

BIBLIOGRAPHY

SALIW-AN, PRECIOUS B. APRIL, 2013. Production Practices of Pole Snap Bean Farmers in Barangay Balakbak Kapangan Benguet. Benguet State University, La Trinidad, Benguet.

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ABSTRACT

The study was conducted to find out the socio-economic profile of the respondents, production practices of pole snap bean farmers, and the problems they encountered in pole snap bean production.

The data were gathered from 30 respondents from Balakbak, Kapangan, Benguet using a survey questionnaire associated with personal interview. Majority of the respondents were males at their middle age, married; and with formal education.

The varieties of pole snap bean planted by the respondents were Kaki, Maroon, and Alno. All of the respondents produced their own seeds. Farmers prepared land through the old method, and used both organic and inorganic fertilizers in their farms as basal and as side dress fertilizers. They controlled the weeds manually and irrigated their crop with overhead sprinkler or watering can. Respondents removed infected leaves or pods to avoid the spread of the disease. Also, they practiced putting up trellis using rono or pao before the vines develop. All of the respondents sold their products at La Trinidad Benguet vegetable trading post or in Baguio City hanger market on whole sale basis.



Problems encountered by the respondents in pole snap bean production were high cost of inputs, lack of financial support to buy for inputs used in farms, occurrence of pests and diseases, scarcity of water during summer and low price for the product.



RESULTS AND DISCUSSION

Socio-economic Profile of the Respondents

Table 1 shows the general information about the respondents as to their age, sex, civil status, educational attainment, number of children, number of years in farming, area planted, and tenure status.

Age. Result shows that 33% of the respondents belonged to the age bracket of 31 to 40 years old; 30 % from 20 to 30 years old; 17%, from 41 to 50 years old; 10%, from 51 to 60 years old; 7%, from 61 to 70 years old; and only 3% of the respondents belonged to the age bracket of 71 to 80 years old. This indicates that majority of the respondents were at their middle age.

Sex. Among the 30 respondents, 73% were males and 27% were females. The result shows that all the respondents both females and males were active in farming snap beans.

Civil status. As to civil status, 60% of the respondents were married and 40% were single.

Educational attainment. The result reveals that 17% of the respondents were elementary graduates; 47% were high school graduates; 3% reached vocational and 33.33% of the respondents were college graduates while others reach college level.

Number of children. Result shows that 47% of the respondents had 1 to 5 children; 13%, had 6 to 10 children; and 40% of the respondents do not have children because they were single.



Number of years in farming. The data show that 40% of the respondents were engaged in farming for 1 to 10 years; and 40% from 11 to 20 years; 17% for 21 to 30 years; and 3% of the respondents, from 41 to 50 years

Area planted. Sixty percent (60%) of the respondents had a land area of 100 to 500 square meters planted with beans; 23% of the respondents had a land area of 501 to 1,000 square meters; and 17% of the respondents had 1,001 to 2,000 square meters planted with snap beans. This indicates that the area planted with snap beans was small.

Tenure status. Result shows that most of the respondents (67%) owned the land they tilled; 17% of the respondents were renting; 10% of the respondents claimed that they were part owners of the land they were tilling; and 7% of the respondents borrowed the land for growing snap bean.

Table 1. Socio-economic profile of the respondents

PARTICULAR	NO. OF RESPONDENTS (N=30)	PERCENTAGE(%)
<u>Age</u>		
20 to 30 years old	9	30
31 to 40 years old	10	33
41 to 50 years old	5	17
51 to 60 years old	3	10
61 to 70 years old	2	7
71 to 80 years old	1	3
TOTAL	30	100
<u>Sex</u>		
Female	8	27
Male	22	73
TOTAL	30	100



Table 1 continued...

PARTICULAR	NO. OF RESPONDENTS (N=30)	PERCENTAGE(%)
<u>Civil Status</u>		
Single	12	40
Married	18	60
TOTAL	30	100
<u>Educational Attainment</u>		
Elementary	5	17
High school	14	47
Vocational	1	3
College	10	33
TOTAL	30	100
<u>Number of children</u>		
1to 5	14	47
6 to 10	4	13
No child	12	40
TOTAL	30	100
<u>Number of years in farming</u>		
1 to 10 years	12	40
11 to 20 years	12	40
21 to 30 years	5	17
31 to 40 years	-	-
41 to 50 years	1	3
TOTAL	30	100
<u>Area planted</u>		
100 to 500 square meter	18	60
5001 to 1000 square meter	7	23
1001 to 2,000 square meter	5	17
TOTAL	30	100



Table 1 continued...

PARTICULAR	NO. OF RESPONDENTS (N=30)	PERCENTAGE(%)
<u>Tenure Status</u>		
Owner	20	67
Lease or rent	5	17
Borrowed	2	7
Part owner	3	10
TOTAL	30	100

Pole Snap Bean Production Practices of the Respondents

Source of seeds.The data show that all of the respondents produced their own seeds and bought supplementary seeds from trusted relatives and friends. Only 20% of the respondents bought seeds from accredited suppliers. It was noted that majority of the respondents, do not buy seeds from accredited suppliers because of high cost and yet the performance of the seed was observed to be the same quality from what they produce in terms of yield.

Table 2. Source of seeds by the respondents

SOURCE	NO. OF RESPONDENTS (N=30)	PERCENTAGE (%)
Produce own seeds	30	100
Buy from trusted relative or friends	15	50
Buy from accredited suppliers	6	20

*Multiple response



Table 3. Varieties planted by the respondents

VARIETY	NO. OF RESPONDENTS (N=30)	PERCENTAGE(%)
Alno	15	50
Maroon	10	33
Kaki	5	17
TOTAL	30	100

Varieties Planted

The most common varieties being planted by the farmers were Alno or black valentine (50%); maroon (33%); and Kaki (17%). Accordingly they prefer this variety because of its high yield and high resistant to bean rust.

Land Preparation

As to land preparation, it was noted that all of the respondents prepared the land thoroughly for snap bean by plowing and harrowing, then make plots with double row. In the prepared plots, mixed chicken dung,compost or triple 14 with the soil.

All of the respondents (100%) directly sow the seeds in their farm at a distance of 30 centimeter between rows, covered with well pulverized soil (Figure 2).

Irrigation

All of the respondents irrigated their crop with the used of an overhead sprinkler (Figure 3) or with watering cans. Accordingly, during dry months every other day irrigation is practiced to keep the moisture of the soil, and also to maintain the moisture of the soil at



all times. As mentioned by PCARRD (2009) that snap bean requires constant supply of moisture throughout the growing period. Water the plants regularly to enhance flowering and pod setting. Too much water is avoided because it can cause root rot. On the other hand, lack of water can result to flower and pod drop.



Figure 2. Prepared land for pole snap bean mixed with well decomposed chicken dung, After 3 days, farmers directly sow seeds and covered lightly with well pulverized and not too wet soil, not to lead the seed to rotting

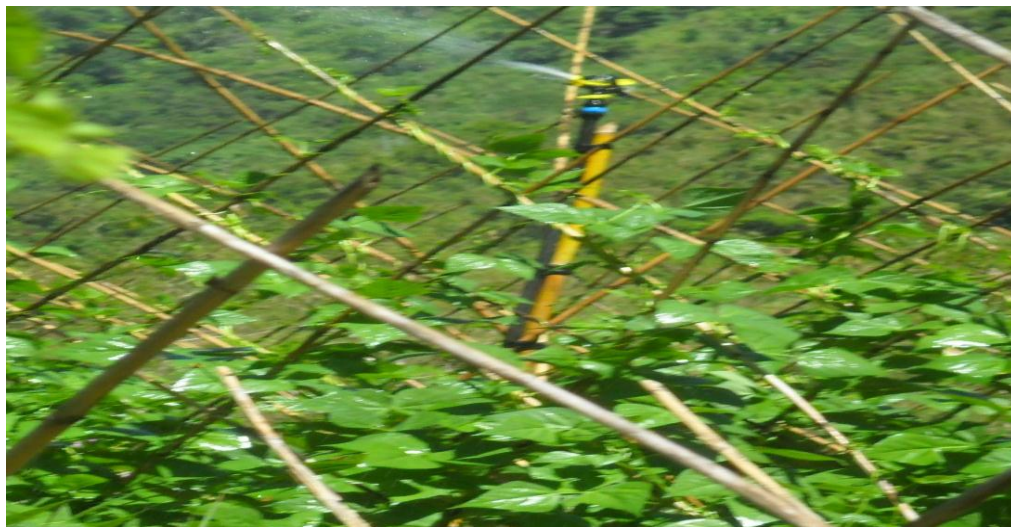


Figure 3. Pole Snap bean farm with overhead sprinkler in between the planted plants, for irrigation. Farmers irrigate their crop every other day to keep the moist of the soil



Figure 4. “Kuwilo”- This is used to store water if watering cans are used for irrigation

Fertilizer Application

With regard to fertilization, the respondents used both organic and inorganic fertilizers (Figure 5) in their bean farming. The organic fertilizers used as claimed by all of the respondents were: chicken dung, compost, and cow or carabao manure, and ashes. They only used cow or carabao manure and ashes as an alternative if chicken dung and compost were not available. Aside from this, they also applied urea and triple 14.

Respondents applied the chicken dung and triple 14 as basal; during the hilling up, they applied triple 14 as side dress; and occasionally fertigate urea during vegetative stage.

As corroborated by Riofrio, undated that the specific application rates are best determined using the result of a soil test. Fertilizer may either be broad cast and worked into the soil before planting time or banded two inches to the side and three inches below the seed at the time of planting. A later side dressing, after pods begin to form, maybe necessary if plants appear yellowish or are not growing well.



Figure 5. Sacks of well decomposed chicken dung and triple 14 kept in the storing house



Figure 6. “Pao” or the stick that farmers used in trellising. Rono or pao would be put up before the vines of the crop developed



Figure 7. Planted pole snap beans at 1 and ½ months from planting, Put up rono or pao before the vines developed (25-30 days from planting)

Trellising

On the trellising, the respondents practiced putting up trellis using rono or pao, before the vine of the beans developed. The trellis should be 8 to 10 feet long (Figure 6) and strong enough to withstand strong winds and rain, especially during rainy season (Figure 7).

Weeding

As to weeding practice of the respondents, all of them claimed that they eradicated weeds through manual method which was done by uprooting with bare hands. Respondents removed weeds regularly to avoid the occurrence of pests like cutworm and pod borer.

Pests and Diseases

All of the respondents encountered pests such as pod borer, thrips, and aphids. Whereas the diseases the respondents identified are bean rust, block spot and blight or anthracnose.

All of the respondents used chemicals to control pests and diseases of their crop. As to block spot, they removed the infected leaves or pod to avoid the spread of the disease.

Harvesting

All the respondents harvested their bean crop with bare hands. They harvested the bean when it is not fully matured, to avoid the fully developed seeds. Accordingly, after harvesting the bean pods, the respondents spread the pods in the packing area and let it dry before packing to avoid the occurrence of black spot on the bean pods, which mostly happened to Kaki variety.

As to postharvest handling, all of the respondents classified the bean pods as marketable and non marketable, unselected pods are considered non-marketable but still can be consumed. As corroborated by PCARRD (2009) stated that pods are classified as marketable and non-marketable. Marketable pods are graded/sorted according to size and quality. First grade pods are unblemished, tender, straight, long, and at the right stage of maturity. Second grade pods are short, have minimal distortion and slightly over the picking stage. Unselected pods are considered non-marketable but can still be consumed.



Packing and Transportation

All of the respondents packed the bean pods in a clean sack, and transport the product through public utility vehicles.

Marketing

As to marketing, all of the respondents sold their product at La Trinidad Benguet Vegetable trading post or Baguio City Hanger Market on whole sale basis; 17% of the respondents sold some of their products at the municipal public market on whole sale basis and to their neighbors on retail price.

Table 4. Vehicles to transport respondents product

TRANSPORTATION	NO. OF RESPONDENTS (N=30)	PERCENTAGE (%)
Transport the product through public utility transport system	30	100
Transport the product using own vehicle	2	7

*Multiple response



Table 5. Marketing Practices of the respondents

MARKETING	NO. OF RESPONDENTS (N=30)	PERCENTAGE (%)
The product are sold at the provincial market	30	100
The product are sold at the municipal market	5	17
The product are sold to neighbors on retail price	5	17

*Multiple response

Table 6. Common problems encountered during pole snap bean production

PROBLEMS	NO. OF RESPONDENTS (N=30)	PERCENTAGE (%)
High cost of seeds	30	100
Manual labor is time consuming	30	100

*Multiple response

Common Problems Encountered During Pole Snap Bean Production

Table 6 shows the common problems of the farmers in relation to farm management practices of snap bean production.

The common problems encountered by the 100% of the respondents were: high cost of seeds, manual labor is time consuming, lack of financial support to buy tractor, high cost of pesticide, hard to control some diseases because its soil borne diseases, scarcity of water during summer, high cost of fare in transporting the product to the market, and no fixed price for the product.



Table 6 continued...

PROBLEMS	NO. OF RESPONDENTS (N=30)	PERCENTAGE (%)
Lack of financial support to buy tractor	30	100
High cost of pesticides	30	100
Hard to control some diseases because its soil borne disease	30	100
Scarcity of water during summer	30	100
High cost of fare in transporting the product	30	100
No fixed price for the product	30	100
Damages on the beans are noted when public utility vehicle is jam-packed with passengers because there is no separate transport system for vegetables	20	67
Buyers are stingy, they give low price for the products	18	60
Double cost for the payment of manpower to carry the beans from the packing area to the road	15	50
There are isolated cases of lost packages	10	33
Difficult to produce own seed	6	2
Suppliers are not honest as to the quality of the seeds	6	20

*Multiple response



SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The study on the production practices of pole snap bean farmers in Balakbak Kapangan, Benguet was conducted to determine the socio-economic profile of the respondents, their pole snap bean production practices and the problems they encountered in pole snap bean production.

A total of 30 pole snap bean farmers from Barangay Balakbak Kapangan, Benguet were the respondents of the study. The survey was conducted in November 2012 with the used of survey questionnaire associated with personal interview. The data gathered were analyzed using statistical tool such as frequency and percentage.

The respondents were at their middle age; mostly males; married; had formal education; and owned the land they tilled.

For the production practices of pole snap bean, farmers prepared the land manually and used both organic and inorganic fertilizers in their farms. All of the respondents produced their own seed and bought supplementary seed from trusted friends or relatives and accredited supplier. Majority of the respondents planted the varieties Alno and Maroon pole snap beans, and directly sow the seeds in the prepared plots mixed with well decomposed chicken dung after 3 days.

With regard to pests and disease management, the respondents used chemicals to control the pests and removing of the infected leaves or pods. As to irrigation, respondents irrigate their crops every other day using overhead sprinkler or watering cans to keep the moisture of the soil.



The respondents used both organic and inorganic fertilizers as basal and side dress. Respondents also removed weeds regularly to avoid the occurrence of pests by uprooting them with bare hands. Also, the respondents practiced putting up trellis using rono or pao before the vine develop.

As to harvesting, all of the respondents harvested the bean when it is not fully matured, to avoid the fully developed seed. The bean pods are classified as marketable and non-marketable, packed in a clean sack and transport through public utility vehicles.

As to marketing, all of the respondents sold their products at La Trinidad Benguet vegetable trading post or Baguio City Hanger market on whole sale basis.

Problems encountered by the pole nap bean farmers were high cost of farm inputs, lack of financial support to buy for inputs, scarcity of water during summer, occurrence of pests and diseases in which were soil borne disease. With regards to marketing, buyers are stingy, they give low price for the product, there's no fixed price and isolated cases of lost packages.

Conclusions

Based on the findings, the following conclusions were derived:

1. The respondents were educated and could understand easily the innovations on bean production in the study area;
2. The respondents planted different varieties of snap pole beans, followed the steps of producing pole snap beans such as from seed selection, land preparation, application of fertilizers, sowing of seeds, trellising, fertilization, harvesting, packing, transportation and marketing; and



3. Problems encountered by the pole snap bean farmers were high cost of farm input, lack of financial support to buy for farm inputs, scarcity of water during summer, occurrence of pests and diseases, stingy buyers, low price for the product, no fixed price and isolated cases of lost packages.

Recommendations

Based on the conclusions, the following recommendations were made:

1. Respondents are advice to attend any seminars on the latest technologies or innovations in farming which can improve their production of beans;
2. The Department of Agriculture and other agencies concerned should send well-trained extension workers and technologist to update the farmers on new technologies of production and control of pests and diseases;
3. Farmers should be organized into association or cooperatives and be registered in order to avail of loans or assistance being extended by the government and private agencies; and
4. A more integrated approach that provides adequate basic inputs needed by the farmers in their production such as fertilizer subsidy and soft credit.



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