

BIBLIOGRAPHY

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Adviser: Jovita M. Sim, MSc.

ABSTRACT

The study focused on the supply chain of banana produced in Cabarroguis Quirino. The study was conducted in the different barangays in Cabarroguis.

The data were gathered through personal interview with the use of survey questionnaires. Sixty producers, twenty traders, four processors and thirty consumers served as a respondent in the study. Majority of the producers were middle to senior age. Varieties of banana produced were saba, lacatan and latundan. Majority of the traders buy and sell per hundreds, sell to retailers per hundred and the retailers sell on per kilogram. Banana produced in Quirino province are picked-up by trucker/traders and are distributed to the different market destinations like Baguio City, Urdaneta, Isabela and Divisoria in Manila. Selling is picked-up and mode of payment is cash.

Actors in the supply chain were the producers, trucker/traders, wholesaler retailers, retailers and consumers.

Production problem encountered by producers was pests and diseases. Problem in marketing includes price fluctuation, lack of market outlet, decreased in market demand and high market fees.



INTRODUCTION

Rationale

Banana is one of the most common and widely grown fruit crops in the Philippines. It is also one of the country's major dollar earners and has consistently ranked next to coconut oil and prawns in terms of value earnings during the last five years. Banana is the most economically important crop in the Philippines and the locally grown fruit available year round. They are grown in diverse environments in the country, from lowlands, flat and sloping uplands to the marginal hillylands, Latundan, lakatan and saba are mostly grown in the backyard or as a component in an intercropping scheme with minimum care and management.

Banana is a tropical plant growing in all regions of the Philippines. The soil and climate of the country is suitable for its commercial production. It is an annual crop that bears fruit anytime of the year, as it is non-seasonal. Banana is an important source of income for small farmers who constitute 80% of the banana growers.

The province of Quirino is one of the producers of banana in the Philippines. In terms of commercial crops production, banana is the leading product of the province. Permanent crops such as banana are widely chosen as a source of income especially in the rural areas of the province. Its suitability to the type of soil in sloping terrain within the province has encouraged farmers to plant banana as an alternative source of income, aside from palay and corn. In the five municipalities of the province (except Saguday), produce banana the whole year round. In 2005, the province's total production of banana was 269,242 metric tons. In 2006, production reached 46,344 metric tons or 12.78% of the



regions harvest. This improved Quirino's rank nationwide, from 34th to 28th, realizing an average growth rate of 56.2%, the highest in the region in terms of production increment.

Cabarroguis is a 3rd class municipality in the province of Quirino, Philippines. It is the capital municipality of Quirino. According to the latest census, it has a population of 28,024 people and 5,336 households. The municipal area of Cabarroguis covers 26,902 hectares approximately. The area is further distributed into the seventeen (17) barangays comprising the municipality including barangay Didipio which remains to be in the municipality and the province of Nueva Viscaya and Quirino.



REVIEW OF LITERATURE

Banana

Banana is the common name for monocarp flowering plants of the genus *Musa* and for the fruit they produce. It is one of the oldest cultivated plants. They are native to tropical South and Southeast Asia, and are likely to have been first domesticated in Papua New Guinea. Today, they are cultivated throughout the tropics. They are grown in at least 107 countries, primarily for their fruit, and to lesser extent to make fiber, banana wine and as ornamental plants. Its fruits, rich in starch, grow in clusters hanging from top of the plant. They come in a variety of sizes and colors when ripe, including yellow, purple, and red. The scientific names of bananas are *Musa acuminata*, *Musa sapientum*. Banana has a various uses. The ripe fruit is pureed, candied and preserved in various forms when not eaten fresh. Its extract is used in the manufacture of catsup, vinegar, and wine. The unripe fruit is powdered and chipped.

Banana is a native to Southeast Asia where the climate is warm and humid. The most common variety grown in the Philippines are “Saba”, “Lacatan”, “Latundan”, “Bangulan”, “Cavendish”.

“Saba” grows to as tall as 20 feet, fruit is angular; has thick peel that is green when unripe, yellow when ripe; flesh is white, gestation period is 15-16 months.

“Lacatan” grows to a height of five to nine feet; fruit is round, seedless; has thick peel that is green when unripe, yellow-orange when ripe; gestation period is 14-15 months.

“Latundan” grows six to ten feet tall; fruit is round; has a thin peel that is green when unripe, yellow when ripe; flesh is white when ripe; gestation period is 12 months.



“Bangulan” fruit is round, very sweet, seedless, and easily rots; has thick peel that is green when unripe and remains green when ripe; flesh is white when ripe; gestation period is 12 months.

“Cavendish” reaches five to ten feet high; fruit is bigger than Bangulan; peel is green when unripe, yellow when ripe; flesh is yellow when ripe; export quality; gestation period is six to eight months. Other varieties grown in the country of “Morado”, “Pitigo”, “Los Banos”, “Senorita”, “Tindok”, “Granda”, and “Tumok”.

Production

According to Kotler (1989), a product is something that is viewed as capable of satisfying a want. A want is described as stated of felt deprivation in a person. The deprivation produces discomfort. The want energizes the person and puts him into an active state and gives him/her direction. The person will perceive certain things outside of himself that would satisfy his wants. Kotler also mentioned that product is anything that can be offered to market for attention, acquisition, use or consumption that might satisfy a need or want.

Banana is one of the best known fruit of the tropics and the most widely eaten, usually refers to soft, sweet, dessert, bananas, it contains good amount of health benefiting anti-oxidants, minerals and vitamins (Mckinley, 2008).

Banana production is still considered a small-scale industry where varieties like “Saba”, “Lakatan” and “Latundan” are planted along the periphery of the farms. This naturally generates a minimal production. The country would be able to capture a bigger share of the market if only it will able to produce more. In line with this, there were a



number of research and development (R&D) that were undertaken to increase production to help farmers, developing technologies can be applied to small-scale farms.

Philippines are among the top five producers of fresh bananas in the world. Our fresh bananas are exported mostly to Japan, China, Korea, Taiwan, as well as the Middle East. That is why banana is the country's prime fruit commodity in terms of their commercial value and the size of the area they are planted.

Marketing and Demand of Banana

As cited by Caraan (2010), marketing is the process of determining the needs and wants of consumers and being able to deliver products that satisfy those needs and wants. It includes all of the activities necessary to move product from the producer to the consumer. Marketing is a bridge from the producer to the consumer.

Marketing is the process in society by which the demand structure for economic goods and services is anticipated and enlarged and satisfied through the conception, promotion, exchange and physical distribution of goods and services. Marketing is where the costumer and it is the costumer who in the end decides the fate of the business (Miranda, 1983).

Moreover, marketing has been defined by the president of General Food Corporation as the creation and delivery of a standard living. It gives emphasis on the creative factor in marketing because of the following reasons: Creative pricing needs to penetrate over expanding market levels, creation of over increasing variety of convenience for the consumer, and deliberate fostering of an attitude of being all times creatively dissatisfied with what we know about marketing and markets (Miranda, 1983).



In the local market, banana; particularly “Saba” is now promoted as an alternative carbohydrates source to rice as a part of the government’s food security thrust. Thus, efforts are now underway to boost production and not only support of food security but also to address supply shortages for the processing and export industries (Macabasco, 2011).

Local demand of bananas in general has remained strong. This is because bananas are the one of the most widely eaten fruits in the country; they are affordable, accessible and available all year round. Per capita consumption stood at 55 kilograms in 2009, with average growth of 12.5% over past five years (Macabasco, 2011).

Target Market

One of the most important components of estimating the market potential for a business is to determine its target market. A target market can be thought of as the costumers who are most likely to buy from you and generally are described using demographic variables (gender, age, education) as well as psychographic variable (lifestyle and belief system variables). In many cases, a business may have more than one target; truck buyers, luxury car buyers, economy buyers. Your business should be able to develop specific profiles for each of your target market using demographic and psychographic variable (Cayosen, 2012).

Market is a sphere within which price is making forces operate and in which exchanges of title end to be accomplished with or without actual movement of the goods affected (Miranda, 1983).



METHODOLOGY

Locale and Time of the Study

The study was conducted in Cabarroguis, Quirino (production area) and to the areas where banana is supplied and marketed. Cabarroguis is composed of seventeen barangays namely; Banuar, Burgos, Calaocan, Del Pilar, Dibibi, Dingasan, Eden, Gomez, Gundaway (poblacion), Mangandingay (poblacion), San Marcos, Santo Domingo, Tucod (including Didipio), Villamor, Villa Pena (Capellangan), Villa Rose, and Zamora. Majority of these areas were planting banana.

The study was conducted on December, 2012.

Respondents of the Study

The respondents of the study were the 60 producers of banana, the market outlet where product is supplied (20) and 30 consumers or buyers of the product. A total of 110 respondents.

Data Gathering Procedure

A survey questionnaire was used as research instrument of the study. A personal interview was also conducted to validate result.

Data Gathered

The data gathered includes the geographical flow of banana produced in the area, actors in the supply chain, production and marketing practices.

Data Analysis

The data gathered were tabulated and interpreted according to the objectives of the study. Data were analyzed using frequency analysis and supply chain mapping was done.



RESULTS AND DISCUSSION

Profile of the Producers

Table 1 presents the demographic profile of the respondents as to their age, educational attainment and years of producing banana.

Age. Age of the respondents ranged from 21 to 60 years old. A greater number (37%) of the respondents were aged 41-50 years old. Seventeen (28.3%) of the respondents were aged 51-60 years old. Fifteen (25%) were aged 31-40 years old. Six (10%) were aged 21-30 years old. This result implies that most of the banana producers are middle to senior age.

Educational attainment. The respondents have attended formal education, some have even finished a college degree. Twenty two (36.7%) of the respondents had reached elementary level. Twenty (33.3%) had reached high school level. Twelve (20%) of the respondents who had finished their college degree and six (10%) had reached college but did not finish their degree.

Number of years in producing banana. Years of experience of the farmers in commercial banana production ranged from 1 to 40 years. A greater number of the respondents (37%) had 11 to 20 years of experience in banana production, 33% were into banana production for 21 to 30 years, 22% had 1 to 10 years of experience and 8% had 31 to 40 years in banana production. Result implies that the farmers were engaged in commercial banana production for a long period which may indicate that they have enough knowledge and skills in production and may also be in marketing.



SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The study focused on the supply chain of banana produced in Cabarroguis Quirino. The study was conducted in different barangays of Cabarroguis. The study aimed to; identify the types/varieties of banana produced in Cabarroguis Quirino; identify the actors involved in the supply chain; identify the product and payment flow and lastly determine the problems and issues in production and marketing.

The data were gathered through survey questionnaire and personal interview with the respondents. Sixty producers, twenty traders and thirty consumers served as respondents of the study. Actors in the supply chain include farmers, trucker-traders, wholesalers, retailers and consumers.

The average volume sold per time per farmer is 3,232 pieces for saba variety, 1,859 pieces for lakatan, and 1,993 for latundan. While the volume purchase by truckers/traders per time is 27,050 pieces for saba variety, 5,950 for lakatan and 14,970 for latundan. Lakatan commands a higher price at 109 pesos per hundred and selling price is 216 pesos per hundred. Saba had the lowest buying price but selling price is higher than latundan.

Mode of payment is cash upon picked-up. Only one farmer sell by consignment.

Farmers/banana producers sell directly to the truckers-traders-wholesalers and truckers-traders transport these products to the different market destinations and distribute to the wholesaler –retailers and retailers. From the retailers the products are sold directly to consumers. The main problem encountered by producers in banana is the pest and diseases which affect their income because of low marketable yield.



Conclusions

Based on the results the following conclusions were drawn:

1. There are 5 actors in the supply chain the farmers, truckers/traders, wholesalers, retailers and consumers.
2. Price depends on the supply and demand schedule but are dictated by the truckers/traders.
3. The trucker/traders buy directly from the farmers and are responsible in the distribution of the product to the different market destinations.

Recommendations

Based on the results, the following are recommended:

1. Continuous research and development should be done to develop more technology on production especially on the control of pest and diseases since the presence, of banana Bunchy Top virus referred to as “tungro” in the area is becoming visible as mentioned by some farmers.
2. As mentioned by the producer, there should be standard measurements because the product is bought by the truckers on per hundred but the retailers are selling on per kilo basis.
3. Policies should be established in on the standard measurements and also on trading activities to safeguard farmers/producers.
4. Production of banana in Quirino province, is a rising industry, thus, the government support this industry by providing technical backstopping to the industry.



LITERATURE CITED

- BENJABUTR, B. 2011. "Supply Chain Operations". Retrieved July 29, 2011. From <http://www.scm-operations.com/p/site-policy.html>.
- CARAAN C.A. 2010. "Defining Marketing in the 21st century". Retrieved November 9, 2012. From <http://www.asbcentral.com/marketing%20pdf/what.pdf>.
- CAYOSEN, D. P. 2012. "Supply chain of Muscovado produced in Besao, Mountain Province". BS Thesis Benguet State University La Trinidad, Benguet. Pp. 16-17.
- DRABENSTOTT, T. 1999. "Purchasing and Supply Management". USA, South Western College Publishing. P. 56.
- E HOW MEDIA, 2012. "What is the importance of Supply Chain Management". Retrieved November 6, 2012. From www.ehow.com/how-to.html.
- KOTLER P. 1989. "Marketing Management". (Analysis, Planning and Control). P.5.
- MCGRAW, H. 2002. "What is Supply Chain Management?" Retrieved October 20, 2012. From highered.mcgraw-hill.com/sites/dl/free/1007298239x14502.
- MCKINLEY, D. 2008 "What are the benefits of eating bananas". Retrieved September 14, 2012. From <http://www.livestrong.com/article/518664>.
- MOCABASCO D.R. 2011. "Bureau of Agricultural Statistics". Retrieved November 14, 2012. From <http://www.ats-sea.agr.gc.ca/ase/5985-eng.htm#cn-tphp>.
- RICHARDSON, T. C. 2004. "Supply Chain Management". Retrieved October 30, 2012. From www.witiger.com.
- SIJSES, S. 2004. "Dynamics in Chain and Networks". Wageningen Academic Publishers. P.118.
- SIM, J.M. and L.N. TAGARINO, 2009. "Supply Chain Improvement for Fresh Vegetables in Selected Areas in Luzon". Pp5-9.
- WATER, D. 2012. "Structure of the Supply Chain". Retrieved November 13, 2012. From <http://www.cws.cengage.co.uk/waters/chapter%13a.d>.

