BIBLIOGRAPHY

QUINTOS, STOCKY TAME W. APRIL 2008. Factors Affecting the Adoption of Crop Programming at the Farm Level in CATTUBO, Atok, Benguet. Benguet State University, La Trinidad, Benguet.

Adviser: Marie Klondy T. Dagupen, PhD

ABSTRACT

This study was conducted to determine the factors affecting the adoption of crop programming at the farm level. Specifically, it identified the crops planted and area devoted to each crop, dominant cropping patterns, farmers' perceptions and applications of crop programming.

The major crops planted were potato, cabbage, carrot and celery. Most of the farmers planted vegetables for two cropping seasons. Most of the farms were rainfed. Some farmers irrigated their farms during first cropping season.

Farmers adopted different cropping patterns within the farm level based on the condition of their farms like soil type and farm location.

Farmers have different perceptions about crop programming. They agreed that crop programming regulates supply of vegetable in the market. Probably, it would solve problems regarding price fluctuations.

Other factors considered in adopting crop programming were availability of capital, water supply, availability of labor, farm location and climatic factors.

TABLE OF CONTENTS

INTRODUCTION

Rationale

Crop programming is scheduling the planting and harvesting of crops to suit the market. This program was conceptualized to ensure that the market is adequately supplied with the products at the time they need them. The main problem of the Benguet vegetable industry is the unstable supply of products sold in the market resulting to fluctuations of its prices. According to Lab-oyan (2007), there are levels of Crop Programming. The Macro Level Crop Programming, an inter-region or national level group collaborative decision of which the objective is to capture an export market. Another is the Meso Level Crop Programming, a provincial or regional level group collaborative decision of which the objective is to influence supply to smoothen erratic fluctuation of market price. Price trend data and cropping pattern are used as a tool. The last one is the Micro Level Crop Programming, an individual farm enterprise level decision of which the objective is to adjust production schedule to take advantage of the reasonably higher market prices based on the price trend supply. The tools used are price trend data, rainfall pattern and cropping pattern. The traditional practice of the farmers is they plant at a month based on their experience of planting not knowing that the other farmers also did the same thing. They would harvest the same time resulting to oversupply of the products in the market leading to low prices. Considering the aforementioned premises, this study was conducted to know the factors affecting the adoption of crop program particularly in Cattubo, Atok, Benguet.

CATTUBO is one of the eight barangays of the municipality of Atok. It is located on the northern part of the municipality sharing boundaries with Buguias on the north and Kabayan on the east; both of which are municipalities of Benguet. Barangay Pasdong in Madaymen,

Kibungan bounds CATTUBO on the west and Paoay bounds on the south. The barangay is located 55.6 km. away from Baguio City and 5.5 km. away from the municipality hall at Sayangan. Since Halsema Highway transverses the barangay, the area is accessible to all kinds of transportation facilities. Buses plying the Bontoc-Cervantes, Lepanto and Buguias routes are available daily. Travel time is 2 ½ hours from Baguio City and Cattubo. Cattubo is the acronym for the six sitios of the barangay namely: C- Calasipan, A- Apanberang, T- Timbac, TU- Tulodan, B- Botia, and O- Oyusan. The name is also derived from the word CATTUBO that means young. It has 2387 total number of population and 471 households. Most of its population is kankanaey and Ibaloi. The major source of income is farming. In addition, others engage in off-farm activities like repair shops, vulcanizing, restaurant and sari-sari store. The barangay has a total land area of 2414.12 hectares composed mainly of young people (Barangay Natural Resource Management Plan, 2002).

Statement of the Problem

1. What are the crops planted and area devoted to each crop?
2. What are the dominant cropping patterns in CATTUBO?
3. How do the farmers perceive crop programming?
4. How do farmers apply crop programming at the farm level?
5. What are the factors affecting the adoption of crop programming among the farmers?

Objectives of the Study

The objectives of the study were as follows:

1. To determine the crops planted and area devoted to each crop.

2. To determine the dominant cropping patterns in CATTUBO.

3. To determine the perception of farmers about crop programming.

4. To find out the application of farmers about crop programming at the farm level.

5. To find out the factors affecting the adoption of crop programming by farmers.

Importance of the Study

This study was conducted to find out the factors affecting the adoption of the crop programming among the farmers. The findings will provide information to the concern government agencies in the development of the program. The goal of this study cannot be attained without the full cooperation of the farmers themselves. Information regarding crop programming of vegetable serves as a guide for farmers' income and sustaining agriculture. In Addition, knowledge in crop programming help the farmers improve and guide the right time of planting.

Scope and Limitation of the Study

This research study focus on how the farmers perceive crop programming and how do they apply crop programming at the farm level. The study does not take into consideration the crop programming by a group of farmers or the whole barangay since it seeks to understand first the micro or farm level programming.

REVIEW OF LITERATURE

Concepts of Crop Programming

Crop Programming is scheduling the planting and harvesting of crops to suit the market. It addresses the problem of unstable supply and helps regulate vegetable prices. It discourages the vegetable farmers in their practice of planting the same crop in the same season that usually result to oversupply in the market causing low prices. Farmers involved in this scheme follow schedules when to plant specific crops in one cropping season to regulate the volume of crops they deliver in the market. Farmers rotate the identified crops that they produce in every cropping season and among the barangays in every participating municipality (Anonymous, 2006). The vegetable crop programming was conceptualized to help minimize competition among local agricultural producers aside from increasing their income. The crops considered for vegetable production scheduling include cabbage, carrot, broccoli, snap beans, cauliflower, bell pepper, potato, and chinese cabbage. Farmers are not mandated to plant crops that are not productive in their respective areas. More than 70% of the farmers from Benguet, Mountain Province and Ifugao committed to participate in the crop programming (JC, 2006).

According to Chatto (1999), crop program was conceptualized to ensure that the market is adequately supplied with the products at the time they need them. Weekly planting schedules were formulated and assigned to the respective growers where close monitoring were done to ensure that everyone follows his assigned schedule. It is necessary that the growers be organized and bonded together to follow a specific schedule (Juan 2007). It is not necessary that a farmer should be a member of a cooperative to go into crop programming. This program is for the farmers to help them have a good harvest and not to be always at the losing side. There would be

no reason for importation of vegetables from other countries if the farmers fallow the concept of crop programming added by Teofilo (2007). Crop programming of vegetables starts at the nursery area of the seedlings wherein during transplanting of the seedling to the field, they are scheduled on what specific days they should be planted (Ampaguey, 2007).

Application of Crop Programming

Alunes (2007) cited that Market Driven Crop Programming is applying crop programming in a green house. There is an agreement between the contract grower and the institutional buyer about the kind of crops planted, the quantity and quality of the vegetables produced and the price. This type of crop programming needs a big amount of capital and usually financed by the government. The other type is the Open Field Crop Programming in the open area that some farmers are already practicing. Farmers who have wider areas for planting should at least plant three to four different kinds of crops while for those who have lesser area should plant two to three different kinds of crops to regulate the oversupply of vegetables in the market.

Situation of the Vegetable Industry

The Vegetable Industry in the Cordillera particularly in Benguet is in a slump because of various production problems met such as high cost of production inputs, alleged high chemical residue contents, poor quality, unstable prices and uncoordinated demand for vegetables due to the rising population. Vegetable farmers continue to exert efforts to maximize their production. The vegetable areas in the Cordillera highlands consist of small units of individually functioning farmers. Farming activities and practices were based on various factors such as Agro-ecosystem,

weather conditions, finances, market prices and technology updates. Many farmers grow the same crops all year round. Probably calmed by the thought that they have perfected the production process and they mainly rely on their memory and do away with records. Few farmers keep a farm record and prepare a farm plan so that they can easily figure out how much income or looses they have incurred in the production process. In effect, growing crops to them is characterized by the idea of "Makachamba" (Colting, 1999).

Problems Encountered

Carbonel (2001) cited the major agricultural problems encountered by farmers as lack of capital, lack of water supply since almost farm are not irrigated, prevention of pest and diseases, low prices of crops and high cost of farm inputs, similar crops produced in a cropping and low production. The sources of information of farmers are radio, co-farmers, DA agriculturist and Technicians of seed companies.

Efficiency of Production

The efficiency of farm production depends upon the increase of fertilizers, improvement in the seed of crops, improved insecticide and ever increasing know how of the farmers. Good farming requires enough capital, modern machinery and efficient use of labor (Snodgrass, et al., 1975).

Carantes, (1994) cited that Benguet people as having their own calendar in determining the seasons and the time to plant a certain crops and rituals have be performed like the "*tawal ni payew*" of Ibalois.

METHODOLOGY

Locale and Time of the Study

This research study was conducted in CATTUBO, Atok, Benguet among the farmers. This study was conducted from December 2007 to January 2008.

Respondent of the Study

Fifty (50) farmers were chosen randomly as a respondent of the study in CATTUBO, Atok, Benguet.

Data Collection

Secondary data include thesis, magazines and municipal reports of Atok. Primary data include key informants and the farmers.

An interview guide was used by the researcher for data gathering. The Likert scale was used for the questions on perception and application of crop programming while ranking was used for the factor of adoption.

Data Gathered

The data gathered includes the following: a) crops planted and area devoted to each crop, b) dominant cropping patterns in CATTUBO, c) perception of farmers about crop programming, d) farmers application of crop programming at the farm level and e) factors affecting the adoption of crop programming.

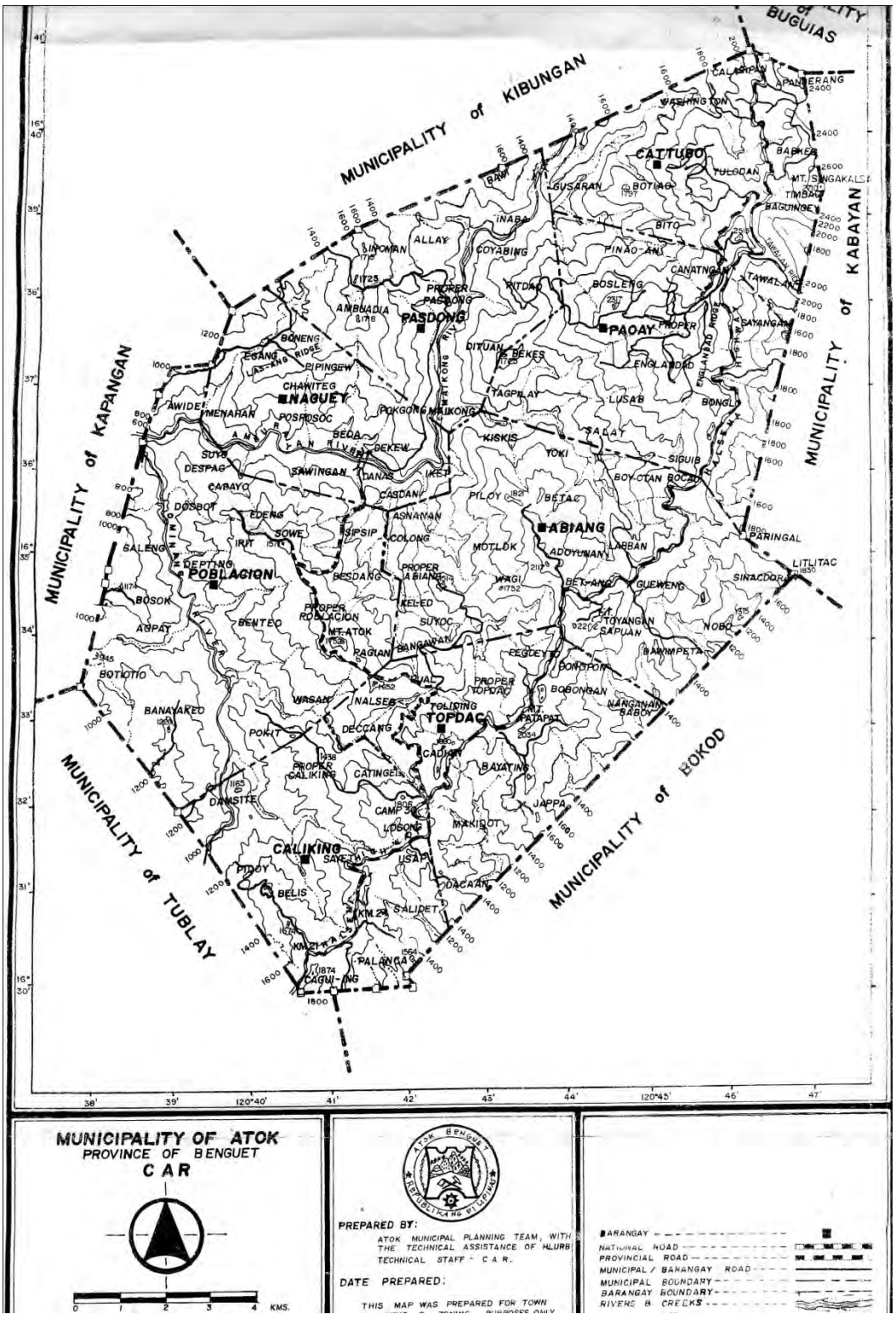

Figure 1. Map of the study area.

Data Analysis

The data collected were consolidated and analyzed using frequency, percentage and mean.

RESULTS AND DISCUSSION

Profile of the Respondents

There were 50 respondents in this study composed of 45 males and 5 females. The mean age of the respondents was 39.52 years. Forty–two (84%) of them were married and the rest were single. In terms of educational attainment, 40% attained elementary and another 40% attained high school education. Eight (16%) either finished or stepped college education.

Half of the respondents had been engaged in farming for 11-20 years. The mean years in farming were 15.88.

Table 1. Profile of the respondents

PARTICULARS	FREQUENCY	PERCENTAGE
Age		
20-30	12	24
31-40	11	22
41-50	22	44
>50	5	10
TOTAL	50	100
Mean age 39.52		
Gender		
Male	45	90
Female	5	10
TOTAL	50	100
Civil Status		
Single	8	16
Married	42	84
TOTAL	50	100
Educational Attainment		
Elementary	20	40
High School	20	40
College	8	16
Vocational	2	4
TOTAL	50	100

Table 1. Continued…

PARTICULARS	FREQUENCY	PERCENTAGE
No. of years as a full time farmer		
<10	17	34
11-20	25	50
21-30	8	16
TOTAL	50	100
Mean years 15.88		

Crops Planted and Area Devoted to Each Crop

Table 2 shows the crops planted and area devoted to each crop.

Crops planted. The major crops planted in CATTUBO are potato, cabbage, carrot and celery. Minor crops include radish and garden pea.

Area planted. Generally, farmers in CATTUBO plant vegetables for two croppings as described in the following sections. For the first cropping, the mean area planted for potato was 3333.33 square meter, cabbage was 3888.7 square meter, carrot was 2769.23 and celery was 2500 square meter. In the second cropping, the mean area planted to potato increase to 5166.66 square meters while the mean area for cabbage decreases to 2886.34. Celery increases to 2833.33 and the same with carrot that increase to 3125. Sufficient rainfall is the reason why most of the areas that were planted for second cropping increases. Farmers know that typhoons usually occur during the months

of June to August but they take risk. Thus, they plant during these months. Minor crops such as radish and garden pea were also planted during second cropping.

Table 2. Crops planted and area devoted to each crop

CROPS PLANTED AND AREA	FIRST CROPPING F	%	SECOND CROPPING F	%
Potato				
<2500	22	61.1	8	38.1
2501-5000	10	27.8	11	52.4
5001-7500	4	11.1	-	-
>1 ha	-	-	2	9.5
TOTAL	36	100	21	100
Mean area	3333.33		5166.66	
Cabbage				
<2500	14	50	15	65.2
2501-5000	10	35.7	7	30.5
5001-7500	1	3.6	1	4.3
7501-10000	3	10.7	-	-
TOTAL	28	100	23	100
Mean area	3888.7		2886.34	

Table 2. Continued...

CROPS PLANTED AND AREA	FIRST CROPPING F	%	SECOND CROPPING F	%
Carrot				
<2500	10	76.9	11	66.7
2501-5000	2	15.4	3	22.2
5001-7500	1	7.7	2	11.1
TOTAL	13	100	16	100
Mean area	2769.23		3125	
Celery				
<2500	1	100	5	71.4
2501-5000	-	-	1	14.3
7501-10000	-	-	1	14.3
TOTAL	1	100	7	100
Mean area	2500		2833.33	
Radish				
<2500	-	-	8	100
TOTAL			8	100
Mean area			1250	
Garden pea				
<2500	-	-	2	100
TOTAL			2	100
Mean area			750	

Crops Planted and Irrigation

Majority of the farms in CATTUBO are rainfed. However, during the first cropping some farmers also irrigate their farm as shown in Table 3 to source water for irrigation during the months of January to March hoping that at the harvest time, the price of vegetables would be high because few plant during these months.

Table 3. Crop planted and irrigation type

CROPS PLANTED AND IRRIGATION TYPE	FIRST CROPPING F	%	SECOND CROPPING F	%
Potato				
Irrigated	14	38.9	-	-
Rainfed	22	61.1	21	100
TOTAL	36	100	21	100
Cabbage				
Irrigated	9	32.1	-	-
Rainfed	19	67.9	23	100
TOTAL	28	100	23	100
Carrot				
Irrigated	4	30.8	-	-
Rainfed	9	69.2	18	100
TOTAL	13	100	18	100
Celery				
Irrigated	1	100	-	-
Rainfed	-	-	7	100
TOTAL	1	100	7	100

Table 3. Continued…

CROPS PLANTED AND IRRIGATION TYPE	FIRST CROPPING F	%	SECOND CROPPING F	%
Radish				
Irrigated	-	-	-	-
Rainfed	-	-	7	100
TOTAL			7	100
Garden pea				
Irrigated	-	-	2	100
Rainfed	-	-	-	-
TOTAL			2	100

Dominant Cropping Patterns

Cropping pattern. The dominant cropping patterns in CATTUBO are: potato-cabbage, potato-celery, potato-radish, potato-carrot, potato-potato; cabbage- cabbage, cabbage-celery, cabbage-potato, cabbage-carrot, cabbage-radish; carrot-cabbage, carrot-celery, carrot-potato, carrot-carrot, carrot-radish; celery-cabbage, celery-celery, celery-potato, celery-garden pea and celery-radish. Potato and cabbage were the crops most planted during the months of January to March. Farmers who planted during the months of January to March were those who have enough source of irrigation water. Most of the respondents planted in April and May because these are the months with sufficient rainfall. In addition, the farmers plant during these months in order to harvest in June so that they will have money to use for the enrollment of their children.

Perception of Farmers About Crop Programming

The perception of farmers about crop programming are summarized in Table 5 and discussed below.

Crop programming is planting crops to suit the market. A weighted mean of 3.28 was obtained from the respondents' answer. This means that the respondents are neutral about this perception. This indicates that the respondents are not sure whether they produce vegetables for the market.

Crop programming regulates the supply of vegetables in the market. A weighted mean of 3.82 was obtained from the respondent. This implies that the farmers slightly agree to this statement.

Crop programming will solve the problem of price fluctuation. A weighted mean of 3.5 was obtained showing that the farmers slightly agree with this perception. According to them, other factors that will solve the problem of price fluctuation are unity among every individual farmers, self-disciplined and willingness to adopt and apply the concept of crop program at the farm level.

Crop programming involves schedules of planting the crops. A weighted mean of 3.6 was obtained from the respondents' answers showing that the respondents are within neutral to slightly agreeing about this statement. The farmers said that there are other things to consider when scheduling the planting of crops such as availability of seeds and occurrence of natural calamities such as frost and typhoons. Schedule of planting crops to them were affected by these situations.

Crop programming minimizes competition among local agricultural producers. A weighted mean of 3.7 was obtained from the answers. It implies that farmers slightly agree that

crop programming minimizes competition among the farmers. According to them, there are already a large, number of farmers and others still want to engage in farming. Thus, the best way to compete is producing the best quality of vegetables needed in the market.

Crop programming is basically for the farmers. The obtained weighted mean was 2.78 from the respondent answer. Farmers disagree about this statement. They said that crop programming is not only the farmers concern but also for other stakeholders.

Crop programming starts with the nursery. A weighted mean of 3.72 was obtained from the answers of the respondents. It shows that farmers slightly agree with this statement.

Crop programming involves crop rotation. A weighted mean of 4.06 was obtained from the respondents' answers. It signifies that the respondents agree with this statement. They said that most of them is practicing crop rotation at their farm since they are taught about the benefits of crop rotation like it lessens occurrence of plant diseases and crop rotation sustains soil fertility.

Crop programming requires enough capital. The weighted mean that was obtained from the respondents answer was 4.12. This means that farmers agree about this statement. According to them, farm inputs such as fertilizers and pesticides are expensive. Thus, applying the concept of crop programming at the farm level requires enough capital.

Farmers Application of Crop Programming

Farmers application of crop programming are summarized in Table 6 and discussed below.

Farmers practice crop rotation. A weighted mean of 4.0 was obtained from the respondents' answers. This means that the respondents often practice crop rotation in their farm but they do not know that what they practice is the concept of crop programming.

Scheduling of planting in order to take advantage of expected higher price. The weighted mean that was obtained from the respondent was 3.06. It implies that farmers sometimes schedule their planting time. They said that as long as there are enough capital to be used and available seeds to be plant then they plant.

Farmers make their price trend study. A weighted mean of 2.66 was obtained. It shows that farmers seldom make their price trend study basing it from the past years. Farming to them is somewhat a form of gambling wherein they are not sure whether they have something to gain after harvesting their crops.

Farmers plant based on established rainfall pattern. A weighted mean of 3.48 was obtained from the respondents answer. It implies that farmers sometimes follow this application. According to them, the climate is changing so there is no guarantee when they plant based on established rainfall pattern.

Farmers sow at the same time but transplant at different time. A weighted mean of 3.1 was obtained from the respondents answer. It shows that farmers sometimes apply this one. They said that this is only applicable for cabbage, celery, and wongbok but not in carrot, potato, radish, and garden pea.

Factors Affecting the Adoption of Crop Programming

Table 7 presents the factors that affect the adoption of crop programming at the farm level and discussed below.

Availability of capital for production. A weighted mean of 1.36 was obtained from the respondents' answers equivalent to rank 1. According to them, this is important in adopting the crop programming because even though they have wide areas of farm if there is no capital to be used then it is useless.

Farm condition. A weighted means of 2.68 was obtained equivalent to rank 2. The farm conditions such as farm location and soil types are also important factors that affect the farmers in adopting crop programming. They explained that they could easily transport their crops if their farm is near from road and they plant crops suited to the soil type of their farms.

Water supply. A weighted mean of 3.04 (rank 3) was obtained from the respondents showing that this is important because according to them, water gives life to their plants, thus they find ways to have sufficient source of water to irrigate their crops during the months of January to March.

Availability of labor. A weighted mean of 4.12 (rank 4) was obtained showing that this factor was slightly important in adopting the crop programming.

Climatic factor. A weighted mean of 4.16 (rank 5) was obtained showing that the farmers rank this as slightly important.

Technological assistance from the government and private sectors. A weighted mean of 5.6 (rank 6) was obtained. This implies that this factor is least important to them also.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This study was conducted to determine the factors affecting the adoption of crop programming at the farm level in CATTUBO, Atok, Benguet. A total of 50 farmers were selected randomly as respondents. The information was consolidated, tabulated and analyzed using percentage, frequency and mean.

Regarding crops and area planted, the major crops planted were potato, cabbage, carrot and celery. Minor crops include radish and garden pea. Majority of the farmers adopted two cropping seasons in planting. Almost all of the farms were rainfed. Most of the respondents plant during the months of April and May where there is sufficient rainfall.

Most of the respondents have different cropping patterns based on the condition of their farms in terms of soil type and farm location. The dominant cropping patterns in CATTUBO are: potato-cabbage, potato-celery, potato-radish, potato-carrot, potato-potato; cabbage-cabbage, cabbage-celery, cabbage-potato, cabbage-carrot, cabbage-radish; carrot-cabbage, carrot-celery, carrot-potato, carrot-carrot, carrot-radish; celery-cabbage, celery-celery, celery-potato, celery-garden pea and celery-radish.

When it comes to perceptions, farmers agreed that crop programming helps regulate the supply of vegetables in the market. Moreover, it would solve the problem of price fluctuations.

As to application, farmers have been practicing crop rotation and scheduling of the planting time but are not aware that this is the concept of the program.

Farmers claimed that there were other factors considered in adopting crop programming such as availability of capital, water supply during summer, availability of labor for efficient production, farm location for easy transport of their crops and climatic factors.

Conclusions

The following conclusions are made based on the findings of the study:

1. The major crops planted in two cropping seasons are potato, cabbage and carrots.

2. Cropping patterns of farmers are based on farm conditions such as soil type, and farm location.

3. Farmers perceive crop programming as involving crop rotation, capital and regulating supply of vegetables.

4. Crop rotation and scheduling of planting based on present prices are common crop programming practices of farmers.

5. Capital is the most important factor that affect the adoption of crop programming.

Recommendations

Based on the conclusions, the following recommendations are made:

1. Research on other crops that could be an alternative to the usual cropping pattern fitting the soil and climatic condition of CATTUBO, Atok. This could be done on-farm with the farmers as cooperators.

2. Farmers could attend seminars conducted within their barangays for them to be aware about the concept of crop programming.

3. It is recommended that farmers link with lending institutions or join a cooperative where they could borrow capital.

LITERATURE CITED

_____2007. Philippines Farmers Adopt Crop Programming Scheme. Retrieved August 8, 2007 from *http://www.freshplza.com./2006/17oct/2_ph_scheme.htm.*

ALUNES, G. 2007. Member of Benguet Farmers Federation Incorporated, Atok Representative. Personal Interview August 16, 2007.

AMPAGUEY, A. 2007. Member of the Benguet Farmers Federation Incorporated. Personal Interview. August 15, 2007.

BARANGAY NATURAL RESOURCES MANAGEMENT PLAN (BNRMP) 2002. A Joint Undertaking of the Commodity of Barangay CATTUBO, Atok, Benguet Province and Cordillera Highland Agricultural Resource Management program (CHARMP). 2002.

CARANTES, J.A. 1994. Indigenous Farming Practice of the Ibalois in Southern Benguet. MS Thesis. Benguet State University, La Trinidad, Benguet. P. 10.

CARBONEL, O. 2001. Production Activities of Farmer-Members of Benguet Multi-Purpose Cooperative in Atok, Benguet.BS Thesis.Benguet State University. Pp 60

CHATTO, E. 1999. Perspective of the Private Sector in Rationalizing Agribusiness Enterprises in Vegetables, Fruits, Cupflowers/Ornamentals in Support of AFMA. A Paper Presented during the First National Stakeholders in Support of AFMA held at Benguet State University on May 3-7, 1999.

COLTING, R.D. 1999. Vegetable- Based Farming Systems: A Case in Atok, Benguet. Farming System and Soil Resources Institute. College of Agriculture, UPLB, Los Banos, Laguna.

JC 2007. Farmers Identify 16 Vegetables for Crop Programming Agenda. Retrieved August 8, 2007 from *http://www.sunstar.com.ph./static/bag/2006/07/07/news/*

JUAN, D. 2007. Supervising Agriculturist of the Department of Agriculture, La Trinidad, Benguet. Personal Interview. August 14, 2007.

LAB-OYAN, J. 2007. General Manager of Benguet Cooperative, La Trinidad, Benguet, Personal Interview. August 15, 2007.

SNODGRASS, M. and C.T.G.T WALLACE. 1975. Agricultural Economics and Resources Management. Prentice Hall Inc. Pp. 154-156.

TEOFILO, L. 2007. High Value Commercial Coordinator of the Department of Agriculture, Guisad Road, Baguio City, Personal Interview. August 14, 2007.

APPENDICES

Appendix A. Communication Letter

Benguet State University
COLLEGE OF AGRICULTURE
La Trinidad, Benguet

January 2008

Sir/Madam:

The undersigned is a fourth year Bachelor of Science in Agribusiness (BSAB) student majoring in Enterprise Management. I am presently conducting a research entitled "Factors Affecting the Adoption of Crop Programming at the Farm Level in Cattubo, Atok, Benguet" in partial fulfillment for the requirement of the course.

In this regard, may I ask a portion of your precious time to answer all the questions to complete the research undertaking. Rest assured that all information you will give be treated with outmost confidentiality.

Thank you very much for your support.

Respectfully yours,

Stocky Tame W. Quintos
Researcher

Appendix B. Survey Questionnaire

I. General Information

1. Name _____ 2. Age _____

3. Sex _____ 4. Civil Status _____

5. Highest Educational Attainment _____

6. No. of years as fulltime farmer _____ (years)

7. How many cropping do you adopt in one year?

_____ One _____ Two

8. What are the crops you produce?

First Cropping	Area planted	Irrigated	Rainfied	Planting month
_____ Cabbage	_____	_____	_____	_____
_____ Potato	_____	_____	_____	_____
_____ Carrot	_____	_____	_____	_____
_____Others (Specify)				
_____	_____	_____	_____	_____

Harvest month _____

Second Cropping	Area planted	Irrigated	Rainfied	Planting month
_____ Cabbage	_____	_____	_____	_____
_____ Potato	_____	_____	_____	_____
_____ Carrot	_____	_____	_____	_____
_____Others (Specify)				
_____	_____	_____	_____	_____

Harvest month _____

II. Perception of farmers about crop programming

Below are statements about crop programming, Please rate each statement according to your level of agreement.

	Strongly Disagree				Strongly Agree
	1	2	3	4	5
Crop Programming is planting crops to suit the market.	( )	( )	( )	( )	( )
Crop Programming regulates the supply of vegetables in the market.	( )	( )	( )	( )	( )
Crop Programming will solve the problem of price fluctuation.	( )	( )	( )	( )	( )
Crop Programming involves schedules of planting crops.	( )	( )	( )	( )	( )
Crop Programming minimizes competition among local agricultural producers.	( )	( )	( )	( )	( )
Crop Programming is basically for the farmers.	( )	( )	( )	( )	( )
Crop Programming start at the nursery area of seedlings before they are transplanted.	( )	( )	( )	( )	( )
Crop Programming involves crop rotation.	( )	( )	( )	( )	( )
Crop Programming requires enough capital.	( )	( )	( )	( )	( )

2. Farmers application of crop programming at the farm level

Please indicate your application of crop program in your own farm

	Rarely	Seldom	Sometimes	Often	Always
I practice crop rotation in my farm.	( )	( )	( )	( )	( )
I schedule my planting in order to take advantage of expected higher price.	( )	( )	( )	( )	( )
I make my own price trend study.	( )	( )	( )	( )	( )
1 plant based on established rainfall pattern.	( )	( )	( )	( )	( )
I saw seed at the same time but transplant at the different time period.	( )	( )	( )	( )	( )

3. Listed below are some factors that affect adoption of crop programming at the farm level. Please rank the factors according to importance.

1- Most important 6-Least important

	Rank
Availability of capital for production	_____
Water supply	_____
Availability of labor	_____
Farm condition (soil type, farm location)	_____
Climatic factors	_____
Technological assistance (from government and private sector companies)	_____

Table 4. Dominant cropping patterns of the farmers in CATTUBO, Atok, Benguet

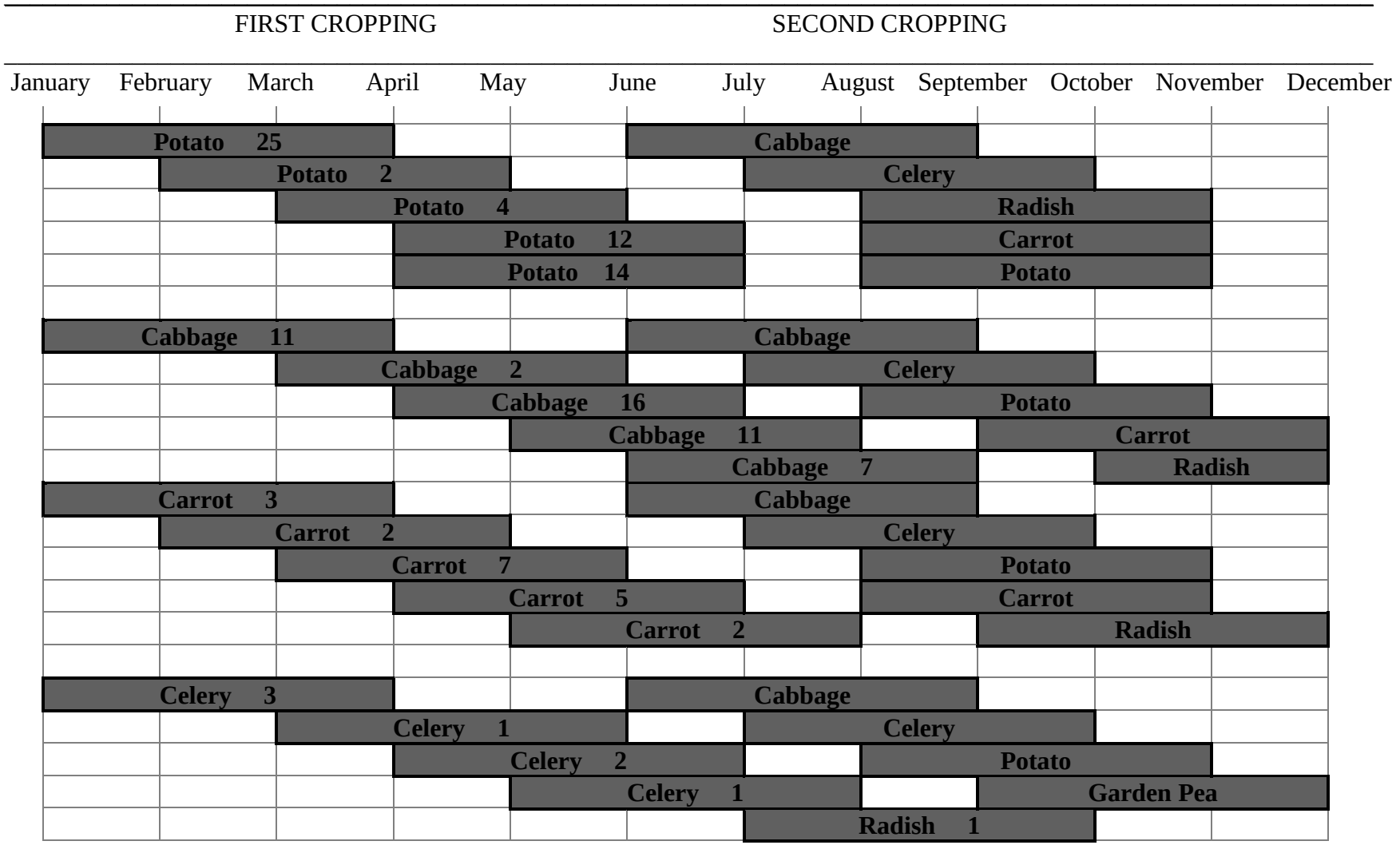

Table 5. Perceptions of farmers about crop programming

PERCEPTIONS	FREQUENCY					
	1	2	3	4	5	
	F	F	F	F	F	Weighted mean
1. Crop programming is planting crops to suit the market.	-	10	20	16	4	3.28
2. Crop programming regulates the supply of vegetables in the market.	-	3	14	22	11	3.82
3. Crop programming will solve the problem of price fluctuation.	1	6	19	15	9	3.5
4. Crop programming involves schedules of planting crops.	1	9	10	19	11	3.6
5. Crop programming minimizes competition among local agricultural producers.	-	1	21	20	8	3.7
6. Crop programming is basically for the farmers.	3	15	24	6	2	2.78
7. Crop programming start at the nursery.	-	3	18	19	10	3.72
8. Crop programming involves crop rotations.	1	2	9	19	19	4.06
9. Crop programming requires enough capital.	1	2	9	16	22	4.12

Legend:

1-Strongly disagree 3-Neutral 5-Stongly agree
2- Disagree 4 Agree

Table 6. Farmers application of crop programming at the farm level

APPLICATIONS	FREQUENCY					
	1	2	3	4	5	
	F	F	F	F	F	Weighted mean
Farmers practice crop rotation.	-	-	14	22	14	4.0
Farmers schedule planting in order to take advantage of expected higher price.	1	15	18	12	4	3.06
Farmers make their own price trend study.	4	19	19	6	2	2.66
Farmer plant based on established rainfall pattern.	3	6	11	24	6	3.48
Farmers sow seed at the same time but transplant at the different time period.	2	10	22	13	3	3.1

Legend:

1-Rarely 3-Sometimes 5-Always
2-Seldom 4-Often

Table 7. Factors that affect the adoption of crop programming

FACTORS	FREQUENCY							
	1	2	3	4	5	6		
	F	F	F	F	F	F	Weighted Mean	Rank
1. Availability of capital for production	42	3	2	2	-	1	1.36	1
2. Water supply	3	14	17	11	4	1	3.04	3
3. Availability of labor	-	5	8	17	16	4	4.12	4
4. Farm conditions (Soil type, farm location)	2	23	16	7	2	-	2.68	2
5. Climatic factor	3	4	6	12	19	6	4.16	5
6. Technological assistance (from government and private sector companies)	-	1	1	1	9	38	5.6	6

Legend: 1-Most important; 6- Least important