

## **BIBLIOGRAPHY**

SUBILAN, JENNYLYN G. APRIL 2010. Supply Chain Management of Organic Lettuce in La Trinidad, Benguet. Benguet State University, La Trinidad, Benguet.

Adviser: Jovita M. Sim, MSc

## **ABSTRACT**

The study was conducted in the different Barangays of La Trinidad, Benguet to describe the socio-demographic profile of organic lettuce producer, identify market actors; their roles and function, describe the supply chain adapted by the farmers producing organic lettuce, and identify problems in production and marketing and to map the supply flow of organic lettuce.

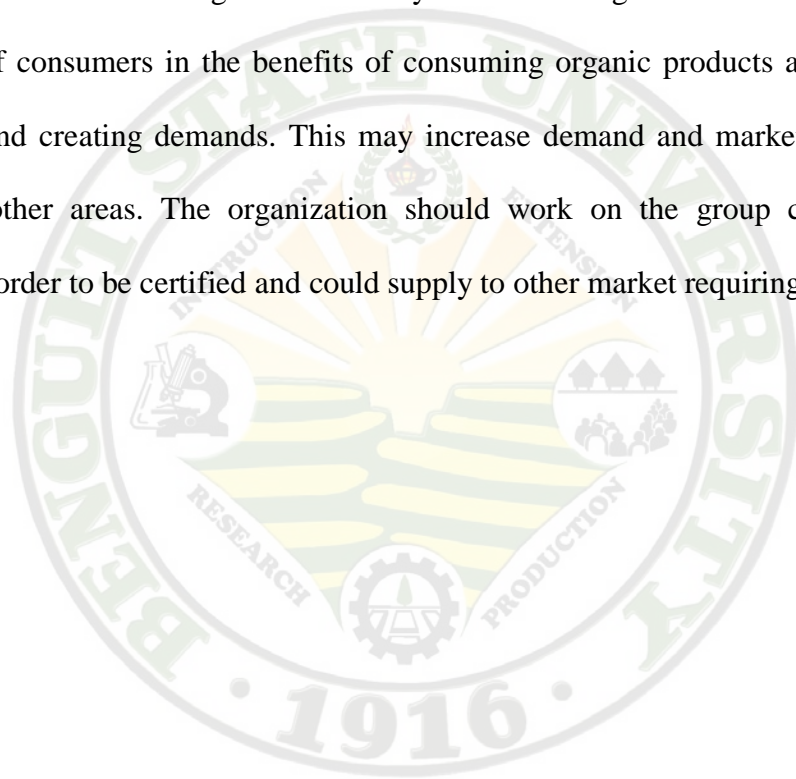
Eighteen organic farmers were interviewed that served as respondents of the study. Majority were middle to senior age. All the respondents attended formal education and majority attended trainings related to organic farming. Aside from organic farming the respondents were also engaged in other livelihood activities. The major reasons of the respondents in going into organic production were the low cost of organic inputs and the premium price of organically produced crop.

Majority of the respondents were LaTOP members, thus, their major market outlet was LaTOP markets in its outlets. Other outlets include BSU organic market. Decision of pricing organic lettuce and other organic vegetables is a consensus of the members and approved by the organization. The main production problems encountered

by the farmers were lack of greenhouse; organic farming is laborious and limited market outlet of organic produce.

Market outlets of organic producers in La Trinidad were LaTOP, BSU and contract buyers. The market problems encountered by the outlets were poor quality of the product and lack of supplies. Furthermore, consumers cannot afford the price of organic vegetables and farmers do not meet volume requirement.

Based on the findings of the study the following are recommended: create awareness of consumers in the benefits of consuming organic products as a strategy in promoting and creating demands. This may increase demand and market outlet should expand to other areas. The organization should work on the group certification of members in order to be certified and could supply to other market requiring certification.



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## INTRODUCTION

### Rationale

The study of supply chain management is the design, maintenance and operation of supply chain for satisfaction of end user needs. In the modern organizational or corporate management, the area of supply chain management has been considered as a competitive strategy for integrating suppliers and costumers with the objective of improving responsiveness and flexibility of manufacturing and service organization.

Among crops raised in La Trinidad, Benguet lettuce (*Lactuca sativa*) is an annual plant which form a rosette of leaves at the base and subsequently a tall flower. It is harvested before the formation of flower stalk. Lettuce in their various forms are the most important salad crops, easily available at anytime of the year since the development of varieties can be grown during wet and dry season. Lettuce is particularly as the main constituent of salad of its mild flavor, crisp texture, low calorie and attractive color.

To be successful and gain adherents, organic farming must be financially viable. And to do this, it has to produce quality product at predictable times. This can be achieved only by professional and skillful farmers drawing on scientific wisdom. Organic farming is becoming a popular response to health and environmental issues. It is imperative that massive people know the existence of chemical free vegetables. The bulk of markets for organic produce belong to upper class consumers who are relatively well-informed and aware of organic food. People are now wise in choosing their food.



Aside from lettuce, there are other crops like strawberries, onions, carrots and other semi-temperate vegetables grown in the fields, making La Trinidad as the salad bowl of the cordillera. La Trinidad is the main source of organic lettuce because of its cool temperature ranging from 11.7 to 23.2 degree Celsius and adequate moisture.

### Importance of the Study

The study was conducted to document the supply chain management of organic lettuce in La Trinidad, Benguet. Result of the study can be used as a guide for decisions in production as well as marketing organic crop. Result may also serve as a guide for others who will be conducting similar studies.

### Statement of the Problem

The study aimed to answer the following questions:

1. What are the socio- demographic profiles of organic lettuce producer?
2. Who are the market actors: their roles and function?
3. How to describe the supply chain adapted by the farmers in La Trinidad, Benguet producing organic lettuce.
4. What are the problems in production and marketing?
5. What is the supply flow of organic lettuce in La Trinidad, Benguet.

### Objectives of the Study

The study aimed to:

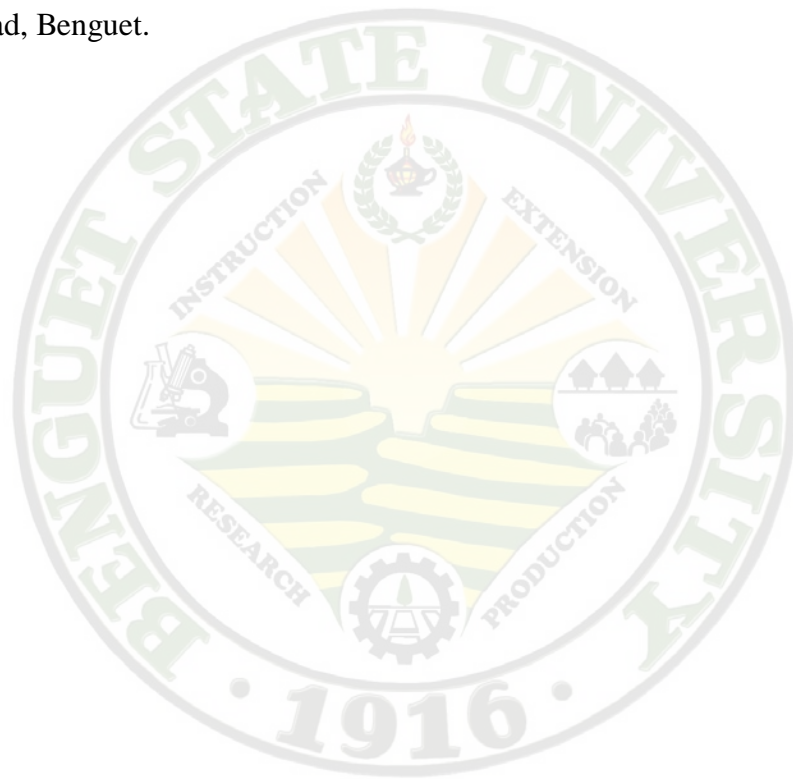
1. Describe the socio-demographic profile of organic lettuce production.
2. Identify market actors, their roles and function.



3. Describe the supply chain adapted by the farmers in La Trinidad, Benguet producing organic lettuce.
4. Identify the problems in production and marketing.
5. Map the supply flow of organic lettuce.

### Scope and Delimitation

The study focused on the documentation of the supply chain of organic lettuce in La Trinidad, Benguet.





## **REVIEW OF LITERATURE**

### Marketing Management

Marketing management is the process of planning and executing the conception, pricing, promotion and distribution of ideas, service to create exchanges that satisfy individual and organizational goals. It is also takes place when at least one party to a potential exchange thinks about the means of achieving desired responses from their parties. Marketing management as the art and science of choosing target markets and getting, keeping and growing costumers through creating, delivering and communicating superior costumers value (Kotler, 2000).

### Marketing Channels

According to Kotler (2000), to reach the target market, the marketer uses three kinds of marketing channels. The marketer uses communication channel to deliver and receive messages from target buyers. The marketer uses distribution channels to display or deliver the physical product or services to the buyer or user. They include warehouses, transportation vehicles and various trade channels such as distributors, wholesalers and retailers. The marketer also uses selling to effect transactions with potential buyers. Selling channels include not only distribution and retailers but also the banks and insurance companies that facilitate transactions (Kotler, 2000). Furthermore, he stated that marketing channels connect the marketer to the target buyers. The supply chain describes a longer channel stretching from raw materials to components to final products that are carried to final buyers. The supply chain represent a value of delivery system. Each company captures only a percentage of the total value generated by supply





chain. When a company acquires competitors to move upstream or downstream, its aims to capture a higher percentage value.

### Life Cycle Considerations for Supply Chain Strategy

It is inevitable for supply chains to be affected by the life cycles that have affects on the dynamics supply chains and are associated with the products.

a. Innovation. This illustrates how the product and production process progress. It gives us hint to consider the feasibility of the location dependent on the degree of innovativeness of the product (Abernathy and Clark, 1983).

b. Market. Related to the market clarifies the marketing objectives in each stage. In this period, sales growth is slow because of the mixed effect of the expensiveness of the product, low awareness in the market, costumers, reluctance to change their behavior and under formation of the distribution channels (Vernon, 1966).

c. Location. Related to the location purposes between the product and the reasonable location of the manufacturing facilities. It is operational because it considers the timing and the reason to shift manufacturing facilities (Vernon, 1966).

### Function of Marketing Intermediaries

According to Sharma (2004), deciding whether to use an intermediary in the distribution channel depend on many factors, but essentially it involves determining whether the needs of the consumer can be successfully be met by the available resources and skills Of producer. The three basic function performed by an intermediary in the distribution channel are:



Transactional. This function involves adding value to the distribution channel by bringing in the intermediary's resources to establish market linkages and customers contacts. The intermediary either directly undertakes the marketing and sales function or helps to establish buyer-seller relationship by serving a link between the manufacturer and the retailer.

Logistical. This function involves the physical distribution of goods. It also breaks sorting and storing supplies at location within the reach of end customers. It is also breaks up the bulk production of the manufacturer into smaller portion and may include the transportation of smaller shipment to intermediaries or retailers further down the channel of distribution.

Facilitating. The facilitating function of the intermediaries supplement the entire marketing flow of the product and are separated from logistics. The facilitating functions include financially supporting the market chain by investing in storage capabilities. They may include facilitating sales by helping the consumers buy even when he or she does not have cash through financing plans, purchase agreement and etc.

These function performed by the intermediary ensure market coverage, increase the availability of cash flow in the distribution channel, and increase end – user convenience. A producer can bypass an intermediary by elimination or substitution, but tasks performed by the intermediary cannot be eliminated (Sharma, 2004).

#### Advantage of Using an Intermediary in Marketing

The advantage of using intermediaries stem from the core economics of supply chain management: market coverage, low cost, systematic cash flow, etc. the



intermediary adds the value to the marketing of the product by bringing in specialization, marketing knowledge, capacity to segment the market, and selling skills that allow the marketer to implement marketing strategies effectively (Sharma, 2004).

Furthermore, intermediaries providing logistic support increase convenience to both the producer and the customers by offering effective delivery and pre- and post-purchase customer service as well as facilitating manufacturer services, making them indispensable to most mid- and small scale producers.

#### Disadvantage of Using an Intermediary in Marketing

As mentioned by Sharma (2004), manufacturers often see intermediaries as parasite rather than assets. The disadvantages of using an intermediary stem from physiological apprehensions, market antecedents have created such apprehensions, and lack of managerial skills or resources that are sufficient to balance and manage the intermediary. Fears, which may come true if the producer fails to manage the intermediary, might include: fears of losing control, fears of losing customer contact, fears of losing customer ownership, fears of opportunistic behavior, fear of inadequate communication, fear that the objective of the intermediary will conflict with those of the producer, fear that the intermediary will extract rather than add to value and fear of poor market management.

Furthermore, an intermediaries many have of the same fears. These fears often undermine the working relationship between a producer and intermediaries and keep them from effectively utilizing each other's resources and maximizing the potential of the marketing mix.



### Definition of Terms

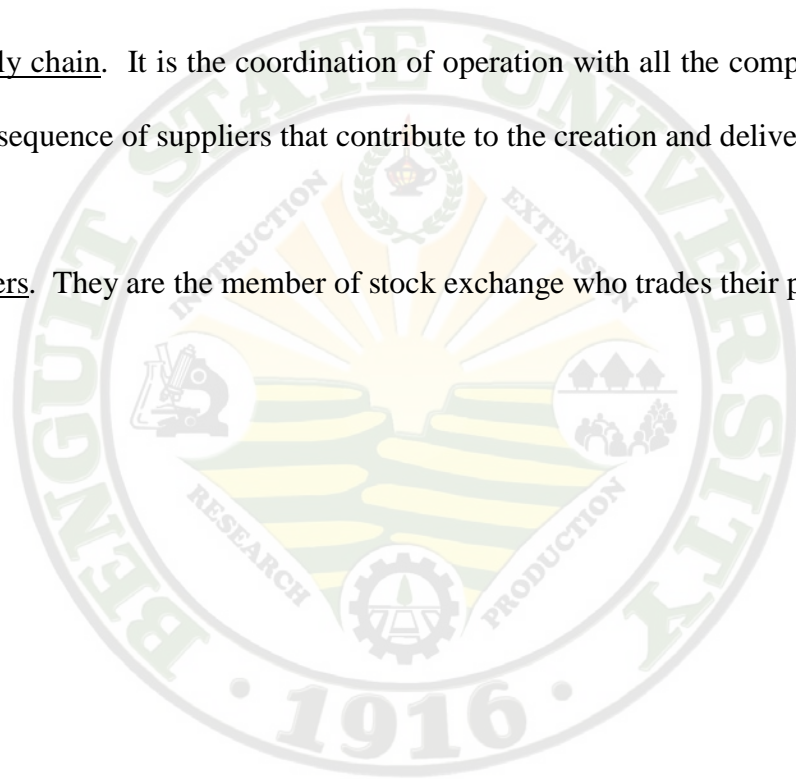
Intermediary. They have an intermediate function that act as a mediator in marketing.

Market. It is a meeting together of people for the purpose of trade by private purchase and usually not by action

Marketing. It is an aggregate of functions involved in moving goods from producers to consumers.

Supply chain. It is the coordination of operation with all the companies involved in the entire sequence of suppliers that contribute to the creation and delivery of a product or services.

Traders. They are the member of stock exchange who trades their product.



## **METHODOLOGY**

### Locale and Time of the Study

La Trinidad is one the 13 municipalities of Benguet. The study sites were the 14 Barangay of La Trinidad namely: Alapang, Ambiong, Bahong, Balili, Beckel, Bineng, Buyagan, Cruz, Long long, Puguis, Shilan and Tomay. The study was conducted on November to December 2009.

### Respondents of the Study

The respondents of the study were the organic lettuce grower and the traders in La Trinidad, Benguet. Total enumeration was used in determining sample size.

### Research Instrument

The study made use of secondary and primary data. Interview questionnaire for farmers and traders was prepared. Primary data was gathered through personal interview. The secondary data on the list of organic lettuce producers was taken from records of organization and from provincial or municipal agricultural office.

### Data Analysis

The data gathered were tabulated using Microsoft excel. The data were analyzed and presented using frequency analysis, percentage and descriptive analysis.



## RESULTS AND DISCUSSION

### Profile of the Respondent

Table 1 present the socio-demographic profile of the respondents as to their age, gender, household size, source of income and number of years/experience in producing organic lettuce.

Age. Most (38.9%) of the respondent has an age bracket of 56-65 years old. Five (28.7%) out of the respondent has an age bracket of 46-55 years old. Result implies that most of the organic producers are of middle to senior age which may be attributed to the health consciousness of the respondent as stated in reason of producing organically.

Sex. There was an unequal number of males and females. Most of the respondents were males (61.1%) and 38.9% of were female. Result shows that majority who are involved in organic farming are males. This may be attributed to the intensiveness of work in organic farming.

Household size. Most (66.7%) of the respondent have four to six members of the family. Four (22.2%) respondent has a member of seven to nine in the family. One (5.6%) of the respondent has ten members of the family and another one (5.6%) respondent has two member of the family.

Major source of income. All the respondent were in organic farming, this is their major source of income. However, some respondents were also government employee (11.1%), laborer (5.6%) and self employ (11.1%) such a sari-sari store owner. Result shows that respondent has other sources of income aside from organic farming.

Number of years in producing organic lettuce. Most (44.4%) of the respondent were into organic production for two to five years. Six (11.1%) of the respondents were





practicing organic farming for less than a year. Two (11.1%) were into organic production for six to nine years and two (11.1%) of the respondent were already ten years or more in organic farming. Result shows that farmers went back to natural farming or farming without using chemicals and pesticides. Those farmers who have been practicing organic farming for six to more than ten years were practitioners of natural farming and are now adopting the science and technology based on organic production.

Table 1. Profile of the respondents

PROFILE	FREQUENCY	PERCENTAGE
Age		
35 and below	3	16.7
36 to 45	3	16.7
46 to 55	5	27.8
56 to 65	7	38.9
TOTAL	18	100
Gender		
Male	11	61.1
Female	7	38.9
TOTAL	18	100

Table 1. continued...

PROFILE	FREQUENCY	PERCENTAGE
Educational Attainment		
Elementary graduate	4	22.2
High school graduate	6	33.3
College graduate	4	22.2
Vocational graduate	4	22.2
TOTAL	18	100
Household size		
1 to 3	1	5.6
4 to 6	12	66.7
7 to 9	4	22.2
10 to 12	1	5.6
TOTAL	18	100
MEAN	5	
Major source of income		
Organic farming	18	100.0
Government employee	2	11.1
Laborer	1	5.6
Self employ	2	11.1
Years of producing organic lettuce		
1 year in below	6	33.3
2 to 5 years	8	44.4
6 to 9 years	2	11.1
10 years in above	2	11.1
TOTAL	18	100

\*Multiple responses



Reasons in producing organic lettuce. The increase in price of inorganic farm inputs contributed to the shifting of farmers to traditional or low cost inputs of organic production (83.3%), fourteen (77.8%) respondent stated that price of organic lettuce is premium as compared to conventional. There were seven (38.9%) respondents who were producing organic lettuce for the health conscious consumers as well as for the safe consumption of their family (16.7%) , four (22.2%) respondent stated that producing organic lettuce is better and higher income is attained. Lettuce are also easy to manage according to two (11.1%) respondents and it is considered a high value crop as stated by one respondent because it is one of the most common for vegetable salad.

Table 2. Reason in producing organic lettuce

REASON	FREQUENCY	PERCENTAGE
Low cost inputs	15	83.3
Premium price	14	77.8
High value crop	1	5.6
Consumers are health conscious	7	38.9
Better and income derived	4	22.2
Easy to mange and care	2	11.1
Family consumption	3	16.7

\*Multiple response

Attendance to training. Majority (83.3%) of the respondents attended training related to organic farming. Only three (16.7%) respondent did not attend training, they just learned



from their neighbors. Respondents mostly attended trainings because it is one of the requirements in joining the LaTOP organization and one respondent stated that he need more trainings even he attended a lot because trainings is the best way to gain more knowledge on organic farming.

Table 3. Participation and title of trainings attended

PARTICULARS	FREQUENCY	PERCENTAGE
Participation/ attendance to training		
Attended trainings	15	83.3
Did not attend training	3	16.7
TOTAL	18	100
Titles of trainings		
Organic farming	5	33.3
Organic agriculture	3	20.0
Natural farming	2	13.3
Natural farm fermentation	1	6.7
Cordillera organic congress	1	6.7
In house organic training	2	13.3
Post harvest technology	1	6.7
TOTAL	15	100

Organization membership. Majority (83.3%) of the respondent are LaTop members.

### Farm Profile

Year started organic farming. Fifty percent (50%) of the respondent started organic farming in 2007-2009 followed by those who started in 2001-2004 (22.2%). Three (16.7%) started organic farming in 2005-2006 and only two (11.1%) respondent started earlier than 2000. The result implies that organic production was just introduced just recently. This may be attributed to the proclamation of Executive Order 481(EO 481) signed by Pres. Gloria Arroyo in December 27, 2005, promoting production of crops, livestock and animals in organic method. Those producer who were into organic production before EO481 had been practicing traditional practices.

Other crops planted organically. All the organic farmer respondents practice diversified cropping where more than one crops is planted and all practice crop rotation. Other crops grown side by side with lettuce include pechay (66.77%), carrots (55.6%), Broccoli (50%), cabbage (33.3%), legumes (33.3%) , spinach (33.3%) squash (33.7%), raddish (11.1%), Aragola (11.1%), cucumber (11.1%), strawberry (11.1%) and one (5.6%) respondent is planting corn and citrus.



Table 4. Farm profile of the respondents

PROFILE	FREQUENCY	PERCENTAGE
Year Started Organic Farming		
2000 in below	2	11.1
2001 to 2004	4	22.2
2005 to 2006	3	16.7
2007 to 2009	9	50.0
<b>TOTAL</b>	<b>18</b>	<b>100</b>
Characteristics of production area		
Sloping	11	61.1
Terraced	7	38.9
<b>TOTAL</b>	<b>18</b>	<b>100</b>
Type of production		
Greenhouse	15	83.3
Open Area	14	77.8
No. of Cropping per Year		
Continuous	3	16.7
Every 15 days	2	11.1
Every month	4	22.2
2 to 4 times a year	3	16.7
5 to 6 times a year	3	16.7
Once a year	3	16.7
<b>TOTAL</b>	<b>18</b>	<b>100</b>





Table 4. continued...

PROFILE	FREQUENCY	PERCENTAGE
<b>Source of Planting Materials</b>		
Bought from Farm Supplies	18	100.0
Own Seeds	4	22.2
From Neighbors	1	5.6
Co-members	1	5.6
<b>Other crops planted organically</b>		
Pechay	12	66.7
Carrots	10	55.6
Broccoli	9	50.0
Spinach	6	33.3
Potato	6	33.3
Cabbage	6	33.3
Legumes	6	33.3

\*Multiple response

### Marketing Profile

Table 5 presents the marketing profile of the respondent. Marketing profile of the respondents include: marketing outlet, price receive per kilo, mode of selling, method of payment, decision of pricing, mode of delivery and volume delivered per time.

Table 5. Marketing profile of the respondent

PROFILE	FREQUENCY	PERCENTAGE
	(F)	(%)
<b>Market outlet</b>		
LaTOP	14	77.8
BSU organic market	1	5.6
Contract buyers	4	22.2
Neighbor	2	11.1
Manila	1	5.6
Sari- sari store	1	5.6
Trading post	1	5.6
<b>Price receive per kilo</b>		
80 to 100	16	88.9
40 to 60	2	11.1
20 to 39	3	16.7
<b>Method of payment</b>		
Consignment	17	94.4
Cash on delivery	6	33.3
<b>Mode of selling</b>		
Delivered	15	83.3
Pick up	3	16.7
<b>TOTAL</b>	<b>18</b>	<b>100</b>



Table 5. continued...

PROFILE	FREQUENCY	PERCENTAGE
Decision of pricing		
Farmers dictate	13	72.2
Buyers dictate	5	27.8
Fixed by the organization	13	72.2
Frequency of delivery		
Per day	2	11.1
Weekly	4	22.2
2 to 3 times a week	10	55.6
Every month	1	5.6
Every 3 months	1	5.6
TOTAL	18	100
Volume delivered per time		
2 to 10 kg	11	61.1
11 to 20 kg	3	16.7
21 to 30 kg	1	5.6
50 kg	1	5.6
1500 kg	2	11.1
TOTAL	18	100

\*multiple response

Marketing outlet. Majority (77.8%) of the respondent were selling their organic lettuce to LaTOP, some (22.2%) of this farmers were selling also in BSU organic market every Wednesday. There were two (11.1%) respondent who were selling to contract



buyers, These contract buyers are going to their farms and harvest their organic lettuce. One (5.6%) farmer is selling his products at La Trinidad Trading Post. One of the farmers sell in Manila aside from the LaTOP market. One farmer is supplying his produce to LaTOP and surplus of his quota is supplied to a sari-sari store and directly to his neighbors.

Price received per kilo. Majority (88.9%) were receiving 80.00-100.00 pesos per kilogram , for the LaTOP members, organization will deduct 15% of the price which 10% will go to the cooperative and 5% to savings. In BSU organic market 10% is deducted from the retail price per kilo . Three (16.7%) were receiving 20.00 - 40.00 pesos per kilogram, this is the price from Trading Post and neighbors of the respondent. Two (11.1%) receive 40.00 -60.00/pesos per kilogram, this was the buying price of the contract buyers. Result shows that farmers receive higher price from LaTOP. However, for those selling in other outlets price is higher as compared to the price of buyers in La Trinidad Trading Post.

Method of selling and payment. Majority (83.3%) of the respondents deliver their produce to the market outlet and three of the respondents mentioned that the buyers pick-up their produce in their farm. On the other hand, majority (94.4%) of the respondents sell their products on consignments basis especially those supplying the LaTOP market and BSU organic market. Six (33.3%) of the respondents sell it on cash upon delivery especially those who do the retailing to their neighbors and friends, La Trinidad Trading Post, contract buyers and Manila.

Decision in pricing. As to the decision in pricing organic lettuce and other organic vegetables, majority (72.2%) said that it was the consensus of farmers and approved by



the organization. Three (16.7%) of the respondents mentioned that the price is dictated by buyers (these are the producers who are selling to contract buyers). For the LaTOP members, price is stable/fixed and is only changed every year if there are changes. However, if the farmer sell to the trading post or to contract buyers it follows the conventional way that the traders dictate the price. This shows that if farmers are organized like the LaTOP, they get a better price.

Frequency of delivery. Most (55.6%) of the respondents deliver their organic lettuce 2 to 3 times a week to their market outlet, while four (22.2%) of the respondents deliver every week. Two (11.1%) respondents deliver organic lettuce every day to LaTOP because they have programmed their cropping. One (5.6%) deliver once a month and another one (5.6%) respondent deliver every three months.

Volume delivered per time. Most (61.1%) of the farmers deliver 2 to 10 kg in one delivery. Three (16.7%) farmers deliver 1500 kg in one delivery. One (5.6%) farmer deliver 50 kg and another one (5.6%) farmer will deliver 21-30 kg in one delivery. Result implies that volume of delivery varies depending on the quota they have quoted in the organization and on the size of farm cultivated.

#### Market Outlets of Organic Lettuce Producers in La Trinidad

La Trinidad Organic Practitioner. (LaTOP) is a cooperative where members are organic farmers from Benguet. They are buying organic vegetables from their members and sell to their market outlet such as: stall #36 km5 La Trinidad, Café by the Ruins in Abanao, Marios Restaurant at upper session road, Guiding Light at Bokawkan, Lourdes Church in Kisad and SM Supermarket in Baguio City. LaTOP farmers are also selling



processed products inspected by the organization with DTI and BFAD registration. Buyers are buying organic lettuce at PhP100.00 per kilo and sell at the same price. However the organization/LaTOP gets a 15% of that price. Most of their buyers are health conscious consumers, cancer patient and Class A B C. Class A consumers are the highest income earners mostly big business owners and heads or executives of offices or companies. Class B are the high income earners but lower than the Class A. Class C are the medium income earners.

BSU organic market. BSU Organic Market is also selling organic vegetables from organic farmers in La Trinidad inspected by BSU guarantee system. They are also selling processed product of BSU. They are buying organic lettuce at PhP100.00 per kilo and sell at PhP100.00 per kilo but the research extension will get 10% of that price. The market is opening every Wednesday. Most of their consumers are the employees of Benguet State University and other health conscious consumers.

Contract buyers. Contract buyers were the one to go directly to the farm of the any organic farmer and harvest their product. Contract buyers are selling to the vegetable vendors in Manila (Divisoria). Buying price of organic lettuce is at PhP 40.00-60.00 per kilo and sell at PhP 90.00-130.00 per kilo.

### Key Actors in the Supply Chain

Organic farmer. Farmers who were not using pesticides and chemicals in farming. These are farmers who maybe using the traditional and indigenous way of production of crops and animals/livestock. This also refers to the science and technology based farming without the use of poisonous chemicals but used natural source of nutrients for the plants and animals like bio-N, fermented plant and fruit juices.





Input supplier. Input supplier refers to the producers of organic fertilizer and pesticides. Input suppliers produce, compost, compost tea, vermin compost and organic pesticides and sell to organic producers.

Traders. Traders refer to someone who buys and sell organic produce from farmers and sell to consumers or to institutional buyers. In this study, the traders referred here are the LaTOP and the contract buyer.

HORECA. HORECA are the hotel, restaurants and cafeteria who purchase organic products and process/prepared for consumption of their customer. In this study, these are the Café by Ruins, Mario's, and Oh my Gulay, in Baguio City and Café Malem-ag in La Trinidad.

Household consumer. Household consumers refer to the end consumer of the product. In the study these are the consumers from La Trinidad and from Baguio City. These are classified as Class A B and C consumers.

#### Supply Chain Maps of Organic Lettuce in La Trinidad, Benguet.

Supply flow 1 (Figure 1) is a case of a farmer with two guarantee systems one from the Benguet State University –Internal Guarantee System (BIGS). This means that the product is monitored by Benguet State University (BSU) and is guaranteed that it is organic. Production system is monitored by BSU. At the same time, the farmer is also being monitored by LaTOP because he is a member of LaTOP and production system is also monitored and inspected by LaTOP. Thereby, the farmer has 2 market outlets for his product, the BSU Organic market and LaTOP market. From the BSU Organic market the products are sold directly to the consumers. From the LaTOP market the products are delivered to Café by Ruins, Marios Restaurants, Guiding Light Church, Lourdes Church



and SM Supermarket as retailer of the product. From these outlets, the product are sold to consumers as fresh or processed.

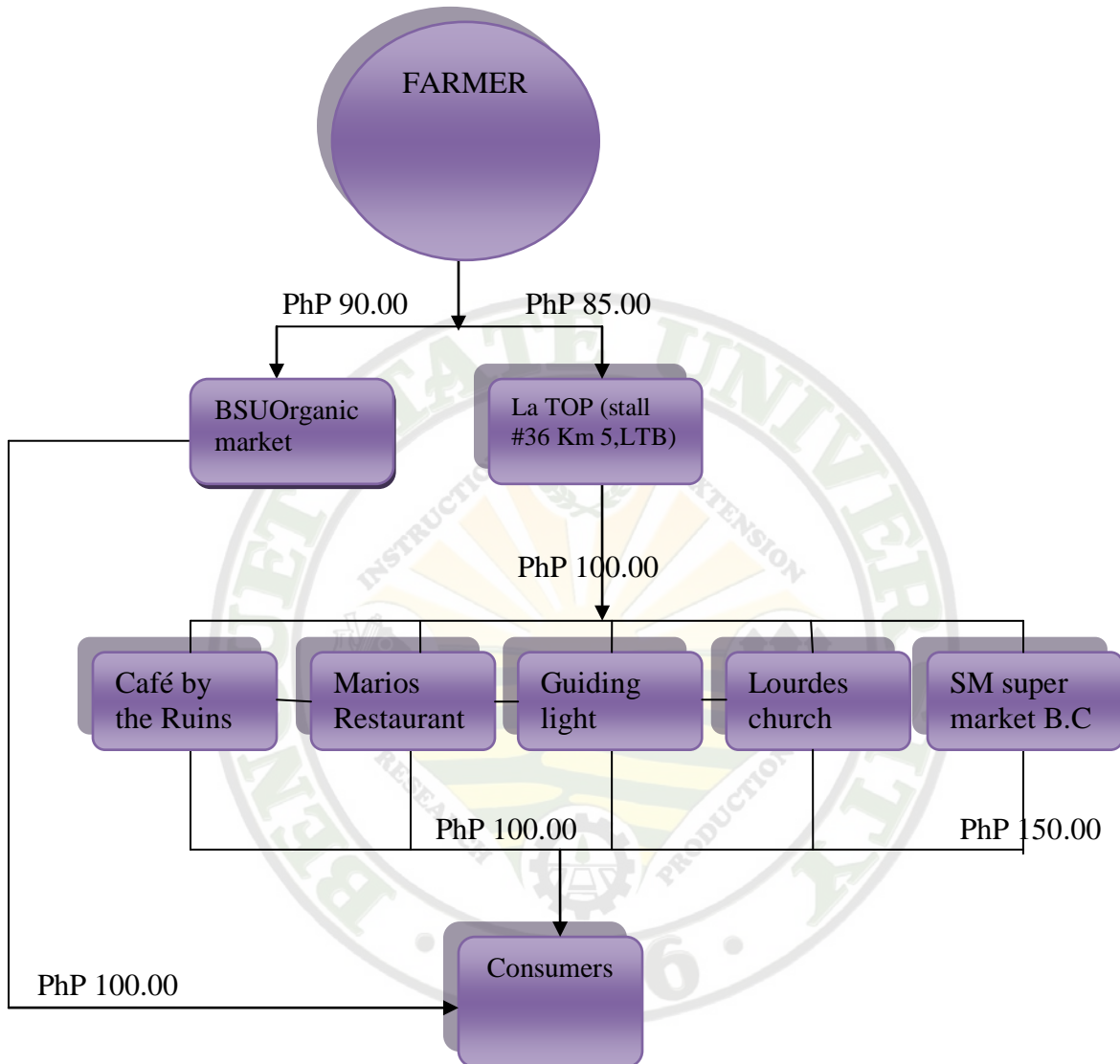


Figure 1. Supply flow of product and price from two farmer to market outlet, the case of farmer with BIGS and LaTOP guarantee system

Supply flow 2 (Figure 2) is a flow of product from the farmer, then delivered to LaTOP outlet and lastly to consumer. The farmer also sell directly to HORECA in Metro Manila through his daughter. The same flow from LaTOP market, the products are delivered to their outlets.

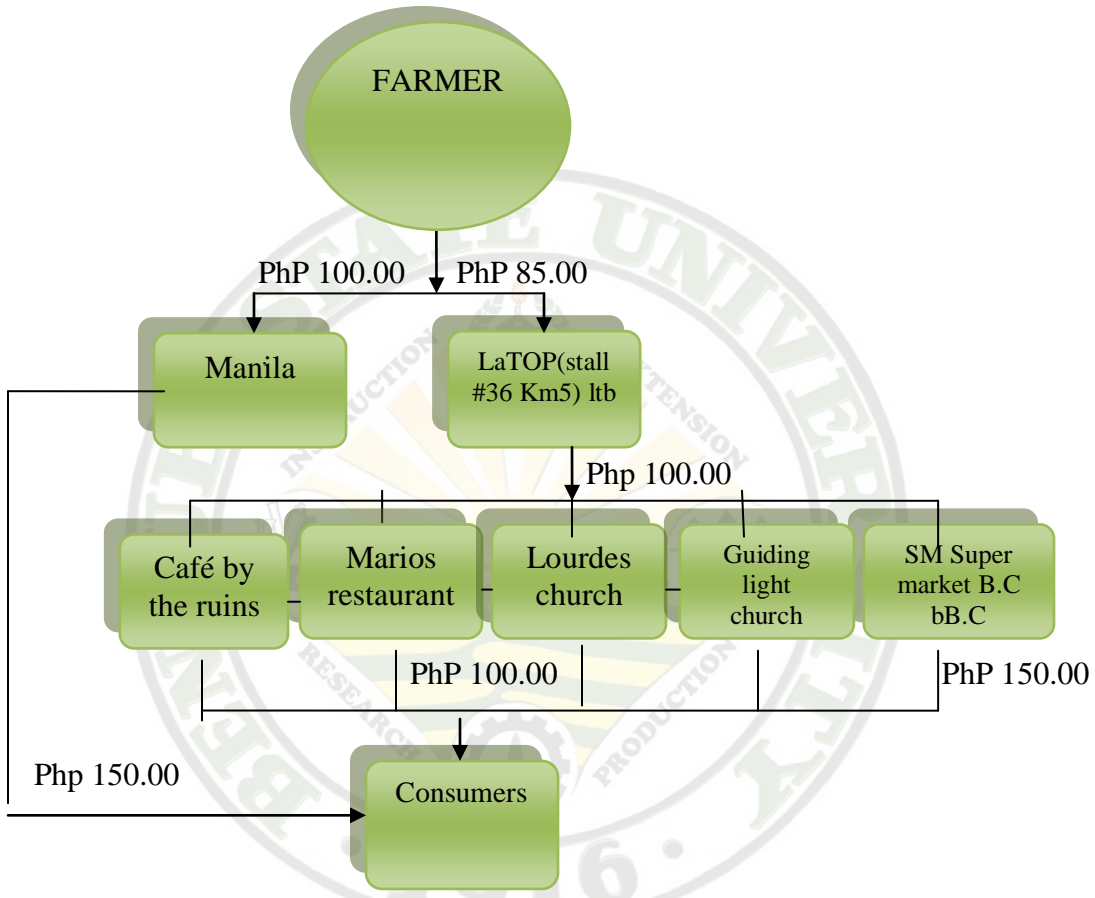


Figure 2. Supply flow of product and price of one farmer



Supply flow 3 (Figure 3) is a flow of product of a farmers who supplies the LaTOP market and at the same time supply a sari-sari store and also retails his products to his neighbors and friends.

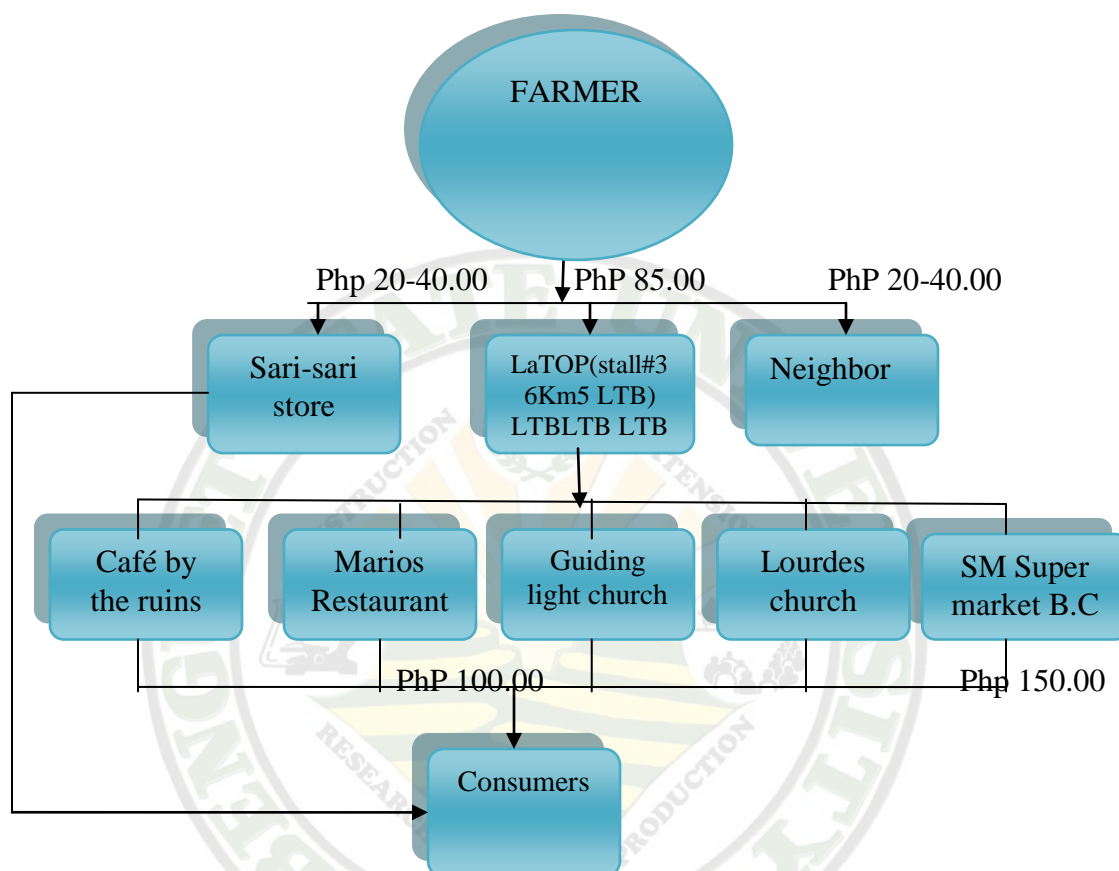


Figure 3. Supply flow of product and price of twelve farmer

Supply flow 4 (Figure 4) is a flow of product from the farmer to contract buyers to Manila retailers and then to consumers. These contract buyers buy the product at a lower price than the LaTOP. The farmer who sell product to these buyers are producing organic products but are not member of the LaTOP and even the BIGS of BSU.

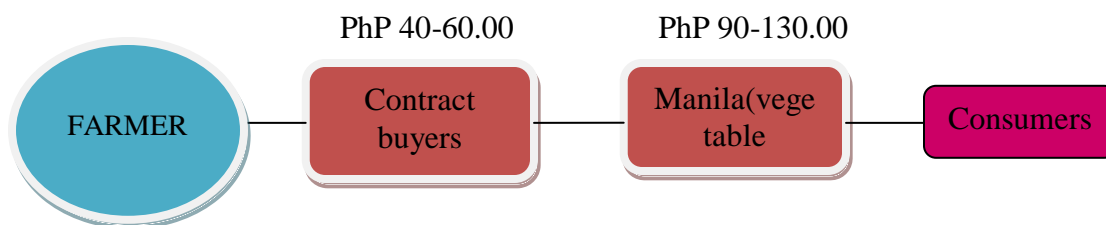


Figure 4. Supply flow of product and price of three farmer.

#### Problems Encountered in Production

Table 6 presents the problems encountered in production and marketing of the respondents. The main production problem encountered by farmers are lack of greenhouse (88.8%). Organic farming is laborious (77.8%), farmers need to produce their own inputs. Other problems encountered in production is crop programming (61.1%), source of clean irrigation water (27.8%), and disease (22.2%) and one (5.6%) farmer said that there is a lot of disturbance like visitors and interviewer.

#### Problems Encountered in Marketing

Fifty percent of the respondents has problem on the limited outlet of organic produce. Four (22.2%) of the respondent have no information on the standard pricing of organically produced vegetable. The problem of four (22.2%) respondent was consumers were not aware on the value of organically produced crop. Another four (22.2%) respondent has a problem on the shortage of the product in some instances. One respondent has a problem on the no certification level of their product. The far distance of farm to market outlet is another problem encountered (5.6%). Another one (5.6%) had problem on the expensive packaging and labels of their product.

Table 6. Problems encountered in production and marketing of the respondents

PROBLEMS	FREQUENCY	PERCENTAGE
<b>*Problems in production</b>		
Greenhouse is needed	16	88.9
Laborious	14	77.8
Crop programming	11	61.1
Source of clean irrigation water	5	27.8
Plant diseases	4	22.2
Lack of training	3	16.7
Weather condition	2	11.1
Disturbance of visitors/interviewer	1	5.6
<b>*Problems in Marketing</b>		
Limited outlet of organic produce	9	50
Lack of information on standard pricing	4	22.2
Lack awareness of consumers on the value of organic produce	4	22.2
Shortage of product	4	22.2
No certification level	1	5.6
Expensive packaging and level	1	5.6
Far farm from the market	1	5.6
<b>*Multiple response</b>		

#### Problems Encountered in Trading Organic Vegetables

The market outlets encountered problem on sources such as: poor quality of the product and lack of supplies. Traders encountered problems in marketing such as: shortage of product, consumers cannot afford the price of organic vegetables and members does not meet the volume requirement of their market outlet.





## **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### Summary

The study was focused on the supply chain management of organic lettuce in La Trinidad, Benguet. The study was conducted in the different Barangay of La Trinidad. The study aimed to describe the socio-demographic profile of organic lettuce production, identify market actors, their roles and function; describe the supply chain adapted by the farmers in La Trinidad, Benguet producing organic lettuce, identify the problems in production and marketing and to map the supply flow of organic lettuce.

The data needed were gathered through personal interview with the respondents. Eighteen organic farmers serves as respondent in the study. Majority of the respondent were middle to senior age. All the respondents had attended formal education. Majority of the respondent attended trainings related to organic farming. Aside from organic farming the respondents are also engaged in other livelihood activities such as store owner and employment. The major reason of the respondents in going to organic production is because of the low cost of organic inputs and premium price of organically produced crop.

Majority of the respondent were members of LaTOP thus, their major market outlet is the LaTOP market. LaTOP offers a fixed and premium price of their products, however, a farmer cannot sell not unless he is a member and his farm is inspected by LaTOP and guaranteed that the produce is organic. From the LaTOP the products are delivered to other outlets such as café by the ruins, Marios restaurant, Lourdes church, Guiding light and SM market are sold directly to consumers. Other outlets include the BSU organic market which offers the price to organic products but the products should



also pass the guarantee system of BSU. Decision of pricing organic lettuce and other organic vegetables, majority said that it is the consensus of farmers and approved by the organization. The volume of delivery of the respondents depends on the on the quota they have quoted in the organization and on the size of farm cultivated. The main production problem encountered by farmers are lack of greenhouse and organic farming is laborious as well as most farmers encountered a problem on the limited outlet of organic produce crop.

Market outlets of organic lettuce producers in La Trinidad were LaTOP, BSU organic market and contract buyers. The market outlets encountered problem on sources such as poor quality of the product and Lack of supplies. Marketing problem they encountered are consumers cannot afford the price of organic vegetables and farmers does not meet the volume requirement of their market outlet.

### Conclusions

The following conclusions were drawn from the findings of the study.

1. Majority of organic farmers in La Trinidad are members of LaTOP and LaTOP is the major market outlet of their produce.
2. Organic products receive a premium price and price is the consensus of the farmers and approved by the organization. This is because the farmers are organized and they have their own outlet through the organization. However, The premium price is also due to the quality of the products which is organic. Although, it is not yet certified it had pass the criteria of the internal guarantee system.
3. The major market outlet is the LaTOP market located in stall no. 36 in the La Trinidad Public Market. In LaTOP, the products are sold directly to the consumers



and are also delivered to the outlets in Baguio City, the Café by the Ruins, Marios restaurant, Guiding Light and Lourdes church and to SM supermarket.

4. Production problems encountered by producers were the high cost of greenhouse to guarantee a continuous supply of products, lack of trainings, laborious, problems on incidence of pest and diseases, source of clean irrigation water, weather disturbances and crop programming. Marketing problem of farmers include lack of market outlet, lack of price information and product certification.

### Recommendations

Based on the findings, the following are recommended

1. Create awareness of consumers on the benefits of consuming organic products as a strategy in promoting and creating demand. This may increase demand and market outlet should expand to other areas.
2. The organization should work on the group certification of members in order to be certified and could supply to other market requiring certification.



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