

BIBLIOGRAPHY

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Adviser: Jovita M. Sim, MSc.

ABSTRACT

This study was conducted to provide more information on the market and market potentials of the product.

Processed foods by the “Mountain Fresh” is the great source of generating income in Barangay Imugan, Santa Fe, Nueva Vizcaya. This study was conducted to help the Ikalahan to enhance of promotion of their products. Respondents of the study included the processor, market outlets, traders and consumers in Santa Fe, Imugan, Bayombong, Nueva Ecija; La Trinidad Benguet, Baguio City, and Manila.

These processed foods were sold to market outlets. The end users were the government employees, private employees, students, tourists, and households.

Processors were increasing their volume of production during holidays and if there are orders. Market outlets and the processor sold the most during December.

Household consumed and purchased processed foods primarily on the taste and quality. However they did not increase their consumption they just buy every month and



year because of the price. Processors were affected if there was shortage of raw materials to process, in which in turn affected the volume of processed foods they will produce.

This processed foods of Ikalahan or “Mountain Fresh” should be promoted and advertised in order to create demand for the product and increase the production.



INTRODUCTION

Rationale

The trustees and staff of Kalahan realized that the utilization of wild fruits was a promising way for the population to obtain a sustainable livelihood without damage to the forests. They established the Food Processing Center in Imugan in 1974 in order to provide employment for the Ikalahan and to improve their economic condition. This Food Processing Center used to produce jams, jelly, butter, vinegar and marmalades preserves and related products using wild fruits from the forests.

These products are marketed under the “Mountain Fresh” label. This fruits are mainly grown in the forests. It is a wild fruits from the forest and some are produce from the farms. It is a one great source of income generating program or livelihood in Barangay Imugan, Santa Fe, Nueva Vizcaya. Wild fruits are a unique; growing in the locality which some of the fruits cannot be seen in other place. This wild fruit products is related to the Indigenous people such as the “weed tree” known as dagwey, bi-holak or dikay, hibiscus, wild berries, passion fruit, guava and santol which is processed and produced by the Ikalahan which otherwise reffered as the kalanguya which means “forests” while the prefix I means “from” or living in, which is a subgroup of the Ifugao tribe in the Northern part of the Philippines. They live in villages nestled in the Caraballo Mountains located 250 kilometers North of Manila and 7 kilometers of Santa Fe Highway.

This research work looked into how far have the “Mountain Fresh” products have moved on from the place to their different market outlets.



Statement of the Problem

This study, intended to answer the following questions:

1. What are the products that are processed by the “Mountain Fresh”?
2. What are the sources of raw materials and other ingredients?
3. Who are the actors of the supply chain?
4. Where are the market outlets of the processed foods produced by the “Mountain Fresh”?
5. What is the geographical flow of the product?
6. What are the costs incurred in production and marketing activities?

Objectives of the Study

This study aimed to answer the following objectives:

1. To identify the products that is being processed by the “Mountain Fresh”;
2. To identify what are the sources of raw materials and other ingredients;
3. To identify the market actors of the supply chain;
4. To identify the market outlets of the processed foods produced by the “Mountain Fresh”;
5. To determine the geographical flow of the product; and
6. To determine the cost incurred in production and marketing practices.



Importance of the Study

The study on supply chain would provide more information on the market and market potentials of the product that is produced by the “Mountain Fresh” in Barangay Imugan, Santa Fe, Nueva Vizcaya. Information can be a basis on the improvement of production and marketing of “Mountain Fresh” products. The information gathered from the study serves as a guide for those who are interested in the processing of wild fruits.

Furthermore, the overall result of the study provides important insights to concerned groups involved in the processing. Supply chain study is very essential in identifying market and market potential of a product. It is looking into what market have not been explored and how efficient the marketing system.

Furthermore the result could be a basis for other entrepreneurs and for other researchers who are interested on supply chain research.

Scope and Limitation of the Study

The study focused on the supply chain of process foods produced by the “Mountain Fresh” in Barangay Imugan, Santa Fe, Nueva Vizcaya.



REVIEW OF LITERATURE

Supply Chain

Supply chain is a complex and dynamic supply and demand network. It is a system of organizations, people, technology, activities, information and resources involved in moving a product or service from supplier to customer. Supply chain activities transform natural resources, raw materials and components into a finished product that is delivered to the end customer (Chopra, 2007).

Supply chain consists of all parties involved, directly or indirectly in fulfilling a customer request. The supply chain includes not only the manufacturer and suppliers, but also transporters, warehouses, retailers and even customer themselves. Within each organization, such as manufacturer, the supply chain includes all functions involved in receiving and fulfilling a customer request. These functions include, but are not limited to, new product development, marketing, operations, distribution, finance, and customer service (Chopra, 2007).

Supply Chain begins with ecological and biological and political regulation of natural resources, followed by the human extraction of raw material, and includes several layers of storage facilities ever decreasing size and even more remote geographical locations, and finally reaching the consumer (Chopra, 2007).

Phases in a Supply Chain

Supply chain strategy or design. During this phase, given the marketing and pricing plans for a product, a company decides how to structure the supply chain over the next several years. It decides what the chains configuration will be, how resources will be



allocated and what processes each stage will perform. Strategic decisions made by companies include whether to outsource or perform a supply chain function in-house, the location and capacities of production and warehousing facilities, the products to be manufactured or stored at various locations, the modes of transportation to be made available along different shipping legs, and the type of information system to be utilized. A firm must ensure that the supply chain configuration supports its strategic objectives and increases the supply chain surplus during this phase (Meindl, 2007).

Supply chain planning. For decisions made during this phase, the time frame considered is quarter to a year. Therefore, the supply chain configuration determined in the strategic phase is fixed. This configuration establishes constraints within which planning must be done. The goal of planning is to maximize the supply chain surplus that can be generated over the planning horizon given the constraints established during the strategic or design phase. Planning includes making decisions regarding which markets will be supplied from which locations, the subcontracting of manufacturing, the inventory policies to be followed, the timing, and size of marketing and price promotions. Planning establishes parameters within which a supply chain will function over a specified period of time (Meindl, 2007).

Supply chain operation. During this phase companies make decisions regarding individual customer's orders. At the operation level, supply chain configuration is considered fixed and planning policies are already defined. The goal of supply chain operations is to handle incoming customer's orders in the best possible manner. During this phase, firms allocate inventory or production to individual orders, set a date that an order is to be filled, generate pick lists at a warehouse, and allocate an order to a particular



shipping mode and shipment, set delivery of trucks, and the place replenishment orders. Because operation decisions are being made in the short term (minutes, hours, or days), there is less uncertainty about demand information. Given the constraints established by the configuration and planning policies, the goal during the operation phase is to exploit reduction of uncertainty and optimize performance. The design, planning and operation (Meindl, 2007).

Supply Chain Management

Supply chain management is the management of a network of interconnected businesses involved in the provision of product and service packages required by the end customers in a supply chain. Supply chain management spans all movement and storage of raw materials, work-in process inventory, and finished goods from point of origin to point of consumption (Jacoby, 2009).

Supply chain management (SCM) is the management of a network of interconnected businesses involved in the provision of product and service packages required by the end customers in a supply chain. Supply chain management spans all movement and storage of raw materials, work-in-process inventory, and finished goods from point of origin to point of consumption (Halldorsson, 2007).

The supply chain encompasses every effort involved in producing and delivering a final product or service, from the supplies supplier to the customer's customer. Supply chain management includes managing supply and demand, sourcing raw materials and parts, manufacturing and assembly, warehousing and inventory tracking, order entry and



order management, distribution across all channels, and to the customer (Richardson, 2004).

It is the set of approaches utilized to efficiently integrate suppliers, manufacturers, warehouses, and stores; so that the merchandise is produced and distributed at the right quantities, to the right locations, and at the right time, in order to minimize system wide costs while satisfying service level requirements (McGraw, 2002).

First supply chain management takes into consideration every facility that has impact on cost and plays a role in the product conform to customer requirements, from supplier and manufacturing facilities through warehouses and distribution centers to retailers and stores. Indeed, some supply chain analysis, it is necessary to account for the suppliers' suppliers and the customers' customers because they have an impact to the supply chain performance (McGraw, 2002).

Second, the objective of supply chain management is to be efficient and cost effective across the entire system; total system wide costs, from transportation and distribution to inventories of raw materials, work in process, and finished goods, are to be minimized. Thus the emphasis is not simply minimizing transportation cost or reducing inventories but, rather, on taking a systems approach to supply chain management (McGraw, 2002).

Finally, because supply chain management revolves around efficient integration of suppliers, manufacturers, warehouses, and stores. It encompasses the firm activities at many levels, from the strategic level through the tactical to the operational level (McGraw, 2002).



METHODOLOGY

Locale and Time of the Study

The study was conducted in Barangay Imugan, Santa Fe, Nueva Vizcaya where the processing of foods is located and to the different market center. It was conducted from December 2012 to January 2013.

Respondents of the Study

The consumer's processors and other market actors were the respondents of the study. Complete enumeration was employed for the processor. Random sampling was employed in the selective market actors and consumers as respondents.

Data Gathering Procedure

The data were collected through a semi structured survey questionnaire supplemented with personal interview.

Data Gathered

The data gathered includes list of products produced by "Mountain Fresh", sources of raw materials and other ingredients, the production cost, market outlet, market terms, conditions prices and the geographical flow of products.

Data Analysis

The data gathered were tabulated and analyze according to the objectives and frequency analysis was in data analysis.



RESULTS AND DISCUSSION

Overview of the Mountain Fresh Processing

The Ikalahan Educational Foundation or “Mountain Fresh” started processing fruits in the year 1980’s through researching from the internet until they discovered that wild fruits can be processed into jams, jellies, juices and others. Their first products were guava jelly, guava jam and guava butter, encouraged by the favorable acceptance of their first products, the KEF started processing other products. These products include dagwey preserves, dagwey jelly, jam and spread, dikay jelly, ginger tea and jelly, passion fruit jelly and juice, hibiscus jelly, and santol jam, jelly and spraed where their products are marketed under the “Mountain Fresh” label. The term of operation is corporation and in promoting their product they are participating in a trade fair. They had been involved in processing for twenty two years and start selling in the year 1981 until now and their main products are the jams and jellies.

Profile of Respondents

Table 1 presents the profile of the respondents (processors, traders, market outlets and consumers) as to their age, gender, household size, household income, educational attainment, ethnic affiliation, religious affiliation and occupation.

Age. The processor is 55 years of age. Thirteen of the consumers is within the age bracket of 15-20 years old with 31.25%, 7 were in the age bracket of 30-50 years old with 22%, six in the age bracket of 40-50 years old (18%), five were in the age bracket of 20-



30 years old and four were in the age bracket of 50-61 years old (13%). Result shows that most of the respondents are young to middle age.

Gender. Table 1 shows that in the market outlet four (80%) were female, twenty three (72%) consumers were female and in the trader one (50%) were female and male. This shows that in the market outlet and consumer's female outnumbered male.

Household size. Table 1 shows that majority of the respondents have a 4-6 members of every family (44%), twelve (37.5%) has a 2-4 members of every family, six (19%) has a 6-8 members of every family.

Household income. Majority of the respondent's income range to 1,000-4,000 pesos seventeen (53.13%), ten (31.25%) range to 4,000-8,000 pesos and few of them range to 8,000-12,000.

Ethnic affiliation. Table 1 shows that 19 consumers were kalanguya with 59%, 13 (41%) were ibaloi, in market outlet two were ilocano and tagalog with 40% and the other respondents were kankana-ey and kalahan.

Religious affiliation. Table 1 show that majority of the consumers were UCCP 21 with 66%, market outlet were Roman Catholic with (80%).

Educational attainment. Table 1 shows that the consumers reached college level with 47% and college graduate 10 (31%), in the market outlet and traders majority of them were college graduate (100%).

Occupation. Most of the respondents are still students 10 (32%), and in market outlets are private employee (60%) and the other consumers were nun laborer, farming, businessman/women and housekeeper as shown in table 1.



SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The study was conducted in Imugan, Santa Fe, Nueva Vizcaya to determine the sources of raw materials and other ingredients, the actors of supply chain, the market outlets, geographical flow of the product, costs incurred in the products and marketing activities and the income derived from the production and marketing.

The “Mountain Fresh” or Ikalahan Educational Foundation is a corporation that is located in Imugan, Santa Fe, Nueva Vizcaya which produces different kinds of processed fruits such as guava jam, jelly and juice, dagwey prones, jelly and jam, bignay juice, jam and jelly, santol jam, jelly and spread, hibiscus jelly, dikay/biho-lak jelly and passion fruit juices.

The actors in the supply chain were the processors, tradres, market outlets and the consumers.

Raw materials of “Mountain Fresh” (fruits), are source out from their nearby barangay, namely Imugan, Malico, Baracbec, Unib, Sta Rosa, Baeneng and San Nicolas and from the province of Pangasinan and Quirino (fruits) and in Manila forth bottles, and plastic bottles. Their other ingredients are citric acid, pectin and spring water.

The mode of procurement of market outlets and traders were delivered by the processor and picked-up by the traders in the processing area.

Product outlets were Full of Grace, Non Timber Forest Product, Life Giving (diosis), Mountain Grown and BSU Marketing Center.

Consumers buy directly from processor or directly from market outlets.



The problems encountered by the processors were lack of equipment, raw materials, input materials and shortage of raw materials (fruits) which affect their production, lack of workers and the seasonality of the fruits.

The problems encountered by the market outlets were high price, limited demand due to high price, not familiar with the fruits that are used in the product, and low sales turnover, shorter life span of some products.

Conclusions

Based on the findings of the study the following conclusions were made:

1. There are many kinds of wild fruits that is being processed and produced by the Ikalahan or “Mountain Fresh”. These products are not known by consumers, thus low sales turn over. Only the known fruits like guava and santol have faster sales turn over; and
2. Market of products is limited because they are unique made of indigenous fruits.

Recommendations

“Mountain Fresh” should develop a strategy to promote product to create demand for this products especially the indigenous fruits.

Products are of good quality but need to explore market potentials and position the product in the market based on how they would like their products to be known.



LITERATURE CITED

- ANONYMOUS. 2012, Retrieved August 24, 2012, from [http:// www.supply chain zjipower.com](http://www.supplychainzjipower.com).
- ARMSTRONG, G. 2006. Marketing. Prentice hall, Inc. Upper Saddle River New Jersey 7th edition. Pp.40-45.
- BROWN, L. 2006. Marketing. Pearson Education Australia/ Prentice Hall. 7th edition. P.17.
- CHOPRA, S. 2007. Supply Chain Management and Demand. Published by McGraw-Hill/Irwin, a business unit of the McGraw-Hill companies, Inc., 1221 Avenue of the Americas, New York, NY 10020. Copyright 2007 by the McGraw-Hill companies, Inc. Pp.200-233.
- HALLDORSSON, A. 2007. Complementary Theories to Supply Chain Management. Supply Chain Management: An International Journal, Volume 12 Issue 4. Pp. 284-296.
- JACOBY, D. 2009. Guide to Supply Chain Management: How Getting it Right Boosts Corporate Performance (The Economist Books), Bloomberg Press; First Edition.
- KOTLER, P. 1989, 2006. Marketing Management. Prentice hall. Inc. Englewood Cliffs. N.J., USA. P.5.
- KURTZ, D. 2010. Contemporary Marketing Mason. OH South western Cengage Learning. P.15.
- LAUDAN, R. 2010. In "Praise of Fast Food". UTNE Reader. Retrieved September 24, 2010.
- McGRAW, H. 2002. "What is Supply Chain Management". Retrieved October 3, 2011, from [highered. mcgraw.hill.com](http://highered.mcgraw-hill.com).
- MEINDL, P. 2007. Supply Chain Management: Strategy, Planning and Operations, Prentice Hall. Pp.45-47.
- NAGUMEY, A. 2006 Supply Chain Network Economics: Dynamics of prices flows profits, from [http://supply chain.com](http://supplychain.com).
- RICHARDSON, T.G. 2004. Supply Chain Management. Retrieved August 30.2011, from <http://wikipower.com>.



SHAPIRO, L. 2005. *Something From The Oven: Reinventing Dinner in 1950's America*.
New York: Penguin.

WEILAND, A. 2007. *Supply-Chain-Management in Stürmischen Zeiten*. Berlin. Pp. 120-122.

