

BIBLIOGRAPHY

YAD-AN, MURNALISA M. APRIL 2009. Production and Marketing Practices of Organic Citrus Growers in Mountain Province. Benguet State University. La Trinidad, Benguet.

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ABSTRACT

The study was conducted to find out the organic production and marketing practices of citrus growers in Mountain Province. There were 12 respondents of the study and was conducted in November 2008.

The survey was conducted in 7 citrus growing areas namely: Monamon Norte, Abatan, Monamon Sur, Otucan Sur, Otucan Norte, Bagnen and Tapapan. Majority of the respondents are males, married and have reached college. Farming is the major source of income of the respondents where citrus is their major crop intercropped with bush beans and sweetpotato which are also grown organically.

Citrus production is done in sloping areas and few in flat terraced. Flat terraced areas were often used for palay production. The varieties of citrus grown by the respondents include Meyer lemon, Mandarin, Hamlin, Valencia and Navel. All respondent grow these five varieties in their farm.

Citrus production in Mountain Province started in 1988 through the RP-German Fruit Tree Project (RP-GFTP) of the Bureau of Plant Industry in Baguio City. Areas planted with citrus ranges from 200 to 800 sq meters.

Spot cleaning and kaingin system were practiced in land preparation. Pest and diseases were controlled by keeping the farm and its surrounding clean. Majority of the harvest are sold and an average of 810 kgs were sold per respondents per year.

Majority of the growers sell their produce outside the province specifically in Baguio City and La Trinidad, Benguet. Growers sell through cash basis.

The respondents perceived that given the premium price for organic products and the increasing awareness of consumers on safe and nutritious food, organic citrus production has a potential in terms of source of income. However production is constraint with technical support especially on organic production.

It is therefore recommended that further research and extension activities should be done to increase organic citrus production in Mountain Province. Research activities may include variety trials, cultural management and postharvest practices and other related practices. Extension activities should also be strengthened. The need for other support mechanism such as irrigation, credit facilities and marketing linkages should be consider by government and non-government organizations supporting the organic citrus industry.

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INTRODUCTION

Rationale

Citrus is one of the most important commercial fruit crops grown in all continents of the world and areas planted to citrus are continuously expanding while citrus fruits, contribute to the nourishment of the people. Citrus products and by-products provide the basis for local agricultural industries, generate employment and serve as source of foreign revenue for developing and developed countries (Brader, 1991).

Citrus plantations in the country are few, but they maybe run on medium and intensive technology to allow their produce to compare favorably with those of developed countries.

Citrus production in Mountain Province has been promising considering the climatic conditions prevailing such as tropical and sub-tropical climates which are conducive to citrus growing. Citrus can be grown in four types of climate but areas with well-distributed rainfall throughout the year are best. Those with distinct and long dry day periods should bank heavily on irrigation to produce high quality citrus fruits.

Citrus growing that has become a lucrative enterprise for some farmers in Mountain Province slowed down recently due to the expensive chemical inputs. The inevitable problems on pest such as aphids, scale insects, fruit flies and diseases like Huanglongbin or greening and tristeza has greatly affected the production of citrus fruits. In spite of this, the area for citrus expanded from 71,000 hectares in 2000 to 105,000hectares in 2004 (Ochasan, 2005).

Today, citrus growing provides a rewarding enterprise for the fruit growers with remarkably good prices of fresh fruits in the local markets. The availability of fresh fruits



in the local market was made possible with the implementation of the RP-German Fruit Tree Project of the Bureau of Plant Industry in 1992 and still existing to present. Various varieties of citrus had been propagated and citrus mother gardens had been established and benefited with more than 3000 fruit growers either backyard and/or citrus orchards.

The many importance and potentials of citrus farming in Mountain Province prompted the Local Government Units (LGU) of Mountain Province to develop the industry. Different varieties/types of citrus is widely adapted to the soil and climate of the province, increasing market demand of citrus products from Mountain Province and available lands for the industry (Wangdali, 2007).

Due to the tremendous increase in the price of farm inputs for citrus production, the growers had tried to shift back to the traditional practice where farm inputs are organic and cheaper and available in the area. Thus, this research will document the traditional/organic practices of citrus production in Mountain Province.

Objectives of the Study

The study aimed to:

1. Find out the production and marketing practices of organic citrus production in Mountain Province;
2. Find out the production problems in organic citrus production;
3. Find out the marketing problems in organic citrus production ; and
4. Identify possible solutions to the problems encountered by the organic citrus producers.

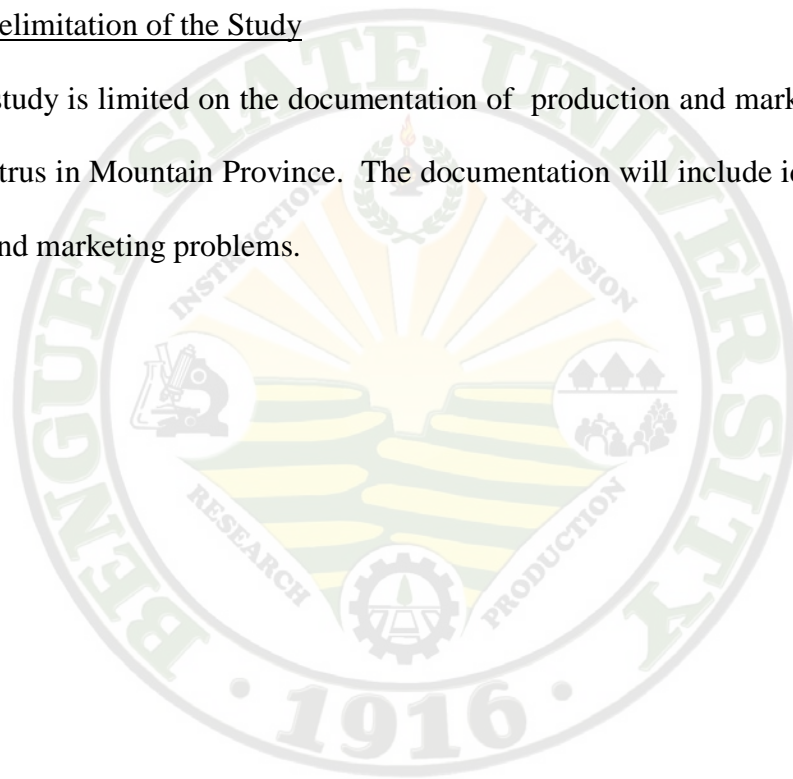


Importance of the Study

The information gathered from the study will be the basis in planning programs or projects in the improvement and sustainability of organic vegetable production especially in Mountain Province. The study can also be used as basis/guide in the development of technology, innovations and interventions. Furthermore, the research result can also be used as reference to other research activity of the same interest.

Scope and Delimitation of the Study

The study is limited on the documentation of production and marketing practices of organic citrus in Mountain Province. The documentation will include identification of production and marketing problems.



REVIEW OF LITERATURE

History of Citrus Production in Mountain Province

Tracing the migration and development of citrus in Mountain Province is like having a course in world history. One of the well-known local citrus growers was the Masfere family of Spanish descent who came to Mountain Province as a philanthropist and popularized the highlands in photography (Mercado, 1991).

Existing citrus in the highlands is believed to have been introduced by the American missionaries in the 1930's. Bauko municipality in the western Mountain Province had been called the "California of the North" because temperate fruits like citrus and apples were being grown in commercial scale. The plantations was later wiped-out by the devastating pink disease.

The RP-German Fruit Tree Program, had listed the general description of some fruit crops that can be planted in the Cordillera Provinces. The varieties that have been observed adopt and perform well under Baguio and similar conditions were also sound suitable in Bauko, Mountain province. Bauko however has higher elevation and colder climate than the other municipalities (Dizon, N.D.).

Hon. Socorro Acosta (1991) stated that the fruit industry is now receiving the much needed attention and support from the government. House Bill No. 28002, which she sites "seek to promote the seed industry and create a National Seed Council". The bill is envisioned to benefit agriculture and will complement another legislative measure she is considering to introduce, that is, one that will set-up a fruit and vegetable marketing authority. It was also noted that efforts to improve existing fruit strains and



varieties as well as recent technological development are indications of a growing and dynamic fruit industry in Region IV..

The Prospects of Citrus Growing

The RP-German Fruit Tree Program has introduced fruit tree growing as a sustainable investment. Fruits are easier bought and transported and unlike vegetable production and harvesting, these incur less hassle at harvest time (Delmar, 1989).

Citrus is one of the major fruits grown in Bauko have brought prospects. This is also a help to farmers particularly in the mountainous terrain of the place, which they have been desperately hopeless to cultivate. Areas that have not been previously considered or used for farming could now be utilized for fruit growing. Even in the rocky areas (Ochasan, 2005).

Citrus production in Mountain Province has come up with a recommendation to alleviate poverty in the Cordillera by developing regions, hilly terrain into a fruit bowl. Furthermore, there is money in fruit growing (Mercado, 1991).

Situational Realities of Citrus Growing

With regards to technology guides availed of by the fruit growers, it is not an easy way out for these fruit growers who had several experiences in farming to accept recommended technologies. Even so, the persistent assistance of the RP-GFTP has considerably influenced the traditional farming mentalities of the fruit growers and now gradually applies recommended technology (DA-CAR, 2003)

Adoption of a certain technology requires a favorable mental set and a successful physical net. The first is internal and symbolic achieved through technical know-how



and conviction of its values. The second is external and achieved through ready availability of its requisite production inputs and services.

Marketing Defined

A large share of the buying peso goes for marketing. It is widely thought that about 50 centavos of each consumer's peso pays for the cost of marketing activities. Marketing is all around, it affects man's daily life. The product that people buy, the stores where we shop, the sales people, the advertisements, people we see and hear are all part of marketing. Even job resumes are a part of a marketing campaign to sell myself to some employer.

Some people believe that marketing is just a fancy name for selling. The difference between selling and marketing is that selling is concerned with disposing of the product that has already been in stocks, whereas marketing takes a much wider view which means planning ahead for profitable future. Marketing includes selling, but selling alone is more than that. It embraces the whole concept of satisfying the needs of the consumers at a profit.

As defined by Kohls and Downey (1982) marketing is the performance of all business activities involved in the flow of goods and services from the point of initial agricultural production until they are in the hands of ultimate consumers. Immediately then, it is apparent that a group with different interest will view marketing differently. Consumers are interested in getting what they want to the lowest possible cost. Farmers are interested in obtaining the highest possible returns from the sale of their products. The various forms engaged in doing the various marketing task are interested in the profitability of their particular business operation. Conflicts of interest can and do arise



among the various groups seeking these goals. The continual birth and solution of these problems is what gives marketing an essential dynamic character. Change is the one general rule of marketing. The status though was never permanent.

Kohls and Downey (1982) also claimed that the traditional concept of agricultural marketing, buying and selling of farm product is no longer valid. He said that marketing is now more than this. It is behavioral discipline and as much deal not only with buying and selling goods but also with people and the flow of communication, though profit is the key element. He believes that is a resource development will ultimately provide stimulus for increase production. In these sense, marketing is a multiplier, in the process of economic development. But in the planning process what is neglected is the role of the agricultural market and the urgency for its improvement. It is not treated as a directly productive sector though its role is vital to stimulate agricultural growth.

According to Mr. Norman C. Dida (personal communication -BSU plant Pathology graduate engaged in wholesaling and retailing) the prices of citrus and other commodity is disseminated by their fellow wholesaler-retailer. However, the wholesaler-retailers are not the dictators of prices. He mentioned that the supply and demand is a contributing factor in price change. If there is a large volume of supply then the usual effect would be the decrease in price and when the demand is high and supply is low the price increase. Furthermore, he mentioned that the qualities preferred by the buyers are clean skin, appealing color (mostly green) and proportioned size and shape. This contributes for a high price.



The peak production of citrus is during the rainy season (May to October) and it decreases during the dry season (November to April). Citrus even though has peak season of harvest, it is a continuous production especially when the area is irrigated.

Marketing Problem

Faylon (1981) found out that the problem generally and commonly perceived by both producers and traders is the low price. This results from the over supply of perishable commodities, farmers felt handicapped by the lack of reliable price information and in many cases take the price as dictated by their informal finances.

The farmers due to spoilage, transport losses that can occur along the way and uncertainty fluctuating prices sometimes consider bringing the products to the market is risky. According to Bangsoyao (1999), there are times also that the farmers do not know whom to approach in the market in order to obtain the best price offered by the buyers.

Chenco (1981) also found out that the poor transportation facilities, lack of grading and poor handling may cause high wastage resulting to poor quality of farm produce. The consequence of these traditional marketing are high cost and low price for the farmers and usually high price to the consumers. Another problem is the cost of hauling the product to the roadside.

Hermano (1976) stated that the lack of knowledge especially in postharvest handling technology may result to very low return to the farmers. One of such practice is storage where losses were estimated to be as high as 30 to 40 percent.

The problems affecting the citrus industry as identified by farmers, traders, processors and other stakeholders included low productivity, poor quality, susceptibility of existing cultivar to disease like bunchy top, “bugtok” and “sigatoka”. The



development and dissemination improved pre and postharvest technologies, inadequate infrastructure support like roads, irrigation, etc, inaccessibility to market, lack of credit facilities, high cost of transport and policy issue to support the growth of the industry (The Philippine Fruit Network, 2003).

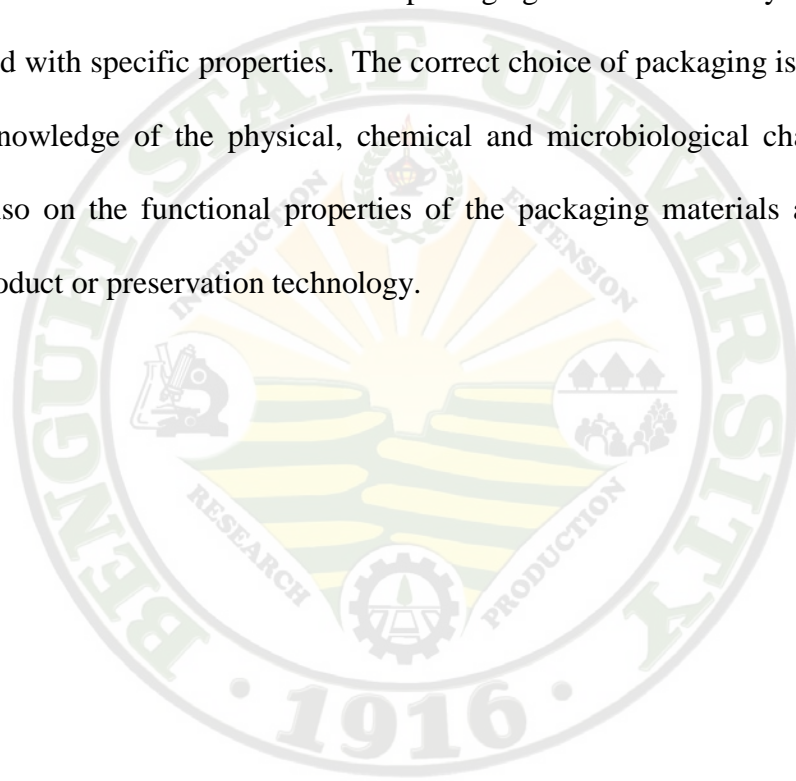
Packaging

The primary objective of packaging of fruits is to protect the contents during storage, transportation and distribution against deterioration, which may be physical, chemical or biological. Packaging is hence provided at the point of production, processing or at distribution centers. Though packaging forms the last link in the chain of production, storage, marketing and distribution, it still plays an important role in delivering the contents safe from “farm gate to the consumer plate”. Increase in production can have an impact on the consumer only when the food is wholesome, unadulterated and available under hygienic conditions at an economical price as mentioned by about 25% to 40% of fruits are spoiled or become substandard during storage and distribution. The enormous wastage which results in product scarcity and higher prices, is attributed mainly to poor packaging, improper handling methods, and inadequate transportation facilities (Yehoshua, 1989).

Robertson (1992) defines packaging as “ the enclosure of products items or packages in a wrapped pouch, bag, box, cup, tray, can, tube, bottle or other container to perform the following functions: containment, protection and/or preservation, communication and utility or performance. “ Since the 1970s, there has been tremendous growth in new food processing/packaging technologies. The growth of these new packaging/processing technologies, for both short and long term preservation of food, is



due to interrelated factors: a) development of new polymeric barrier packaging materials, b) increased urbanization, c) market needs and consumer demands for convenience, and d) increasing energy costs. As a result of these interrelated factors, food packaging technology has gone through a tremendous transformation. Packaging now provides increased consumer information is used very effectively as a marketing tool and has clearly evolved from its primary and previously single role of protection to be a more multifaceted tool. There are a multitude of packaging materials in today's market place, each designed with specific properties. The correct choice of packaging is dependent not only on a knowledge of the physical, chemical and microbiological characteristics of fruits, but also on the functional properties of the packaging materials available for a particular product or preservation technology.



METHODOLOGY

Locale and Time of the Study

The study was conducted in the citrus production area of Bauko, Mountain Province from October and December 2008.

Bauko, Mountain is 135 kms from the City of Baguio and 555 kms from Manila.

Respondents of the Study

Respondents of the study were the organic citrus growers in Bauko, Mountain Province.

Data Collection

The respondents were interviewed personally by the researcher. A structured interview schedule served as a guide during the interview.

Data Analysis

Data gathered were analyzed according to the objective of the study. Descriptive and simple statistical tools such as frequency counts, percentages and others were employed.



RESULTS AND DISCUSSION

Study Area

Table 1 shows that 3 or 25% of the respondents who are producing citrus are from barangay Monamon Norte, 3 or 25% from barangay Abatan, 2 or 16.67% from barangay Monamon Sur, 1 or 8.33% from barangay Otucan Sur , 1 or 8.33% from barangay Bagnen, and/or 8.33% from barangay Tapapan.

Majority of the respondents are from barangay Monamon Norte and barangay Abatan.

Profile of the Respondents

The demographic profile of the respondents is presented in table 2. these includes the sex, age, civil status, educational attainments and number of years in farming of the citrus growers.

Table 1. Distribution of respondents according to barangay

BARANGAY	FREQUENCY	PERCENTAGE
Monamon Norte	3	25.00
Abatan	3	25.00
Monamom Sur	2	16.67
Otucan Sur	1	8.33
Otucan Norte	1	8.33
Bagnen	1	8.33
Tapapan	1	8.33



Sex. Most (91.67%) of the citrus growers interviewed are males while only one was a female.

Age. The average age of the respondents is 55.38 years. One half (50%) of the respondents is in the age bracket of 45-55 years. There were 33.33% within the age bracket of 56-65 years, while 16.67% were within 66-75 years. The mean age and the age bracket indicate that the citrus growers were mostly in middle age.

Civil status. Most (83.33%) of the farmers were married. Only two (16.67%) were single.

Educational attainment. There were four (33.33%) respondents who finished collage, four (33.33%) of the respondents went to or finish elementary education, three (25%) of the respondents stepped high school while (8.33%) indicated that he is illiterate.

Number of years in farming. Four (33.33%) of the respondents have been in farming within 25-30 years. Four (33.33%) have been farming about 15-19 years, and four (33.33%) have been farming for 20-24 years.

Table 2. Profile of respondents

PARTICULAR	FREQUENCY	PERCENTAGE
Sex		
Male	11	91.67
Female	1	8.33
TOTAL	12	100

Table 2. Continued

PARTICULAR	FREQUENCY	PERCENTAGE
Age		
45 – 55	6	50.00
56 – 65	4	33.33
66 – 75	2	16.67
TOTAL	12	100
Civil status		
Single	2	16.67
Married	10	83.33
TOTAL	12	100
Educational attainment		
College	4	33.33
High school	3	25.00
Elementary	4	33.33
No formal education	1	8.33
TOTAL	12	100
Number of years in farming		
15 – 19	4	33.33
20 – 24	4	33.33
25 – 30	4	33.33
TOTAL	12	100



Demographic Profile of Organic Citrus Production Area

The demographic profile of organic citrus production area presented in Table 3 includes information on the topography of the area, varieties planted, number of plants grown per farmer per variety, source of planting materials, area devoted for organic citrus production and cropping system.

Topography of the farm used for organic citrus production. Mountain Province is generally hilly area, thus, majority (75%) of the respondents grow citrus in sloping areas, 16.67% grow in hilly areas and 8.33% grow in terraced flat area. Usually, it is a practice in the area that sloping areas are utilized for citrus production and the flat terraced areas are utilized for other crops such as palay or vegetables.

Year the when the area started in citrus production. Citrus production in Bauko, Mountain Province started in 1988 by two farmers (16.67%). Four (33.33%) of the respondents started in 1990, 2 (16.67%) started in 1992, and 4 (33.33%) started in 1998. Results implies that production of citrus in Mountain Province been introduced 2 years ago. This was the time when the Bureau of Plant Industry in Baguio City through the RP-German Fruit Tree project was implemented in Mountain Province. The project had been instrumental in the expansion and success of the fruit tree production especially for citrus in the study area.

Varieties planted. Organic citrus growers in Mountain Province planted five varieties of citrus which includes the Meyer lemon, Mandarin variety, Hamlin, Navel and Valencia. All the respondents grow the Meyer lemon variety.

Number of citrus plants planted per farmer per variety. Six (50%) of the 13 farmers who grew the Meyer lemon variety, have 1-50 plants, five (41.67%) have 51-100



plants, while one (8.33%) have 101-150 plants. Out of the five farmers who planted the Mandarin variety, 2 (40%) have 30-45 plants, two (40%) have 55-100 plants and 1 (20%) had 1- 80 plants. Out of the four farmers who planted Hamlin variety, 2 ((50%) have 1-80 plants and 2 (50%) have 81-100 plants. Of the eight farmers who planted Navel variety, 4 (50%) have 1-20 plants, 2 (25%) have 14-80 plants and 2 (25%) have 81-120 plants. Of the three farmers who planted Valencia variety, 2 (66.66%) have 1-25 plants and 1 (33.33%) had 26-50 plants. Result implies that farmers have several varieties of citrus grown in their farms.

Area planted to organic citrus. Majority (75%) of the respondents had an area of 200 – 400 sq. m. for organic citrus, Two (16.67%) had 401 – 600 sq. m. area and 1 (8.33%) with 601-800 sq. m. devoted for organic citrus production.

Source/origin of planting materials. Two of agriculturist of the Municipal Agriculturist Office obtained the seedlings from the Bureau of Plant Industry in Guisad, Baguio City (through the RP- German Fruit Tree Project) and distributed these to eleven growers in Bauko, Mountain Province. The Municipal Agriculture Office also did the propagation/multiplication in the open nurseries and distributed to other areas of the municipality. Kinds of planting materials used are grafted seedlings.

Cropping system. Most (75.00%) of the respondents said that multiple cropping is practiced where the different varieties of citrus are planted together in the farm and under the citrus are other crops such as bush beans and sweetpotato. The intercrops are also organically grown. Three (25%) practiced monocropping.

Source of irrigation. All the areas for citrus were rainfed. Thus, planting season and propagation is done during the rainy season.



Table 3. Demographic profile of the farm area

PARTICULAR	FREQUENCY	PERCENTAGE
Topography of the farm		
Flat	1	8.33
Hilly	2	16.67
Sloping	9	75.00
TOTAL	12	100
Year the area started in citrus production		
1988	2	16.67
1990	4	33.33
1992	2	16.67
1995	4	33.33
TOTAL	12	100
Varieties planted		
Meyer lemon	12	100
Hamlen	4	33.33
Navel	7	58.33
Mandarin	4	33.33
Valencia	2	16.67
No. of citrus plants planted per farmer per variety		
Meyer lemon		
1-50	6	50.00

Table 3. Continued

PARTICULAR	FREQUENCY	PERCENTAGE
51-100	5	41.67
101-150	1	8.33
TOTAL	12	100
Mandarin		
1 - 50	2	40
51 - 100	2	40
101 - 150	1	20
TOTAL	5	100
Hamlin		
1 - 80	2	50
81 - 160	2	50
TOTAL	4	100
Navel		
1 - 40	4	50.00
41 - 80	2	25.00
81 - 120	2	25.00
TOTAL	8	100
Valencia		
1 - 25	2	66.67
26 - 50	1	33.33
TOTAL	3	100

Table 3. Continued

PARTICULAR	FREQUENCY	PERCENTAGE
Valencia		
1 - 25	2	66.67
26 - 50	1	33.33
TOTAL	3	100
Area planted to organic citrus (sq. m.)		
100 – 400	9	75.00
401 – 600	2	16.67
601 – 800	1	8.33
TOTAL	12	100
Cropping system		
Mono cropping	3	25.00
Multi cropping	9	75.00
TOTAL	12	100

Organic Citrus Production Practices

Land preparation practices. Since the area used for citrus production is wide, spot cleaning and kaingin system/method of land preparation is practiced. Spot cleaning is cleaning around the tree/ plot and the kaingin system is the slash and burn method of cleaning the area. Nine (75%) of the respondents practiced the spot cleaning and 3 (25%) practiced the kaingin system. As mentioned by the respondents, spot cleaning is more applicable if the area is small and for wide/larger area the slash and burn method is



more convenient, however, has bad effect to the environment such as the greenhouse effect thus, it is not advisable.

Pest and Disease management practices. More than half (58.33%) of the respondents control pest and diseases by cleaning the surroundings of the farm to remove host plants of pest and diseases and 41.67% control by watering / sprinkling the citrus plants.

Production Data

Table 5 presents the quantity of citrus harvested and sold per year. Ten (83.33%) of the respondents harvested around 800-1,000 kgs and 2 (16.67%) can harvest 1,100 – 1,300 kgs.

As to quantity sold, 10 (83.33%) of the respondents were able to sell 700 to 850 kgs in a year while 2 (16.67%) were able to sell 900 to 1,000 kgs as shown in table 5. Result implies that most of the citrus harvested were sold. On the average the quantity of citrus sold per farmer is 810 kgs per year.

Table 4. Organic citrus production practices

PRACTICES	FREQUENCY	PERCENTAGE
Method of land preparation practices		
Spot cleaning	9	75.00
Kaingin	3	25.00
TOTAL	12	100
Pest and disease management		
Cleaning the surrounding	7	58.33
Water sprinkling	5	41.67
TOTAL	12	100



Table 5. Production volume and quantity sold per year.

PARTICULAR	FREQUENCY	PERCENTAGE
Quantity produced (kgs)		
800 – 1,000	10	83.33
1,100 – 1,300	2	16.67
TOTAL	12	100
Quantity sold (kgs)		
700 – 850	10	83.33
800 – 1,000	2	16.67
TOTAL	12	100
MEAN = 810 kgs		

Marketing Practices

The marketing practices of organic citrus growers in Mountain Province are presented in Table 6.

Market outlet and channels. Majority (83.33%) of the organic citrus growers sold their produce outside the province, while 2 (16.67%) are sold in the local markets in the area of production. Most of the produce were sold in Baguio City. The better/higher price of the product if brought outside the locality inspires them to market the product in that market. All the producers sell directly their produce to the retailers who go directly to the farm or the producers bring their product to Baguio and bring to the retailers who are their regular buyers “suki” the retailers specifically the ambulant vendors and or sell in stores selling fruits in the locality including that of sari-sari stores.



Method of sale. Majority (66.67%) of the respondents sell their citrus on cash basis while 33.33% sell on credit. Producers only sell on credit to their regular buyers whom they have known for long and are trusted. All the products are sold on a per kilogram basis.

Source of price information. The information on the prevailing prices of citrus were obtained from neighbors (by 50% of the respondents), from buyers outside the locality (25%) and from local retailers (25%).

Transportation facilities. All the farmers used public vehicles plying the Baguio – Bontoc route in transporting their products to Baguio City.

Packaging materials. All the respondents used sacks or bamboo baskets as packaging material of citrus. The citrus are packed directly in these packaging materials at harvest.

Table 6. Marketing practices of organic citrus growers in Mountain Province

PRACTICES	FREQUENCY	PERCENTAGE
Market outlets		
Within Mountain Province	2	16.67
Outside Mountain Province	10	83.33
TOTAL	12	100
Marketing channels		
Wholesalers	0	0
Retailers	12	100
TOTAL	12	100



Table 6. Continued

PRACTICES	FREQUENCY	PERCENTAGE
<u>Method of sale</u>		
Cash	8	66.67
Credit	4	33.33
TOTAL	12	100
<u>Source of price information</u>		
Neighbors	6	50.00
Buyers outside the locality	3	25.00
Local retailers	3	25.00
TOTAL	12	100
<u>Packaging materials</u>		
Sacks	12	100
Bamboo basket	12	100

Perception of Farmers on the Potential of Organic
Citrus Production

All the respondents perceived the potential of organic citrus as a major source of cash income given the premium price of organic products. The demand of organic products is also increasing with the evident promotion of organic products by the Department of Agriculture and the Benguet State University. Evidences on the promotion are the several Cordillera Organic Congress being conducted by advocates in organic farming. The increasing awareness of consumers on safe and nutritious food is also a plus factor.



Support Mechanisms for the Success of Organic Citrus Production

The respondents identified one support they need for the success of the organic citrus production in Mountain Province. The growers needs technical support from the government agencies like the Department of Agriculture and even the state colleges and universities providing research and development and extension services especially to organic producers.



SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

The study was conducted to determine the production and marketing practices of organic citrus growers in Mountain Province.

Twelve organic citrus producers from the seven barangays of Bauko, Mountain Province, namely; Monamon Norte, Monamon Sur, Otucan Norte, Otucan Sur, Abatan, Bagnen, and Tapapan served as respondents of the study. Data gathering was done through personal interview with the farmer guided by a questionnaire.

Most of the citrus farmers were from barangays Monamon Norte and Abatan. Average age of the respondents were 55.38 years old. Majority (91.67%) of the growers were male. Four of the respondents have been in citrus farming for 25-30 years.

Organic citrus farmers grow/maintain several varieties of citrus in their farm. There were four varieties grown in the area namely; Hamlin, Meyer lemon, Mandarin, Valencia and Navel. These varieties were distributed by the Bureau of Plant Industry in Baguio City in mid 80's through the RP-German Fruit Tree Project. Ninety three percent of the respondents started to citrus production in 1988. Citrus are grown in hilly and sloping areas and grow them in flat terraced areas.

Organic citrus growers practice multiple or intercropping, where they grow other crops under the trees such as legumes and sweetpotato. Control of pest and diseases is done through maintaining the cleanliness of the farm and its surrounding removing weeds that are host of pest and diseases or sprinkling the citrus plants with water.

The growers sell their produce directly to the retailers in the local market and in Baguio City.



All the respondents perceived organic citrus as a potential commercial crop and a major source of income because it is saleable and commands a higher price.

Conclusion

The following conclusions were drawn based on the findings.

1. Organic citrus production in Mountain Province is a potential crop to be commercialized because of the increasing demand for organic products especially the demand in Baguio City.
2. The market outlets for the organic citrus are the retailers within Mountain Province, Baguio City and La Trinidad, Benguet.
3. There are still less market intermediaries involved in the marketing of organic citrus.
4. There is an inadequate existing support mechanism for the development of organic citrus production in Mountain Province.

Recommendation

Based on the conclusions of this study, it is recommended that further research and extension activities should be done to increase organic citrus production in Mountain province.

Research activities may include variety trials, cultural management and postharvest practices and other related practices.

Extension activities should also be strengthened. The need for other support mechanism such as irrigation, credit facilities and marketing linkages should be consider by government and non-government organizations supporting the organic citrus industry.



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