BIBLIOGRAPHY

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ABSTRACT

The study was conducted to identify the production and marketing practices of organic snapbean producers in Tublay and La Trinidad, Benguet, identify their problems and reason for organic production.

There were eight organic snapbean growers identified and these served as respondents of the study. The respondents were member of the La Trinidad Organic Practitioner (LaTOP-MPC) and those from Tublay were member of the Acop Tublay Organic Practitioners (ATOP). The reasons of these farmers going into organic production were; premium price for organic products, to produce healthy and safe food and because of awareness on the negative effect of chemical farming to the environment.

The respondents practice multiple cropping or intercropping and crop rotation. The most common variety grown by the farmers was Alno. Other varieties were Tarent, Blue Lake and Maccarao. The farmers produce their own seed.

The respondents used compost as fertilizer for the crop. To control incidence of pest and diseases, farmers practice manual picking and used biological control agents.

Farmers also practice crop rotation to reduce population of pest and diseases. Source of irrigation is from spring/spring water.

The market outlets of the organic producers were the stall/market outlets of the association. For the ATOP members, their market outlet is the parking area of the University of Cordillera, in Baguio City where marketing is scheduled every Wednesday. The products are packed in plastic with the label of the association, name of farmer, name and address of the farm and the star label. The star label is a guarantee that the product is organic and inspected by the association. The price of the product is set by the producers with the officers and other members of the association. Price set is good for one year.

Marketing problems encountered by the producers include: high cost of certification, limited market outlet, and lack of capital to build greenhouse.

Thus, it is recommended that a local certifying body should be organized and accredited to reduce cost of certification, promote the value and benefits of consuming organic products to create or increase demand and technology development on organic farming to improve production.

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INTRODUCTION

Background of the Study

Snap beans (Green or wax) is a member of the legumes family, of the Phaseolus vulgaris species. Snap beans are also dried which are used for baking. This crop is botanically describes as an annual twining vine. Bean flowers are self pollinated. Snap bean cultivars differ from dry bean cultivars by having thicker walled pods. These vary in color with green, yellow and purple being the ones most commonly grown.

Snap beans are adapted to both temperate and tropical areas as where there is a greater frost free period than 50 days and soils are warm enough to allow seed germination. Snap beans are sensitive to soil moisture stress especially at the time of flowering.

Beans should be planted in well-drained soils with good aeration and soil borne diseases have to be kept in check by good rotation. A range of soil textures are suitable to the crop but sandy loams are best suited for early crops and then loams for later production. The soil should be well supplied with organic matter.

Snap beans are available from late July to late September for both the fresh and processing markets with tunnel house production this season could possibly be extended. Harvest is approximately two weeks after bloom.

An average yield for snap beans is 4.4 tons per hectare. High yield ranges from 6.6 to 17.6 tons per hectare.

Snap beans are an important crop in the Atlantic area mainly due to the processing industry. Relatively few beans are grown for fresh market use and most of this crops are picked by hand labor (http//www.gov.pe sa/al/agweb/indexphp3?).

Snap beans known as common bean is an annual crop that can be grown profitably in high elevated areas, like Cordillera Region. Recent studies shows that growth and yield of snap beans is best suited in higher elevations. In lower elevations, yield was significantly lower than in higher elevations, although maturity period was found out to be longer in higher elevations (Ferrer, 1981).

Production of pole snap beans is one of the major sources of income of some farmers in Benguet. Most farmers are producing this crop through the conventional practice. However, due to the continuous promotion of the Department of Agriculture(DA) and the Benguet State University (BSU) on organic farming, farmers became interested to this practice. Organic production training had been conducted by DA through the National Training Center-Agricultural Training Institute (NTC-ATI), and some farmers who have attended the training had adapted the practice. The farmers realized that it is necessary to restore soil fertility through organic practice of farming. Thus, this study documented the organic snap beans production in Benguet.

Statement of the Problem

This study aimed to answer the following questions;

1. What are the organic production and marketing practices of snap beans in Tublay and La Trinidad, Benguet?

2. What are the reasons producing organic snap beans?

3. What are the production and marketing problems encountered by farmers in organic snap beans?

Objectives of the Study

The study was conducted to:

1. Identify the organic production and marketing practices of snap beans in Tublay and La Trinidad, Benguet;

2. Identify reasons for organic snap beans production;

3. Identify the production and marketing problems encountered by farmers in organic snap beans.

Importance of the Study

The study will provide baseline information on the organic production and marketing of snap beans in Benguet. The result will serve as a basis/guide for further research on organic as well as for planning future projects on organic and identifying interventions/technology innovations for organic production especially for snap beans and other legumes.

Scope and Delimitation of the Study

The study is limited on documenting organic production and marketing practices of snap beans as well as the problems encountered by the producers in Tublay and La Trinidad, Benguet.

REVIEW OF LITERATURE

Description of Snap Beans

The best known bean plant of the world is the Kidney bean (*Phaseolus vulgaris* L.). As annual crop, it is either erect or bushy, with three pointed leaves with white, yellowish or purple seed pods. The petals are developed into a standard (upper broad and erect petals), two wings and keel. Rine of the stamens are fused and one is free. The ovary develops into pods which may be 15.24 cm or more in length. The pods contain seeds which are white, brown, reddish, bluish and black. Each consists of coat or integument, a scar by which a seed is attached to the pod, and a minute opening or microbyle, one in the coat. Inside the coat are large cotelydons which food is stored, hypocotyls, a radicle or root and plumule or bud (Anon, 1973).

Pods characteristics also vary with species. The pod may be linear, cylindrical, slightly curved, oblong or crescent-shaped and flat. Length and diameter range from 6-7.3 cm and 0.52 cm respectively.

The number of seeds per pod ranges from 1-22 seed maybe black, white or cream, red, purple, gray or combination of various shade of colors (Knott and Deanon, 1967).

Importance of Snap Beans

According to Swiader and Ware (2002), snap beans are excellent source of protein, vitamins and one of the most important cash crops of the highland people. Snap beans can contribute to the energy and body building nutrient for human and easily grown for both fresh market and processing even though they may not require intensive management.

Anon (1966) stated that beans are sources of protein and carbohydrates. However, proteins derived from beans are incomplete, that is, they do not contain all the amino acids that the body needs. Beans are source of fiber; contain vitamins like riboflavin and minerals such as zinc, iron and magnesium. Furthermore, the author mentioned that bean plants enrich the soil. The plants take nitrogen from the air and added it to the soil through the action of bacteria in the roots. Aside from these, it is also used for feeding animals and livestock.

Beans are an important agricultural crop because of its industrial uses. It is also used as vegetable processed food into various forms and animal feeds. Leguminous crops like pole bean could also fix nitrogen in the soil. Thus, it is recommended for crop rotation and for green manuring (Anonymous, 2007).

Organic Farming

Organic farming is a production system that excludes the use of synthetically compounded fertilizers, pesticides, growth regulator and others. It relies on crop rotation, crop residues, animal manures and mechanical cultivation to maintain the soil productivity, to supply plant nutrients, and to control weeds, insects and other pest (Anonymous, 2005).

Importance and Benefits of Organic Foods

Vegetables organically are safe and health promotion. Hwan (1984) stated that "you are what you eat". Children nourished with organically grown foods possess distinctive positive characters than those fed with chemical-supplement food for instance the high calorie-dense food or referred to as "junk foods" that make the children prone to

illnesses. Such behavior could hardly be observed in children or even adults nourished with organically grown foods. For character formation, he recommends the parents to provide their children with natural or organically grown food especially in their critical years which is before they reach the age of twelve, and that they remain healthy. Being healthy does not only mean freedom from diseases or any other symptoms of illness, but also having a healthy body, mind, spirit and manners.

The findings of Hwan (1984) support the results of research conducted by Rutgers University (2000). Researchers at Rutgers University in New Jersey did an analysis on the mineral content of organic and non-organic foods. The researchers found out that organically produced foods contain higher amount of essential nutrients while non-organic foods contain lesser amount of nutrients and the food also contain a variety of chemicals residues that enhance growth and destroy pest and many of which are known or suspected carcinogens (cancer-causing). The idea that organic crops are nutritionally superior has been accepted largely (Rutger University, 2000).

Inorganically grown fruits and vegetables are less expensive, are prettier to look at, contain approximately 10-50% of the nutrients found in organic produce are often depleted in enzyme and are contaminated with a variety of herbicides, pesticides and other agricultural chemicals. In comparing organically and inorganically produced vegetable and fruits, it was found that organic foods contained 20-80% less metal residues (aluminum, cadium, cobalt, lead and mercury), contained 25-300% more of specific nutrients (calcium, chromium, copper, iodine, magnesium, manganese, molybdenum, nickel, phosphorous, potassium, selenium, sulfur and zinc), (Journal of Applied Nutrition, 1993).

Sources of Organic Matters in Organic Farming

The most common natural organic fertilizers in the Philippines are chicken manure, hog manure and sunflower compost. Chicken manure is extensively used in Benguet province than any other kind of manure (Bautista, 1983).

Bucu (1991) mentioned that mushroom compost is a great source of organic fertilizers. It consists of sawdust with some minerals like limestone, and rice bran. Mushroom compost has low potassium content, rich in nitrogen, phosphorous, calcium and other secondary nutrient elements. It is recommended however, to mix this compost with proper amount of manure, like hog and chicken manure. It was also found that mushroom compost has carbon as main source of energy for the activities of soil microorganisms like rhizobia for nitrogen fixation and mycorrhizae for increasing the availability of soil phosphorous. Soil treatment with sawdust, tree leaves, green manure, oil cake or rice bran promotes the multiplication of earthworm and inhibits nematodes population. The use of rice straw reduces the incidence of wilt and black leg in potato and root in common bean, pea and cotton.

Alnus compost is abundant in Benguet that can be a perfect organic nitrogen source. It is easy to compost and hastens decomposition (Pandosen, 1980) as cited by Marcelino (1985). At present, alnus compost has been discovered as a good source of organic fertilizers; it is also friendly to the environment and controls some plant diseases. In addition, alnus compost is more economical to the farmers for organic inputs because they can plant alnus trees for the production of their own compost, thus helping also in reforestation and restoration of the ozone layer. A study conducted by Dida (1998)

reported that population and incidence of black scab in potato tuber with increasing level of alnus compost applied.

Andrew (1997) claimed that compost from plant residues are excellent source of organic matters because they have sufficient amount of nitrogen. The most important soil Organic matter is from plant residues. Plant residues can provide soil organic matter ranging from 11 tons per hectare per year (Bolin, 1979).

Allison (1973) reported that plant residues are chemically complex. Organic materials that enter the soil play an important role in maintaining soil productivity by providing nutrients and inputs to organic matter. They improve the soil physical properties, availability of soil nutrients and soil fauna population. Decomposition signifies the mechanical disintegration of dead plant structure form the stage where the grass cells structure is no longer recognizable.

Different compost has varying compositions. The Bureau of Soils and Water Management Office of the Department of Agriculture (1994) found that mushroom compost provides necessary nutrients for growing a crop. It contains 17.5% of organic matter, 5% of nitrogen, 310%. ppm phosphorous and 365% ppm potassium and had pH of 7.2 (Cuyahon, 1996). Balaoing (2006) reported that the BSU compost contains 5% of nitrogen, 2% phosphorous and 2% potassium, while Mercado (1996) stated that the alnus compost contains 50% organic matter, 2.5% nitrogen, 7% phosphorous, 3.36% potassium and pH of 4.6.

Organic Matter and Soil Amendments

Parnes (1986) claimed that organic matter is the principal source of nitrogen, phosphorous and sulfur become available as the organic matter continuous to decompose. Most of the calcium, magnesium and potassium in decaying organic residue are discarded by the soil organism during the first stages of decomposition and those nutrients are quickly available to plants. Organic matter through its effect on the soil increases the amount of water available per plant growth.

Experiment from IRRI showed that carbonated rice hull in whatever form increases nitrogen content of the soil. Soil high in organic matter allows little or no soil-borne diseases of the oxygen and ethylene cycle in the soil. Not only do humans confer immunity to plant pest and diseases, it improves the quality of crops and characteristics that has a very definite commercial value (Abadilla, 1982).

Organic Fertilizer Application

Erasquin (1981) reported that soil for vegetable production should be rich in organic matter through sustained application of decomposed sawdust and other type of plant residues that are converted to useful soil amendments. Such soil amendment improves soil structure which is good for vegetable production.

Definition of Terms

Compost Fertilizer – natural process that is carried out by various natural microorganisms, including bacteria and fungi that utilize solid waste as an energy source to breakdown organic materials into simpler substance.

Organic fertilizer – derived from animal or plant waste or mineral occurring from nature and not more nutritious than commercial plant foods. Plant cannot distinguish between organic fertilizers. Usually organic fertilizers are lower in nutrient value than inorganic commercial fertilizers.

Snap bean – is a vegetable crop in the legume family. These crops are grown in small scale or as an intercrop.

METHODOLOGY

Locale and Time of the Study

The study was conducted in Acop, Tublay, and La Trinidad, Benguet where organic snap beans are produced. The study was conducted from October to December 2008.

Respondents of the Study

Purposive sampling was employed in the selection of respondents. Respondents were the producers of organic snap beans.

Research Methods and Instrument

The research made use of secondary and primary data. Data on the number of producers, area and area cultivated were gathered from the Department of Agriculture Office, or from the Municipal Agriculture Office or from the records of La Trinidad Organic Practitioners (LaTOP) and the Acop-Tublay Organic Practitioners (ATOP).

Primary data were gathered from the farmer/producer. The researcher personally interviewed the respondents with the aid of a structured questionnaire.

Data Analysis

Data were tabulated and analyzed according to the objectives of the study. Descriptive analysis and appropriate statistical tool were used in data analysis.

RESULTS AND DISCUSSION

Description of the Study Area

La Trinidad is the first class municipality in the province of Benguet. It is the capital municipality of Benguet. La Trinidad is 3 km north of Baguio City. It is bounded on the north by the municipality of Tublay. Tublay is a fifth class municipality in the province and located 13 km from Baguio City.

Tublay is an area with cold temperature which is climatologically suitable for snap beans production and other semi-temperate vegetables.

Profile of Respondents

Table 1 presents the profile of the respondents as to their age, civil status, number of household members, educational and number of years in farming of the respondents. There were eight organic snap beans producers in Tublay and in La Trinidad and all these growers served as respondents of the study. Six of these growers were from Tublay and two of these growers were from La Trinidad. All these respondents were members of the La Trinidad Organic Practitioners (LaTOP) and the Acop-Tublay Organic Practitioners (ATOP). These growers supply the two organizations with the products. The organization assists the growers in marketing their products.

Educational attainment. One half (50%) of the respondents had reached college, 25% had reached high school, 25% had reached elementary and another 25% had finished a vocational course.

Source of income. Farming is the major source of income of the respondents. All of them are engaged in organic production of snap beans and other vegetable crops. One

(12.50%) of the respondents is employed while two are engaged in other livelihood activities aside from organic farming.

Monthly average income from organic production. Fifty percent of the respondents have an income ranging from PhP 8,000 to 10,000 per month from organic farming organic production. However, the income from snapbeans was not segregated from the total income. Furthermore, 37.5% of the respondents get PhP 5,000 or lower and one of the respondents get PhP 6,000 – 7,000 per month.

Organic training attended. As a requirement for membership in any organic practitioner association, all the respondents have undergone several trainings on organic production and other related trainings. Most (62.5%) of the respondents have attended training on organic practices/farming. Three (37.5%) have attended training on internal control system and 37.5% also have attended Good Agriculture Practices (GAP).Other training attended by the respondents include natural farming, composting, nursery establishment, and gardening techniques (Table 1).

Table 1. Profile of the respondents

PARTICULAR	FREQUENCY	PERCENTAGE
Educational attainment		
Elementary	1	12.50
Secondary	2	25.00
Vocational	1	12.50
College	4	50.00
TOTAL	8	100

Table 1. Continued

PARTICULAR	FREQUENCY	PERCENTAGE
Source of income		
Organic farming	8	100
Off-farm employment	1	112.50
Other source like weaving	2	25.00
Monthly average income from organic (pesos)		
5,000 and below	3	37.50
6,000 – 7,000	1	12.50
8,000 - 10,000	4	50.00
TOTAL	8	100
No. of years in organic farming		
3 years and less	6	75.00
4 – 6	1	12.50
7 – 8	1	12.50
TOTAL	8	100
Trainings attended		
Natural farming	2	25.00
Organic practice/farming	2	25.00
Composting	1	12.50
Nursery establishment	1	12.50
Internal control system	3	37.50
Good agriculture practice	3	37.50
Gardening techniques	1	12.50

Reason for Organic Farming

Majority (75%) of the respondents practice organic farming to produce healthy food both for the consumer and for their own consumption. One respondent reasoned to produce a chemical free food, thus also producing healthy foods. This is in support with the findings of Hwan (1984) wherein he said that organically grown vegetables are safe and healthier. One mentioned that he is producing organic because he is aware of the environmental effect of chemicals or conventional farming to the environment such as the soil, the air, and water as well as the effect to the health of the farmer and family. One of the respondents mentioned that aside from producing healthy food, it is also a source of income especially that the produce commands a better price than that of the conventionally produced vegetables.

Area Devoted to Organic Farming

Results of the study show that farmers produce organic vegetables in greenhouse and in open field. Greenhouse ensures a continuous cultivation/cropping, thus ensures a stable supply of vegetables in the market outlet. Aside from the greenhouse the farmers also grow vegetable the usual way in open fields. Fifty percent of the respondents have a greenhouse with 100 – 1,000 sq.m. and there were two respondents have a greenhouse with 1,001 – 2,000 sq.m area. In open field 75% are growing organic in a 500 – 5,000 sq. m area while 25% have an of 6,000 – 10,000 sq.m area. Result implies that wider area is devoted for organic production in open field than in greenhouse. The large amount of capital for greenhouse is one of the reasons why smaller greenhouses are used by the farmers and also open field production.

Table 2. Reason of the respondents for organic farming

REASON	FREQUENCY	PERCENTAGE
To produce chemical free products	1	12.50
Awareness on the bad effect of chemical farming to the environment	1	12.50
To produce healthy food	6	75.00
Source of income	1	12.50

*Multiple responses

Table 3. Area devoted for organic farming

AREA (sq. m.)	FREQUENCY	PERCENTAGE
Greenhouse		
100 – 1,000	4	50
1,001 – 2,000	2	25
Open field		
500 – 5,000	6	75
6,000 – 10,000	2	25
TOTAL	8	100

Demographic Profile of the Organic Farms

Characteristic of farm. The production has two types of terrain, the flat terraced and sloping/rolling hills. Production of organic lettuce is usually in flat terraced. Majority (62.50%) of the respondents have terraced farm and 37.5% have sloping terrain.

Source of irrigation. One of the requirements for organic production is a clean source of irrigation for the crop. Water source should be free from any contaminants or pollution. In the study, majority (62.5%) of the respondents get water for irrigation from springs and 37.5% from creek which has clean water.

Crops Grown

Organic growers produce several crops in a cropping period. Results showed that beans and lettuce are popularly grown as organic in the area. Eight of the organic farmers in the study area grow snap beans and these are the only suppliers of snap beans for the LaTop and ATOP market outlet.

Table 4. Demographic profile of the organic farm

PARTICULAR	FREQUENCY	PERCENTAGE
Characteristic of farm		
Sloping terrain	3	37.50
Flat terraced	5	62.50
TOTAL	8	100
Source of irrigation		
Spring	5	62.50
Creek	3	37.50
TOTAL	8	100

Table 5. Crop grown by the respondents

CROP	FREQUENCY	PERCENTAGE
Beans	8	100
Pechay	3	37.50
Brocolli	4	50.00
Cabbage	3	37.50
Potato	4	50.00
Lettuce	6	75.00
Tomato	2	25.00
Spinach	2	25.00
Sayote	1	12.50
Spoon cabbage	1	12.50
Cauliflower	1	12.50
Cucumber	1	12.50
Garden pea	1	12.50
Onion leeks	1	12.50
Carrots	1	12.50
Sugar beets	1	12.50
Basil	1	12.50
Aragola	1	12.50
Bell pepper	1	12.50
Chingkang	1	12.50

Organic Snap beans Production Practices

Varieties. There were four varieties of beans grown for organic; these were Alno, Blue Lake, Tarent and Maccarao. Fifty percent of the respondents grow the Alno variety, 25% grow the Blue Lake and 12.5% grow the Tarent and Maccarao respectively.

Number of cropping. Production of organic vegetables is continuous especially when growing in greenhouse. The result shows that the farmers continuously plant snap beans and that planting is scheduled in such a way that harvesting is continuous in order to have a stable supply of organic snap beans in the organic outlet of LaTOP and ATOP.

Source of planting materials. All the respondents propagate their own seeds especially for snap beans, pechay and all other crops where propagation is viable considering the climatic condition. For crops that could not be propagated in the area, the farmers purchase seeds from the farm supply stores. Other asked or buys from co-farmers or co- members in the association.

Fertilizer application. All the respondents applied organic fertilizer in the form of compost. Application of compost fertilizer is done before planting and as side dressing during hilling up. Time of application/side dressing of fertilizer varies on the type of crops grown. For snap beans it is done during hilling-up before staking.

The practice of the respondents supports the statement of Marcelino (1995) that organic fertilizer supplies some amount of the nutrient requirements of the crop and promotes favorable soil properties such as granulation, efficient aeration thus easy root penetration and improved water holding capacity of the soil.

Furthermore, in a study conducted by Pataras (1984) on the response of snap beans to organic fertilizer, he found out that soil for vegetable production should be rich

in organic matter and that the best way to achieve this compost is by garden compost, manures and other form of green manures converted to useful soil amendments which when used in farm can improve soil structure making it ideal for production especially on vegetables.

Pest and disease control. All the respondents use manual killing of insects/worms. The farmer hand-picked the worms and then kill them manually by just pressing. Farmers also use biological pesticides such as the use of marigold and tomato juice. Farmers also practice crop rotation to reduce the population of pest and microorganism causing diseases.

Table 6. Organic snap bean production practices of the respondents

PRODUCTION PRACTICES	FREQUENCY	PERCENTAGE
Varieties grown		
Alno	4	50.00
Blue Lake	2	25.00
Tarent	1	12.50
Maccarao	1	12.50
TOTAL	8	100
No. of cropping per year		
1 – 3	3	37.50
4 – 6	3	37.50
7 – 9	1	12.50
10 – 12	1	12.50

Table 6. Continued

PRODUCTION PRACTICES	FREQUENCY	PERCENTAGE
TOTAL	8	100
Source of planting materials		
Farm supply store	5	62.50
Own propagated seeds	8	100
From other farmers/co-member	1	12.50
Method of fertilizer application		
Basal application	6	75.00
Side dressing	3	38.00
Pest and disease control practices		
Use of biological fungicide/pesticide	5	63.00
Hand picking	8	100
Crop rotation	1	13.00

* Multiple responses

Marketing Practices

Market outlet. A total of seven respondents revealed that they bring their products to the cooperative (LaTOP) and one respondent sell his product directly to the consumer. The finding shows that in terms of market outlet, it is still limited and confined only to the LaTOP market outlets based in La Trinidad Public market and 3 outlets in Baguio City, the Café by Ruins and the Mario's Restaurant in Engineers Hill and in Session Road. An open market for organic produce is schedule every Thursday at the University of Cordillera Parking area, however this is only for the members of the

ATOP. The outlet such as LaTOP buys only the required volume or quota which the farmer is supposing to supply. Surplus is not accepted. Thus, if there is surplus these are sold to their neighbor or friends, worst are sometimes these are brought to the trading centers and are priced the same with the conventionally produced products. Thus, volume produced by farmers is also limited.

Pricing system. The price of the product is set by the association/cooperative in consultation with the member. Every year, a fixed price is set, thus prices is changed every year. The price set is usually higher than the products produced conventionally.

Packaging. All the respondents use plastic bags or boxes as packaging materials when these products are delivered to LaTOP or ATOP. In LaTOP or ATOP, the products are repacked in retail sizes, using a transparent plastic with the association's label, name of the farmer, address/location of the farm and the star label which guarantees that the product is organic.

Problems encountered on production and marketing. Several problems on organic production and marketing had been identified in the study. One of the major problems was the high cost of certification and the limited market outlet. Organic certification is necessary in order to sell the product organic and get a better or premium price for the product. Other problems identified by the respondents are lack of funds/capital to construct a greenhouse. Greenhouse cultivation will enable the farmer to have continuous cultivation, thus a more stable supply even during bad weather condition.

SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

The study aimed to identify the production and marketing practices, identify reasons for organic snap bean production and identify the problems encountered by farmers in organic snap bean production and marketing.

The study was conducted in Tublay and La Trinidad, Benguet. Respondents were organic growers of snap beans. There were eight organic snap beans grower in the study areas and all these growers served as respondent of the study.

All the respondents were members of La Trinidad Organic Practitioners (LaTOP) MPC and six of the respondents were members of the Acop Tublay Organic Practitioners. All the respondents do not grow one crop but grow several kinds of crops in one cropping. Staggered planting is practiced in order to have a continuous harvest to be supplied to LaTOP and ATOP on the schedule of delivery.

The reasons of farmers of going into organic farming are because of health consciousness, that the farmers would like to produce safe and healthy food, another reason was the awareness of the respondents on the environment, the bad effect of chemical farming to the environment and to the health of farmers and consumers and because of a premium price of organic products.

Most (62.50%) of the respondents produce/plant bean in a terraced farm while other in a sloping terrain farm. All the farmers used compost as fertilizer. All the respondents produce their own snap bean seeds. For other crops, they purchase seeds from the farm supply store. The source of irrigation is from spring, thus irrigation water

is clean and free from chemical residue and pollutants. Production of organic beans is continuous especially when grown in greenhouse.

On the pest and disease control practices, all the respondents use manual killing of insects/worms. Farmers also use biological pesticide such as the use of marigold and tomato juice. Crop rotation is also practiced to reduce population of pest and diseases.

All the respondents deliver their produce to the LaTOP market outlets. The products are packed in plastic and labeled with the name of association, name of farmer, address of the farm and the star label which indicates and guarantees that the vegetable is organic. The price of the product is set by the association in consultation with the members, and the price is fixed and is valid for one year. Every year the members and officers meet and set new prices for the year.

Problems on the production and marketing include; high cost of certification, limited market outlet, lack of funds/capital to construct a greenhouse.

Conclusion

Based on the findings the following conclusions are drawn.

1. There are few farmers producing organic snap beans and other vegetables in Tublay and La Trinidad who are locally certified organic producers.

2. Organic producers do not utilize the whole farm area for organic production, they just devote a small portion of their farm, and this is because of the limited market/market outlet and labor intensive as compared to the conventional practice.

3. Farmers produced organic for health consciousness and environmental awareness.

4. High cost of certification is the major problems of organic producers and high cost of greenhouse.

Recommendation

Based on the conclusions, the following recommendations were made.

1. A local certifying body maybe a government agency should be accredited to certify organic products.

2. Government agencies like the Department of Agriculture, the organic association and the health department should promote or create awareness of the consumers on the benefits of consuming organic in order to create demand for the product thereby motivating farmers to go into organic or farmers to increase area for organic production, thus protecting the environment reducing pollution...

3. A continuous technology development on organic farming to cater to the needs of organic producers.

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