

BIBLIOGRAPHY

PACSI, RHEALYN Y. APRIL 2008. Production and Marketing Profile of Cassava in Benguet. Benguet State University, La Trinidad, Benguet.

Adviser: Jovita M. Sim, MSc

ABSTRACT

The study sought to determine the production and marketing profile of cassava in the different municipalities of Benguet. Specifically the study aimed to (1) determine the production profile of cassava in Benguet, (2) find out the production and marketing practices of the cassava growers and (3) identify the production and marketing problems of cassava growers in Benguet. There were 50 respondents of the study from different municipalities of Benguet. These composed of 17 respondents from Mankayan, 16 from Sablan, 14 from Kabayan and 3 from Kapangan, Benguet. The study was conducted from December 2007 to February 2008 with the use of survey questionnaire and personal interview.

Farming is the main source of livelihood of the respondents. Majority of the respondents were not member in any organizations or farmers/marketing association in their locality or municipality. All of the respondents financed their own production of cassava and (78%) of the respondents owned the land they are cultivating.

Majority of the cassava growers were devoting small farm area, less than 1 hectare for the cassava production and most of them usually plant in the month of May. The varieties of cassava grown in the province of Benguet are golden-yellow cassava

(miracle) and white cassava. Respondents practice the usual crop management practices such as land preparation and cultivation, weeding and pest control. The most common pest in cassava production is rat which is controlled by using a rat poison. The respondents produced an average of 19 sacks of cassava tuber. A one sack is approximately 50 kilograms. Respondents utilize cassava produce for home consumption; sell surplus and as animal feed.

Growers bring their produce to Baguio Hanger Market and local outlet or to their neighbors. One respondent operating more than 1 hectare of cassava, supply his product in Pangasinan. Growers sell cassava on consignment basis and set their own price. Promotion of cassava is by word of mouth or sales talk and by joining trade fairs/festivals in their own municipalities. The choice of buyers depends on the price offered, proximity, accessibility or convenience. Farm gate price for cassava ranged from 6-10 pesos per kilogram but could be as high as Php 40 per kilogram on retail price. Respondents produce only a small quantity to avoid surplus, some consume or processes the surplus.

The problems encountered by the respondents varies but the common problem mentioned was lack of information for standard pricing, limited market outlet, long maturity, rat, buyers control price, and far distance from farm to market. They also mentioned, lack of market information, short storage life and limited knowledge on post harvest handling.

To provide solutions to these problems; research and development for cassava, should be geared towards improving/prolonging, storage life, post harvest and utilization and improved varieties which are short maturing. Develop alternative outlet/alternative

uses of cassava. Market information should be established especially in standard pricing to encourage growers to plant cassava, thus increasing the production.



TABLE OF CONTENTS

	Page
Bibliography.....	i
Abstract.....	i
Table of Contents.....	iv
INTRODUCTION	
Rationale.....	1
Statement of the Problem.....	3
Objectives of the Study.....	4
Importance of the Study.....	4
Scope and Limitation of the Study.....	5
REVIEW OF LITERATURE.....	6
Production.....	7
Marketing.....	9
Problem Encountered.....	11
METHODOLOGY.....	14
Locale and Time of Study.....	14
Respondents of the Study.....	14
Data Collection.....	14
Data Gathered.....	17
Data Analysis.....	17

RESULTS AND DISCUSSION

Profile of the Cassava Producing Areas.....	17
Profile of the Respondents.....	22
Farm Area Devoted to Cassava Farming.....	26
Production Practices of the Respondents.....	26
Marketing Practices of the Respondents.....	31
Production and Marketing Problems.....	36
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....	41
Summary.....	41
Conclusion.....	42
Recommendation.....	43
LITERATURE CITED.....	44
APPENDICES.....	46
Appendix A. Letter to the Respondents.....	46
Appendix B. Letter to the Municipal Mayor.....	47
Appendix C. Questionnaire.....	48
Appendix D. Cassava Plantation.....	53

INTRODUCTION

Rationale

Cassava (*Manihot esculenta* Crantz, syn. *M. Utilissima* Pohl) is considered one of the important root crops in the Philippines. This plant belongs to *Euphorbiaceae* family. It is a dicotyledonous perennial shrub, which grows three to six feet tall. It has large palmate leaves. The edible portion is the root/tuber. However, the top is currently promoted as vegetable. The flowers are borne at the end of the stems and range in color from greenish purple to light greenish yellow (Stephens, 2007). It is also the only one of 98 species in its family that is widely cultivated for food production (O’Hair, 1995).

Cassavas are essential raw materials in manufacture of monosodium glutamate (MSG), of beer products, alcohol, ethanol, and vinegar as well as vermicelli (*noodle or sotanghon*) and a good source of starch for “sago” production. However, an important break through is using cassava in soy sauce making (Lasdacan, 1987). It is also used as filler to the content of pills and tablets and other pharmaceutical products and used as chemical raw materials in manufacture of plastics, and tanning of leather, coating, sizing and adhesives, paper making and textiles. In the Benguet, it is locally known as “*kamoteng kahoy* or *balinghoy*”. It is a long tropical perennial crop which is grown traditionally with limited inputs or unfertile/marginal soils and usually planted in backyards and harvested when the need for food or other delicacies like “*suman*”, cake, chips and other snack items arises. During “*Canao*”, the Igorot’s feast, cooked cassava roots are usually served as part of the menu.



Two thirds of the population of Benguet, depends on the root crops industry. The cassava production has reached its peak a long time ago and has declined since then. The rapid decline is exacerbated by diminishing planting areas and unawareness of consumers on the nutritional value of the cassava.

With the farmer facing these problems, it is very important that they should be reminded about the importance of the crop as buffer food and for traditional purposes so that they will produce more despite the pressing problems of land conversion and marketing of the crop in Benguet. Cassava processing could also be a potential livelihood.

Benguet Province is one of the six provinces under the Cordillera Administrative Region and composed of thirteen municipalities and 140 barangays comprising the municipalities of Benguet (Anonymous, 2007). Benguet is also known for its cassava production as fermented cassava products always available/displayed during festivals. The cassava is are often used mainly for human food either as substitute staple or snack item, since it is readily available and by using simple technology it can be made into a large number of traditional products, either in the form of moist food or dried products, it also used as industrial raw material (starch based industries) and animal and poultry feeds (Ghosh, et al., 1988). Some farmers sell cassava to La Trinidad trading post, Baguio hanger market and direct consumers. Aside from the plantation cassava is also planted in backyards as a ready source of food.

Cassava as an important crop is not given much attention by the people in Benguet. Propagation of this crop is not taken seriously. Even though cassava can be a



promising industry especially in starch making, supply of cassava in the locality is still for subsistence.

In most of the municipalities of Benguet, cassava hardly competes with food or feed grains. However, the multiple use of cassava and its adaptability in a wide range of soil- climatic conditions are plus points of the crop by which it should find a significant position in many of the provinces.

This study could be used to provide information that is necessary and useful to asses the condition of the cassava industry, cooperatives and associations to formulate plans for the development of the cassava production. It is therefore imperative to undertake this study to generate necessary data, which may be useful in developing or improving the cassava industry, thus improved the livelihood of cassava farmers and entrepreneurs.

Statement of the Problem

In general, the study aimed to investigate the potentials of the cassava production and marketing in Benguet. Specifically, the study aimed to answer the following question:

1. What is the production profile of cassava in Benguet?
2. What are the production and marketing practices of cassava growers in the study area?
3. What are the problems production and marketing of cassava growers?



Objectives of the Study

Generally, the study was conducted to document the production and marketing profile of cassava in Benguet.

Specifically, the study aimed to:

1. Determine the production profile of cassava in Benguet.
2. Find out the production and marketing practices of the cassava growers.
3. Identify the problems of cassava growers related to the production and marketing of cassava.

Importance of the Study

The study will provide relevant information on cassava production and marketing practices in Benguet and serves as a source of baseline data needed in developing programs towards the improvement of production and marketing. This study would also be a basis for recommending possible profitable project, such as cassava processing enterprise or look for alternatives outlets and uses of cassava. Moreover, the results of the study provide data to the processors, to the source of cassava as raw material. In one way or another, this study helps the processors to source out supply of cassava. As we all know the whole world is entering an area of new challenges, and Benguet is not excluded. With the entire global market opening through GATT, APEC, etc., there arises the need to be competitive. Every major industry is geared towards quality, high value product and cost efficient operations. It is for this context that we must work for the development of the Benguet entrepreneurs, as stated by Gov. Raul M. Molintas (June 13,



1997), during his address in the opening of the Trade Fair in the Benguet Provincial Capitol (Saturno, 2000).

At present, there is insufficient data on cassava production in Benguet. In order to develop this potential industry in Benguet, a good data base is necessary.

Scope and Limitation of the Study

The study concentrated mainly on the production and marketing profile of cassava in Benguet. The study also includes production and marketing practices applied in cassava. In addition, the study will try to look into the problems related to the production and marketing of cassava.



REVIEW OF LITERATURE

Cassava is one of the world's most important staple food crop because it serves as a binder and stabilizer for many processed meat products such as sausages, it is also the main ingredient in some regional Muslim cuisine (Botangen, et al., 2006) because it is an excellent source of energy, of food nutrition values due to its highly digestive carbohydrates (70% - 75%), mainly starch (Crisanto, et al., 1988), The flesh can be chalk-white or yellowish; raw cassava tastes like a mixture of potato and coconut flesh, it breaks like a carrot, and darkens quickly upon exposure to the air (Anonymous, 2007).

Indeed, cassava is the third largest source of carbohydrates. In Benguet, it is grown mainly for home consumption because of its low economic value. But with the increasing demand of cassava cake sold by the bakeshops and peddlers in Baguio City, the market potentials of this crop is being explored by farmers (Sim, et al., 2001). Since it is readily available and by using simple technology it can be made into a large number of traditional products, either in the form of moist food or dried products. Cassava is particularly valued because of its drought tolerance and its ability to grow on poor soils and its relative resistance to diseases and insect pests. These characteristics plus the fact that it can be left in the ground without harvesting for a long period of time makes it an ideal food crop as a security against famine. The utilization of cassava as a traditional food offers good prospects for further development, both with respect to marketability as well as the improvement of processing techniques. However, many problems still need to be solve, especially those related to quality and storability (Ghosh, et al., 1988).



Production

"Productivity is how well resources are used to produce desire output".

-By Peter Drucker

Production: The transformation of two or more inputs (resources) into one or more products. The transformation that take place includes the technology that industry uses, its relative efficiency, its costs of production, its capacity to meet market demands and the labor directed to the production does not vary evenly as inputs are fed uniformly into the production process. The volume of production determines whether a product should be produced in small or large quantities.

In the Philippines, cassava is rank number 10 and number 1 in the world in terms of dry matter production (Botangen, et al., 2006). Cassava grows almost everywhere in Benguet Province without any climatic restrictions and thrives better in poor soils than any other major food plant. As a result, fertilization is rarely necessary. Planting cassava plant start of the rainy season, within one week after planting, the cutting will begin to sprout. Cassava has a long maturity period from 9-11 months for early maturing and 11-18 months for late maturing (Sim, et al., 2001). However, yields can be increased by planting cuttings on well drained soil with adequate organic matter. Cassava is a heat-loving plant that requires a minimum temperature of 80 °F to grow. Many cultivars are drought resistant, cassava can survive even during the dry season when the soil moisture is low, but humidity is high (Anonymous, 2003). For the weed control and cultivation, the critical period for weed control in cassava production is during first two months of growth when the canopy is not yet closed. Therefore, weed control operations such as hand weeding and cultivation should be confined to this period to provide maximum benefit to the crop. Cultivation is not only necessary to control the weeds but to loosen



the soil which is beneficial to the expanding storage roots. Harvesting for the subsistence farmers, the age of harvest does not matter much as long as they get sizeable roots to eat. For those who grow the crop for business, the crop should be harvested at the right time to get the maximum return. If late, the starch and dry matter contents maybe low although yield may be high and the roots become fibrous (Villamayor, 1988). Harvest cassava at full maturity after planting and harvesting too early results in low yield and poor eating quality. On the other hand, do not harvest cassava right after rain or when the soil is too wet. At this time the roots have high water content which makes them difficult to store. Also wet soil particles would stick easily to the roots especially if the soil is clayey, this making the roots hard to clean and harvest cassava during relatively dry weather so that you can easily remove the soil particles from the roots (O’Hair, 1995).

Cassava roots are harvested by individual gatherers using digging tools such as crowbar or hoe if necessary and are pulled manually to attain as much merchantable length as possible (Tayaban, 1996).

Cassava production is closely allied with, but not the cause of, poorer farm household. This relationship exists because poorer households are marginalized and often live in marginalized areas the same areas where cassava performs well. Cassava also is a source of food security, not only because it can be grown on less productive land, but because it is a source of income for producers and generally a low cost source of food. These relationships suggest that the development of market opportunities for cassava can contribute substantially to poverty alleviation, especially for resource-constrained households, and can increase household food security (Anonymous, 2007).



Marketing

Marketing is primarily a legal-economic ethical relationship formed between individuals in their efforts to acquire rights to scarce goods which they believe will have a further value, in business marketing is the process by which products are matched with markets and through which ownership transfer are affected. Processors play an important role in marketing process of cassava produce because they satisfy some of the customer's needs and wants at right place and at right time. The efficiency of marketing is often dependent on marketing practice employed by middlemen (Salbino, 2006).

Marketing is the business activities associated with the flow of goods and services from production to consumption. Marketing of agricultural products begins on the farm, with planning of production to meet specific demands and market prospects. It is complete with the sale of the fresh or processed product to consumers, or manufactures in the case of raw materials for industry. Agricultural marketing also includes the supply to farmers of fertilizers and other inputs for production. It also directs the flow of goods and services from producer to ultimate users. One way of moving a particular commodity is through middlemen generally classified as wholesalers and retailers (Comila, 2003).

The wholesalers, retailers and contract buyers are the common channels of marketing. Cash payment is the most acceptable term of payment. Passenger jeepney's and human beings are use to transport farm produce to nearest market outlet. Basket and sacks are common containers for their farm product (Tayaban, 1996).

The majority of cassava growers obtain information on pricing mostly from co-producers and buyers who produce majority of their harvest while other growers canvass the prices to set the right price for their product. However some growers rely on



information from buyers who are their “*suki*” while some set their price lower to compete with the others. These variations are related to several factors, foremost of which the marketing practices are involved in the movement of products from the point of production to the ultimate consumers (Salbino, 2006).

The country’s agricultural development efforts since 1950’s have directed towards production to attain self-sufficiency. Philippine agricultural marketing has been left to the private sector within the context of free market system. The private trading sector can be viewed as a complex system of market intermediaries who are involve in buying, transporting and processing (Tayaban, 1996) and considered marketing mix where in the industry determines, in response to market, not only the product but also the prices, the channel of distribution, the market place, and promotion and advertising, that an industry does not mean much unless its product is sold (Salbino, 2006). Packaging should also be considered in marketing, give protection to the goods and to the end users. Goods are packed on the right way for product to prevent spoilage or rotting. Secondly reason for packaging is convenience, not only on transporting the products but also using. Consumers want packages that are easy to open, while being able to protect their contents. Packaging may also make possible for the manufacture to economize. Product should be packed in units that meet the preferences with consumers. Thus, cassava has three distinct markets, a) the domestic market mainly for human consumption, b) the animal feed market and c) the starch market.

Marketing improvement will help the farmers make good production decisions according to the needs of the market in terms of the kind of the crop produced, quality and quantity of deliveries. They also contribute to transforming small farmers into



commercially oriented producers. It also improves the distribution and price, to meet the needs of the consumers and promoting it in such a way as to make profit. It means that it is the right product at the right price at the right place at the right time to the consumers which

not only contributes to a more efficient consumption but on an improvement of consumer as well. Furthermore, farmers will be able to experience a better quality of life. The development of efficient marketing and distribution facilities and the availability of production credit as well as processing facilities, in long run, will promote expand production and higher income from these farm enterprise (Tayaban, 1996).

Studying marketing activities allows us to weigh their loss, benefits and flaws more efficiently and effectively. In addition, marketing enables concerned and affected individuals to improve their marketing practices in order to attain the maximum level of income (Salbino, 2006).

Problem Encountered

In Benguet Province, most farmers are willing to plant cassava if they were assured a market for the production because the effective and efficient marketing system from the farmers viewpoint is one that will induce the production of those productions and qualities which, when sold to consumers, will result in maximum returns.

The common problem faced by the farmers in production and marketing of their products that they find it difficult to transport them to the market needs; they encounter fluctuation price, existence of frugal customers and hidden damage/low quality which results to low price and high transport cost. Other problem is how to market their product. This is very vital for the success of the cassava production in Benguet, because



oftentimes farmers tend to ask “*Sino bang bibili niyan?*”(Who will buy?). Despite to this problem, there are several other issues that need to be addressed. These include among others, the limited cultivated land, market outlets, transportation problems, and shift life of cassava roots is very short, once it is removed from the stem, so there is an urgency to get the food to market. “Roots can turn to mush in less than a week and cassava fresh market time is very small, so it has to be processed immediately” (Sayre, 2003). It also includes communications and peace and order.

The transportation problem is not surprising in the Cordillera, considering its topography. Farms are either on top of mountain or far from the main road. These have been a perennial problem of vegetable growers and are seemingly experienced by cassava growers now.

Marketing of agricultural products is a commonly problem among the farmers as the system passes through a series of middlemen before it reaches the ultimate consumer, who buys it at an exorbitant price as compared to the original farm gate price. The presence of middlemen is just one among the other problems confronting the market industry of cassava and vegetable in the cordillera as well as the country (Palao-ay, 2003).

Definition of Terms

Agriculture. Art, science, and industry of managing the growth of plants for human use.

Cassava. Is a shrubby, tropical, perennial plant that is not well known in the temperate zone. For most people, cassava is most commonly associated with tapioca



Carbohydrate. Any of a large group of compounds in which hydrogen and oxygen, in the proportions in which they exist in water, are combined with carbon; the formula of most of these compounds may be expressed as $C_m(H_2O)_n$. Structurally, however, these compounds are not hydrates of carbon, as the formula would seem to indicate.

Crop. A group of plants grown by people for food or other use, especially on a large scale in farming or horticulture.

Distribution. The handing out or delivery of things to a number of people, the selling and delivery of goods to retailers.

Entrepreneur. A person who visualizes the need to increase cassava production and takes the necessary action to initiate or change the process by using available technology.

Farmer. Person who is engaged in agriculture, raising living organisms for food or raw materials. This is a way of life that has been the dominant occupation of human beings.

Marketing. The performance of business activities that direct the flow of goods and services from the producers to the consumers which includes selling, buying, transforming and risk taking.

Price. Cost of something bought or sold: the amount, usually of money, that is offered or asked for when something is bought or sold.

Producers. Refers to individuals who are engaged in processing of cassava into finished products. Producers are also the farmers planting cassava.

Production. Refers to propagation and planting or growing of crops, i. e. cassava.



METHODOLOGY

Locale and Time of the Study

The study was conducted in Benguet from December 2007 to February 2008. The location map of the study area is shown in Figure 1.

Respondents of the Study

The respondents of this study included cassava growers for the survey; they were identified with the help of community leaders in the locality. There were 50 respondents of the study coming from different municipalities of Benguet. These composed of 17 respondents who are in Mankayan, Benguet. There were 16 respondents in Sablan, 14 at Kabayan and 3 respondents in Kapangan, Benguet with a total of 50 respondents. Aside from the survey and observation, Municipal Agricultural Officers and Agriculturist for Key Informant Interview.

Data Collection

Data gathering was done through survey questionnaires. The researcher conducted an informal interview with the farmers to supplement the information gathered from the questionnaires. Prior to the floating of the survey questionnaires a pre-test was done in order to make possible improvements on the questionnaires based on the answers of the pre-test respondents.



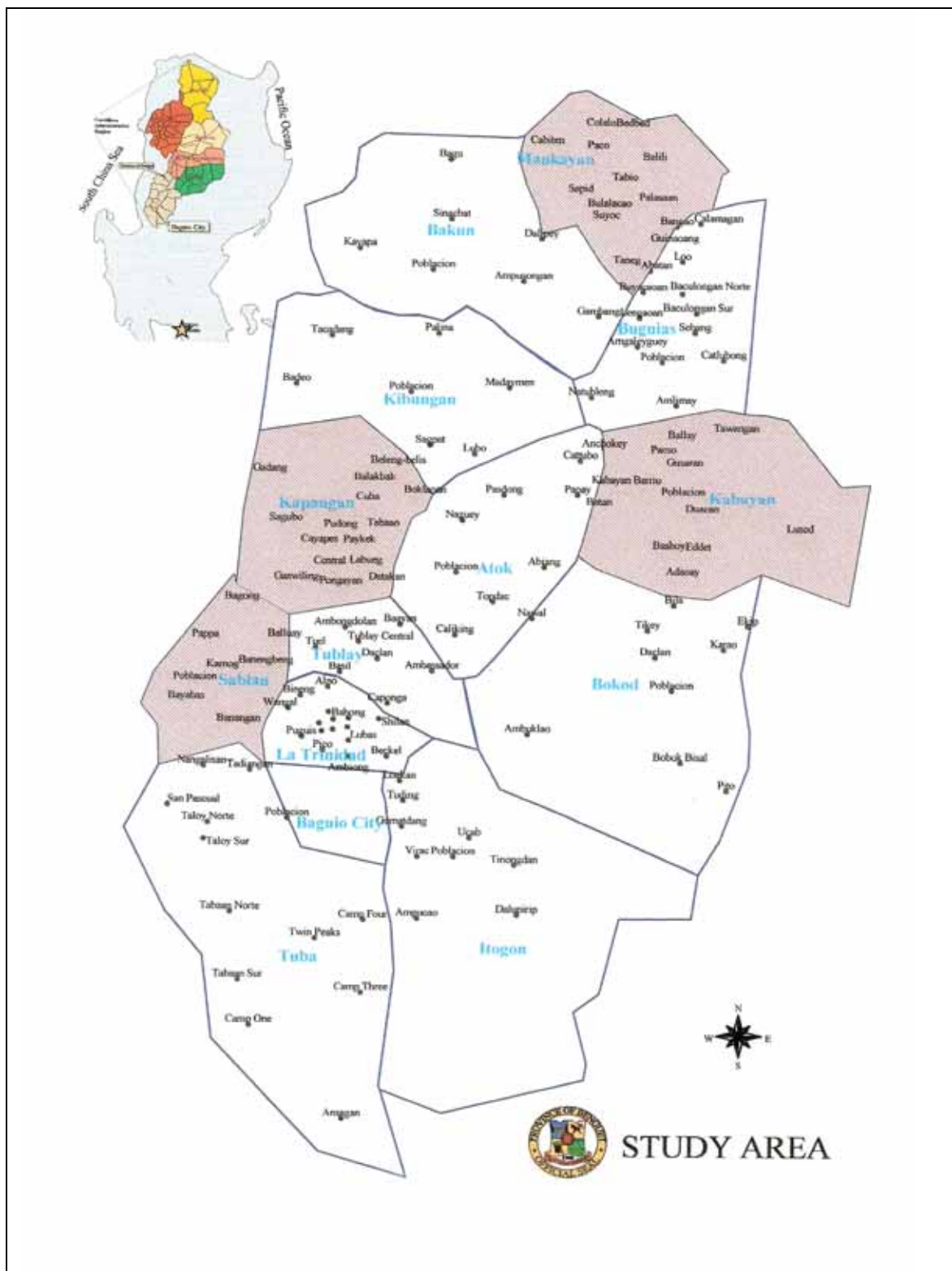


Figure 1. Map of Benguet showing the study area



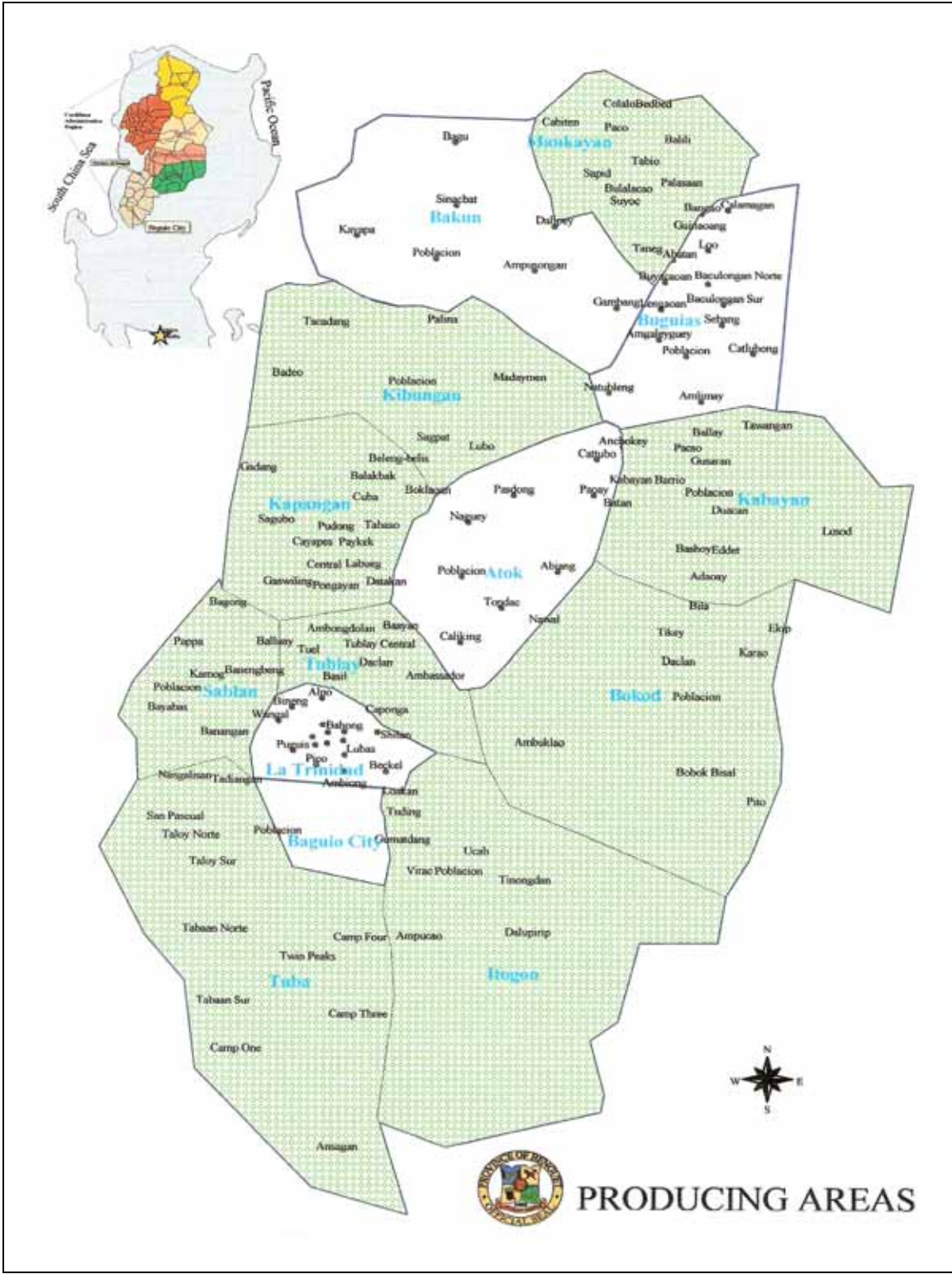


Figure 2. Map of Benguet showing the cassava production area



Secondly data were gathered before the preparation of proposal and were collected from the Department of Agriculture (DA) and Office of Provincial Agriculturist (OPAG), the internet, library research and other available resources. The information gathered from the literature was used in the construction of the research problems and questions.

Data Gathered

The data gathered were the production areas, production and marketing practices and problems related to production and marketing practices of cassava in Benguet.

Data Analysis

The data collected were tabulated and analyzed using frequency counts, percentages, mean and interpreted according to the objectives of the study.



RESULTS AND DISCUSSION

Profile of the Cassava Producing Areas in Benguet

Major cassava producing areas. Table 1 shows the top major cassava producing areas of Benguet, Kapangan had the highest cassava production with 1,400 metric tons, compared with other four municipalities namely Itogon, Tuba, Kibungan and Sablan, Benguet with a volume of production ranging from 1,189 to 140 metric tons.

Table 1. Major cassava producing areas in Benguet (2006)

MUNICIPALITY	PRODUCTION (mt)
Kapangan	1,400
Itogon	1,189
Tuba	256
Kibungan	206
Sablan	140

Source: Office of Provincial Agriculturist (OPAG)

Cassava production and area planted. Table 2 shows that the cassava production in Benguet indicates that in year 2000 total area planted 839.50 hectare, while production was 5,907 metric tons. Compared with similar data from 2006 there has been a big reduction in cassava area planted was 208.20 hectare, production was 2,055.10 metric tons and table 3 show the cassava production in Benguet by municipalities in year 2000-2006.



Table 2. Production, area harvested and yield of cassava in Benguet (2000 – 2006)

YEAR	PRODUCTION (mt)	AREA PLANTED (ha)	AREA HARVESTED (ha)
2000	5,907.00	839.50	697
2001	5,150.00	546.00	657.75
2002	2,803.02	383.50	421.75
2003	3,993.22	426.95	532.25
2004	3,110.00	321.80	437.45
2005	3,403.90	300.90	426.55
2006	2,055.10	208.20	416.6
TOTAL	26,422.24	3,026.85	3,589.35

Source: Office of Provincial Agriculturist (OPAG)

Table 3. Cassava Production in Benguet by Municipality (2000-2006)

MUNICIPALITY	YEAR							
	2000	2001	2002	2003	2004	2005	2006	
Bokod								
Area Planted (ha)	7	10	8	10	10	10	10	
Area harvested (ha)	5	10	10	10	10	10	10	
Production (mt)	50	98.50	98.50	98.50	98.50	97.50	100	
Productivity (mt)	10	9.85	9.85	9.85	9.85	9.75	10	
Number of farmers	35	50	40	50	50	50	50	

Source: Office of Provincial Agriculturist (OPAG)



Table 3. Continued...

MUNICIPALITY	YEAR						
	2000	2001	2002	2003	2004	2005	2006
Itoyon							
Area Planted (ha)	133	133	133	133	133	133	133
Area harvested (ha)	131	131	131	131	131	131	131
Production (mt)	1,189	1,189	1,189	1,188	1,189	1,189	1,189
Productivity (mt)	9.08	9.08	9.07	9.07	9.08	9.08	9.08
Number of farmers	663	633	663	663	663	663	663
Kabayan							
Area Planted (ha)	10.50	12	10.50	9	9	9	9
Area harvested (ha)	5	4.75	5.25	4.25	6.25	4.25	4.25
Production (mt)	50	47.50	52.50	42.50	62.50	42.50	42.50
Productivity (mt)	10	10	10	10	10	10	10
Number of farmers	55	60	48	45	40	45	45
Kapangan							
Area Planted (ha)	190	90	52	90	90	90	90
Area harvested (ha)	190	90	40	90	90	90	90
Production (mt)	2,280	1,080	480	1,080	1,080	1,400	1,400
Productivity (mt)	12	12	12	12	12	15.56	15.56
Number of farmers	1,780	900	520	900	900	900	900

Source: Office of Provincial Agriculturist (OPAG)



Table 3. Continued...

MUNICIPALITY	YEAR						
	2000	2001	2002	2003	2004	2005	2006
Kibungan							
Area Planted (ha)	313	115	124	129	26.80	14.60	14
Area harvested (ha)	40	115	66	116	22.20	18	12
Production (mt)	324	859	522	1,022	166	108	206
Productivity (mt)	8.10	7.47	7.92	8.81	7.40	6	17.2
Number of farmers	2,325	860	1,032	1,032	541	740	840
Mankayan							
Area Planted (ha)	150	150	21	18	19	10	6
Area harvested (ha)	163	145	11	18	18	13.80	7
Production (mt)	1,630	1,500	110	180	150	143	77
Productivity (mt)	10	10.34	10	10	8.33	10.36	11
Number of farmers	705	835	190	130	110	101	60
Sablan							
Area Planted (ha)	14	14	14	14	14	14	14
Area harvested (ha)	14	14	14	14	14	14	14
Production (mt)	140	140	140	140	140	140	140
Productivity (mt)	10	10	10	10	10	10	10
Number of farmers	64	64	64	64	64	64	64

Source: Office of Provincial Agriculturist (OPAG)



Table 3. Continued...

MUNICIPALITY	YEAR						
	2000	2001	2002	2003	2004	2005	2006
Tuba							
Area Planted (ha)	20	20	16	16	16	16	16
Area harvested (ha)	20	20	16	16	16	16	16
Production (mt)	220	220	192	192	192	256	256
Productivity (mt)	11	11	12	12	12	16	16
Number of farmers	300	300	160	160	160	160	160
Tublay							
Area Planted (ha)	2	2	2	7.95	4	4.30	6.20
Area harvested (ha)	3	2	2.50	7	4	3.50	6.35
Production (mt)	24	16	19.80	50	32	28	44.60
Productivity (mt)	8	8	7.92	7.14	8	8	7.02
Number of farmers	200	200	200	455	280	146	119

Source: Office of Provincial Agriculturist (OPAG)

Profile of the Respondents

The socio-demographic profile of the respondents included their, other sources of income, membership in farmers/marketing association, status in farming and landownership. These were presented in Table 4.

Other sources of income. Six of the respondents claimed that cassava production is the major source of livelihood; forty four of the respondents have other source of



income such as gardening (56%), laborer/farm worker (14%), and business (8%), broom making (4%), carpentry (4%), and swine raising (2%).

Membership in farmers/marketing association. Seventeen (34%) of the respondents were members in farmers/marketing association. Four (8%) of the respondents were members of Kabayan Farmer's Association and 13 (26%) were members of the organization of *Sabdang, Kidpol Farmer's Association (SKFA)*. This finding implies that the majority (66%) of the respondents were not member in farmers/marketing association or any organization in their locality or municipality.

Status in farming. All (100%) of the respondents said that they financed their own production of cassava.

Land ownership. Twenty two percent of the respondent's leased the land they utilize for cassava production and 78% owned the land they were cultivating. This implies that majority of the farmers were cultivating their own land.

Table 4. Profile of the respondents

CHARACTERISTICS	FREQUENCY	PERCENTAGE
Other Sources of Income		
Cassava production as a source of income	6	12
With other sources of income		
Farming	28	56
Laborer/farm worker	7	14
Business	4	8



Table 4. Continued...

CHARACTERISTICS	FREQUENCY	PERCENTAGE
Broom Making	2	4
Carpentry	2	4
Swine Raising	1	2
TOTAL	50	100
Membership in Farmers Associations		
With no membership in farmers association	33	66
With membership in farmers association		
Sabdang, Kidpol, Farmers Association (SKFA)	13	26
Kabayan Farmers Association	4	8
TOTAL	50	100
Status in Farming		
Self financed	50	100
Others	0	0
TOTAL	50	100
Land Ownership		
Owner	39	78
Leased	11	22
TOTAL	50	100



Farm area. Table 5 shows land area devoted by the respondents for cassava production. Majority of the respondents (96%) devoted 1 hectare and below and only 1 (4%) utilized more than 1 hectare and above for the cassava production.

This finding shows that majority of the cassava growers were devoting a small area for cassava production because most of the respondents plant crops that are short maturing. Most often cassava intercropped with yam/ubi (*Dioscorea alata*), taro (*Colocasia esculenta*) and galiang (*Xanthosoma sagittifolium*), sweet potato (*Ipomoea batatas*), and vegetables or farmers totally shift to other crops or rice farming. As mention by Mr. F. Binay-an and Mr. H. M. Benggeg. They cannot convince people to plant cassava because there is no market not like taro (*gabi*), or other vegetable which has a higher market. There should be a program that can help the farmers in marketing their cassava produce, or seminar/workshop to learn some processing techniques in as alternative market. Further more, Mr. W. P.Cilo, a Municipal Agricultural Officer of the municipality of Itogon, Benguet, stated that cassava production is negligible in Itogon, Benguet, because people prefer to go private mining and rice farming. Few of the farmers go to their office to solicit advice on the crop. Instead many farmers shift to private mining; agriculture or farming a second priority of the residents in Itogon, Benguet. Mr. Cilo also mentioned that he want to convince farmers to plant taro (*gabi*) because many of them are using taro (*gabi*) during occasion or vigil, but as he said they cannot force farmers to plant this crop.



Table 5. Farm area devoted to cassava farming in square meter

FARM AREA	FREQUENCY	PERCENTAGE
Less than 1 ha.	48	96
1 ha. and above	2	4
TOTAL	50	100

Production Practices of the Respondents

Area planted. Table 6 shows that most (88%) of the respondents had a farm of less than 0.5 hectare, and 8% of the respondents had more than 1 hectare. Only few 2 (4%) of the respondents had more than 1 hectare area planted for cassava production. The study revealed that the respondents have limited area farm for cassava production.

Land classification. The same table reveals that most (86%) of the respondents had flat lands for cassava plantation and only (14%) had sloppy lands. The respondents mentioned that the land used for cassava production is flat land, because it is easy to cultivate and production is continuous.

Month of planting. Table 6 shows that (36%) of the respondents plant cassava in the month of May, 20% plant in November. As mentioned by the respondents it is good to plant after rainy season. Eighteen percent usually plant on the month of April, 10% plant on the month of September, and 8% of the respondent's claim that they plant in the month of June and October during rainy season. This finding implies that cassava can be planted in the month of April to October before or after rainy season.



Variety. Table 6 shows that (62%) of the respondents were producing golden-yellow cassava (miracle) and 38% were producing white cassava variety. Some respondents said that they prefer golden-yellow variety because it has a longer storage life than the white variety, but other said that white is good for flour making. The *International Center for Tropical Agriculture (CIAT)* and *IITA (International Institute of Tropical Agriculture)* play a lead role in developing improved cassava varieties and preserving the genetic diversity of this important staple crop (Anonymous, 2007).

Care and maintenance. Table 6 revealed that 65.22 % of the respondents weed their farm manually. The weeds were dried burned and ash was used as fertilizer, or compost for organic fertilizer. Respondents mentioned that the more organic matter is present in the soil, the more fertile it will be. Some (19.57 %) of the respondents often cultivate their soil to enhance the soil aeration and make the area suitable for crop production. Cultivation and weeding were done simultaneously. However, further weeding may be necessary for areas with denser weed population. There were seven (15.22%) of the respondents who claimed that they used rat poisoning to control this pest, because this can cause substantial loss/reduction in yield. This practice is usually done in Sablan, Benguet as mentioned by Mr. G. Santa, Barangay Secretary of *Sabdang, Kidpol Farmers Association (SKFA)*. Cassava is mostly intercropped with other root crops such as taro (*gabi*), sweet potato, ginger, pineapple and banana. The study implies that control measures were regularly done according to the farmer's assessment of pest and diseases with regard to their experience or practice.



Table 6. Production practices of the respondents

PARTICULARS	FREQUENCY	PERCENTAGE
Area planted		
Less than 0.5 ha.	44	88
0.5 ha.-1 ha.	4	8
More than 1ha.	2	4
TOTAL	50	100
Land classification		
Flat land	43	86
Sloppy land	7	14
TOTAL	50	100
Month of planting		
May	18	36
November	10	20
April	9	18
September	5	10
June	4	8
October	4	8
TOTAL	50	100



Table 6. Continued...

PARTICULARS	FREQUENCY	PERCENTAGE
Variety of cassava grow		
Golden-yellow cassava	31	62
White cassava	19	38
TOTAL	50	100
Care and maintenance		
Weeding	30	65.22
Cultivation	9	19.57
Rat poisoning	7	15.22

Volume of production. Table 7 shows that 57.14% of the respondents were harvesting an average of 1-3 sacks per cropping, an approximate of 50 kilograms per sack, 14.29% produce 4-6 or 10-12 sacks and 9.52% of the respondents who had 7-8 sacks per cropping, and only one respondents, Mr. Leo Guzman, produced more than 300 sacks. This is because he has a larger farm size which is fully utilized for cassava production than the others. Mr. Guzman had been engaged in production for almost 5 years.



Table 7. Volume of production per cropping

VOLUME (SACK)	FREQUENCY	PERCENTAGE
1-3	12	57.14
4-6	3	14.29
7-9	2	9.52
10-12	3	14.29
12-300	1	4.76
Mean: 19		

Distribution of produce. Table 8 shows that 48% of the respondents utilize cassava produce for home consumption, 30% sold and 22% for animal feed. This implies that cassava is produce by the respondents were commonly used for home consumption.

Table 8. Distribution of cassava produce

PARTICULARS	FREQUENCY	PERCENTAGE
Home consumption	24	48
Sold	15	30
Animal feed	11	22
TOTAL	50	100



Marketing Practices of the Respondents

Market outlet. Table 9 reveals the different market outlet for cassava. Since the respondents came from different organization and municipalities, they employ different strategy to market their produce either in locality or outside the locality. Only one respondents market his produce to some of the bakeries in Baguio City and La Trinidad, Benguet and the excess produce are sold in Pangasinan. According to Mr. L. Guzman market demand of cassava in pangasinan is high because of the processors in the area. Market in Baguio City and Benguet is limited.

However, all producers bring their produce to their local market in the area or to their neighbors. More than half (54.76%) sell their produce to their neighbors. Some (33.33%) of the respondents dispose their produce to the processors. The rest of the respondents said they bring their produce to Baguio Hanger Market (7.14%) and 1 (2.38%) of the respondents that has a big volume of produce usually dispose to some bakeries in Baguio City and La Trinidad, Benguet and (2.38%) of the respondents sell to local outlet. This shows that market for the cassava in Benguet is limited.

Mode of selling. Table 9 shows that (46.81%) of the respondents sell through consignment; whatever was sold were paid to avoid bankruptcy but not preventing the farmer to ask for advance payment when they need cash. Some (44.68%) of the respondents sell in cash/cash on delivery and 8.51% were bartered, exchange with other crop to their neighbors or other consumers. This method is still applied not only in agricultural crop but also for other products.



Price determination. Table 9 also shows that most (72%) of the respondents set their own market price for their produce. The respondents determined their price using the cost of production as basis plus market-up that is acceptable to the farmers. Some (28%) of the respondents follow the price set by the buyers. The producers can not demand price because cassava should dispose immediately upon harvesting it is highly perishable.

Mode of promoting their produce. Table 9 shows that (73.08%) of the producers promote their produce by word of mouth or sales talk, where they explain to consumers the benefit of eating organic produce and uses of the said crop. As mention by Mrs. S. A. Lino, an Agricultural Technician of Tublay, Benguet, that “we need more activities to promote our own crops because now a days some do not give importance to the crop, because we do not know what are the some benefits we can get from it, she further mentioned that “now a days many farmers prefer to undertake vegetable farming, flower industry or go abroad. Some respondents (26.92%) participate in local trade fairs/festival in their own municipalities to let the public know that cassava produce can be made in many ways, as snacks, and can be made into flour and wine.

Reason for the choice of buyers. Table 9 also shows the distribution of respondents according to the reason for the choice of buyers. Majority (69.05%) said that they choose buyers because of convenience and 13 (30.95%) because of the higher price offered. These means that most of the respondent choose the buyers who are within the locality.



Table 9. Marketing practices of the respondents

PARTICULARS	FREQUENCY	PERCENTAGE
Market outlet		
Neighbors	23	54.76
Processors	14	33.33
Baguio hanger market	3	7.14
Bakeries (Baguio and La Trinidad)	1	2.38
Other outlet	1	2.38
Mode of selling		
Consignment	22	46.8
Cash on delivery	21	44.68
Barter	4	8.51
TOTAL	50	100
Price determination		
Set own price	36	72
Price set by buyers	14	28
TOTAL	50	100
Product promotion		
Word of mouth	19	73.08
Participate in local trade fairs/festival	7	26.92
Reason for choice of buyers		
Convenience	29	69.05
Offers price	13	30.95



Quantity sold. Table 10 shows that the volume produce sold by respondents. Most (64.86%) of the respondents reveals that quantity of cassava sold ranged from 10-100 kilograms, 21.62% sold 101-200 kilograms, 2.70% sold 201-300 kilograms, 8.11% sold 3001-400 kilograms and 1.59% sold more than 15,000 kilograms. Mean quantity of cassava sold is 285.12 kilograms.

Table 10. Quantity sold (price per kilogram)

QUANTITY SOLD	FREQUENCY	PERCENTAGE
10-100	24	64.86
101-200	8	21.62
201-300	1	2.70
301-400	3	8.11
401-15,000	1	2.70
Mean: 285.12		

Price. The price of a product is one of the considerations in the selection of crop to plant. Table 11 shows most (67.57%) of the respondents sell their produce, farm gate price at 6-10 pesos per kilogram, 8.11% sell at 11-20 pesos and 21.62% of respondents sell at retail price 21-30 pesos and 2.70% sell at Php 31-40 per kilogram. The result implies that farmers received a low price of their cassava crop thus; they are discouraged from planting cassava crop as mentioned by 37 of the respondents.



Table 11. Prices of the cassava (per kilogram)

PRICE	FREQUENCY	PERCENTAGE
Farm gate price		
P 6-10	25	67.57
P11-20	3	8.11
Retail price		
P 21-30	8	21.62
P31-40	1	2.70

Respondents' response as to whether they produce more than the demand of their customers. Table 12 shows that majority (58%) of the respondents do not produce more than the demand of their customers since most of them have small farm areas of about 50 to 1,000 square meters, while others producers harvest on staggered basis to meet the requirement of their buyers (continuous supply but limited volume). On the other hand, only 21 (42%) claimed to have produced more than the demand of their customers, especially those who have wider farm area of 5,000-20,000 square meters. This implies that those who have wider area have experienced surplus of supply.

Utilization of excess produce by respondents. Table 13 shows that 48% of the respondents consume their surplus produce. The rest (8%) of the respondents give surplus harvest to neighbors or relatives in the area and (12%) exchange produce with other crops. Other respondents, 32% process it as snacks and sold to their neighbors or in school canteens that are willing to buy. This shows that all producers utilized their



produce to avoid wastage of crop, labor and time. This is practice because of the producer's psychological orientation that the product must be properly utilized.

Table 12. Respondents' response whether they produce more than the demand of their customers

RESPONSE	FREQUENCY	PERCENTAGE
No	29	58
Yes	21	42
TOTAL	50	100

Table 13. Utilization of market excess by respondents

RESPONSE	FREQUENCY	PERCENTAGE
Home consumption	24	48
Process	16	32
Exchange products with other members	6	12
Given away freely to neighbors/relatives	4	8
TOTAL	50	100

Problems in Production and Marketing of the Respondents

Problems in production. Table 14 present the different problems encountered by the respondents. The production problems identified by the respondents include; a) low storage life (24.50%), b) limited post harvest/utilization knowledge (21.19%), c) long



maturity/cropping season (17.22%), d) pest-rat (9.93%) and e) lack of farmer road/accessibility from farm to market road (7.95%).

Problems in marketing. Table 14 shows the marketing problems encountered by the producers, the problems identified included; a) lack of market information (21.48%), b) absence of marketing outlets for cassava produce (18.52%), c) lack of information for standard pricing (14.81%), d) buyers control price (13.33%) and e) difficulties in transporting produce (12.59%). This implies that most of the respondents have encountered problems during production and marketing or it may either be financial matter.

Table 14. Production and marketing problems encountered by the respondents

PROBLEM	FREQUENCY	PERCENTAGE
Production problems		
Low storage life	37	24.50
Limited post harvest/ utilization knowledge	32	21.19
Long maturity	26	17.22
Attack of pest and diseases	15	9.93
Distance from farm to market	12	7.95
Marketing problems		
Lack of market information	29	21.48
Limited of marketing outlets for cassava produce	25	18.52



Table 14. Continued...

PROBLEM	FREQUENCY	PERCENTAGE
Lack of information for standard pricing	20	14.81
Buyers control price	18	13.33
Difficulties in transporting produce	17	12.59

Potential of cassava. Table 15 reveals that 83.33 percent of the respondents believe that cassava production could become the main source of income especially to the family who are producing this crop, as we have learn cassava is a source of food from the leaves down to its roots. That can be made into many ways but we need to be patient in product development and make this crop competitive. Technology on cassava processing's readily available. Cassava can be prepared in the form of moist food or dried products. This can also be processed into a cake, chips, crisp, and other traditional products like "suman", "petchi-petchi", "tinupig" and as "bibingka". This is practice in Mankayan, Benguet. Three respondents mentioned that it is the main source of income of their family until now but they need more knowledge and skills in processing this crop. Cassava tubers can be made also as a wine through the traditional ways of processing wine by our old folk called "binobodan". This is practiced by all the producers of cassava. In Kabayan, Benguet producers process them into flour for home consumption only. Some (16.67%) of the respondents said that cassava production could be commercialized/industrialized if we really give attention and importance to the said crop. Mrs. Nora A. Cangat, an Agricultural Technologist from Mankayan, Benguet stated that



if we give attention to cassava crop it would help our farmers, processors and especially our community, nowadays we observe that all the important crops that should be maintain are no longer seen in our locality, because many people prefer mining, or plant high value vegetables. This situation leads to the surplus of vegetable crops and also degradation of environment because of pesticide/chemical used in the production of vegetable crop.

Table 15. Potential of cassava as perceived by the respondents

PARTICULARS	FREQUENCY	PERCENTAGE
Could become the main source of income	35	83.33
Could be commercialized/industrialized	7	16.67

Table 16. Perceived solutions to the problems by the respondents

PERCIEVED SOLUTIONS	FREQUENCY	PERCENTAGE
Government support	11	22
Establish cooperation between producers and traders	9	18
Product handling/transportation or product storage facilities should be built	9	1
Cash payment	7	14
Set standard price	6	12
Create market information system	3	6
TOTAL	50	100



Suggested solutions to problem. Table 16 shows the suggested solutions to the problems encountered by the respondents. These were: to improve the marketing system of cassava tubers, set standard price, create market information system, product handling, transportation and product storage facilities. To improve product quality, government support and assistance should be availed by the cassava producers. Participations to seminars and trainings related to cassava are necessary. There should be cooperation among farmers to stabilize price and to set standard quality of cassava. This study should not only apply to cassava production but also to all of agricultural crops.



SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The study provided an overview of the production and marketing profile of cassava in Benguet. The study was conducted in the different municipalities in Benguet specifically to (1) determine the production profile of cassava in Benguet, (2) find out the production and marketing practices of the cassava growers and (3) identify the problems of cassava growers related to production and marketing of cassava in Benguet. There were 50 respondents of the study from the municipalities of Mankayan, Sablan, Kabayan and Kapanagn. The study was conducted from December 2007 to February 2008. Data were gathered with the use of survey questionnaire and personal interview.

Farming is the main source of livelihood of respondents and majority of the respondents were not member of any organizations or farmers/marketing association in their own municipality. All of the respondents financed their own production of cassava and (78%) of the respondents owned the land they were cultivating.

The cassava growers were devoting a small farm area for cassava production. Most of the respondents had a farm of less than 1 hectare, and majority of them mentioned that cassava plantation should be in flat land. Most of them usually plant in the month of May. Varieties grown include golden-yellow cassava (miracle) and white cassava which is common in the province of Benguet. For the crop management, most of them practice weeding and cultivation. Rat is the major pest in cassava production. Farmers control rat by poisoning.



The respondents produced an average of 19 sacks of cassava tuber. A one sack is approximately 50 kilograms. Most of the respondents utilize cassava for home consumption; for cash income or as animal feed.

Growers bring their produce to Baguio Hanger Market and local outlet or to their neighbors. One respondent operating more than 1 hectare for cassava, supply his product to Pangasinan. Growers sell cassava on consignment basis and set their own price. Promotion of cassava is by word of mouth or sales talk and by joining trade fairs/festivals in their own municipalities. The choice of buyers depends on the price offered, proximity, accessibility or convenience. Farm gate price for cassava ranged from 6-10 pesos per kilogram but could be as high as Php 40 per kilogram on retail price. Respondents produce only a small quantity to avoid surplus, some respondents consume or processes the surplus.

The problems encountered by the respondents varies but the common problem mentioned was lack of information for standard pricing, limited market outlet, long maturity, attack of pest and diseases, buyers control price and distance from farm to market. They also mentioned, lack of market information, short storage life, limited knowledge post harvest handling.

Conclusions

Based on the results of the study, the following conclusions were drawn:

1. Area devoted for cassava is small/limited.
2. Farmers produce for subsistence/primarily for home consumption.



3. Growers were willing to develop the cassava production and marketing but encountered the following constraints:
 - a. short storage life
 - b. limited post harvest/utilization knowledge
 - c. long maturity period
 - d. limited market outlet
 - e. lack of market information
 - f. lack of information for standard pricing
 - g. buyers control price

Recommendations

In relation to the results obtained, the researcher recommends the following in order to develop the cassava production and marketing in Benguet.

1. Increase/prioritize research and development for cassava especially in improving storage life, post harvest and utilization and develop improved varieties which are short maturing.
2. Develop alternative uses and outlet by processing.
3. Market information should be established especially in standard pricing to encourage growers to plant cassava and also to increase the production of cassava products.



LITERATURE CITED

- ANONYMOUS. 2007. Benguet History. Retrieved October 01, 2007 from <http://elgu2.ncc.gov.ph/benguet/>.
- ANONYMOUS. 2003. Cassava research boosts production. Retrieved October 01 2007 from <http://www.fao.org/NEWS/>.
- ANONYMOUS. 2007. Cassava. Retrieved September 14, 2007 from <http://www.iita.org>.
- BOTANGEN E. T., G. S. BACKIAN and B. T. GAYAO. 2006. Cassava Industry Profile.
- COMILA Z. B. 2003. Profile of Vegetable Marketing Operations at the La Trinidad Vegetable Trading Post. Unpublished Thesis. BSU. L.T.B. P 4.
- CRISANTO R. E and L. K. MIRANDA. 1988. State of the Art abs Abstract Bibliography Cassava Research. Published through the Philippine Agriculture and Resources Research Foundation, Inc (PARRFI) Los Banos Laguna. pp. 1-2, 69-70.
- GHOSH, S. P. T. RAMANUJANI; J. S. JOS; S. N. MOORTHY; R.G NAIR. 1988. Tuber Crops. Published by Mohan Primalani for oxford and IBH publishing Co. Pvt. Ltd., 66 Janpath, New Delphi 11001 and Printed at Sunil Printers, Narama, and New Delhi 110028. P. 1.
- LASDACAN, L. T. 1987. Effect of Different Levels of Cassava on the Growth Performance of Swine. Unpublished Thesis. BSU. L.T.B. pp 2, 4.
- MICROSOFT ENCARTA. 2003. Microsoft Encarta Online Encyclopedia. Retrieved October 01, 2007 from [http:// Encarta.msn](http://Encarta.msn).
- O'HAIR, S. K. 1995. Agriculture and Consumer Protection. Tropical Research and Education Center, University of Florida. Retrieved October 01, 2007 from <http://www.hort.purdue.edu/newcrop/CropFactSheets/cassava.html>.
- OFFICE OF PROVINCIAL AGRICULTURIST (OPAG). 2006. Commodity Production Profile of Cassava.
- PALAO-AY, S. M. 2003. Status of Fruit Production in Sagada, Mountain Province. Unpublished Thesis. BSU. L.T.B. pp 10-11.
- SALBINO. V. B. 2006. Marketing Practices of Flower Shop Owners in Selected Areas in Pangasinan and La Union. Unpublished Thesis. BSU. L.T.B.



- SATURNO, R. P. 2000. Benguet Entrepreneurs Association Production and Marketing an Analysis . Unpublished Thesis . BSU. L.T.B. P 3.
- SAYRE, R. 2003. Researchers get to the Root of Cassava's Cyanide-Producing Abilities. Retrieved October 01, 2007 from [http://www.congocookbook.com/about/africa/what is cassava.html](http://www.congocookbook.com/about/africa/what%20is%20cassava.html).
- SIM, J. M; D. T. MELDOZ. 2001. Nutritional Composition of Potato, Sweetpotato, Taro, Yam and Cassava. P. 6.
- STEPHENS, J. M. 2007. Cassava - Manihot esculenta Crantz. Ed Gibbon, the Congo Cookbook. Retrieved October 01, 2007 from <http://edis.ifas.ufl.edu/MV042>.
- TAYABAN, A. L. 1996. Baseline Study on Rattan Production and Marketing in Four Selected Municipalities of Ifugao. Unpublished Thesis. BSU. L.T.B.
- VILLAMAYOR, JR. F. G. 1988. Ecological Requirement and Cultural Management of Cassava. Pp 17, 20.



APPENDIX A

Letter to the Respondents

COLLEGE OF AGRICULTURE
Department of Agricultural Economics and Agribusiness Management
Benguet State University
La Trinidad, Benguet
January, 2008

Dear Respondent,

I am a fourth year student of Benguet State University, taking up Bachelor of Science in Agribusiness; I am presently conducting a study on “Production and Marketing Profile of Cassava in Benguet”.

In this connection, may I request your full cooperation and assistance in gathering data by answering the questionnaire sincerely and honestly, which will help me in the success of this research.

Thank you very much for sharing a part of your precious time. God Bless!

Very truly yours,

RHEALYN Y. PACSI
Researcher

Endorsed by:

JOVITA M. SIM
Adviser



APPENDIX B

Letter to the Municipal Agricultural Officer

COLLEGE OF AGRICULTURE
 Department of Agricultural Economics and Agribusiness Management
 Benguet State University
 La Trinidad, Benguet

January , 2008

HON: _____
 Municipal Mayor
 _____, Benguet

Thru: _____
 Municipal Agricultural Officer
 _____, Benguet

Sir:

Greetings!!!

I am a fourth year student of Benguet State University, taking up Bachelor of Science in Agribusiness; I am presently conducting a study on “Production and Marketing Profile of Cassava in Benguet”.

In this connection, may I ask permission to interview the cassava growers, at the same time gather data on the cassava production areas.

Your favorable endorsement for this request is very much appreciated.

Thank you!

Very truly yours,

RHEALYN Y. PACSI
 Researcher

Endorsed by:

JOVITA M. SIM
 Adviser



APPENDIX C
SURVEY QUESTIONNAIRE

Municipality _____

Barangay _____

Respondent No. _____

I. Socio-demographic profile

Name: _____ Age: _____

Address: _____ Gender: () Male () female

Civil Status: () Single () Married () Widowed

Highest educational attainment: _____

Number of household members: _____

Sources of income aside from cassava farming (pls. check)

() Employment (pls. specify) _____

() Business

() Carpentry

() Laborer/farm worker

() Gardening

() Broom making

() Swine raising

() Others, specify _____

Membership in Farmers/ Marketing Association: _____

Status in Farming:

() contract grower

Landownership:

() owned



self financed

leased

Farm area (in square meter): _____

II. Production

1. Location	Area Planted	Land Classification (a)	Volume produce (kg)	Quantity sold	Price/ Unit
_____	_____	<input type="checkbox"/> flat land <input type="checkbox"/> sloppy land	_____	_____	_____

2. Current production volume per cropping

Volume (sack) _____

3. What variety of cassava do you grow?

white cassava yellow cassava others, specify _____

4. What month do you usually plant cassava? _____

5. Specify the care and maintenance practices you follow.

III. Marketing (Please check those who apply to you)

1. What is the distribution of cassava produce?

sold

home use

animal feed

others, specify _____

2. Where do you market your product?

Baguio Hanger Market

peddling to

neighbors



processors

bakeries

others, specify_____

3. What is your reason for your choice of buyer?

higher price convenience others, specify_____

4. Do you produce more than that the demand of your buyers?

Yes No

If yes, what do you do with the excess? _____

5. Manner of payment

cash basis

consignment

paid in cash upon delivery

others, specify_____

6. Who are the sources of price information?

Set own price

set by buyer

others, specify_____

7. How do you promote your product?

participate in local trade fairs / festivals

advertisement by support groups

word of mouth

others, specify_____



IV. What problems are met in the production and marketing of cassava product in your locality?

a. Problems encountered in production.

- limited post harvest / utilization knowledge
- short storage life
- long maturity
- attack of pest and diseases
- distance from farm to market
- others, specify _____

b. Problems encountered in marketing.

- limited of marketing channels for cassava produce
- lack of information for standard pricing
- buyers control prices
- lack of awareness of consumers on cassava
- difficulties in transporting produce
- lack of market information
- others, specify _____

V. Suggestions related to the problems encountered:

a. Production problems:

_____	_____
_____	_____
_____	_____

b. Marketing problems:

_____	_____
_____	_____
_____	_____



VI. Other information:

1. What is the potential of cassava in your locality?
 - () could be commercialized/industrialized
 - () could become the main source of income
 - () others, specify _____



THANK YOU VERY MUCH FOR SHARING A PART OF YOUR PRECIOUS TIME. GOD BLESS!!!!

RHEALYN Y. PACSI



APPENDIX D

Cassava Plantation



Figure 3. Cassava production in Colalo, Mankayan, Benguet, newly planted



Figure 4. Cassava production in Colalo, Mankayan, Benguet, newly planted





Figure 5. Cassava production in Pukitan, Paco, Mankayan, Benguet intercropped with pineapple and newly planted, vegetation stage



Figure 6. Cassava production in Colalo, Mankayan, Benguet, vegetation stage





Figure 7. Cassava production in Sablan, Benguet, intercropped with gabi and papaya and vegetation stage



Figure 8. Cassava production in Kibungan, Benguet, intercropped with banana pineapple and ready for harvesting





Figure 9. Cassava production in Colalo, Mankayan, Benguet, ready for harvesting



Figure 10. Cassava production in Palpaltogan, Paco, Mankayan, Benguet intercropped with sweetpotato and ready for harvesting





Figure 11. Cassava production in Palpaltogan, Paco, Mankayan, Benguet intercropped with banana and ready for harvesting



Figure 12. Cassava production in Pukitan, Paco, Mankayan, Benguet intercropped with banana and sweetpotato and ready for harvesting





Figure 13. Cassava production in Kapangan, Benguet intercropped with banana and pineapple and ready for harvesting



Figure 14. Cassava production in Colalo, Mankayan, Benguet ready for harvesting

