

Changes in Cropping Pattern and Crop Diversification in Jammu and Kashmir

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Abstract: *The cropping pattern of Jammu and Kashmir was based on the traditional system of the subsistence farming without any surplus. But with the advent of New Agricultural Strategy, there has been the complementary relationship between the commercialization and cropping pattern of the state. The farmers are gradually diversifying to commercial crops for the sake of higher earnings. The aim of the present paper is to find out the changes in cropping pattern in Jammu and Kashmir. This paper will also give some suggestion for improving the cropping pattern in Jammu and Kashmir.*

Keywords: *Cropping pattern, Crop diversification, Food crops, Jammu and Kashmir.*

I. Introduction

Cropping pattern means the proportion of area under different crop at a point of time, change in this distribution over a period of time and factors affecting this change in distribution (Misra & Puri ; 2011). Cropping pattern is a dynamic concept as it changes in time and space. Cropping pattern in a state keep on changing from time to time with the change in related factors. It is determined mainly by physical, socio-cultural and historic factors. Besides technological factors have also played an important role. For example HYV programmes. In 1962-63 the IADP was introduced in the state in two districts i.e. Jammu(in Jammu division) and Anantnag (in Kashmir division). This programme were encouraging the production of paddy, wheat, and maize. The state of Jammu and Kashmir has higher degree of variation in its cropping pattern, crop combination and crop diversification (Hussain; 2000).

The cropping pattern of the state by and large had a subsistence in nature during the Dogra rule. Cropping pattern was highly biased towards food crops with paddy, maize and wheat. Paddy, maize and wheat accounting for about 73 percent of total gross cropped area in 1938-39. The cropping pattern was reversed with the independence of the state. After independence ,the state government take certain initiatives to transform the traditional agriculture into modern one joint with the institutional and technological reforms thereby, liberating the agriculture of the state from the shackles of stagnation. During the sixties, the introduction of high yielding varieties of seeds and fertilizers and provision of assured irrigation gave a boost to the production of agriculture (Singh; 1998).

The impact of the cropping pattern in the state was not uniform due to different topography and agro-climatic conditions. There was shift of cropping pattern in favour of commercial crops which may attributed to the development of infrastructure, like roads, bridges and irrigation. Technological innovation also influenced the cropping pattern on the state in many ways. It can be the asserted that after the introduction of New Agricultural Strategy, there has been the complementary relationship between the commercialization and cropping pattern of the state.

For the sake of higher earnings, the farmers has been switched from cereal crops to non cereals crops. The provision of pesticides, transport and cold storage to ensure disease free maturation and delivery of fruits in various market played an important role in diversion of cereals and other land to orchard (Misri and Bhat ;1994).

Objectives Of The Study

1. To find out the changes in cropping pattern in Jammu and Kashmir
2. To give some suggestion for improving the cropping pattern in Jammu and Kashmir.

II. Research Methodology

Keeping in view the status of the research work, the data has been used out from the secondary sources. The data has been collected from government official records, valid records of the state government, Directorate of Economics and Statistics, Jammu and Kashmir, Department of Financial commissioner revenue, Jammu and Kashmir, various published reports, books, journals, yearbooks-statistical digest and other official record from

outside and within the state. The area under different food crops has been analyzed and interpreted through tabulation and simple percentage method.

III. Result and Discussion

After the introduction of new agricultural strategy, the achievement in agricultural sector have been made all round. During 1965-66, the total area sown under different food crops was 808 thousand hectares . The maximum area covered under food crops like maize, rice and wheat was 255 (31.55 percent), 212 (26.23 percent) and 154 thousand hectares (19.05 percent) of total area sown. The area under other cereal and millets and pulses and other was 57 and 44 thousand hectares which accounted 7.05 and 5.44 percent of the total area sown. The area under fruits and vegetables was 22 thousand hectares (2.72 percent) in 1965-66. The area covered under oilseeds and fodder crops was 38 thousand hectares (4.70 percent) and 16 thousand hectares (1.98 percent) respectively.

There was significant change in the cropping pattern during 1990-91. In 1990-91, the rice and wheat constitute 48.72 percent of the total sown area. The area under fruits and vegetables constitute 5.63 percent . While the oilseeds and fodder covers about 6.34 percent and 3.55 percent of total area. Table 1.1 depicted that the area under the food cereal increased in nineties but it strange that the area under rice which is the staple food of the state has decline showing that rice lost its popularity during the nineties. The increase in area under oilseeds was due to the effect that at the national level the government initiated a series of measures during 1980's (**Bazaz & Haq ; 2013**).

In 2009-10, the cropping pattern become more complex rather than simple, as rice and wheat constitute 47.94 percent of total area sown. The fruits and vegetables become much more prominent as occupying about 7.80 percent of the area. The area under oilseeds and fodder has 5.70 percent and 4.57 percent during the same period.

It has been depicted from the table that in cropping pattern of state during 2009-10, about 69 percent total area is covered by crops such as rice, wheat, pulses, oilseeds, fodder, fruits and vegetables and 31 percent is covered by the other crops including coarse grains that occupying minor percentage.

Table 1.1. Total area sown under different food crops Area (000' hectares)

s.no	Food crops	1965-66	1974-75	1980-81	1990-91	2000-01	2009-10
1	Rice	212 (26.23)	237 (26.36)	264.58 (27.16)	274.49 (25.74)	244.05 (21.94)	259.88 (22.70)
2	Wheat	154 (19.05)	191 (21.25)	201.98 (20.73)	245.12 (22.98)	280.96 (25.19)	288.94 (25.24)
3	Maize	255.00 (31.55)	265.30 (29.51)	275.19 (28.25)	249.90 (27.65)	330.21 (29.61)	311.02 (25.24)
4	Other cereals & millets	57.00 (7.05)	51.8 (5.76)	45.96 (4.71)	37.76 (3.54)	37.15 (3.33)	35.64 (3.11)
5	Pulses	44.00 (5.44)	52.20 (5.80)	48.60 (4.99)	41.32 (3.87)	27.45 (2.46)	30.30 (2.64)
6	Other food crops	3 (0.37)	3 (0.33)	3.13 (0.32)	1.9 (0.17)	5.37 (0.48)	8.34 (0.72)
7	Fruits & vegetables	22.00 (2.72)	34.00 (3.78)	51.11 (5.24)	60.04 (5.63)	67.26 (6.03)	89.32 (7.80)
8	Oilseeds	38 (4.70)	40.4 (4.50)	52.74 (5.41)	67.62 (6.34)	73.91 (6.62)	65.26 (5.70)
9	Fibres	4 (0.49)	2.2 (0.24)	1.58 (0.16)	0.77 (0.07)	0.38 (0.03)	0.17 (0.01)
10	Fodder	16 (1.98)	19.4 (2.15)	24.95 (2.56)	37.86 (3.55)	43.86 (3.93)	52.38 (4.57)
11	Other non food crops	3 (0.37)	3.4 (0.37)	4.09 (0.41)	4.51 (0.42)	4.38 (0.39)	2.91 (0.25)
12	Net area sown	675	693.8	715.3	730.71	748.31	735.32

13	Area sown more than once	133	205	258.61	335.6	366.68	409.37
14	Total area sown	808	898.8	973.91	1066.31	1114.99	1144.57

Source- Financial Commissioner Revenue Department, Jammu and Kashmir

IV. Conclusion and Suggestion

The area under vegetables and fruits increased at the cost of other food crops which showed a decreasing trend during the study period. A trend of shift from food grains to non food grains has been observed by the process of development which indicates an increasing tendency towards crop diversification. Within crop groups like cereals, there is an increase in the area under wheat and maize, whereas area under rice has been fluctuated. The area under other cereals had decline. Due to the increase in demand for fodder to feed the poultry, the area under fodder has shown an increase and a favourable price policy has resulted in an increase in area under wheat. With cereal crop shown a higher growth, non cereal crops and allied farm activities also recorded improved performance.

Even though with the introduction of cropping pattern in the state, production of both food grains and non food grains have tremendously increases but comparatively production of food grains and non food grains had not been increased proportionately. The real difficulty in adopting a better cropping pattern is that farmers may not have adequate amount of capital to invest and therefore the farmers should know the new techniques. Government should come forward to help this. The state farmers should appreciate the importance of horticulture sector include fruits, vegetables, floriculture to improving the productivity of land, generate employment and improve their economic conditions.

Initiative are needed for the agricultural diversification, as diversification taken place in the Kashmir valley have shown a positive trend in terms of return. There should be the diversification, a proper balance between the propagation of cereal and non-cereal crops and the mechanization of agriculture.

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