

## SOCIO-ECONOMIC IMPACTS OF APPLE PRODUCTION IN SHOPIAN DISTRICT OF JAMMU AND KASHMIR

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### ABSTRACT

Apple production plays a key role in rural economy of jammu and Kashmir, and is considered one of the most important and widely grown fruit in temperate zones of the world with high economic returns, nutritive value and popularity. This fruit grows in three mountain states of north india: himachal pradesh, jammu and Kashmir and uttranchal, out of them jammu and Kashmir has the highest average area and accounts 67% of total apple production and is important for economic growth and high level of employment opportunities in the Kashmir region district shopian. After orange, grapes and banana, Apple is the fourth widely produced fruit in the world. This fruit is produced in summer and matures in autumn. This region (Kashmir) has witnessed high level diversification from food crops. India annually exports apple worth of rupees 400 million out of which 200 millions comes out from Kashmir region, and provides job opportunity to 1.2 million people directly or indirectly. The estimated Apple production and area under major horticulture crop in jammu and Kashmir state of district shopian for the year 2018-2019 is (272620 Mts) and area (21669 hectes).

**KEYWORDS:** Matures, Diversification, Opportunity, Estimated, Popularity.

### INTRODUCTION

The state of jammu and Kashmir consists of three regions namely jammu, Kashmir and ladakh. The state is blessed with diverse agro-climatic zones, The Kashmir valley receives good rainfall, and has rich soil due to this high yield of food crops are cultivated. Agriculture is considered to be the major source of income and employment for the people of the state. The state is importing about 7 lakh Mts of food grains every year. The state of jammu and Kashmir is largely an agricultural dependent economy, and nearly 80% of its population engaged in agriculture and its allied sectors. The net sown area of jammu and Kashmir is 7.316 lakh hectares. The major horticulture crops in jammu and Kashmir are; apple, pear, apricot, peach, plum, cherry, mango, guava, anola, ber etc. The most staple crops of

Jammu and Kashmir wheat and rice. In Kashmir region district Kulgam is considered as the rice bowl of Kashmir and the district Shopian is rich in cultivation of apples. This region has witnessed high level diversification from food crops. India annually exports apple worth of rupees 400 million out of which 200 million comes out from Kashmir region.

The estimated apple production and area under major horticulture crop in Jammu and Kashmir state of district Shopian for the year 2018-2019 is (272620)Mts and area (21669)hect. The production of three important food crops namely; rice, wheat and maize contributes a major portion of the food grains in the state, and accounts for 84% of the total cropped area the balance 16% is shared by other cereals and pulses. Agriculture is the mainstay of Indian economy and horticulture is the crucial component. There of apple production is the main occupation in the Kashmir valley. It constitutes 90% of total fruit crop in the valley. But due to the lack of certified and improved planting materials, low knowledge on management procedures, poor postharvest handling, lack of processing facilities, low value addition and unstructured marketing channels were reported as major constraints in the development of agriculture. The study expects agriculture to have indispensable role to play in the present circumstance of demographic dividend and portfolio diversification in our country.

PRODUCTION AND PRODUCTIVITY OF APPLE IN KASHMIR VALLEY DISTRICT-WISE YEAR 2016-2017 AND 2018-2019 IN TABLE 1 AND 2

TABLE-1

(A) Fresh Fruits	Sgr.	Gndbl	Bud.	Bla.	Bndpr	Kup.	Angt.	Kul.	Shpn.	Pul
1 Apple	17064	59768	132329	380005	64834	257072	188148	207259	237001	139288

TABLE-2

(A) Fresh Fruits	Sgr.	Gndbl	Bud.	Bla.	Bndpr	Kup.	Angt.	Kul.	Shpn.	Pul
1 Apple	19231	91955	148276	404089	60358	289215	210619	213653	272620	138467

Apple is cultivated and produced in almost all the 10 districts of Kashmir region, with Shopian, Kulgam, Baramulla, Pulwama being the highest growers respectively. The harvest continuous between August and November, with peak activity in September and Oct.

## MARKETING CHANNELS

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, sand others. There are number of Marketing channels patronized by the apple growers of which the pre dominate are as:

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) by Channel (2) (23.25%) while channel 3 & 4 account for 19.75% and 5.63% of 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 (Heavy 1952, Joson & Bresier 2001). 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. Horticulture sector is a viable option for nearly 30 lack people who are earning their income directly or indirectly through this sector<sup>10</sup>. Still there are creation problems which hinder its growth and need special attention.

## **OBJECTIVES**

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

1. Assessing the Potential of Apple production, its impact on the standard of living of the local people.
2. To examine the growth rate in area, and production of apple in Jammu and Kashmir.
3. To examine the marketing system prevailing in the apple trade and provide possible solution to the problems faced by this apple sector.

## **IMPACT OF CLIMATE ON APPLE PRODUCTION IN SHOPIAN DISTRICT, JAMMU AND KASHMIR**

Decreased productivity of apple orchards in the recent years has become a serious concern of the growers in jammu and Kashmir particularly shopian district. The apple yield has shown continuous fluctuations from last five years in the district, although the area of cultivation has steadily increased from 19770 hectares in 2008-09 to 21595 hectares in 2014-15. The factors which influence yield are climate, soil, cultivars, rootstocks, spacing and cultural management practices. Where as all these factors influencing yield are manageable, the climate factors are beyond the control. The appearance of certain diseases and pests in epidemic form has also adversely affected apple production in recent years. The outbreak of premature leaf fall and apple scab disease in the last five years remained persistent problem of the apple growers. Apple production and meteorological data during the past nine years indicates great role of abnormal climatic factors during flowering and winter chilling requirements in lowering apple production. Among all the climatic factors rainfall during flowering seems to be most crucial factor in apple crop productivity in the study area.

## **SOCIO-ECONOMIC CONDITION OF APPLE GROWERS IN SHOPIAN**

The state of Jammu and Kashmir has been ranked 1st in Primary Health, 3rd in macro economy, 4th in industrial investments and also primary education, 6th in the consumers markets in Infrastructure and 11th in agriculture. A vast natural resource base has helped the predominantly agrarian state to develop its base for cultivation of major fruits such as apples, walnut, walnut kernels, bitter apricot nuts, pears, almond, plum, cherries and saffron. 57% of India's production of apples and 97% production of walnut comes from the state. Apple cultivation is today widely recognized in the shopian region for the successful diversification

of subsistent agriculture into cash crop farming. There are niches in the entire shopian where, due to apple farming, socioeconomic conditions of marginal farmers have significantly improved during the last four decades. The future sustainability of apple farming, however, has become a matter of concern due to changing climate, shifting apple production areas, the fall in productivity due to pollination failure, emerging new pest and disease problems and the challenges of trade liberalization. Despite these accounts of changing weather patterns and difficult economic times, local farms are by no means giving up. Their flexibility in times of change and capitalization on the local market are helping to ensure their survival. Farmers have adjusted to the changing temperatures by growing apple varieties that are better in a slightly warmer climate.

### **SUGGESTION FOR REMOVAL OF BOTTLENECKS:**

For eradicating the existing ills of the marketing operations of apple, the following suggestions are recommended:

- **Enhancement of Grading and Quality Control Act:** Grading and quality control Act should be executed which should include establishment of grade specification and enforcement of grading programmes, operation of inspection systems and control laboratories. At the same time, grading should be carried out in accordance with the best mechanical devices. Types and specification of authorized packages must be set out by law to ensure safe handling and speedy recognition.
- **Economic Packing System:** An economic packing system for apple should be developed and made easily available for marginal growers of the State.
- **Establishment of Horticulture Marketing Training Institute:** A Horticulture Marketing Training Institute should be established for training and education of personnel engaged in various activities of marketing viz., packing, grading, standardization etc.
- **Improved Marketing Channel:** Efforts should be made to ignore the influence of commission and forwarding agents on apple trade and to establish such a distribution system of fruit as would ensure direct sale to the consumer. This type of marketing channel will be remunerative.
- **Cold Storage Facilities:** Cold storage should also be constructed at export marketing centres so as to ensure the grower of the State the facility of cold storage at terminal markets when they feel low returns of their produce as result of glut at export marketing centres.

- **Improvement in Transport Facility:** If the apple industry is to be properly developed from all angles, the available transport facilities of every mode have to be improved and expanded suitably.
- **Financial Facilities to the poor Growers:** All State financial agencies should provide loans to basic and poor growers on low interest against their produce. This facility will minimise the practice of supplying interest free finance to the growers commission agents and then cheating them by charging abnormally commission  
Establishment of
- **Marketing Information and news Service:** Market information centres should be established which will provide the apple growers and traders day to day knowledge and information about the happenings and trends prevailing in the various marketing centres in and outside the State. Such a facility will help the growers/traders to decide about future market strategy.
- **Educating the Growers:** Adequate arrangements should be made for imparting training and education to the growers so as to equip them to face the marketing challenges. Grower's should be trained in the art of bargaining, selling, price fixation and so on.
- **Promotion of Cooperative Marketing:** Cooperative marketing is a unique pattern of marketing where the growers sell their produce to the cooperatives organized with the help of the Government. Although, there are some cooperative societies in the State, these are totally inadequate and inefficient to meet the requirements and demand of the apple industry.
- **Marketing fellowships:** State Government should give fellowships to young growers/traders to study marketing methods and administration in the advanced institutions of learning.
- **Marketing meeting and Training:** Government may recommend personnel/growers to attend specialised horticulture meetings and training course arranged to meet the marketing needs of horticulture sector.
- **Provision of Technical Experts:** The services of horticulture marketing specialists should be offered from other parts of the country to work for some time in a particular area, to analyse problems on this subject and make recommendations to the State in the light of current conditions.

- **Advertising and Publicity:** Advertising and publicity media should be expanded within and outside the country. It is strongly suggested that there should be an international campaign launched by the various concerned State agencies by creating an agency with foreign market association and organisation. Attracting hoarding should be placed at key centres of the principal cities.
- **Research Laboratories:** Horticulture Research laboratories should be established in every Tehsil of the State so that control on pests and diseases may become possible.
- **Exhibition – cum – Demonstration centres/plots:** Classes at mass scale may be conducted by various horticulture departments and institutions in fruit growing areas, where apple growers maybe informed about the latest horticulture technology. For this purpose demonstration plots should be set up in fruit producing areas.
- **Publicity and Advertisement Campaign:** A rigorous advertisement campaign should be launched to inform growers about the proper use and relative benefits of fertilizers, so that the habit of use of fertilizers may be developed in the growers.
- **Modern Techniques of Irrigation:** To meet the present requirement of irrigation all methods of irrigation i.e., wells, ditches, storage ponds and river canals etc. should be developed and extended. Merely by extended application of one particular method of irrigation cannot meet the requirement and demands of irrigation. These are the secret proposals for the healthy operation of the marketing system and for the economic development of apple industry. Therefore, it become obligatory on the part of growers and horticulture agencies as well as on the Government to go for these suggestions to correct deficiencies in the existing marketing system/operation of the apple industry. The suggestions, if implemented properly would prove a gate way to the future prosperity of the industry.

## **GROWTH, IMPORT AND EXPORT STRENGTH OF J&K APPLE IN INDIA**

### **RESEARCH FINDINGS**

Table-1 shows the statistics regarding area, production and productivity of apples from the year 1999-2000 to the year 2016-17. In the year 1999-00, the area, production and productivity of apples in J&K was 86651 ha, 729022 M.T and 8.41 /ha respectively and In the year 2016-17 it was 127795 ha, 1311845 M.T and 10.60/ ha respectively. It can be observed that growth rate of area under apple was highest 9.18% in 2011-12 and the growth rate of production was highest 68.03% in 2105-16. Area under apple turned negative -1.02%



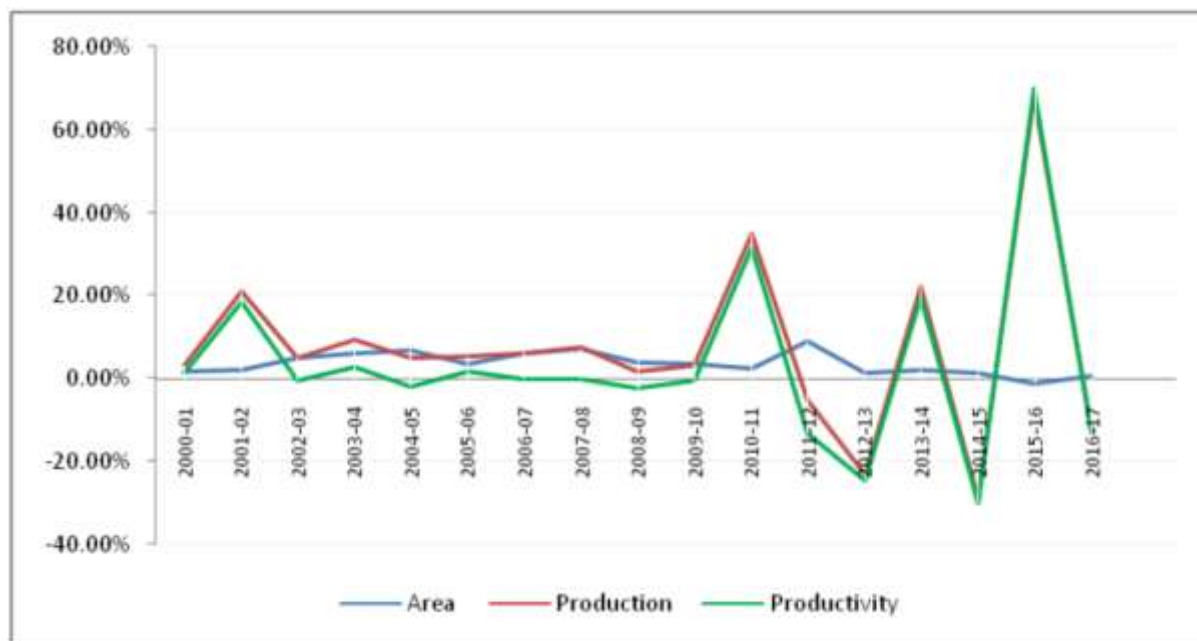
in 2015-16 whereas production turned negative three times in 2011-12, 2012-13 and in 2014-15. From table-1, it can be observed that productivity of apple was highest as 13.07 per hectare in 2010-11. The growth rate of area under apple from 1999-00 to 2016-17 has increased up to 88.07%, production 136.87% and the productivity is 26.04%.

Table: 1 Area and production of apple from 1999-2000 to 2016-2017 in j&k

Year	Area (in Ha)	Change in Area	Growth %	Production	Change in Production	Growth %	Productivity	Growth %
1999-00	86651	---	---	729022	---	---	8.41	---
2000-01	88149	1498	1.73%	751310	22288	3.06%	8.52	1.31%
2001-02	90080	1931	2.19%	909583	158273	21.07%	10.10	18.54%
2002-03	94874	4794	5.32%	953946	44363	4.88%	10.05	-0.50%
2003-04	100702	5828	6.14%	1041538	87592	9.18%	10.34	2.89%
2004-05	107925	7223	7.17%	1093275	51737	4.97%	10.13	-2.03%
2005-06	111881	3956	3.67%	1151712	58437	5.35%	10.29	1.58%
2006-07	119041	7160	6.40%	1222176	70464	6.12%	10.27	-0.19%
2007-08	127795	8754	7.35%	1311845	89669	7.34%	10.27	0.00%
2008-09	133102	5307	4.15%	1332812	20967	1.60%	10.01	-2.53%
2009-10	138191	5089	3.82%	1372973	40161	3.01%	9.94	-0.70%
2010-11	141717	3526	2.55%	1852412	479439	34.92%	13.07	31.49%
2011-12	154720	13003	9.18%	1756192	-96220	-5.19%	11.35	-13.16%
2012-13	157280	2560	1.65%	1348149	-408043	-23.23%	8.57	-24.49%
2013-14	160865	3585	2.28%	1647687	299538	22.22%	10.24	19.49%
2014-15	163432	2567	1.60%	1170306	-477381	-28.97%	7.16	-30.08%
2015-16	161773	-1659	-1.02%	1966417	796111	68.03%	12.16	69.83%

Source: Directorate of horticulture Kashmir

Graph-1 Trends in the growth rate of area, production and productivity of apple

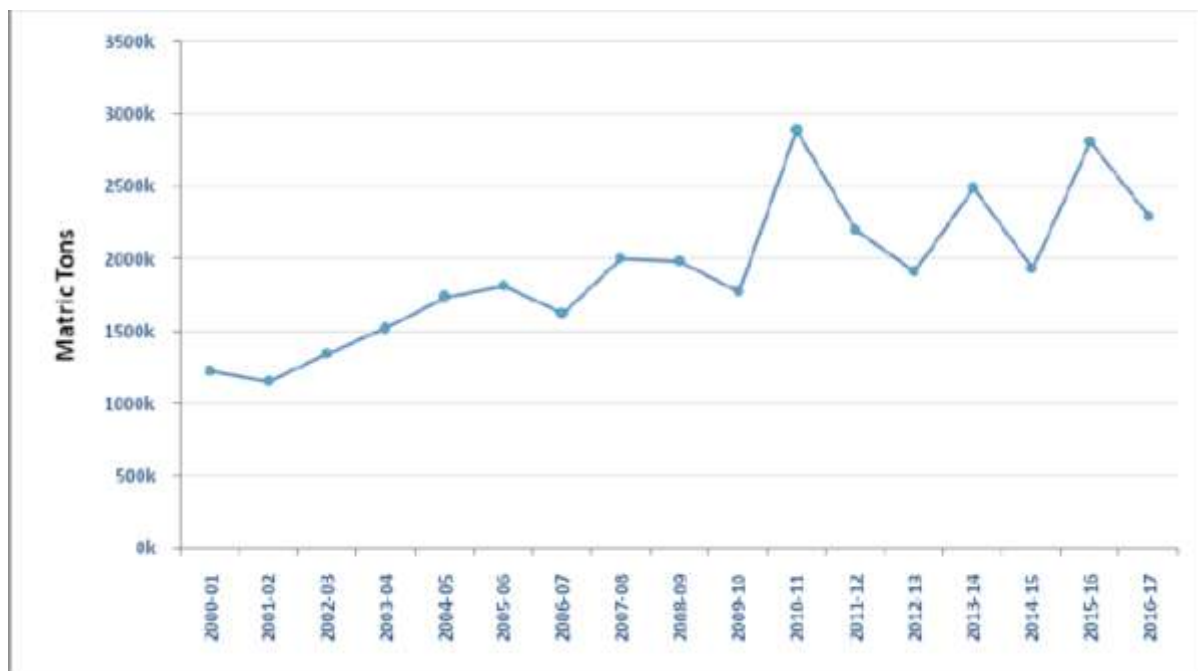


It can be seen that production was at peak during 2010-11 but after that it has declined



very fast however, it has increased during 2013-14 and 2015-16 but has again declined during 2017-16. The growth rate of apple production is not stable due to the climatic changes and the damage of fruit caused by diseases like scab, mite, etc. Therefore reduction of apple production is one of the reasons for excess import and lesser export of Apples.

Graph-5 Trend in the production of apple in india



Source: Department of agriculture cooperation and farmers welfare indian horticulture database

District-wise/kind-wise estimated production under major horticulture crops in j&k state for the year 2018-2019



facilities in the state or establishing local mandies and cooperative societies, so that exploitation by middle man can be controlled. In nutshell government has to come forward and take immediate action against exploitation by middlemen, commission agents and supply of spurious pesticides and fertilizer, if they controlled, apple fruit will survive in district Shopian.

## REFERENCES

- Kothari C. R., (2008): “Research Methodology: Methods and techniques” 2nd revised Ed. New Age International Pvt. Limited New Delhi.
- Kumar T.Pradeep, Jyothibhabkar B. and Suma, Satheena K.N., (2008): “Management of Horticultural Crops, Vol.II, Horticultural Science Series”, New India Publishing Agency New Delhi.
- Naqvi S. A. M.H., (2005): “Diseases of Fruits and Vegetables: Diagnosis and Management” Vol.1, Kluwa Academic Publisher, Netherlands.
- Prasad Arbind and Prasad Jagdish, (1995): “Indian Agricultural Marketing; Emerging Trends and Perspectives”, Mital Publications New Delhi.
- Sharma Pradeep, (2005): “Human Geography (the Economy)” Discovering Publishing House.
- Sing V.B, Sima Akali K. and Alila Pauline, (2006): “Horticulture for Sustainable Income and Employment Potential Vol. 1st, Concept Publishing Company.
  - Satish Y. Deodhar, at all, “Prospects for India’s Emerging Apple Market/FTS-319-01, Economic Research Service/USDA”
  - Zulfiqar Murtaza (2015), “Horticulture and Its Role in the Economic development (An Empirical Study of Kashmir Valley)” International Journal in Management and Social Science Vol-03 Issue-01, pp- 162-172
  - [www.hortikashmir.gov.in](http://www.hortikashmir.gov.in)
  - [www.nhb.gov.in](http://www.nhb.gov.in)
  - [www.tradingeconomics.com](http://www.tradingeconomics.com)
  - Sikra BK and Swarup R (1987). Production and Marketing of Apples. Mittal Publications

- Wani, M. H.; Mattoo, M. S. and Sofi, A. A. (1995); Resource use and economic efficiency of various marketing costcomponents in apple; Agricultural Marketing; 37(4) :PP 38-40.s
- Wani, M.H., Bhat, A.R. and Wani, S.A. (1998) Fertilizer use efficiency and concentration of net returns of appleorchards in Kashmir. Annals of Agricultural Research 19 (2) 144-148.