

RESEARCH ARTICLE :

Training needs of apple growers of district Budgam, J & K

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SUMMARY : The study identified training needs of apple growers in district Budgam, J&K. Purposive sampling technique was used to select two blocks (Beerwah and Khan Sahib), four zones, eight circles and eighty apple farmers were selected for the study. Some of the data were analyzed with percentage and mean score while some were presented in charts. Majority (77.5%) of the respondents did not have contact with extension agents in 2012 and they sourced information apple from neighbours (86.3%). The mean annual expenditure and income from apple were Rs. 27, 568 and Rs. 235, 530, respectively. Majority (96.2%) of the respondents had no training on processing and preservation of apple and off season production of apple (85%). Majority of the respondents indicated that training on apple should be organized by researchers (65%) through interpersonal communication (83.8%) using local language (kashmiri) (78.8%). Provision of effective micro-credit facilities ($M=2.84$) and stability of government policy (stability of price of apple) ($M=2.68$) were perceived by the respondents as major strategies that will improve apple production in the area. The study encouraged building capacities of apple farmers through informal training especially in the areas of processing, preservation and off-season production of apple so that they can face challenges of the enterprise, boost their farm size and income.

KEY WORDS :

Training needs, Apple growers, Government policy, Local language

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BACKGROUND AND OBJECTIVES

Apple is pomaceous fruit of the Apple tree. It is one of the most widely cultivated fruits in India and the most widely known of the many members of genus malus which are used by humans. There are more than 7500 known cultivars of apple. About 69 million tons were grown worldwide in 2010 and China produces almost half of this total production, the United States is the second largest producer. Commercially popular apple

cultivars are soft but crisp, other desired qualities in modern commercial apple breeding are a colorful skin, absence of russetting, lengthy storage ability, high yields and disease resistance.

The famous proverb “An apple a day keeps the Doctor away” addressing the health effects of the fruit. The apples reduce the risk of colon, prostate and lung cancers. Apple is the principle fruit crop of Jammu and Kashmir and accounts for 51 per cent of total area of 2.72 lakh hectares under all temperate fruits

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grown in this state. The annual apple production in the state is 13.73 lakh M tones (2009). Average yield of commercially important apple cultivars per unit area is the highest in the country ranging between 10-12 tones/ha, but it compares poorly to the yields of 20-30 tones/ha in the horticulturally advanced countries of the world. Climate and other agro-ecological factors of Kashmir are ideally suited to the cultivation of many varieties. Apple cultivation is one of the major fruit industries of Jammu and Kashmir. Generally apples are grown at high altitude 1600-2400 meters above sea level. Firminger (1990) reported that attempts are being made to grow apples in various parts of India and good fruits were reported from some pockets of Bihar state.

Training by nature, is an organized activity aimed at imparting information and/or instructions to improve the recipient's performance or to help him or her attain a required level of knowledge or skill (New business dictionary.com). Hence, it is an activity leading to skilled behavior (Compare info base Limited) and a performance improvement tool. Since, it is counter-productive to offer training to individuals who do not need it or to offer the wrong kind of training, successful training needs analysis identifies those who need training and what kind of training is needed thereby putting training resources to good use and enhancing productivity. Given the importance of apple and the possibility of exceeding current production estimates in Jammu and Kashmir State, it becomes pertinent to identify training needs of apple growers which will serve as critical factors that needs to be addressed in order to ameliorate challenges and hence realize potentials of the fruit. In view of the aforementioned facts, the study assessed training needs of apple growers in Jammu and Kashmir State, India. Specifically, the study examined characteristics of apple growers in the study area, sources of information, areas of training and strategies for enhancing apple production in the area.

RESOURCES AND METHODS

The study was carried out in district Budgam of Jammu and Kashmir state, India. The district has seventeen local government areas and six agricultural zones. Apple growers in the district constituted the population for the study. A multi-stage sampling technique was used in the selection of the respondents. From the six agricultural zones, two (2) zones; (Beerwah and Khan

Sahib) were purposively selected because of their high involvement in apple production. Two (2) blocks were also purposively selected from each of the selected zones because of the same reason given above. This gives a total of four (4) blocks for the study. From each of the selected blocks, two circles where apple growers dominate were also purposively selected from each of the selected blocks giving a total of eight (8) circles for the study. Ten apple growers were purposively selected from each of the circles giving a total of eighty (80) respondents for the study.

Data were collected from the respondents through the use of structured interview schedule. It contained relevant questions based on the objectives of the study. Respondents were asked to indicate the number and types of organization(s) they belong to, their sources of information on apple production, number of extension contacts in 2013, total income and expenditure on apple production in one season (2013).

Farmers were asked to tick from the list provided areas they had training on apple production. Some areas indicated in the list were irrigation, fertilizer application, pest and disease control etc. They were also asked to indicate who they will want to organize training for them, resource person, method and language that they will want to be used to train them. List of perceived enhancing factors was provided in a three (3) point Likerts type scale with responses as; to a great extent (3), to a little extent (2), and to no extent (1) with a mean of 2.0 in other to ascertain strategies for enhancing apple production in the area. Any variable with a mean score higher or equal to 2.0 was regarded as a major strategy while variable with a mean score less than 2.0 was regarded otherwise. Some of the data were analyzed with percentage and mean score while some were presented in charts. These analyses were executed with the help of Statistical Product and Service Solution (SPSS) version 16.

OBSERVATIONS AND ANALYSIS

The results obtained from the present study as well as discussions have been summarized under following heads:

Membership of social organization :

Table 1 reveals that 93.8 per cent of the respondents belonged to social organizations and amongst respondents

belonged to social organizations, 73.8% were members of cooperative society, 25% of them belonged to different religious groups while 20% and 8.8% of them belonged to different political organizations. Involvement of farmers in social organizations especially farmers group and cooperative could enhance diffusion of information and reception of government assistance in the form of loans, subsidies and other inputs.

Agricultural extension contact :

Table 1 reveals that 77.5% of respondents did not have contact with extension agents in the year 2013 while 22.5% had contact with extension agents. This finding is in line with what is happening in most developing countries like India where farmer-extension contact is almost non-existent probably due to poor remuneration and logistical problems.

Variables	Percentage
Membership of social organization	
No	6.2
Yes	93.8
*Social organization(s) belonged to	
Non- Farmers group	6.2
Religious group	25.0
Cooperative society	73.8
Political group	20.0
Contact with extension agents in 2013	
Yes	22.5
No	77.5

*Multiple responses Source: Field survey July, 2014

Sources of information on apple farming :

Fig. 1 reveals that majority (80%) of the respondents had neighbors as the main source of information on apple farming from their neighbours. Those who got it from extension agents accounted for 9% while 8% and 3% of the respondents got it from radio and television respectively. Therefore it is clear from the figure that most of the farmers are dependent on neighbors as a source of information on apple production and 9 per cent had information from extension agents, 8 per cent and 3 per cent had from radio and television respectively. Since most of them lacked extension contact (Table1), so when farmers do not have access to formal extension services, they use other sources of information or ask other farmers and their input suppliers (Global Forum for Rural

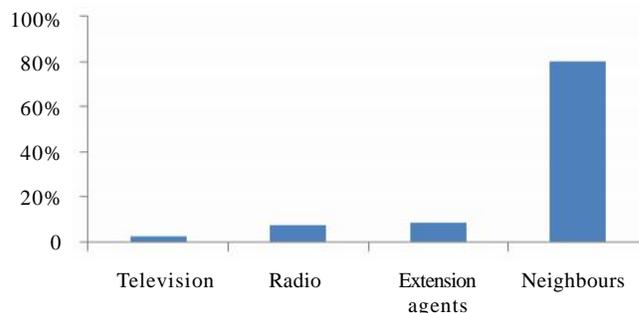


Fig. 1 : Sources of information of the respondents on apple production

Advisory Services (GFRAS), 2012).

From Table 2, it can be inferred that 27.5% of the respondents earned more than Rs. 250,000 from apple fruit in a season/year, 21.2% of the respondents earned between Rs., 1001 to Rs. 50,000 while 20% of them earned between Rs. 50,001 to Rs. 100,000. The mean annual income of the respondents from apple fruit in a season was Rs. 235,530.

Variables	Percentage
Mean	
Annual income from apple in Rs.	
2,35,530	
No response	5.0
1,001-50,000	21.2
50,001-1,00,000	20.0
1,00,001-1,50,000	17.5
1,50,001-2,00,000	3.8
2,00,001-2,50,000	5.0
>2,50,000	27.5
Expenditure on apple production	
27,568	
No response	15.8
1,001-10,000	38.8
10,001-20,000	13.8
20,001-30,000	10.0
30,001-40,000	3.8
40,001-50,000	10.0
>50,000	10.0

Source: Field survey July, 2014

Annual income and expenditure from apple production in a season/year :

Entries in Table 2 also show that greater proportion

(38.8%) of the respondents spent between Rs. 1,001 to Rs. 10,000 while 13.8% spent between Rs. 1,0001 to Rs. 20,000 on apple production in a season/year. The mean annual expenditure of the respondents on apple production per season was Rs. 27,568. The finding shows that the farmers spent less and earn high income (Table 2) from apple indicating that apple production is a lucrative business in the area. The finding tend to supports the fact that apple production has become the key source of economic growth in Costa Rica (www.rainforest.alliance.org)

Areas respondents had training on apple production:

Data in Table 3 shows that majority (81.2%) of the respondents had no training on suitable site selection / land for apple production while (18.8%) had training on it. Selection of good site/land for specific agricultural crop is likened to productivity /yield, hence the need for these farmers to be properly trained on ideal site/land for apple production.

Table 3 : Areas respondents had training on apple production (n=80)

Variables	Percentage
Selection of suitable site/land	81.2
Soil management and conservation	28.8
Identification of good cultivars	61.2
Post-harvest management	15.0
Pruning techniques	51.2
Irrigation system	41.2
Fertilizer application	61.2
Pest and disease control	62.5
Harvesting operations	18.8
Processing and preservation methods	03.8
Record keeping	33.8

Source: Field survey July, 2014

Majority (71.2%) of the respondents had no training on soil management and conservation practices while (28.8%) had training on these practices (Table 3). Many people that are engaged in farming report that their livelihood is becoming less viable due to lack of access to farmland, rising land costs, unfavorable agricultural and land tenure policies, population growth, fragmentation of holdings, over use and degradation of cultivated lands (World Bank, 2000). Training related to land/soil will help farmers to manage and conserve this important factor of production. Table 3 show that majority (61.2%) of the

respondents had training on identification of good species/ varieties of apple while (38.8%) had no training on it. Training of these farmers on the good varieties may invariably motivate them to use them in their production in order to increase output.

As shown in Table 3, majority (85.0%) of the respondents had no training on post-harvest management of apple while (15.0%) had training on it. Since majority of these respondents did not undergo training on post-harvest management of apple, it is unlikely that they will get better returns from apple crop unless they will be trained in post-harvest management practices.

The data reveals that 51.2% of the respondents had training on pruning techniques while 48.8% had no training on it (Table 3). This shows that greater proportion of the farmers had training on pruning technique which is meant to remove extra spurs from the plant thereby allowing the growing ones to give maximum yield.

Table 3 further reveals that greater proportion (58.8%) of the respondents had no training on irrigation while the remaining 41.2% had training on irrigation at critical stages of the crop. Since majority of these farmers did not have training on irrigating apple crop at critical stages, it is likely that they will not have on irrigation which is a supplementary water supply to plants/crop especially during dry/off season.

Data in Table 3 show that majority (61.2%) of the respondents had training on fertilizer application while (38.8%) had no training on it. Majority of the respondents may have undergone training on fertilizer application because it is one of the commonest inputs used by farmers in growing their crops.

Table 3 also shows that majority (62.5%) of the respondents had no training on pest and disease control on apple while the remaining (37.5%) had training on it. Training the farmers on how to combat disease and pest infestation in the farm will reduce cost of production as well as increasing the quality of apples produced.

Entries in Table 3 show that majority (81.2%) of the respondents had no training on apple harvesting operation while only (18.8%) had training on it. This training is pertinent as premature harvest; late harvest, poor method of harvesting etc are detrimental and can lead to heavy losses. Yet most of these farmers were not trained on it.

It is obvious in Table 3 that a greater proportion (96.2%) of the respondents had no training on processing

and preservation of apple fruit while just (3.8%) had training on them. Processing aims at preserving the nutrients in the food in order to make them available to the consumers (Hassal *et al.*, 2005). Seasonality of agricultural products like apple makes it necessary that farmer be trained on how to process and preserve this product during period lean season and to reduce losses and ensure the value addition of the crop.

From Table 3 it can be seen that majority (66.2%) of the respondents had no training on record keeping while (33.8%) had training on it. Farm records and accounts are very important as they help farmers to obtain exact knowledge about present and potential gross income and operating costs (Agriculture information bank, 2011). These information help them to manage their farms profitably.

Organization of the training :

Entries in Table 4 reveal that majority (65%) of the respondents indicated that they would want research institute to organize training on apple for them, 45% indicated government, 10% indicated NGOs, while 8.8% indicated community based organization as outfit that they

Table 4 : Percentage distribution of respondents on organization of training (n=80)	
Organization	Percentages
*Organizers of the training	
Government	45.0
NGO	10.0
Researchers	65.0
Community organization	8.8
*Method of conducting training	
Formal training	13.8
Demonstration	27.2
Workshop	82.5
Interpersonal	83.8
Mass media	47.5
Internet	3.8
*Trainer/resource person	
School teachers	3.8
Lecturers	10.0
Researchers	88.8
Clergy	26.3
Language	
Urdu	3.8
Local	78.8
Both	17.5

*Multiple responses

Source: field survey July, 2014

would want to organize training for them. It is surprising that none of the respondents pointed out extension agency that has the mandate of training farmers on recommended practices. This exposes lapses and inefficiency of extension services in the study area probably due to logistic problems which may consequently undermine its contribution and impact on agricultural growth.

Method of conducting training :

Table 4 further reveals that interpersonal communication (83.8%), workshop (82.5%) and demonstration (82.5%) were indicated by majority of the respondents as methods that will be used in conducting training for them. Being rural farmers who are mostly illiterates, they will prefer the aforementioned methods that are participatory and allow physical interactions between the trainer and the trainee with direct feedback thereby enhancing effectiveness of training.

Trainer/resource person :

Data in Table 4 show that majority (88.8%) of the respondents indicated that they will prefer researchers to be their trainer/resource person, 26.3% indicated clergy while 10% indicated lecturers. Their preference for researchers may be derived from the fact that researchers generate credible information/technology on agriculture and are more likely to transfer it to farmers in an undiluted form.

Language of communication during training :

Data in Table 4 show that majority (78.8%) of the respondents pointed out local language (Kashmiri) only; 17.5% indicated combination of Kashmiri and Urdu languages while 3.8% indicated English language only as medium of communication during training. Being rural farmers who usually have poor educational status, they will prefer local language as medium of communication during training.

Strategies for improving apple production :

It can be inferred from Table 5 that all the factors in the table were perceived by the respondents as major strategies for improving apple production in the area. Some of these major strategies as indicated by the respondents were increased extension contact (M=2.94), investing in apple research to solve apple farmers problems (M=2.91), labor availability (M=2.89),

Table 5 : Mean scores of strategies for improving apple production

Perceived strategies	Mean	SD
Provision of effective micro-credit facilities	2.84*	0.462
Stability of government policy on apple enterprise	2.68*	0.546
Labour availability	2.89*	0.318
Use of organic manure only	2.41*	0.567
Construction of available road network	2.74*	0.545
Provision of irrigation systems	2.34*	0.635
Establishment of farmers association	2.85*	0.453
Involvement of youth in apple production	2.69*	0.493
Provision of incentives and subsidy	2.80*	0.488
Investing in apple research	2.91*	0.363
Increase extension contact	2.94*	0.244
Provision of good market	2.84*	0.434

Source: field survey, June 2014

* indicates significance of value at P=0.05

establishment of effective farmers association to enable them solve their problem together (M=2.85), provision of good market (M=2.84), provision of effective micro-credit facilities (M=2.84), Provision of incentives and subsidies like fertilizers, improved saplings agrochemicals etc. (M=2.80) and construction of road (M=2.74). These findings may be said to agree with current policy directions in agriculture which emphasize on extending public private (including public NGO) partnerships in service and input delivery, strengthening farmers associations and demand for advisory services and tackling gaps and failures in private marketing systems (Ellis, 2004).

Conclusion :

Majority of the respondents were members of religious group, lacked extension contact and sourced information on apple production from mainly neighbours. Although most of them had no training on specific area of apple production, they realized big income from the business. These indicate that apple production is a lucrative business.

Recommendations :

Based on the major findings of this work, the following recommendations were made:

– Research institutes, universities, KVKs etc should invest in apple research to solve apple grower's problems. The research should focus mainly on areas like suitable land/soil for apple production, soil conservation and management practices, off-season production, harvesting and processing operations, as well

as record keeping.

– Agricultural extension services system should be strengthened by provision of conducive environment for their operations so that output of the research can be transferred by them through training and ultimately utilized by the targeted audience for increased output

– Government and non-governmental organizations, like community based organizations and even patriotic citizens should embark on development programme and projects in the area. Provision of basic infrastructural facilities such as provision for good marketing and road network for easy transportation of agricultural produce especially apple from the point of production to utilization should be given utmost priority

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