnější?

- a) Tableta
- b) Rozpustná forma (sypký prášek)
- c) Čerstvá šťáva
- d) Koncentrát

9. Upřednostníte nákup takového výrobku v:

(seřaďte podle preference školním známkováním; 1=nejlepší)

- a) Lékárně
- b) Supermarketu
- c) Hypermarketu
- d) Specializovaném obchodě se zdravou výživou
- e) Internetový obchod

10. Jaká cena, za 100 tablet tohoto výrobku, by pro Vás byla dostupná?

- a) 150 - 199 Kč
- b) 200 – 249 Kč
- c) 250 – 350 Kč



11. Pohlaví

- a) Žena
- b) Muž

12. Vzdělání

- a) Základní
- b) Střední
- c) Střední s maturitou
- d) Vysokoškolské

13. Věk

- a) do 20 let
- b) 21 – 30 let
- c) 31 – 40 let
- d) 41 – 50 let
- e) 51 – 60 let
- f) 61 a více let

14. Ve kterém městě / obci bydlíte?

- a) Severní Morava a Slezsko

- b) Střední Morava (Olomoucký a Zlínský kraj)
- c) Jihovýchod (Jihomoravský kraj a Vysočina)
- d) Severovýchod (Pardubický, Královéhradecký a Liberecký kraj)
- e) Severozápad (Ústecký a Karlovarský kraj)
- f) Jihozápad (Jihočeský a Plzeňský kraj)
- g) Střední Čechy
- h) Praha

15. V současné době jste:

- a) Studující (pokud i pracujete, rozhodněte, kterou činnost děláte spíše)
- b) Pracující
- c) Na mateřské dovolené
- d) Důchodce
- e) Nezaměstnaný

Děkuji za Váš čas a ochotu podílet se marketingovém průzkumu produktu Camu Camu na českém trhu. Tento dotazník byl vytvořen pod záštitou Institutu Tropů a Subtropů, České Zemědělské Univerzity v Praze. Bude sloužit jako studijní podklad pro Diplomovou práci, která se týká marketingového průzkumu trhu s tropickými produkty a možnostmi uvedení výše zmíněného produktu na český trh.

Dotazník sestavila Bc Kateřina Steklá.

Appendix II. Questionnaire product Noni

Noni je plod keře *Morinda citrifolia* původem z deštných pralesů v Amazonii, rostoucí volně v přírodě v tropických a subtropických oblastech světa. Výzkumy ukazují, že plod **Noni** má mimořádné léčivé vlastnosti, které mají příznivé účinky na lidský organismus. Produkty **Noni** obsahují chemicky neošetřenou sušinu plodů rostliny *Morinda Citrifolia* L. z ostrova Hawaii, které obsahují unikátní směs více než 140 druhů vitaminů, stopových prvků, enzymů, alkaloidů, polynenasycených mastných kyselin a dalších pro zdraví významných látek. Tento přípravek se osvědčil i v klinické léčebné praxi při terapii poruch imunity, tuberkulózy, nemocí srdce a krevního oběhu a některých typů zhoubných nádorů. Studie ukazují, že **Noni** snižuje cholesterol, krevní tlak, působí na ekzém (protibakteriálním a protialergenním působením) nebo podporuje detoxikaci jater. Řada účinných látek, které také *Morinda citrifolia* obsahuje (damnacanthal, proxeronin, aj.), nebyly v jiných rostlinách dosud objeveny a nelze je zatím ani v čisté podobě z rostliny extrahovat, ani synteticky vyrobit. **Noni** se na trhu objevuje především jako 100% čistě přírodní ovocná šťáva, vitamínová tableta nebo ovocný koncentrát.



Morrinda citrifolia

1. Zajímáte se o zdravou výživu?
 - a) Ano
 - b) Ne

 2. Nakupujete podobné výrobky (vitamínové tablety, bylinné extrakty atd.)?
 - a) Ano
 - b) Ne
 - c) Občas

 3. Upřednostňujete certifikované bioprodukty před necertifikovanými?
 - c) Ano
 - d) Ne

 4. Slyšel/la jste už někdy o výrobcích **Noni**?
 - a) Ano
 - b) Ne (pokračujte otázkou č.7)
-
- Plod keře (Noni) *Morrinda citrifolia*
5. Ochutnal/la jste někdy tento výrobek?
 - a) Ano
 - b) Ne

 6. Jak jste byl / la spokojen s jeho chutí?
 - a) Hodně
 - b) Vůbec
 - c) Docela ano
 - d) Uvítal bych i různé příchutě

 7. Pokud byste měl/la možnost tento produkt zdarma ochutnat, měl/la byste zájem?
 - a) Ano
 - b) Ne
 - c) Nevím

 8. V jaké podobě je pro Vás výrobek nejpohodlnější?

- a) Tableta
- b) 100% čerstvá šťáva
- c) Koncentrát



9. Kde upřednostníte nákup **Noni**?
(seřaďte podle preference školním známkováním; 1=nejlepší)
- a) Lékárně
 - b) Supermarketu
 - c) Hypermarketu
 - d) Specializovaném obchodě se zdravou výživou
 - e) Internetovém obchodě
10. Jaká cena, za 500 ml tohoto výrobku, by pro Vás byla dostupná?
- a) 150 - 199 Kč
 - b) 200 – 249 Kč
 - c) 250 – 350 Kč
 - d) 350 – 450 Kč

11. Pohlaví
- a) Žena
 - b) Muž



12. Vzdělání
- a) Základní
 - b) Střední
 - c) Střední s maturitou
 - d) Vysokoškolské

13. Věk
- a) do 20 let
 - b) 21 – 30 let
 - c) 31 – 40 let
 - d) 41 – 50 let
 - e) 51 – 60 let
 - f) 61 a více let

14. Ve kterém městě / obci bydlíte?
- a) Severní Morava a Slezsko
 - b) Střední Morava (Olomoucký a Zlínský kraj)

- c) Jihovýchod (Jihomoravský kraj a Vysočina)
- d) Severovýchod (Pardubický, Královéhradecký a Liberecký kraj)
- e) Severozápad (Ústecký a Karlovarský kraj)
- f) Jihozápad (Jihočeský a Plzeňský kraj)
- g) Střední Čechy
- h) Praha

15. V současné době jste

- a) Studující (pokud i pracujete, rozhodněte, kterou činnost děláte spíše)
- b) Pracující
- c) Na mateřské dovolené
- d) Důchodce
- e) Nezaměstnaný

Děkuji za Váš čas a ochotu podílet se marketingovém průzkumu produktu Noni na českém trhu. Tento dotazník byl vytvořen pod záštitou Institutu Tropů a Subtropů, České Zemědělské Univerzity v Praze. Bude sloužit jako studijní podklad pro diplomovou práci, která se zabývá marketingovým průzkumem trhu s tropickými produkty a možnostmi uvedení výše zmíněného produktu na český trh.

Dotazník sestavila Bc. Kateřina Steklá.

Appendix III. Questionnaire product Noni (English version)

Morinda citrifolia commonly known as **Noni** is found in the tropical regions throughout the world. It is considered to be one of the most nutritious fruits with health benefits. In addition to the minerals and vitamins, tests have proven that essential amino acids and enzymes also exist in the **Noni** fruit. Many of its nutrients are known to stimulate the immune system, exhibits better antioxidant activity and is also known as the 'Painkiller and Headache tree'. **Noni** has antibacterial, antifungal or antiparasitic properties. Research studies show that this product help decrease amount of cholesterol or blood pressure and is effective in prevention of heart diseases. *Morinda citrifolia* contains unique substances (damnacanthal, proxeronin, etc.) that will not have been yet discovered in any other plant and it is impossible to extract them in a pure form. **Noni** powder, sold in capsule form was the first **Noni** product brought to the commercial market. Today you can buy it as well as 100% fresh juice or fruit concentrate.



Morinda citrifolia

1. Are you interested in health food?

- a) Yes
- b) No

2. Do you buy similar products? (Vitamin tablets, herbal essences etc.)?

- a) Yes
- b) No
- c) Sometimes

3. Would you prefer certified products **Noni** rather than not certified?

- a) Yes
- b) No

4. Have you ever heard about Noni products?

- a) Yes
- b) No (go on with question no 6)



Fruit (Noni) *Morrinda citrifolia*

5. Have you ever tasted **Noni**?

- a) Yes
- b) No (go on with question no.6)

6. How were you satisfied with the taste?

- a) Very tasty
- b) Not at all
- c) Quite good
- d) I would have appreciated other flavors

7. If you have a chance to taste **Noni** for free would you be interested?

- a) Yes
- b) No
- c) Do not know

8. What form of Noni is the most comfortable for you?

- a) Tablet
- b) Soluble form (powder)
- c) Fresh juice
- d) Concentrated solution



9. Where would you prefer to get this product?
(Lining up according to your preferences 1=the best)
- a) Pharmacy
 - b) Supermarket
 - c) Hypermarket
 - d) Specialized shop with health food
 - e) On-line
10. What price, for 32 fl oz of **Noni** juice, will be acceptable for you?
- a) 6.00 - 8.90 euro
 - b) 9 - 11.90 euro
 - c) 12 - 14 euro
 - d) Other (write please) _____



11. Gender (sex)
- a) Male
 - b) Female
12. Education
- a) Elementary education
 - b) Secondary education
 - c) High school degree education
 - d) University education
13. Age
- a) Under 20 years
 - b) 21 – 30 years
 - c) 31 – 40 years
 - d) 41 – 50 years
 - e) 51 – 60 years
 - f) 61 and more years
14. What is the country and city you live in?
Write please _____

15. What do you do for a living?

- a) Studying
- b) Working
- c) Maternity leave
- d) Pensioner
- e) Unemployed

Thank you for your time and willingness to participate in my market research about Noni products on the European market. This Questionnaire was created under the aegis of the Institute of Tropics and Subtropics Agriculture, Czech Agriculture University in Prague. It will be used as a studying base for a Diploma Thesis which deals with tropics and subtropics products market research. It will consider the possibilities of introducing the products mentioned above to the European market.

The Questionnaire was created by Bc. Kateřina Steklá.

Appendix IV. Questionnaire on product Camu Camu (English version)

Camu Camu (*Myrciaria dubia*) is a bush which grows in the Amazonian rain forest of Peru. It produces round, light orange-colored fruits about the size of lemons. This fruit is packed with more vitamin C than any other food source so far discovered. In comparison to oranges, **Camu Camu** provides thirty times more vitamin C or ten times more iron. The **Camu Camu** fruit has a surprising range of medicinal effects. Traditionally it is used to support the immune system, to ward off viral infections, and to help maintain optimal health, especially under conditions of stress and anxiety, which tend to deplete the immune system. It has also a great antioxidant power so it helps to prevent cancer. You can find this product on the market in a soluble form, optionally as a tablet or fruit juice.

Products **Camu Camu** are ecologically certified and you can buy them at a pharmacy or through internet shops.

1. Are you interested in health food?

- a) Yes
- b) No

2. Do you buy similar products? (Vitamin tablets, herbal essences etc.)?

- a) Yes
- b) No
- c) Sometimes

3. Have you ever heard about **Camu Camu** products?

- a) Yes
- b) No (go on with question no 6)



Myrciaria dubia

4. Have you ever tasted **Camu Camu**?
 - a) Yes
 - b) No (go on with question no.6)

5. How were you satisfied with the taste?
 - a) Very tasty
 - b) Not at all
 - c) Quite good
 - d) I would have appreciated other flavors

6. If you have a chance to taste it for free would you be interested?
 - a) Yes
 - b) No
 - c) Do not know



Camu Camu fruit

7. Would you prefer certified products **Camu Camu** rather than not certified?
 - a) Yes
 - b) No

8. What form of Camu Camu is the most comfortable for you?
 - a) Tablet
 - b) Soluble form (powder)
 - c) Fresh juice
 - d) Concentrated solution



Camu Camu fruit

9. Where would you prefer to get this product?
(lining up according to your preferences 1=the best)
 - a) Pharmacy
 - b) Supermarket
 - c) Hypermarket
 - d) Specialized shop with health food
 - e) On-line

10. What price, for 32 fl oz of juice **Camu Camu**, will be acceptable for you?
 - a) 6.00 - 8.90 euro

- b) 9 - 11.90 euro
- c) 12 - 14 euro
- d) Other (write please) _____



11. Gender (sex)

- a) Male
- b) Female

12. Education

- a) Elementary education
- b) Secondary education
- c) High school degree education
- d) University education

13. Age

- a) under 20 years
- b) 21 – 30 years
- c) 31 – 40 years
- d) 41 – 50 years
- e) 51 – 60 years
- f) 61 and more years

14. What is the country and city you live in?

Write please _____

15. What do you do for a living?

- a) Studying
- b) Working
- c) Maternity leave
- d) Pensioner
- e) Unemployed

Thank you for your time and willingness to participate in my market research about **Camu Camu** products on the European market. This Questionnaire was created under the aegis of the Institute of Tropics and Subtropics Agriculture, Czech Agriculture University in Prague. It will be used as a studying base for a Diploma Thesis which deals with tropics and subtropics products market research. It will consider the possibilities of introducing the products mentioned above to the European market.

The Questionnaire was created by Bc. Kateřina Steklá.

Appendix V. Questionnaire product Camu Camu (retailers who not offer Camu Camu)

Camu Camu je plod keře *Myrciaria dubia* původem z deštných pralesů v Amazonii. Vyznačuje se nejvyšším obsahem vitamínu C ze všech známých plodů na světě. Díky tomu je také velmi účinným antioxidantem, který pomáhá v prevenci proti rakovině, srdečním onemocněním a zánětům. Zároveň obsahuje důležité vitamíny a vysoké množství aminokyselin, které pomáhají rychle regenerovat buňky a zpomalují procesy stárnutí. Toto ovoce se na trhu objevuje nejčastěji v sušené rozpustné formě, případně jako tableta nebo ovocný nápoj. Produkty **Camu Camu** jsou ekologicky certifikované a k dostání v lékárnách nebo na internetových stránkách.

1. Jak dlouho je Vaše firma na českém trhu?
 - a) méně než 1rok
 - b) 2 – 6 let
 - c) 7 – 10 let
 - d) 11 let a více
2. Jaký je typ obchodu, v němž prodáváte?
 - a) Lékárna
 - b) Specializovaný obchod se zdravou výživou
 - c) Internetový obchod
 - d) Jiný
3. Máte prodejní pobočky i jinde na území ČR (mimo Prahu)?
 - a) Ano, uveďte prosím kde _____
 - b) Ne
4. Máte pouze jednu prodejní pobočku nebo více?
 - a) Jednu
 - b) Více (uveďte prosím kolik _____)
5. Slyšel/la jste už někdy o výrobcích **Camu Camu**?
 - a) Ano
 - b) Ne (pokračujte otázkou č.7)



6. Jak jste se o produktu dozvěděl/la?
 - a) Tištěná reklama
 - b) Internet

- c) Doporučení od kolegů, známých
- d) Dodavatel

7. Jaká forma reklamy by Vás oslovila?

- a) Letáčky v obchodě
- b) Inzerce v časopisech
- c) Rádio & Televize
- d) Osobní prodej
- e) Nabídka výrobků zdarma pro vyzkoušení
- f) jiná _____

8. Měli byste zájem tento výrobek vyzkoušet?

- a) Ano
- b) Ne
- c) Nevím

9. V jaké podobě by pro Vás bylo nejpohodlnější výrobek prodávat?

- a) Tableta
- b) Rozpustná forma (syký prášek)
- c) Čerstvá šťáva
- d) Koncentrát

10. Jaká nákupní cena, za jedno balení (100 tablet) tohoto výrobku, by pro Vás byla dostupná?

- a) 150 - 199 Kč
- b) 200 – 249 Kč
- c) 250 – 350 Kč
- d) 350 – 450 Kč



11. Upřednostnil/la byste nákup certifikovaných výrobků Camu Camu před necertifikovanými?

- a) Ano
- b) Ne

Děkuji za Váš čas a ochotu podílet se na marketingovém průzkumu produktu Camu Camu na českém trhu. Tento dotazník byl vytvořen pod záštitou Institutu Tropů a Subtropů, České Zemědělské Univerzity v Praze. Bude sloužit jako studijní podklad pro diplomovou práci, která se zabývá marketingovým průzkumem trhu s tropickými produkty a možnostmi uvedení výše zmíněného produktu na český trh.

Dotazník sestavila Bc. Kateřina Steklá.

Appendix VI. Questionnaire Noni (retailers who not offer Noni)

Noni je plod keře *Morinda citrifolia* původem z deštných pralesů v Amazonii, rostoucí volně v přírodě v tropických a subtropických oblastech světa. Výzkumy ukazují, že plod **Noni** má mimořádné léčivé vlastnosti, které mají příznivé účinky na lidský organismus. Produkty **Noni** obsahují chemicky neošetřenou sušinu plodů rostliny *Morinda Citrifolia* L. z ostrova Hawaii, které obsahují unikátní směs více než 140 druhů vitaminů, stopových prvků, enzymů, alkaloidů, polynenasycených mastných kyselin a dalších pro zdraví významných látek. Tento přípravek se osvědčil i v klinické léčebné praxi při terapii poruch imunity, tuberkulózy, nemocí srdce a krevního oběhu a některých typů zhoubných nádorů. Studie ukazují, že **Noni** snižuje cholesterol, krevní tlak, působí na ekzémy (protibakteriálním a protialergenním působením) nebo podporuje detoxikaci jater. Řada účinných látek, které také *Morinda citrifolia* obsahuje (damnacanthal, proxeronin, aj.), nebyly v jiných rostlinách dosud objeveny a nelze je zatím ani v čisté podobě z rostliny extrahovat, ani synteticky vyrobit.

Noni se na trhu objevuje především jako 100% čistě přírodní ovocná šťáva, vitamínová tableta nebo ovocný koncentrát.



Morinda citrifolia

1. Jak dlouho je Vaše firma na českém trhu?
 - a) méně než 1rok
 - b) 2 – 6 let
 - c) 7 – 10 let
 - d) 11 let a více

2. Jaký je typ obchodu, v němž prodáváte?
 - a) Lékárna
 - b) Specializovaný obchod se zdravou výživou
 - c) Internetový obchod
 - d) Jiný

3. Máte prodejní pobočky i jinde na území ČR (mimo Prahu)?
 - a) Ano, uveďte prosím kde _____
 - b) Ne

4. Máte pouze jednu prodejní pobočku nebo více?
 - a) Jednu
 - b) Více (uveďte prosím kolik _____)

5. Co rozhoduje o výběru produktů, které byste chtěli zákazníkům nabízet?
(seřad'te podle preference školním známkováním; 1=nejlepší)

- a) Cena
- b) Kvalita
- c) Modní trend (bioprodukty atd)
- d) Vysoká poptávka po produktu
- e) Promo akce
- f) Výhodné podmínky od dodavatele (slevy, servis atd)

6. Slyšel/la jste už někdy o výrobcích **Noni**?

- a) Ano
- b) Ne (pokračujte otázkou č.7)



Plod keře (Noni) *Morrinda citrifolia*

7. Jak jste se o produktu dozvěděl/la?

- a) Tištěná reklama
- b) Internet
- c) Doporučení od kolegů, známých
- d) Dodavatel

8. Jaká forma reklamy by Vás oslovila?

- a) Letáčky v obchodě
- b) Inzerce v časopisech
- c) Rádio & Televize
- d) Osobní prodej
- e) Nabídka výrobků zdarma pro vyzkoušení
- f) jiná _____

9. Měli byste zájem **Noni** vyzkoušet?

- a) Ano
 - b) Ne
- Nevím



10. V jaké podobě by pro Vás bylo nejpohodlnější výrobek prodávat?

- a) Tableta
- b) Rozpustná forma (sypký prášek)
- c) Čerstvá šťáva
- d) Koncentrát



11. Jaká nákupní cena, za jedno balení (500ml) **Noni**, by pro Vás byla dostupná?

- a) 150 - 199 Kč
- b) 200 – 249 Kč
- c) 250 – 350 Kč
- d) 350 – 450 Kč

12. Upřednostnil/la byste nákup certifikovaných výrobků **Noni** před necertifikovanými?

- a) Ano
- b) Ne

Děkuji za Váš čas a ochotu podílet se na marketingovém průzkumu produktu **Noni** na českém trhu. Tento dotazník byl vytvořen pod záštitou Institutu Tropů a Subtropů, České Zemědělské Univerzity v Praze. Bude sloužit jako studijní podklad pro diplomovou práci, která se zabývá marketingovým průzkumem trhu s tropickými produkty a možnostmi uvedení výše zmíněného produktu na český trh.

Dotazník sestavila Bc. Kateřina Steklá.

Appendix VII. Questionnaire Noni product (retailers who offer Noni)

1. Jak dlouho je Vaše firma na českém trhu?

- a) méně než 1rok
- b) 2 – 6 let
- c) 7 – 10 let
- d) 11 let a více

2. Jaký je typ obchodu, v němž výrobek prodáváte?

- a) Lékárna
- b) Specializovaný obchod se zdravou výživou
- c) Internetový obchod
- d) Jiný _____

3. Máte pouze jednu prodejní pobočku?

- a) Ano (pokračujte otázkou č.5)
- b) Ne, mám jich více (uved'te kolik _____)

4. Máte prodejní pobočky i jinde na území ČR (mimo Prahu)?

- a) Ano (uved'te prosím kde _____)
- b) Ne

5. Jak jste se dozvěděli o produktech Noni?

- a) Tištěná reklama
- b) Internet
- c) Přímá nabídka od dodavatele
- d) Jinak _____

6. V jaké formě výrobek prodáváte?

- a) Ovocná šťáva
- b) Tablety
- c) Koncentrát
- d) Jiný (uved'te jaký) _____

7. V jakém balení (množství) Noni nakupujete?

Uved'te prosím _____

8. V jakém balení (množství) Noni prodáváte?

Uved'te prosím _____

9. Jak často výrobky od dodavatele nakupujete?

- a) Týdně
- b) Jednou za 14 dní
- c) Jednou za 3 týdny
- d) Jednou za 4 týdny
- e) Měsíčně
- f) Méně než jednou za měsíc

10. Jaká je nákupní maloobchodní cena, za kterou produkt nakupujete?

- a) Méně než 249 Kč
- b) 250 – 299 Kč
- c) 300 – 399 Kč
- d) více než 400 Kč
- e) jiná _____

11. Jaké máte dodavatele?

Uved'te prosím _____

12. Kde máte zboží vystaveno?

- a) Na prodejním pultu, regálu
- b) Výloha
- c) Jinde _____

d) Není viditelně vystaveno

13. Upřednostňujete nákup certifikovaných výrobků Noni před necertifikovanými?

a) Ano

b) Ne

Děkuji za Váš čas a ochotu podílet se na marketingovém průzkumu produktu Noni na českém trhu. Tento dotazník byl vytvořen pod záštitou Institutu Tropů a Subtropů, České Zemědělské Univerzity v Praze. Bude sloužit jako studijní podklad pro diplomovou práci, která se zabývá marketingovým průzkumem trhu s tropickými produkty a možnostmi uvedení výše zmíněného produktu na český trh.

Dotazník sestavila Bc. Kateřina Steklá

Appendix VIII. Questionnaire Camu Camu product (retailers who offer Camu Camu)

1. Jak dlouho je Vaše firma na českém trhu?

a) méně než 1rok

b) 2 – 6 let

c) 7 – 10 let

d) 11 let a více

2. Jaký je typ obchodu, v němž výrobek prodáváte?

a) Lékárna

b) Specializovaný obchod se zdravou výživou

c) Internetový obchod

d) Jiný _____

3. Máte pouze jednu prodejní pobočku?

a) Ano (pokračujte otázkou č.5)

b) Ne, mám jich více (uveďte kolik _____)

4. Máte prodejní pobočky i jinde na území ČR (mimo Prahu)?

a) Ano (uveďte prosím kde _____)

b) Ne

5. Jak jste se dozvěděli o produktech Camu Camu?

a) Tištěná reklama

b) Internet

c) Přímá nabídka od dodavatele

d) Jinak _____

6. V jaké formě výrobek prodáváte?

a) Sypký prášek

b) Tablety

c) Jiný (uveďte jaký) _____

7. V jakém balení (množství) Camu Camu nakupujete?

Uveďte prosím_____

8. V jakém balení (množství) Camu Camu prodáváte?

Uveďte prosím_____

9. Jak často výrobky od dodavatele nakupujete?

- a) Týdně
- b) Jednou za 14 dní
- c) Jednou za 3 týdny
- d) Jednou za 4 týdny
- e) Měsíčně
- f) Méně než jednou za měsíc

10. Jaká je nákupní maloobchodní cena, za kterou produkt nakupujete?

- a) Méně než 249 Kč
- b) 250 – 299 Kč
- c) 300 – 399 Kč
- d) více než 400 Kč
- e) jiná_____

11. Jaké máte dodavatele?

Uveďte prosím_____

12. Kde máte zboží vystaveno?

- a) Na prodejním pultu, regálu
- b) Výloha
- c) Jinde_____
- d) Není viditelně vystaveno

13. Upřednostňujete nákup certifikovaných výrobků Camu Camu před necertifikovanými?

- a) Ano
- b) Ne

Děkuji za Váš čas a ochotu podílet se na marketingovém průzkumu produktu Camu Camu na českém trhu. Tento dotazník byl vytvořen pod záštitou Institutu Tropů a Subtropů, České Zemědělské Univerzity v Praze. Bude sloužit jako studijní podklad pro diplomovou práci, která se zabývá marketingovým průzkumem trhu s tropickými produkty a možnostmi uvedení výše zmíněného produktu na český trh.

Dotazník sestavila Bc. Kateřina Steklá.

Appendix IX. Questionnaire Camu Camu product (wholesalers who not offer Camu Camu)

Camu Camu je plod keře *Myrciaria dubia* původem z deštných pralesů v Amazonii. Vyznačuje se nejvyšším obsahem vitamínu C ze všech známých plodů na světě. Díky tomu je také velmi účinným antioxidantem, který pomáhá v prevenci proti rakovině, srdečním onemocněním a zánětům. Zároveň obsahuje důležité vitamíny a vysoké množství aminokyselin, které pomáhají rychle regenerovat buňky a zpomalují procesy stárnutí. Toto ovoce se na trhu objevuje nejčastěji v sušené rozpustné formě, případně jako tableta nebo ovocný nápoj. Produkty **Camu Camu** jsou ekologicky certifikované a k dostání v lékárnách nebo na internetových stránkách.

1. Jak dlouho je Vaše firma na českém trhu?
 - a) méně než 1rok
 - b) 2 – 6 let
 - c) 7 – 10 let
 - d) 11 let a více
2. Jaký je typ obchodu, který provozujete?
 - a) Lékárna
 - b) Specializovaný obchod se zdravou výživou
 - c) Supermarket
 - d) Hypermarket
 - e) Internetový obchod
 - e) Jiný
3. Co rozhoduje o výběru produktů, které byste chtěli zákazníkům nabízet? (seřad'te podle preference školním známkováním; 1=nejlepší)
 - a) Cena
 - b) Kvalita
 - c) Modní trend (bioprodukty atd)
 - d) Vysoká poptávka po produktu
 - e) Promo akce Výhodné podmínky od dodavatele (slevy, servis atd)
4. Slyšel/la jste už někdy o výrobcích **Camu Camu**?
 - a) Ano
 - b) Ne (pokračujte otázkou č.7)



5. Jak jste se o produktu dozvěděl/la?
 - a) Tištěná reklama

- b) Internet
 - c) Doporučení od kolegů, známých
 - d) Dodavatel
6. Jaká forma reklamy by Vás oslovila?
- a) Letáčky v obchodě
 - b) Inzerce v časopisech
 - c) Rádio & Televize
 - d) Osobní prodej
 - e) Nabídka výrobků zdarma pro vyzkoušení
 - f) jiná _____
7. Měli byste zájem **Camu Camu** vyzkoušet?
- a) Ano
 - b) Ne
 - c) Nevím



8. V jaké podobě by pro Vás bylo nejpohodlnější výrobek prodávat?
- a) Tableta
 - b) Rozpustná forma (syký prášek)
 - c) Čerstvá šťáva
 - d) Koncentrát
9. Jaká nákupní cena, za jedno balení (100 tablet) **Camu Camu**, by pro Vás byla dostupná?
- a) 150 - 199 Kč
 - b) 200 – 249 Kč
 - c) 250 – 350 Kč
 - d) 350 – 450 Kč



10. Upřednostnil/la byste nákup certifikovaných výrobků Camu Camu před necertifikovanými?
- a) Ano
 - b) Ne

Děkuji za Váš čas a ochotu podílet se na marketingovém průzkumu produktu Camu Camu

na českém trhu. Tento dotazník byl vytvořen pod záštitou Institutu Tropů a Subtropů, České Zemědělské Univerzity v Praze. Bude sloužit jako studijní podklad pro diplomovou práci, která se zabývá marketingovým průzkumem trhu s tropickými produkty a možnostmi uvedení výše zmíněného produktu na český trh.

Dotazník sestavila Bc. Kateřina Steklá.

Appendix X. Questionnaire Noni product (wholesalers who not offer Noni)



Noni je plod keře *Morinda citrifolia* původem z deštných pralesů v Amazonii, rostoucí volně v přírodě v tropických a subtropických oblastech světa. Výzkumy ukazují, že plod **Noni** má mimořádné léčivé vlastnosti, které mají příznivé účinky na lidský organismus. Produkty **Noni** obsahují chemicky neošetřenou sušinu plodů rostliny *Morinda Citrifolia* L. z ostrova Havaii, které obsahují unikátní směs více než 140 druhů vitaminů, stopových prvků, enzymů, alkaloidů, polynenasycených mastných kyselin a dalších pro zdraví významných látek. Tento přípravek se osvědčil i v klinické léčebné praxi při terapii poruch imunity, tuberkulózy, nemocí srdce a krevního oběhu a některých typů zhoubných nádorů. Studie ukazují, že **Noni** snižuje cholesterol, krevní tlak, působí na ekzémy (protibakteriálním a protialergenním působením) nebo podporuje detoxikaci jater. Řada účinných látek, které také *Morinda citrifolia* obsahuje (damnacanthal, proxeronin, aj.) nebyly v jiných rostlinách dosud objeveny a nelze je zatím ani v čisté podobě z rostliny extrahovat, ani synteticky vyrobit. **Noni** se na trhu objevuje především jako 100% čistě přírodní ovocná šťáva, vitamínová tableta nebo ovocný koncentrát.

1. Jak dlouho je Vaše firma na českém trhu?
 - a) méně než 1rok
 - b) 2 – 6 let
 - c) 7 – 10 let
 - d) 11 let a více

2. Jaký je typ obchodu, který provozujete?
 - a) Lékárna
 - b) Specializovaný obchod se zdravou výživou
 - c) Supermarket
 - d) Hypermarket
 - f) Internetový obchod
 - g) Jiný

3. Co rozhoduje o výběru produktů, které byste chtěli zákazníkům nabízet? (seřad'te podle preference školním známkováním; 1=nejlepší)
 - a) Cena
 - b) Kvalita
 - c) Modní trend (bioprodukty atd)
 - d) Vysoká poptávka po produktu
 - e) Promo akce
 - f) Výhodné podmínky od dodavatele (slevy, servis atd)

4. Slyšel/la jste už někdy o výrobcích **Noni**?
- a) Ano
 - b) Ne (pokračujte otázkou č.6)



Morrinda citrifolia – Noni

5. Jak jste se o produktu dozvěděl/la?
- a) Tištěná reklama
 - b) Internet
 - c) Doporučení od kolegů, známých
 - d) Dodavatel

6. Jaká forma reklamy by Vás oslovila?
- a) Letáčky v obchodě
 - b) Inzerce v časopisech
 - c) Rádio & Televize
 - d) Osobní prodej
 - e) Nabídka výrobků zdarma pro vyzkoušení
 - f) jiná _____

7. Měli byste zájem tento výrobek vyzkoušet?
- a) Ano
 - b) Ne
 - c) Nevím



Plod keře (Noni) *Morrinda citrifolia*

8. V jaké podobě by pro Vás bylo nejpohodlnější **Noni** prodávat?
- a) Tableta
 - b) Rozpustná forma (sypký prášek)
 - c) Čerstvá šťáva
 - d) Koncentrát



9. Jaká nákupní cena, za jedno balení (100 tablet) tohoto výrobku, by pro Vás byla dostupná?
- a) 150 - 199 Kč
 - b) 200 – 249 Kč
 - c) 250 – 350 Kč
 - d) 350 – 450 Kč



10. Upřednostnil/la byste nákup certifikovaných výrobků **Noni** před necertifikovanými?
- a) Ano
 - b) Ne

Děkuji za Váš čas a ochotu podílet se na marketingovém průzkumu produktu Noni na českém trhu. Tento dotazník byl vytvořen pod záštitou Institutu Tropů a Subtropů, České Zemědělské Univerzity v Praze. Bude sloužit jako studijní podklad pro diplomovou práci, která se zabývá marketingovým průzkumem trhu s tropickými produkty a možnostmi uvedení výše zmíněného produktu na český trh.

Dotazník sestavila Bc. Kateřina Steklá.

Appendix XI. Questionnaire Camu Camu product (wholesalers who offer Camu Camu)

1. Jak dlouho je Vaše firma na českém trhu?
- a) méně než 1rok
 - b) 2 – 6 let
 - c) 7 – 10 let
 - d) 11 let a více

2. Jak jste se dozvěděli o produktech Camu Camu?

- a) Tištěná reklama
- b) Internet
- c) Přímá nabídka od distributora
- d) Jinak _____

3. Na jaké odběratele se soustředíte?

- a) Lékárny
- b) Specializované obchody se zdravou výživou
- c) Internetové obchody
- d) Obchodní řetězce
- e) Jiné _____
- e) Nemám cílové odběratele

4. V jaké formě výrobek prodáváte?

- a) Sypký prášek
- b) Tablety
- c) Jiný (uved'te jaký) _____

5. V jakém balení Camu Camu nakupujete?

Uved'te prosím _____

6. V jakém balení produkt prodáváte?

Uved'te prosím _____

7. Jak často výrobky od dodavatele nakupujete ?

- a) Týdně
- b) Jednou za 14 dní
- c) Jednou za 3 týdny
- d) Jednou za 4 týdny
- e) Měsíčně
- f) Méně než jednou za měsíc

8. Jaká je cena, za kterou produkt nakupujete?

Uved'te prosím _____

9. Za jakou cenu produkt prodáváte?

Uved'te prosím _____

10. Jakého máte dodavatele a odkud dovážíte?

Uved'te prosím _____

11. Jak výrobky propagujete?

- a) Letáčky
- b) Inzerce v časopisech
- c) Rádio & Televize

- d) Osobní prodej
- e) Nепropaguji
- f) Jiná forma _____

12. Kde máte zboží vystaveno ?

- a) Na prodejním pultu
- b) Výloha
- c) Internetová stránka
- d) Jinde _____
- e) Není viditelně vystaveno

13. Upřednostňujete nákup certifikovaných výrobků Camu Camu před necertifikovanými?

- a) Ano
- b) Ne

Děkuji za Váš čas a ochotu podílet se na marketingovém průzkumu produktu Camu Camu na českém trhu. Tento dotazník byl vytvořen pod záštitou Institutu Tropů a Subtropů, České Zemědělské Univerzity v Praze. Bude sloužit jako studijní podklad pro diplomovou práci, která se zabývá marketingovým průzkumem trhu s tropickými produkty a možnostmi uvedení výše zmíněného produktu na český trh.

Dotazník sestavila Bc Kateřina Steklá.

Appendix XII. Questionnaire Noni product (wholesalers who offer Noni)

1. Jak dlouho je Vaše firma na českém trhu?

- a) méně než 1rok
- b) 2 – 6 let
- c) 7 – 10 let
- d) 11 let a více

2. Jak jste se dozvěděli o produktech Noni?

- a) Tištěná reklama
- b) Internet
- c) Přímá nabídka od distributora
- d) Jinak _____

3. Na jaké odběratele se soustředíte?

- a) Lékárny
- b) Specializované obchody se zdravou výživou
- c) Internetové obchody
- d) Obchodní řetězce
- e) Nemám cílové odběratele
- f) Jiné _____

4. V jaké formě výrobek prodáváte?

- a) Ovocná šťáva
- b) Ovocný koncentrát
- c) Tablety
- d) Jiný (uved'te jaký) _____

5. V jakém balení Noni nakupujete?

Uved'te prosím_____

6. V jakém balení produkt prodáváte?

Uved'te prosím_____

7. Jak často výrobky od dodavatele nakupujete ?

- a) Týdně
- b) Jednou za 14 dní
- c) Jednou za 3 týdny
- d) Jednou za 4 týdny
- e) Měsíčně
- f) Méně než jednou za měsíc

8. Jaká je cena, za kterou produkt nakupujete?

Uved'te prosím_____

9. Za jakou cenu produkt prodáváte?

Uved'te prosím_____

10. Jakého máte dodavatele a odkud dovážíte?

Uved'te prosím_____

11. Jak výrobky propagujete?

- a) Letáčky
- b) Inzerce v časopisech
- c) Rádio & Televize
- d) Osobní prodej
- e) Nепropaguji
- f) Jiná forma_____

12. Kde máte zboží vystaveno ?

- a) Na prodejním pultu
- b) Výloha
- c) Internetová stránka
- d) Jinde_____
- e) Není viditelně vystaveno

13. Upřednostňujete nákup certifikovaných výrobků Noni před necertifikovanými?

- a) Ano
- b) Ne

Děkuji za Váš čas a ochotu podílet se na marketingovém průzkumu produktu Noni na českém trhu. Tento dotazník byl vytvořen pod záštitou Institutu Tropů a Subtropů, České Zemědělské Univerzity v Praze. Bude sloužit jako studijní podklad pro diplomovou práci, která se zabývá marketingovým průzkumem trhu s tropickými produkty a možnostmi uvedení výše zmíněného produktu na český trh.

Dotazník sestavila Bc. Kateřina Steklá.