

# Exploring Marketing Activities of Apple Growers: Empirical Evidence from Kashmir

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## Abstract

Despite a wide range of reform initiatives in agricultural extension in India from last decades, the coverage, access, and quality of information provided to marginalized and poor farmers is uneven. This paper aims to ascertain why farmers are not accessing information in general or about schemes and where information gaps exist, for effective and efficient marketing (selling and channel selection). Using information provision and awareness as the basis for analysis, the paper reviews some of the major agricultural extension programs in Kashmir by considering their ability to provide information and facilitate information sharing for availing schemes. Further the study evaluates the awareness of central and state schemes and frequency of participation by growers. The study uses both primary and secondary data for frequency and percentage analysis. Hence from results of this analysis, opportunities are identified for increasing extension services' awareness in reaching smallholder farmers for the utilization of various schemes. The findings highlighted the role of various unsorted marketing activities that should be taken in to consideration and explores the use, access and awareness of various schemes and programmes. Findings also showed that deficit awareness leads to decrease in utilization. The study came up with suggestions about the awareness through selection of proper source of media according to the use of targeted population.

**Keywords:** Awareness, Selling Conditions, Information Source, Marketing Channels

## Introduction

Agriculture is the primary occupation of the larger part of Indian population. 65-70 % of Indian population is dependent on agriculture for their living in rural areas. As rural Indian population is in majority here and accounts for about 12 % of world population (Misra, S, 2012). Among agriculture horticulture is a prime sector. In Horticulture sector the largest area of 43.53% is occupied by apple out of total area under fruit and 65.46% out of fresh fruit area. Indian apple production averaged nearly 1.4 million making it the sixth largest apple producer in the world (Satish. Y. et.al, 2006). Apple alone is the fourth widely produced fruit in the after Banana, Orange and grapes. India Annually exports apple worth of Rs 400 million (Nearly US \$ 10 million) out of which Rs 200 million of apples comes from Jammu and Kashmir North

region (Kashmir) and Provides job opportunity to 1.2 million people directly, indirectly. Its area is estimated to be the second largest in the world and in Asia it is the second largest producer (Deepa. D, 2008). There by making it the largest contributor to the State GDP. Further among the Horticulture produce Jammu and Kashmir and Himachal Pradesh have roughly equal area planted to apple, but J&K has the highest average field and accounts 67% of total apple production and 50% of its export in the country hence a substantial foreign exchange earner and important for economic growth. Productivity is much higher than national average of 6.86 tons/ha. It is also compared well with the world average of 10.82 tons /ha, or China 9.93 tons/ha, which is world's highest producer of Apple (Masoodi M.A, 2003).

With the advancement of technology many new farm practices, policies and schemes have been introduced and these have immense possibilities for increase in agricultural production. But the effectiveness and efficiency of these schemes and policies depends on proper need identification by policy makers and adoption by target population. Also value and efficiency of agricultural production is directly proportional to efficiency in marketing the produce. However, despite the renewed interest and investment in agricultural extension in India, the coverage of such services is inadequate. Government extension programs, extension services of the national agricultural research system, cooperatives, and nongovernmental extension programs have a very limited outreach (NSSO 2010). The 2003 National Sample Survey Organisation (NSSO) survey showed that 60 percent of farmers had not accessed any source of information on modern technology to assist in their farming practices in the past year and those who had sourced information, 16 percent received it from other progressive farmers, followed by input dealers. Those farmers who had accessed information, the major problem of extension services was found to be the practical relevance of the advice (NSSO 2005). The coverage and relevance of information provided to farmers through the agricultural extension system is therefore questionable. While this may be partly due to inadequate contact by the services, which need to reach a large and complex farming community, inappropriate or poor-quality information could also be a key hindrance to farmers' use of extension services. In other words, the content of the information provided by agricultural extension approaches, and the information farmers actually need, may not be aligned. There is therefore a need to reexamine the current agricultural extension approaches to understand where information gaps exist and determine why farmers are not accessing information through the large, well-established public-sector extension system in addition to emerging private and third-sector actors. As there is an increasing need to work in partnership

and to share knowledge and skills in order to provide locally relevant services that meet the information needs of marginal and smallholder farmers.

Information and knowledge are key components of an improved agricultural sector (Lwoga et al., 2011). Farmers require proper information in order to plan for their activities, make choice of the inputs and eventually on when and where to sell their products. Thus, there is a direct relationship between availability of information and agricultural development (Babu et al., 2011).

Shepherd (2011) noted that farmers' information needs have increased now than ever before due to less government intervention in the sector. This is because availability of information enhances livelihoods and reduces poverty when applied to improve agriculture and trade among others. At the global level, strong emphasis is being placed on the role of information in achieving the millennium development goals (MDGs). The importance is underscored in the eighth MDG. It is well agreed that information can support all other MDGs (World Development Report, 2008). Farmers' lack of information is a paradox that continues to debilitate the efforts to improve agriculture in most of African countries. Lwoga et al. (2011) reveal that despite the large body of knowledge that exists in research institutions, universities, public offices and libraries, it is only a small amount of agricultural information which is eventually accessible by rural farmers. This creates a concern as to whether the mechanisms used to disseminate the same are effective and/or the disseminated information tallies with the actual needs of the farmers.

## **MARKETING CHANNELS AND EXTENSION PROGRAMES**

Almost all apples produced in India are used for fresh consumption with limited use of processing, about 70% of the Crop is transported to and sold in India's largest whole sale fruit and vegetable market at Azadpur in Delhi followed by Mumbai, Bangalore, Abmadabed and others. There are number of Marketing channels patronized by the apple growers of which the predominate are as8

Channel (1): Producer- commission agent- Wholesaler - Retailer - Consumer.

Channel (2): Producer- Forwarding agent- Commission agent- Wholesaler- Retailer - Consumer.

Channel (3): Producer- Pre harvest Contractor- Commission Agent - Wholesaler - Retailer- Consumer.

Channel (4): Producer- Pre harvest contractor- Forwarding Agent - Wholesaler - Retailer- Consumer

The highest percentage (51.37%) of total produce is transported through Channel- (1) followed by Channel (2)

(23.25%) while channel 3 & 4 account for 19.75% and 5.63% of the total produce transacted by these growers respectively. Sale through pre-harvest Contractor is most important system of marketing. Normally the small orchardists sell their crop at flowering stage to contractor who organizes plant protection, Plucking and packing of fruit. The medium and large orchardist prefers to market their produce through 2nd and 3rd channel respectively. The decision of diversification by a farmer is considered to be one of the major economic decisions that have strong bearing on his welfare in terms of income level and variability in returns. It has been accepted fact that the peculiar geographical conditions and inadequacy of infrastructure particularly in Kashmir region has restricted the development of agriculture product. Still there are creation problems which hinder its growth for which state and central Government has initiated various schemes and programs across all dimensions that include marketing, financing and production. These schemes and programs include National Agricultural Cooperative Marketing Federation of India (NAFEED), Jammu and Kashmir Horticulture Planning and Marketing Corporation Limited (JKHPCL), Agricultural Marketing NET (AGMARKNET), Apple Advance and Market Intervention Scheme (MIS).

**OBJECTIVES**

Looking to above facts the present study is undertaken in view of the following objectives.

1. To examine the marketing channel selection and ANALYSIS

**DISTRIBUTION OF GROWERS ACCORDING TO TIME AND CONDITIONS OF SELLING**

Table I

| SELLING TIME & CONDITIONS | DISTRIBUTION |       |            |      | EXTENT OF PARTICIPATION |      |          |      |        |      |       |      |
|---------------------------|--------------|-------|------------|------|-------------------------|------|----------|------|--------|------|-------|------|
|                           | Freq.        | %age  | Frequently |      | Often                   |      | Normally |      | Rarely |      | Never |      |
|                           |              |       | Freq.      | %age | Freq.                   | %age | Freq.    | %age | Freq.  | %age | Freq. | %age |
| IMMEDIATELY               | 112          | 74.66 | 45         | 30.0 | 41                      | 27.3 | 33       | 22.0 | 21     | 14.0 | 10    | 6.7  |
| AFTER STORING             | 65           | 43.33 | 10         | 6.7  | 13                      | 8.7  | 37       | 24.7 | 26     | 17.3 | 64    | 42.7 |
| FAVOURABLE PRICES         | 48           | 32.00 | 36         | 24.0 | 59                      | 39.3 | 37       | 24.7 | 13     | 8.7  | 5     | 3.3  |
| INDEBTEDNESS              | 89           | 59.33 | 38         | 25.3 | 36                      | 24.0 | 28       | 18.7 | 29     | 19.3 | 19    | 12.7 |

**Comparative Selling Time In Three Apple Producing States In India**

| STATE MONTH      | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. | Oct. | Nov. | Dec. |
|------------------|------|------|------|------|-----|------|------|------|-------|------|------|------|
| Jammu & Kashmir  |      |      |      |      |     |      |      | ■    | ■     | ■    |      |      |
| Himachal Pradesh |      |      |      |      |     |      | ■    | ■    | ■     |      |      |      |
| Uttaranchal      |      |      |      |      |     | ■    | ■    | ■    | ■     |      |      |      |

Source: National Horticulture Board, Ministry of Agriculture, Government of India



selling conditions prevailing in the apple trade and provide possible solution to the problems faced.

2. To gauge the awareness and participation level of growers towards central and state Government schemes and programmes and their frequency of participation.

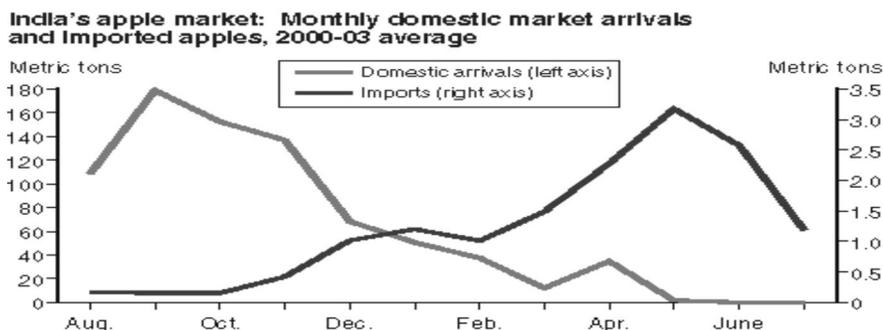
**RESEARCH METHODOLOGY**

The Jammu & Kashmir is purposively selected for study purpose as it has 35.92 per cent and 58.85 per cent of country's total area and production respectively. About 30 per cent area and 60 per cent production of the state is in Barramulla district. Hence, Barramulla district is selected for the study. From Barramulla district, two tehsils, one having highest production i.e., Sopore and other having relatively less production i.e., Bandipore are taken into consideration. Eight villages (4 from each tehsil) are chosen for the study purpose. Accordingly, 300 apple growers are selected for the present study through stratified random sampling. Respective farmers were selected on the basis of their co-operation and willingness to respond. In all, the requisite information was collected from them personally with the help of a non-disguised, pre-tested questionnaire. Further percentage and frequency analysis has been used to analyse the data collected through questionnaire. The analysis has been carried out through the use of statistical software's like SPSS and Microsoft Excel to draw meaningful inferences.

The table-I shows mixed selling distribution participation across the mentioned reasons as 76.44% of growers are selling produce “immediately” after harvest. 43% of growers are selling produce “after storing”, 32% of growers are selling produce when “prices are favorable” and 59% of growers are selling produce due to “indebtedness” to traders. Though a comparative study the extent of participation for “selling immediately” is more frequent followed by “indebtedness”, “after storing” and “favorable prices” respectively. The extent of participation according to frequency for selling immediately is decreasing from frequently to never, which infers that maximum time's growers are selling their produce immediately after harvest. The frequency of “selling produce after storing” is increasing from frequently to never which infers that minimum times growers sell their produce “after storing”. The frequency of selling produce when prices are favorable is decreasing form frequently to never, which infers that maximum times growers sell their produce when prices are

favorable which is a good indication. The frequency of selling produce due to indebtedness is decreasing from frequently to never which infers that growers are forced to sell produce due to indebtedness.

Fig-1 infers that growers are selling produce immediately after harvest because of indebtedness to traders and lack of storing facilities during peak season of harvest which are the months of September and October. When comparing this peak season with Himachal Pradesh and Uttrakhand it is in the month of June, July, August and September respectively this infers that growers sell their produce when there is peak supply from other states which results in lower price of produce. Growers and policy makers should concentrate on the identification of proper time and conditions for selling the produce. As a shift in time of selling (by storing or by introducing improved varieties) from October, November to November, December results in the higher prices of produce as price of imported apples is nearly 3500 per box after the month of January-February.



Source: World Trade Atlas. National Horticultural Board, Ministry of Agriculture, Government of India.

### DISTRIBUTION OF GROWERS ACCORDING TO REASONS OF SELLING

The table II highlights that growers are having integrated reasons for selling as 82.66% of growers are selecting a market based on nearness, 57.33% selects a market based on previous agreement, 58.66% of growers selects a market based on better prices, 31.33% of growers select a market based on frequent interaction with brokers & other intermediaries, and 32.00% of growers selects a market based on immediate cash payments. Through a comparative

study the extend of participation for selecting a market based on nearness is more frequent followed by better prices, previous agreement, immediate cash payment and frequent interaction respectively. Growers are selecting particular market channels oftenly by nearness of market and due to previous agreement without analyzing other options which results in lower returns and more profits for intermediates.

The findings are in agreement with the research of javaid ahmad shapoo and B.N BanerJee (2002) the marketing system of Kashmir apple

Table II

| REASONS FOR SELLING    | DISTRIBUTION |       |            |      | EXTENT OF PARTICIPATION |      |          |      |        |      |       |      |
|------------------------|--------------|-------|------------|------|-------------------------|------|----------|------|--------|------|-------|------|
|                        | Freq.        | %age  | Frequently |      | Oftenly                 |      | Normally |      | Rarely |      | Never |      |
|                        |              |       | Freq.      | %age | Freq.                   | %age | Freq.    | %age | Freq.  | %age | Freq. | %age |
| NEARNESS TO MARKET     | 124          | 82.66 | 40         | 26.7 | 53                      | 35.3 | 37       | 24.7 | 11     | 7.3  | 9     | 6.0  |
| PREVIOUS AGREEMENT     | 86           | 57.33 | 36         | 24.0 | 56                      | 37.3 | 14       | 9.3  | 39     | 26.0 | 5     | 3.3  |
| BETTER PRICES          | 88           | 58.66 | 54         | 36.0 | 11                      | 7.3  | 43       | 28.7 | 30     | 20.0 | 12    | 8.0  |
| FREQUENT INTERACTION   | 47           | 31.33 | 7          | 4.7  | 39                      | 26.0 | 57       | 38.0 | 44     | 29.3 | 3     | 2.0  |
| IMMEDIATE CASH PAYMENT | 48           | 32.00 | 42         | 28.0 | 48                      | 32.0 | 43       | 28.7 | 14     | 9.3  | 3     | 2.0  |

## DISTRIBUTION OF GROWERS ACCORDING TO SOURCES OF INFORMATION

The table III highlights that growers are using mixed and multiple source of information as 26.5% of growers are using television as a source of information through (28) as agri-programmes, (36) as news, (24) as entertainment frequently. 78.75% of growers are using radio as a source of information through agri-programmes (32), news (45), Entertainment (38) frequently. 36.25% of growers are using newspapers as a source of information through farm information(19), general news(22), frequently 26.5% of growers are using farm magazine as source of information through scientific articles(14), & through success stories (8) frequently only .02% of growers using internet as a source of

information through cell phones with frequency from normally or rarely.

Through a comparative study the extent of participation for television shows that television news is used most frequently followed by Agri programmes while used radio as a source of information growers are using radio news more frequently followed Agri-programmes. While using newspapers as a source of information growers are using general news more frequently followed by farm information. While using farm magazines as a source of information growers are using scientific articles more frequently followed by successes stores and while using internal as a source of information growers are using cell phones and that also rarely.

Table III

| MASS MEDIA SOURCE | DISTRIBUTION |       | EXTENT OF PARTICIPATION |                  |               |                |              |             |
|-------------------|--------------|-------|-------------------------|------------------|---------------|----------------|--------------|-------------|
|                   | Freq.        | %age  | Programmes              | Frequently Freq. | Oftenly Freq. | Normally Freq. | Rarely Freq. | Never Freq. |
| TELEVISION        | 42           | 26.5  | Agri. Programmes        | 28               | 52            | 33             | 25           | 80          |
|                   |              |       | Advertisement           | 36               | 48            | 21             | 44           | 76          |
|                   |              |       | News                    | 24               | 56            | 11             | 62           | 80          |
|                   |              |       | Entertainment           | 13               | 62            | 26             | 53           | 85          |
| RADIO             | 126          | 78.75 | Agri. Programmes        | 32               | 37            | 32             | 43           | 91          |
|                   |              |       | Advertisement           | 45               | 61            | 19             | 26           | 54          |
|                   |              |       | News                    | 38               | 53            | 48             | 19           | 69          |
|                   |              |       | Entertainment           | 11               | 54            | 13             | 49           | 95          |
| NEWSPAPER         | 58           | 38.66 | Agri. News              | 19               | 26            | 72             | 56           | 115         |
|                   |              |       | Advertisement           | 22               | 37            | 88             | 28           | 101         |
|                   |              |       | General news            | 9                | 11            | 19             | 61           | 140         |
| FARM MAGAZINE     | 26           | 17.33 | Scientific articles     | 14               | 18            | 42             | 24           | 128         |
|                   |              |       | Success stories         | 8                | 12            | 32             | 56           | 140         |
|                   |              |       | Expert Interview        | -                | -             | -              | -            | -           |
|                   |              |       | Cell phones             | -                | 1             | 2              | 1            | -           |
| INTERNET          | 4            | 2.66  | Browsing center         | -                | -             | -              | -            | -           |

## DISTRIBUTION OF GROWERS ACCORDING TO REASONS OF MARKETING CHANNEL SELECTION

The table-IV highlights that 27.3% of growers are selecting marketing channel based on the degree of accessibility and availability of channel 32% of growers are selecting marketing channel based on the brokers effect and 40.6% of growers are selecting marketing channel due to influence of friends and relatives. Through a comparative study the extent of participation in selecting marketing channel on the basis of influence of friends and relatives is more frequent followed by brokers effect and accessibility respectively.

The extent of participation according to frequency for selecting channel by accessibility is decreasing from frequently to never which infers that maximum times growers use accessibility as a source of channel selection. The frequency for selecting brokers as a source of channel selection is decreasing from frequently to never which infers that maximum times growers use brokers as a sources of channel selection. The frequency for selecting friends and relatives as a source of channel selection decreasing from frequently to never. This infers that maximum time's growers are using friends & relatives as a source of channel selection.

Table IV

| MARKETING CHANNEL SELECTION | DISTRIBUTION |      |            |      | EXTENT OF PARTICIPATION |      |          |      |        |      |        |      |
|-----------------------------|--------------|------|------------|------|-------------------------|------|----------|------|--------|------|--------|------|
|                             | Fre q.       | %age | Frequently |      | Oftenly                 |      | Normally |      | Rarely |      | Never  |      |
|                             |              |      | Fre q.     | %age | Fre q.                  | %age | Fre q.   | %age | Fre q. | %age | Fre q. | %age |
| ACCESSIBILITY               | 41           | 27.3 | 41         | 27.3 | 32                      | 21.3 | 33       | 22.0 | 16     | 10.7 | 28     | 18.7 |
| BROKERS                     | 48           | 32.1 | 36         | 24.0 | 62                      | 41.3 | 12       | 8.0  | 15     | 10.0 | 25     | 16.7 |
| FRIENDS AND RELATIVES       | 61           | 40.6 | 22         | 14.7 | 47                      | 31.3 | 48       | 32.0 | 23     | 15.3 | 10     | 6.7  |
| TOTAL                       | 150          | 100  |            |      |                         |      |          |      |        |      |        |      |

### DISTRIBUTION OF GROWERS ACCORDING TO AWARENESS OF SCHEMES

The table-V highlights that 5.33% of people are aware of AGMARKNET, 8% of people are aware of NAFEED, 28.66% of growers are aware of Apple advance scheme, 25.33% of people are aware of JKHPMC and 80 people are aware of MIS. Through a comparative study the extent of awareness of these schemes Apple advance scheme is more popular followed by JKHPMC, NAFEED, MIS and AGMARKNET respectively.

The extent of awareness according to frequency of awareness about AGMARKNET is increasing from frequently to never, which infers that maximum number of

growers know very little about this scheme the frequency of awareness about NAFEED is increasing from frequently to never which infers that maximum numbers of growers know very little about this scheme. Same degree of frequency is found for Apple advanced scheme, JKHPMC & MIS respectively. It is clear that all growers lack necessary information about these schemes which results in low efficiency of this scheme. This may be due to inappropriate selection of information and programme source, growers who are knowing about these schemes like Apple advance scheme are not frequently participating in these schemes due to rigid procedure of these schemes.

Table V

| SCHEMES              | DISTRIBUTION |       |            |      | EXTENT OF PARTICIPATION |      |          |      |        |       |       |       | Total Freq. |
|----------------------|--------------|-------|------------|------|-------------------------|------|----------|------|--------|-------|-------|-------|-------------|
|                      | Freq.        | %age  | Frequently |      | Oftenly                 |      | Normally |      | Rarely |       | Never |       |             |
|                      |              |       | Freq.      | %age | Freq.                   | %age | Freq.    | %age | Freq.  | %age  | Freq. | %age  |             |
| AGMARKNET            | 8            | 5.33  | 2          | 1.3  | 1                       | 0.6  | 3        | 2    | 2      | 1.3   | 142   | 94.66 | 150         |
| NAFEED               | 12           | 8.00  | 5          | 3.33 | 0                       | 0    | 4        | 2.6  | 3      | 2     | 138   | 92    | 150         |
| APPLE ADVANCE SCHEME | 43           | 28.66 | 13         | 8.66 | 2                       | 1.3  | 11       | 7.33 | 17     | 11.33 | 107   | 71.33 | 150         |
| JKHPMC               | 38           | 25.33 | 8          | 5.33 | 11                      | 7.33 | 9        | 6    | 10     | 6.66  | 112   | 74.66 | 150         |
| MIS                  | 12           | 8.02  | 5          | 3.33 | 2                       | 1.3  | 3        | 2    | 2      | 1.3   | 138   | 92    | 150         |
| NONE                 | 37           | 24.66 |            |      |                         |      |          |      |        |       |       |       |             |

### SUGGESTIONS

Based on the findings the following recommendations are made:

- The information producers should identify proper mechanisms of disseminating information among rural farmers. Situation remaining unabated, the traditional and interpersonal means are more useful in the rural settings. This requires an active link between producers and the sources that relay information to the rural farmers.
- There is a need to first encourage and establish context and location specific agricultural programs aired through television and radio stations. This should be followed by encouraging and supporting local radio and television stations as well as local publications that are context-

specific.

- Government and development partners need to encompass in their programmes an aspect of information dissemination targeting the local community in which programs are implemented.
- The dynamic nature of the information needs of the farmers calls for a continuous process of identifying them. It is thus recommended that further research has to look across agro-ecological zones taking into account the level of development of each locality.
- There is need to brand Kashmiri apple in such a manner that the originality of fruit is traced from Kashmir region. This will help to get better returns and will also avoid the Kashmiri name being misused by the any other state for selling their produce.
- The state government should revive the fruit growers Cooperative marketing societies and activate the Horticulture department as well as JKHPMC in order to provide better marketing facilities and also to eliminate the role of middle man.
- Local mandies need to be established at tehsil level in order to make the direct sale by apple growers with minimum expenditure.
- The market infrastructure in terms of cold storage should be created in the state, in order to avoid the market risk and also to strike a balance between demand and supply.
- Since the market rate of apple fluctuates, there should be a minimum price fixed (Per K.G or per box) by the government so that growers will at least be sure of the minimum returns as is done in other states.
- Since this Sector is one of the major foreign exchange earners of the state it should be given status of an industry so that special attention can be diverted to it. Provisions should be made for more exports. The apple in the regions should be uplifted on the lines of SEZS.
- The procedure of financing should be made easy and convenient for the farmers in order to make it Popular among the apple growers.
- There is need for the provision of crop insurance in

the case of natural calamities like droughts, hail storm or other natured disasters.

## CONCLUSION

The research shows apple growers have strong incentive to apple sale information, investigating price and demand changes by using all the available information sources. However, low availability of market information and high cost on analysis and recognition of getting signals cause such problems, including convergence of information sources, limitation in the local market, and low reliability of information. Growers & policy makers should concentrate on the sources of channel information as it is highlighted that selected channel by accessibility and brokers' effect is less profitable. Growers are selecting these channels by identifying friends and relatives as a source of channel selection which can be used as a source of information distribution. The analysis reveals that farmers understand marketing as an important factor, but they primarily see it only as a means to sell their product and reap their revenues, and do not understand the principles behind how to successfully market their products so as to maximize their revenues.

## References

- Agarwal P.k. (2002), Agriculture Marketing Civil lines" New Delhi. 3,5
- Ahmad. N. (2008), "Problems and prospects of temperate fruits and nut production scenario in India vis-à-vis international scenario "central institute of temperate Horticulture Srinagar"
- and Agriculture Organization of the United Nations (FAO), Rome, available at: <ftp://ftp.fao.org/docrep/fao/012/x8826e/x8826e00.pdf>
- Annual report of agriculture Production department Government of Jammu and Kashmir, (2005).
- Annual Report of Agriculture Production Department, Government of Jammu and Kashmir (2008).
- Babu, S.C., Glendenning, C.J., Asenso-Okyere, K. and Govindarajan, S.K. (2011), Farmers' Information needs and Search Behaviors: Case Study in Tamil Nadu, India, Report for International Food Policy Research Institute, Washington, DC.
- Deepa.D, (2008), Indian product, "Brief India fresh fruit sector", Holy Higgins US Embassy
- Economic Survey 2009-10, "Directorate of Economics and Statistics Jammu and Kashmir."
- Lwoga, E.T., Stilwell, C. and Ngulube, P. (2011), "Access

and use of agricultural information and knowledge in Tanzania”, *Library Review*, 60(5), 383-395.

Masoodi M.A, 2003, “Agriculture in Jammu and Kashmir a perspective” Mohisarw book series Srinagar p.195.

Masoodi M.A. (2003), Agriculture in Jammu and Kashmir a perspective, Mohisarw book series Srinagar

Mittal.S, 2007 “Can Horticulture be a success story for India” (ICRIER) Working Paper no. 197 p. 8 p.195

satish.Y (et.al) 2006 “Prospects for India's Emerging Apple Market, USDA 2006 p.8.

Satish.Y. (2006), Prospects for India's Emerging Apple Market, USDA, p.8

Shaheen F.A and Gupta S.P, 2002 “Economics of apple marketing in Kashmir province, *Agriculture Marketing Journal*, 4(4), 4-5.

Shapoo, J. A., and Banerjee, B. N., (2003). Economics of Apple Trade in Anantnag district of Jammu and Kashmir, *Agricultural Marketing*, 16, 2.

Shepherd, A.W. (2011), Extension Guide: Understanding and Using Market Information, Food

Srijit Mishra, (2009), Poverty and Agrarian Distress in Orissa, in The Indian Economic Association, 92 nd Annual Conference, 2, 309-316.

The Apple is the Pomaceous fruit of the Apple Tree (<http://en.wikipedia.org/wiki/apple>.) 2010.

World Development Report (2008), Agriculture for Development, World Bank, Washington, DC

Srijit Mishra (2012), Hunger, Ethics and the Right to Food, *Indian Journal of Medical Ethics*, 9(1), 32-37.