

# Understanding and Boosting Horticulture Industry: An Evaluative Study of Horticulture Sector of District Kupwara in J&K



**Farzana Gulzar**  
Sr. Assistant Professor,  
The Business School,  
University of Kashmir,  
Srinagar



**Nusrat Rashid**  
Research Scholar,  
The Business School,  
University of Kashmir,  
Srinagar

## Abstract

Horticulture is considered as an important and emerging growth sector of agriculture and plays an important role in GDP of the country. It offers a wide range of choices to the farmers, cultivators, growers, labourers of crop diversification and provides employment opportunities to horticulture specialists, and involves more and more people in the industry in one way or the other. In case of Jammu and Kashmir horticulture is considered as a backbone of economy but is being mismanaged and various policies are poorly implemented due to which people don't get what they expect, the people who depend on horticulture get cheated by improper implementation of horticultural technologies and policies. since each district of Jammu and Kashmir has a comparative advantage of some specific fruit which is the result of topography, soil type, environment and geographical conditions. Most of the horticulture land is in districts like Baramulla, Anantnag, Budgam, Pulwama, Kulgam and Kupwara. In District Kupwara almost half of the population is involved in agriculture, Main Crops in the district are Rice, Maize, Pulses, Fruits, and Vegetables, and major horticulture produces are walnuts and Apple. The aim of this paper is to analyze the peoples view towards use of various technologies and proper implementations of policies for the development of horticulture produces in District Kupwara.

**Keywords:** Horticulture, GDP, Labourer, Jammu and Kashmir, District Kupwara, Development

## Introduction

The word horticulture comes from two Latin words which mean "garden" and "culture". Horticulture is the art and science of growing and handling fruits, nuts, vegetables, herbs, flowers, foliage plants, woody ornamentals and turf. Horticulture connotes different meaning to different people it is science on the cutting edge of biotechnology, an art, profession, business, industry, hobby, way of life, and therapy for millions of people. Every one of us comes in contact with horticultural products and professions by some way or the other. Horticulture feeds us, improves our environment, and through science, is helping and finds answers to tomorrow's problems. Presently our country is next to China in area and production of fruits and vegetable crops and has been contributing 10% of fruits and 14% of vegetables towards the total world production. India leads the world in production of mango, banana, sapota, acid lime and cauliflower while the highest productivity of grape is also recorded here. India occupies second position in production of onion and third in cabbage production globally. Fruits such as mango, citrus, guava and apple account for 75% of the total fruit production in the country. India produces about 70 different varieties of vegetables (Horticulture statistics, 2013). The horticulture sector constitutes nearly 20% of agricultural GDP and contributes 4% in the national economy. Despite having all the favourable factors, the desired level of development in horticulture has not been achieved because of a number of constraints like low productivity of many fruits and vegetables than international averages, non availability of good planting material, lack of post harvest management and less value addition etc. As of today horticulture is considered as one of the fastest growing sectors in agriculture and is the thrust area to stimulate agricultural growth, spurred by the changing domestic food habits towards more nutritious food and increasing overseas demand. In order to boost

horticulture industry, the government of India promoted a horticulture scheme which was called as National Horticulture Mission (NHM). It was launched under 10th five year plan in 2005-2006 with the aim to develop horticulture to the maximum potential available in the state and go for augmented production of all horticultural products, to provide holistic growth of the horticulture sector through an area based regionally differentiated strategies and to create opportunities for employment generation for skilled and unskilled persons, especially unemployed youth. Despite various horticulture schemes, The Government of India also promoted a horticulture board named as National Horticulture Board, was setup in 1984 as an autonomous society under the societies Registration Act 1860 with a mandate to promote integrated development in horticulture, to help in coordinating, stimulating and sustaining the production and processing of fruits and vegetables and to establish a sound infrastructure in the field of production, processing and marketing with a focus on post harvest management to reduce losses. India has lot of Employment potential in Horticulture as it is an extremely diversified field with nearly unlimited career opportunities in a variety of job settings. A large number of jobs require knowledge and training in horticulture. The level of training could be vocational or at the school/ college level. Generally a good job in horticulture requires a degree in this discipline. College level education provides more in-depth knowledge of the field and provides job opportunities at supervisory or at managerial levels while post graduate or doctorate level degree offers very good jobs in the area of horticulture to conduct research or imparting teaching. Horticulture is a vast subject in the field of agriculture and is divided into three branches: Floriculturists: Floriculture is a branch of horticulture which deals with study of growing and marketing of flowers and foliage plants. It includes cultivation of flowering and ornamental plants for sale or for use as raw material in cosmetic and perfume industry or in the pharmaceutical sector. The persons associated with this field are called floriculturists. These are specialised in planning and designing of exterior/interior landscape of parks, recreational areas, campuses, industrial sites, institutional grounds, shopping malls and other large projects. Olericulturists: The study of vegetable culture is called olericulture and those associated with this are called

olericulturists. Vegetable growing is an important part of horticulture. It has an immense scope in a vast country like India. Olericulturists can start their career in industry, research institutes, universities and other organisations at different levels. These personnel are more required in private sector as the vegetable growers have good future especially in seed industry. Pomologist: Pomology deals with the cultivation, production, post harvest storage, processing and value addition of fruit plants known as major source of carbohydrates, proteins, vitamins and antioxidants. It is well known fact that fruit industry plays a significant role in many countries economy, making pomology especially vital. One of the most crucial aspects of pomology is the development of new hybrid fruit cultivators. One of the important associations in order to boost career in horticulture industry and to develop skills of youth was established in 1934 which has been named as The National Junior Horticultural association (NJHA) and was the first organisation in the world dedicated solely to youth and horticulture. NJHA programs are designed to help young people to obtain a basic understanding and develop skills in the ever expanding art and science of horticulture. These programs help the horticulture industry by training and recruiting youth in many specialised fields of horticulture. NJHA also develops citizen appreciation for the understanding of the industry by placing emphasis on positive programs for building producer-consumer understanding.

**Jammu and Kashmir Economy**

Jammu & Kashmir state with its varied and diversified geographic, agro-climate and topographic features poses peculiar and unique problems of development. Gross State Domestic Product (GSDP) of J&K state during 2012-13 (at current prices) has increased to Rs. 75574.31 crores (quick estimates) from Rs. 65758.52 crores (quick estimates) of 2011-12 registering a growth of 14.93% during 2012-13. The growth as per advance estimates for the state during 2013-14 at current prices is projected at 15.54%. Similarly the State economy is expected to grow at 5.88% (advanced estimates at constant 2004-05 prices) during 2013-14 as compared to achievement of 5.51% in 2012-13 (quick estimates). The tables given below show the growth of the economy of J&K State viz-a-viz National level at current and constant (2004-05) prices: -

Gross Domestic Product of J&K and India at current prices						
Year	2004-05	2009-10	2010-11	2011-2012	2012-13	2013-14
GSDP of J&k (Rs.in Lakhs)	2730462	4838451	5807257	6575852 (QE)	7557431 (QE)	8731872(AE)
GDP of India (Rs in Lakhs)	297146400	610890300	724886000^	839169100	938887600*	---
% Contribution of j&k to India	0.92	0.79	0.80	0.78	0.80	---
Per capita GSDP of J&K	25478	42052	49809	55699	63232	72188
Per capita income of India	27286	52213	61120	69814	77148	---
Growth rate J&K (%age)	---	14.34	20.02	13.24	14.93	15.54
Growth rate India (%age)	---	15.2	18.07	18.8	11.9	---

**Table I:Economic Growth**

The state Government on its part has not only implemented the national strategies but has launched various state specific strategies to achieve the goal of "Faster, More Inclusive and Sustainable Growth". In addition to national initiatives like

universalization of elementary education, health facilities for all, providing drinking water supply, MGNREGA, food security act, State initiatives like Sher-i- Kashmir Employment Welfare Programme, Seed Capital Programme, Youth Start-up loan,

Women Entrepreneurship Programmes, creation of new administrative units, exploration of new tourist areas, crop diversification and food processing etc, are some of these. The 12th Five Year Plan for the State has been proposed at Rs. 44000 crore. The Annual Plan ceiling for 2014-15 is proposed at Rs. 11300 crore which includes Rs. 7300 crore of State Plan and Rs. 4000 crore under Centrally Sponsored Schemes. Slight increase was witnessed, during the year 2012-13, in the net area irrigated, as it increased from 319.26 thousand hectares in 2011-12 to 325.08 thousand hectares in the state. Around 90% of the area irrigated was under rice in 2012-13, 28% area under wheat and 9.37% under maize was also irrigated during the same year. Area under Fruits in J&K State has increased from 3.25 lakh hectares in 2010-11 To 3.55 lakh hectares in 2013-14. The production has increased from 17.13 lakh MTs in 2009-10 to 21.17 lakh MTs in 2013-14, recording an increase of 23.58%. The tourism tag has placed always the State of J&K in the limelight at the National as well as international levels. Our tourism products are well known. Infrastructure development serves as an engine for industrial development and calls for continuous attention of the Government. The State has 53 existing industrial estates spread over an area of 35,102 Kanals of land as per position ending November, 2013. Handicraft activities occupy an important position in the economic structure of J&K State. Being environment friendly, these activities are best suited to the state as they are more labour intensive and less capital intensive in nature, therefore having scope for employment generation at a large scale. The Kashmir handicraft products have earned worldwide fame for their attractive designs, functional utility and high quality craftsmanship. The handicraft sector of the state has great contribution towards foreign exchange earnings to the state and country in particular. Human resource development through education and health and social welfare is not only a pre-requisite for better human living but is also critical in determining the pace of economic development of a society. As per census 2011, the Life Expectancy of males and females at national level stands at 63.95 & 67.08 years, respectively. As far as, the J&K State is concerned, the life expectancy of males & females stands at 66.5 and 69.3 years, respectively; which is more than the national average.

#### **Jammu and Kashmir Horticulture**

Jammu and Kashmir is the northern most state of India with an area of 2, 22,236 sq.km. in terms of area. It is one of the largest states of India. It consists of three divisions, Jammu, Kashmir and Ladakh. Jammu and Kashmir comprises of 22 districts, 10 each of Jammu and Kashmir division and 2 in Ladakh sector.. The state has two capitals, Jammu, the winter capital and Srinagar the summer capital. Agriculture is the mainstay of the people of Jammu and Kashmir. About 70% Of populations Depends on the agriculture for their raw livelihood. Those who work in other industries also depends on agriculture for the requirement of raw materials for their production. The total percentage contribution of agriculture and allied sectors on state gross domestic product is only 19.96 percent (As per advance

estimates for 2013-14). Horticulture in the recent years has emerged as one of the important sector and growing sub sector of the Jammu and Kashmir. The state is famous for its horticultural produces both in India and abroad. The state offers a wide range of choices to the farmers for the cultivation of horticultural crops like apple, pear, peach, almond, walnut, apricot, cherry, mango, guava etc. Jammu and Kashmir is home to growing all varieties of fresh and dry fruits. During past few years, demand for high value and low volume of horticultural crops is showing much faster growth than demand of food grains (Rather.et.all 2013). Horticulture is the backbone of the state's economy with a yearly turnover of Rs.500crores. Presently it provides direct and indirect employment to about 23.00 lakh people and most of them earn their livelihood from this sector. Horticulture has been declared as a thrust area by the state Government and various developmental schemes have been taken by the department under state sector and central sector for the promotion of this sector and give further boost to it. Horticulture is dominant and major sector in the state as well as Kashmir and is considered the backbone of the state economy. With an annual turnover from fruits and dry fruits of the order of Rs. 3500 crores, this sector plays a significant role in the economy of Jammu & Kashmir state. An estimated 25 Lakh people are connected directly and indirectly with the horticulture sector. (Mushtaq Ahmad Malik, Tapan choura). Horticulture technology mission was started by union ministry of agriculture in North Eastern states and skim, subsequently it was implemented in other Himalayan states which include, Jammu & Kashmir state, Himachal Pradesh, Uttaranchal having four missions viz., MMi, MMii, MMiii, MMiv. The mandate for MMi was given to state agriculture universities and ICAR (Indian Council for Agriculture Research) and Department of horticultures as well as the registered nursery growers in horticulture ,as some efforts are being made in the Kashmir by SKUAST (Kashmir & Jammu) and some horticulture departments and institutions for production of Nucleus planting material of Dwarfing and semi-dwarfing rootstocks and superior quality planting material but the same couldn't keep pace with the requirement of area expansion and rejuvenation programs of the department. As for as District Kupwara is concerned, the density of the population in the district is 368 persons per square km as against 124 persons in the state. Population is concentrated mainly in rural areas and only 0.99 lakh people live in urban areas. The main occupation engaging the 40.1 % of the total working force is cultivation, although the district is considered deficient in natural irrigation; about 90 per cent of the population depends in one way or other on agriculture for their livelihood. Walnuts are the major horticulture produce in the district. The reporting area of the district is 0.67 lakh Hect. Out of which net cropped area is 0.46 lakh Hect. Rest is under forests, pastures and grazing land. Main Crops in the district are Rice, Maize, Pulses, Fruits, and Vegetables. Area under Maize occupies 25,550 hect. (54%) and Paddy 15647 hect. (28%), fruit and vegetables about 3842

hects. (19%) of the total area sown (As per the censuses 2011).

#### Review of the Literature

Horticultural production has been one of the least protected sectors of agriculture in inter-national trade within the European Union (EU). As the Union has enlarged, so production regions in southern Europe have been able to compete more freely with regions in northern member states. Lower heating and labour costs, despite increased transport costs; have given a competitive edge in northern markets to some products from Spain, Portugal and southern Italy. This inter-regional competition has resulted in the horticultural industry of the EU being increasingly rationalised and concentrated since 1970. Within the Union, quite marked national and regional differences have become apparent in the area, age structure and planting densities of apple and pear orchards, and in the number of holdings with glass and the area devoted to glass on each holding. The UK's orchard and glasshouse sectors have been adversely affected by these trends and they have experienced a number of problems since the 1970s. One major problem confronting the horticultural industry in the UK has been a lack of profit and thus capital investment to upgrade the competitiveness of producers. To remedy this situation, the British government has intervened by introducing, in 1989, the Horticultural Buildings and Orchard Replanting Grant Scheme (HBORGS). The Scheme assists the injection of capital for the modernisation, but not the expansion, of glasshouses and apple and pear orchards, and thereby conforms to the overall objective of EU agricultural policy of not encouraging increases in farm production. The objective is that, after five years of assistance, the industry will be capable of self-sustaining development without further government intervention. This paper is concerned with the uptake of the HBORGS between 1989 and 1992 in England. (Brian Ilbery and Ian Bowler Vol. 79, No. 4 (1994), pp. 361-366). Happily, there is already a good start toward "horticultural engineering." The creation of improved varieties of horticultural plants by scientific breeding methods is an example. In the past left largely to chance, new varieties are now made to order for particular needs. (H.B Tukey Vol. 44, No. 3 (1957), pp. 279-289). According to the conclusions and policy implications of K.V Subrahmanyam: 1) Horticultural crops are very labour intensive, (ii) the horticultural industry has a great potential for generating additional employment and thus will help to solve the problem of unemployment and underemployment, and (iii) the inclusion of horticultural crops in crop rotations will not only give additional employment but also help to realize higher net returns and thus help the farmers in uplifting their economic position. In view of these advantages, the government should make all efforts to increase the area under fruit and vegetables by bringing culturable waste land under these crops and providing the necessary support like special loans for horticultural crops, exempting fruit orchards from land ceilings, etc. Besides, the government should organize efficient marketing of these crops because of their special nature like quick perishability, and encourage the establishment of small scale fruit and

vegetable processing industries in rural sector by reducing duties and taxes etc (K. V. Subrahmanyam Vol. 16, No. 4 (1981), pp. 605-613). There is no doubt that there has been acceleration in rural non-agricultural employment in India in the recent past and the process seems to be ongoing. This is supported by the Census 1981 and the recent rounds of the NSS. It is estimated that the share of non-agricultural workers in the rural workforce rose from 14.3 per cent in 1961 to 18.6 per cent in 1983. The rise in the share of male non-agricultural workers was steeper (16.3 per cent to 22.4 per cent, Jeemol Unni, 1990). It is understandable that in the wake of rapid population growth and severe shortages of food grains, the economists should be preoccupied with issues like technological change in food grains production, marketed surpluses of food grains and price, etc. Yet, crop production, livestock economy, rural poverty and environment are highly inter-related and no single sector can be studied satisfactorily independent of the other three sectors. There are clear indications that the observed pattern of growth in the crop sector has had certain adverse consequences for rural ecology directly as well as indirectly through its impact on livestock development and poverty situation. (C.H Hanumantha Rao Vol. 23, No. 52/53 (1988), pp. A142-A146). Agriculture being a seasonal activity requires more labour in the busy season than it does in the slack period. Since surplus labour is defined as that which can be siphoned off the agricultural sector without adversely affecting its output, those workers who are only seasonally required are not surplus. The number of required workers is, therefore, defined as that which is required at the peak time of agricultural operations. (Shakuntla Mehra Vol. 1, No. 1 (1966), pp. 111-129). To develop the Apple industry in Kashmir valley according to the cultivators' point of view, argumentation of production of apple crop by adopting appropriate technologies should be earned as the first step, Research extension, and also like in other states/UT, s APMC-Act reforms should be involved for horticulture development as given in exhibit -2 and the government support for introductions of Adani Agrifresh like private agencies in Jammu and Kashmir for development of apple industry which was introduced in Himachal Pradesh and in this channel cultivator receive 85% of price on his produce. Whatever have been circumstances, this sector has proved to be an important economic sector and a big chunk of the population thrives on it. There economic standard gets effected directly by any changes in the corresponding sector. Hence of attention is given upon the national horticulture mission, reforms under 12th five year plan and the suggestions provided in the study according to the cultivators point of view, there will definitely be a positive change in the situation which will increase the profitability of the apple cultivation in the state as whole, and will prove, How to produce more or less. (Zahoor Ahmad Malik, Tapan Choure Volume 3, No.5, (2014). The single term "horticulture" therefore covers a broad range of systems varying widely in terms of such important related dimensions as population density, land requirements, and relative length of fallow periods, if any. At the lower end of the population density scale,

simple horticulture overlaps with hunting-gathering in favourable environments his low end of the continuum is sometimes referred to as "extensive cultivation" in view of the long fallow periods required and the extensive use of land relative to small capital and labour inputs. At the other end of the scale, supported perhaps by more favourable soil and rainfall patterns and probably spurred by population pressure, we have what might be called intensive horticulture because it generally requires much more labour per unit of output and frequently requires more capital in the form of raised fields, terracing, and irrigation. Because in simple horticulture women are already more fully employed in working the land than are men, especially when child care, gathering, and other domestic preoccupations are considered, much of the incremental labour required in more intensive forms of horticulture usually must come from the men. Where men do most of the work in intensive horticulture, Baumann uses the term "higher hoe culture," and he notes that cultivation is then held in higher esteem, presumably by the male leaders of the political economy (Baumann 1928:291, 295). Under intensive horticulture, population densities in the magnitudes cited above overlap with those found under true agriculture with the plow. But while Neolithic horticulturalists on small plots of irrigated alluvium, for example, can sometimes derive higher yields per acre and maintain denser populations than could simple plow agriculturalists, simple Iron Age plow agriculture apparently had its revolutionary advantage in terms of its ability to regularly maintain soil productivity over wide areas in the face of population growth, land shortage, and a need for more continuous cropping. That superiority, derived from the iron-bladed, ox-drawn plow for primary tillage in preparing seed beds, was the ultimate basis of Greek and Roman civilization (Allan 1965, 1972; Boserup 1965; Conklin 1961; Harris 1972; Miracle 1973). C. hhanumantha Rao and Ashok Gulati ('Indian Agriculture: Emerging Perspectives and Policy Issues', EPW, December 31, 1994) have strongly advocated integration of Indian agriculture with the world market, on the plea that such a process would improve terms of trade of agriculture, the benefits of which would also percolate to the poor. Towards that end in view the authors, have suggested a strategy for agricultural development including broad policy changes in supply side factors and a shift from food grain production to new activities with favourable domestic export demand, such as dairying and other animal products, horticulture and floriculture in order to boost agro-processing. Their view is based on the premise that growth rate in domestic demand for food grains has been declining and may not exceed the long-term food grain output growth rate of 2.6 per cent per annum due basically to the availability of a wide range of non-food grains and urban consumption goods in rural areas and, therefore, agricultural growth need not any longer be limited by the goal of self-sufficiency but may benefit from trades o as to raise the overall rate of growth. This view may be questioned on the ground that the consumption basket of the minority of population might have undergone a change in favour of non-food grains and urban consumption goods but

certainly not the consumption basket of the vast majority of rural population which contains mainly cereals and the contents of which are shrinking due to rapid erosion of purchasing power, consequent upon rise in the prices of basic consumption goods. The declining demand for food grains may be partly due to lack of purchasing power in the hands of majority of population. Nearly two-thirds of rural population consist of small and marginal farmers and landless labourers. Their demand for food is not fully met and they are net purchasers in the market this vast segment of rural population cannot participate in the process of globalisation of agriculture. Since 'surplus' of food grains may not be real, food self-sufficiency will continue to remain one of the goals of agricultural policy in the face of rising population and increasing demand of the poor( A.C Minocha. vol 30, No.15 (1995). Strong links between industry and agriculture, resulting in: an increasing cultivation of processing varieties of fruit and vegetables; the flow of technical advice and inputs from industry to agriculture to enable an improvement in yields and - product qualities; an assured market for farmers at prices within a previously agreed range, and the reduction of post-harvest losses as well as transport costs through intermediate processing at centres within clusters of intensive horticultural production. Recognition by the government of the potential of the industry as a means of: -stimulating farm sector employment and incomes by facilitating partial cash crop-ping, and - generating substantial export earnings by adding value to farm sector surpluses and converting them into relatively high value tradable goods, -resulting in a drastically altered fiscal policy regime which reduces taxes on both pro-ducts and packing materials. A convergence between the felt needs of consumers (and the consumer's palate) and the product mix of the industry-particularly in niche products such as ready-to-serve and snack foods. (Sanjay Sinha and Saurabh Sinha Source: Economic and Political Weekly, Vol. 27, No. 26 (1992), pp. A93-A99). Indian agriculture has undergone a technological change at different rates in different regions and among different crops which has resulted in substantial increases in marketable surplus of wheat and rice and contributed to achieving food security mainly by inducing a decline in real prices of rice (2.2 per cent) and wheat (3.3 per cent). The new technologies increased the dependence of farmer on modern inputs and substantially increased the cost of production per unit of land at constant prices. But the increase in yield has been much higher than the increase in real cost of production and hence the cost per unit of output has declined for rice (at the rate of 11.1 per cent in eastern region, 2.14 per cent in northern region and 3.9 per cent in the southern states) and wheat (ranging from 2.0 per cent to 2.8 per cent in different wheat growing states) (Kumar and Mruthyunjaya 1992; Kumar and Rosegrant 1994). Agricultural diversification through horticultural crops offers vast potential to ameliorate socio-economic conditions of the people of Himalayan region which would result in favourable impact on ecology because, in our opinion, low income and poverty are the major cause of natural resources and ecological degradation.

(Ramesh Chand, vol 31, no 26 (1996, pp93-99). There are several reasons why increase in agriculture production is important. First, increase in agriculture production leads to an increase in availability of agricultural products for both rural and urban areas. Increase in marketable surplus of food grains is likely to increase the availability of food grains under the public distribution system and in the open market. Thus, it will indirectly help in reducing the food prices and overall inflation. Second, improvements in agriculture directly improve employment of agricultural labour and incomes of farmers. It reduces underemployment in agriculture by providing more labour days to the workers. Also, agricultural development increases the demand for agricultural labour and hence raises agricultural wages. In other words, agricultural growth improves the incomes of both farmers and agricultural labourers. Third, agricultural growth improves incomes in the non-agricultural sector. The forward and backward linkage effects of agricultural growth are likely to improve the incomes of the non-agricultural classes. For example, strengthening of the input delivery system, supplies of implements and repairs, marketing and transportation, etc, all get activated and open up new employment opportunities for the non-agricultural sector. Fourth, agriculture-industry linkages are very vital for a state like Maharashtra. On the supply side, agriculture provides raw materials like cotton and sugarcane to industry. On the demand side also agriculture has an important role to play for the promotion of industry. The importance of the agricultural sector as a source of domestic demand for the products of the non-agricultural sector in general and of industry in particular arises primarily from the fact that, even today, over 65 per cent of the population is located in rural areas, with the rural population still being overwhelmingly dependent on agriculture as a means of livelihood. Under these circumstances, despite per capita income/expenditure being substantially higher in urban areas, a major portion of the aggregate domestic expenditure on industrial goods as a group is linked to the fortune of the agricultural sector. Finally, the growth of some commercial crops may lead to a significant potential for promoting exports of agricultural commodities and bring about faster development of agro-based industries (S. Mahendra Dev and B. L. Mungekar Source: Vol. 31, No. 13 (1996), pp. A38-A48. Horticulture is a green carpet that covers the earth (H. B. Tukey Vol. 44, No. 3 (1957), pp. 279-289), from the air, the earth looks green-a great green mantle stretched out protecting and warmly over the good earth. This is a proper concept, because without the chlorophyll that gives this green colour, the good earth would not be so good. There would be no life, no coal or wood or oil for fuel, no foodstuffs or fibre, and remarkably little shelter. The green mantle has that wonderful property of being able to capture the energy of the sun and tie it up in what we call the products of photosynthesis-the sugars and the starches and other organic compounds made from the carbon dioxide of the air. No, there would be no plant life and there would be no animal life. The good earth might perhaps more properly be called the green earth. This is the sort of

thing with which Horticulture deals-a great green mantle or carpet covering the earth. Originally, Horticulture meant the cultivation of a garden. Those plants which were cultivated in gardens or in more intensive types of plant growing acquired the name of "horticultural plants" in contrast to field crops. This has meant flowers, fruits, vegetables, ornamentals, and sometimes herbs and medicinal plants. It represents a certain refinement of agriculture, some of which comes with leisure and which is associated with home. On this green carpet of Horticulture are gathered all kinds and conditions of men. There are (1) those interested in the science or biological side of Horticulture-botanists, chemists, physicists, geneticists, plant breeders, soil experts, and the like; (2) those interested in the business or affairs side of Horticulture-seeds men, nurserymen, florists, fruit growers, vegetable growers, producers, merchants, canners, freezers, and the like; and (3) those interested in the home or art side of Horticulture, the amateur gardener, the housewife, and all those who enjoy plants for the satisfaction they derive from them. Apple and walnut are the major produces of Jammu and Kashmir. About 75% of Apple and 90% of Walnut production in India comes from Jammu and Kashmir. Most of the land under horticulture crops is in Kupwara, Baramulla, Budgam, Anantnag, Shopian, Pulwama and Kulgam. In the state of Jammu and Kashmir, Different regions and areas have a dominance over some specific horticulture fruits because of the comparative advantages of different districts in specific fruit which is the result of varying topography, soil fertility, soil matter and different environmental and geographical conditions which results in diversification of different horticulture fruits among different regions and areas, (Lone and Sen., 2014). The area under major Horticultural crops has been expanding but the area under orchards is far less as compared to area under agriculture. According to the Horticulture Department, the area under horticulture crops was 2.83 lakh hectares in 2006-07 which has increased up to 3.23 lakh hectares in 2010-2011 (Directorate of Horticulture. Jammu and Kashmir).

#### **Difference between Past and Present**

In past various researches have been done on Horticulture as per its scientific perspective and management side of it was rarely been studied. The impact of technology on its workforce is being ignored. Most of the State wise researches in horticulture have been done by many authors but researches in district wise is mostly lacking. In present, Horticulture needs costly inputs including higher technology and efficient management and use of workforce. Increasing demand for accurate, reliable and timely horticulture database in view of globalization and integration of market. The research study will focus on Horticulture as an Industry in District Kupwara and impact of horticulture technology on workforce. It will try to understand the role of people in boosting horticulture industry; Technology used in Horticulture Industry in a particular District and will cover the progress of people due to proper use of horticulture policies and technologies for the development of horticulture produces.

### Rationale of the Study

It is obvious that the economy of the Jammu and Kashmir mainly depends on primary sector and horticulture is one of the largest contributors. It is considered as backbone of the state's economy but is mismanaged by the planners and the administrators as they don't give proper attention towards the result of our productivity of horticultural produces as compared to the other states or Districts. When we see at a District level, the district horticultural planners and administrators do not pay any attention towards its producers and ignore cultivators, farmers and labourers. The people who depend on horticulture get cheated by improper implementation of horticultural technologies and policies. Although the new technology and schemes are not contributing much towards horticulture but it still continues to contribute to the state economy and if the attention is paid properly to its new missions, schemes and technology from the peoples point of view (cultivators, farmers, labourers, growers etc), the horticulture industry will boost both at the state level as well as district level. Thus, the main purpose of the research is to analyse the functioning of horticulture sector and implementation of various schemes, policies and technologies for the development of horticulture produces in District Kupwara and boost horticulture industry.

### Objectives

1. To analyse the functioning of Horticulture and implementation of various policies for the development of Horticultural produces in District Kupwara.
2. To find out Technologies used in Horticulture and its effects on various horticulture produces.
3. To study the Employment opportunities in Horticulture sector.
4. To study perception of cultivators and labourers of, how they get benefitted from the horticulture sector and suggest different ways for improvement according to their point of view.
5. Study the linkage between horticultural producers and marketers in District Kupwara.

### Conclusion

In district Kupwara, the economic condition is changing rapidly along with the state of Jammu and Kashmir and is recovering from violence and political turmoil. It is expected that all primary sectors of economy will have better employment opportunities and improved investment climate in order to involve more and more people for their upliftment. At the same time, horticulture is the largest contributor in economy of a particular district and needs to be tapped in a significant manner by introducing new guidelines and policies. Horticultural policies and schemes being ignored at the administrative levels, still being encouraged on part of the cultivators, growers, labourers' level, It becomes important in boosting this sector to provide proper training both at administrative level as well as at lower level.

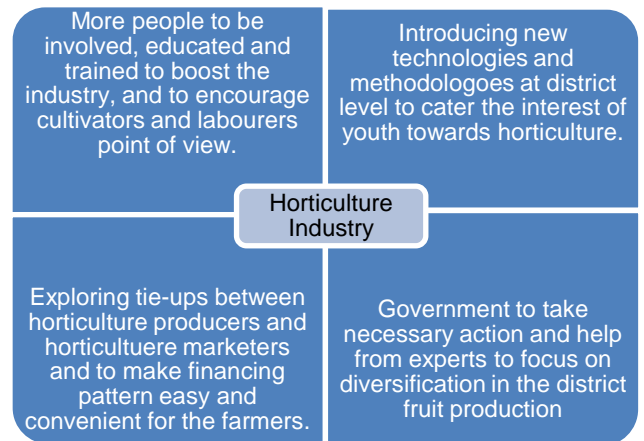


Figure I: Boosting Horticulture Industry

It is being concluded from the study that major crops in district Kupwara are Apple and walnuts which has put this sector at low equilibrium. Horticulture is concentrated on few major horticulture produces in a particular district and there are numerous inter district disparities in horticulture production. In order to boost horticulture sector, focus should be on diversification in the district. However the particular district should not follow the uniform policies due to weather conditions of the region. In this regard Government should take necessary help of horticultural experts and provide a necessary infrastructure to promote the horticulture sector. Marketing facilities should be provided to horticulture producers for the promotion of horticulture produces. Proper communication channels should be made between horticulture producers and marketers of the horticulture produces. It has also been shown from the study, most educated unemployed youth stay away from the horticulture industry as they take it as an age old profession, it is because they are not properly informed about it, its technologies, policies and schemes, employment opportunities, and impact on economy in general. Government should appoint a professional horticulture team to educate and train the youth about horticulture, introduce new policies and schemes in order to cater their interest towards horticulture, and use different technologies in this technology driven era. The study also focuses on upliftment of horticulture through cultivators, growers and labourers point of view as they are ignored at the ground level. They need to be properly educated about horticulture growth and how to get more benefit from its produces. In general it is concluded that success of horticulture industry depends on involvement of more and more people in it, proper implementation of policies, new trends and technologies should be used, and training institutes should be opened to train people both at administrative levels, middle levels and lower level. Backward and forward linkage should be strengthened. There should be a strong bond between the horticulture producers and buyers of the horticulture products. Cold storage and warehousing facilities should be encouraged in the district so that guilt in the market will be reduced and financing

pattern should be made easy and convenient for the farmers in order to make it popular among growers, cultivators of horticulture produces.

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