

PRODUCTIVITY OF HORTICULTURAL CROPS IN KASHMIR VALLEY

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Abstract:- Horticulture is one of the important sector of economy in Jammu and Kashmir where more than half of population is engaged in this sector and this sector. Kashmir valley is well known for its horticultural fruits both in India and abroad. This sector contributes about 7 to 8 per cent in state GDP. Out of total area of horticulture in state, 90% is in the Kashmir valley where favourable agro climatic condition is suitable for the growth of various kinds of temperate crops. Horticulture has emerged as an important growing sub sector of agriculture, offers wide range of choices for crop diversification. Continuous increase in production and export of horticultural crops directly influences the income, employment and living standard of the people. Horticulture also provides ample scope for sustaining large number of agro industries which generate huge employment opportunities. The productivity of horticultural produce is vital for supplementing farm income and overall employment in horticulture.

Keywords:- Horticulture, Economy, Production, Employment.

1. INTRODUCTION

Kashmir division is well known for its horticultural produce both in India and abroad. The valley offers good scope for cultivation of horticultural crops, covering a variety of temperate fruits like apple, pear, peach, plum, apricot and almond. Year after year there is significant increase in area and production under horticulture crops and the continuous increase in production and productivity can be attributed to modal factors like commitment of the farmers/ orchardists towards this sector, continuous efforts of department of horticulture and research organisation and above all the conducive agro-climatic conditions like topography, soil type, environment and geographical conditions of the division.

The horticulture sector forms the backbone of the economy of the Kashmir division. Horticulture development is one of the thrust area in agriculture and a number of programmes have been implemented in the past, resulting in the generation of higher income in the rural area, thereby improving the quality of life in villages. The horticultural products like apple, almond, cherry, pears walnut and almond are important cash fetching fruits of the valley and they not only supplement the diet of the people in the state and country, but form an important item of our export. Right from the stage of tree plantation to the point of postharvest and marketing, horticulture generates good potential of employment.

There are around 7 lakh families comprising of about 33 lakh people who are associated with horticulture directly or indirectly. The scope of horticulture is very significant in the Kashmir valley due to presence of some fruits which are having a universal coherence such as apple, walnut, almond etc. the growth of horticulture sector can be attributed to various initiatives by the GOI and state government towards market intervention viz: establishment of fruit man dies, technological support, awareness options, publicity inputs, research extension etc.

1.1 Study Area

The valley of Kashmir has unique geographical location situated between 33° 20' to 34° 54' /N latitude and 73° 55' E and 75 ° 35' E longitude. The state of J & k is a natural and inevitable destination. The main valley is 100 km wide and 15520.3 km in area. The Himalayas divide the Kashmir valley from Ladakh while the Pir Panjal range which encloses the valley from west and south separates it from the plain of north India. The average height is about 1850 mt. above mean sea level.

2. DATA SOURCE AND METHODOLOGY

The present study is based on secondary source of data. Data is collected from various published records of Department of Statistics and Economic (Srinagar) and horticulture department of Kashmir division. Data is also collected from books, journals, and magazines.



Further the collected data is processed to analyse the productivity of horticultural crops. Tables and map is used to show district wise productivity of horticultural crops.

2.1 Productivity of horticultural crops by Kendall's Ranking Method

The Kashmir valley has the large potential for increasing the productivity of quality temperate crops. The Productivity of horticultural crops in Kashmir valley is increasing due to various government initiatives but still we have not achieved the desirable results and valley is far behind from USA, Australia and China in horticultural productivity. In this paper attempt is being made to now the district wise horticultural productivity by using Kendall's ranking method.

Before using Kendall's formula to find out the horticulture productive district of Kashmir it is important to know the yield of crops in all the districts, and for that year 2018-19 has been selected. In Apple crops for the year 2018-19 Baramulla had 16.01 M.T of yield per hectare followed by Kupwara 15 M.T per hectare. The lowest yields per hectare were in Pulwama 8.89 M.T followed by Budgam 10.76 M.T. Similarly in Walnut Kupwara had highest yield per hectare of 5.2 M.T followed by Shopian 4.84 M.T and Pulwama 4.76 M.T and the lowest yield of Walnuts were in Bandipora 2.99 M.T per hectare.

Baramulla had highest yield in Pear of 15.10 M.T per hectare followed by Ganderbal 13.58 M.T and Kupwara 12.20 M.T and lowest yield per hectare of Pear were in Shopian 6.32 M.T. In Peach Kupwara is leading in yield per hectare with 9.43 M.T followed by Baramulla with 7.30 M.T and the lowest were in Ganderbal of 1.51 M.T and in Budgam Peach is total absent in 2018-19. In Plum again Kupwara is leading with 9.45 M.T per hectare followed by Ganderbal 7.84 M.T and the lowest were in Anantnag 2.15 M.T.

In Cherry Kupwara with 10.20 M.T is at first place followed by Baramulla with 6.49 M.T and the lowest were in Bandipora with 0.87 M.T. In Almond Srinagar is at first place with 8.38 M.T followed by Ganderbal with 6 M.T and the lowest were in Anantnag with 1.08 M.T. In Apricot highest yield of 8.80 M.T were in Ganderbal followed by Kupwara 6.65 M.T and the lowest were in Srinagar with 1.02 M.T. There is wide variation in yield per hectare among different crops in Kashmir and in this regard we are trying to find out the most horticultural productive district of Kashmir valley.

Figure. 1: Yield in Metric Tonnes per hectare in Kashmir 2018-2019

S.no	Districts	Apple	Walnut	Pear	Peach	Plum	Cherry	Almond	Apricot
1	Srinagar	11.48	3.34	7.18	3.18	2.64	4.35	8.38	1.02
2	Ganderbal	12.93	3.15	13.58	1.51	7.84	3.42	6	8.80
3	Budgam	10.76	3.15	10.80	0	5.08	2.87	1.27	5.04
4	Baramulla	16.01	3.24	15.10	7.30	6.92	6.49	2.14	3.95
5	Bandipora.	12.14	2.99	11.23	6.65	7.06	0.87	3	6.42
6	Kupwara	15	5.2	12.20	9.43	9.45	10.20	5	6.65
7	Anantnag	11.48	4.23	3.85	2.73	2.15	1.95	1.08	2.71
8	Kulgam	11.80	4.09	9.78	3.71	3.72	4.11	2.73	4.01
9	Shopian	12.58	4.84	6.32	4.36	4.16	4.91	3	3.84
10	Pulwama	8.89	4.76	8.02	5.28	7.38	6.03	1.47	5.48

By Using Kendall's method the productivity of all the ten districts is ranked separately for each crop and each district has eight ranks one for each crop. The sum of all the eight ranks of district will give the composite score reflecting the horticultural productivity of the district. In table no.1 the districts have been ranked eight times according to their yield per hectare in each crop. The district having highest yield is ranked first and the next higher has been given the 2nd rank and so on. After ranking all the districts for each fruit these ranks are added row wise.

The sum of these ranks is given in the last column of Table No. 1. Composite score shows the horticultural productivity of all districts based on eight fruits. After the computation, analysis of table shows that Kupwara is most horticulture productive district because its composite score is low. Majority of horticultural crop in Kupwara had highest yield as compared to others which makes it most productive district of valley. Baramulla is next productive district of Kashmir valley followed by Pulwama and Kulgam. The less



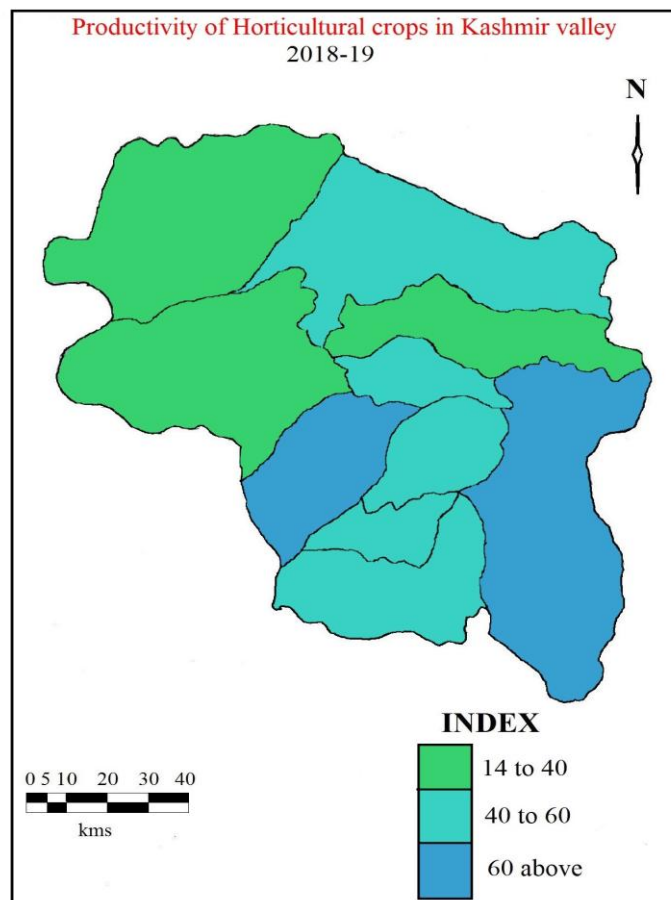
horticulture productive district according to productivity in eight crops is Anantnag whose composite score is the highest.

Anantnag is followed by Budgam and Srinagar in less productive districts. The reason for low productivity in Anantnag, Budgam and Srinagar is that most of orchards of horticultural crops are in plain area where climatic conditions are not suitable as compared to hilly areas. Another reason for low production of horticulture crops in Srinagar and Budgam is that these two most urbanised districts where area under horticulture is decreasing year after year due to construction of buildings, roads, malls etc. and due to various opportunities of income in city people are not taking cultivation of horticultural crops seriously.

Table No. 1: Composite index/scores of horticultural productivity using Kendall's Ranking method

Districts	Apple	Walnut	Pear	Peach	Plum	Cherry	Almond	Apricot	Total
Srinagar	7.5	6	8	7	9	5	1	10	53.5
Ganderbal	3	8.5	2	9	2	7	2	1	34.5
Budgam	9	8.5	5	10	6	8	9	5	60.5
Baramulla	1	7	1	2	5	2	7	7	32
Bandipora.	5	10	4	3	4	10	4.5	3	43.5
Kupwara	2	1	3	1	1	1	3	2	14
Anantnag	7.5	4	10	8	10	9	10	9	67.5
Kulgam	6	5	6	6	8	6	6	6	49
Shopian	4	2	9	5	7	4	4.5	8	43.5
Pulwama	10	3	7	4	3	3	8	4	42

The composite index has also been shown plotted on map to show spatial variations in the horticultural productivity. Map showing productivity of horticultural crops by Kendall's Method for the year 2018-19



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