

Changing Cropping Pattern in Himachal Pradesh



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Abstract

Himachal Pradesh is primarily an agrarian state, as 71 percent population is getting employment directly from agriculture. But the share of agriculture sector towards GDP has declined and the economy of the Himachal Pradesh has shown a shift from agriculture sector to industries and services. The declining share of agriculture sector, however, did not affect its importance, but the very limited resources like land for agriculture has done that and only 11 percent of its total geographical area is under cultivation. Hence the main concern of the farmers is how to optimally use available land. The change in the cropping style or cropping pattern is suggested as the most viable solution for using these limited resources. The present paper attempts to analyze the changing cropping pattern in Himachal Pradesh.

Keywords: Agriculture, Cropping Pattern, Land.

Introduction

The main occupation of people in Himachal Pradesh is agriculture. In the state agriculture is directly providing employment to 71 percent of the population. Despite this agriculture is still suffering from the problem such as small and marginal land holdings. According to the reports of Economics and Statistics department of Himachal Pradesh only 65 percent of the reporting area is available for cultivation. Out of this available land only 21 percent is used as net sown area and current fallow land. Due to the physiographic limitations of the state it is not possible to make agriculture of Himachal fully mechanized. Despite these serious problems farmers of state are trying to gain profit from the available land by exploiting it. Farmers are also changing their traditional cropping style by shifting their focus from non- cash crops to cash crops.

Review of Literature

According to Tripathy and Sarap (1994) change in cropping pattern is the most important determinant in raising the growth of agricultural income. Cropping pattern means the proportion of area under different crops at a point of time, change in this distribution over a period of time and factors affecting this change in distribution (Misra and Puri). Cropping pattern is a very broad concept which changes in time and space (Sangral). Within a state cropping pattern changes with time and with its related factors. The main factors by which cropping patterns are determined are physical, socio- cultural and technological (Sangral). If we consider the cropping pattern of Himachal Pradesh the main determinant factor is climate. The best example of this is that the farmers in the very early stage shifted towards fruits and especially towards apple cultivation as the climate of state is most suitable for it. But now the scenario has changed as they have shifted towards vegetables with the change in the demands and profit also. The case of Himachal Pradesh is very different as the resources are very limited here. The most important thing to consider is to have optimum use of the available resources, so as to increase farm income. According to Ningaraju and Das (2017) the productivity in any area can be substantially raised by growing the crops suitable to the area with the help of newly developed agricultural techniques. Therefore, to increase the farm income or the farm output in Himachal Pradesh change in the cropping pattern is suggested as a viable solution to use its limited available resources.

Objectives of the Study

Against this background the research paper aims to discuss the following objective:

1. Analysis of the changing cropping pattern in Himachal Pradesh.

Methodology

The present paper is solely based on secondary data. The data has been collected from published data of the Directorate of Land Records

and Directorate of Economics and Statistics, Shimla. The data has been tabulated and analyzed. The share of the various crops in the net sown area in all the districts has been calculated in percentage. To show the change in cropping pattern the difference in the percent share has been calculated. The maps for the same have been prepared by using Arc GIS software.

Results and Discussions

The changing lifestyle has changed the demands of the society especially their food habits

and consequently these changed demands have changed the cropping pattern of the farmers. The state of Himachal Pradesh has followed the same scenario so as to meet the changing demands of the society. The following Table (1) clearly depicts the changing cropping pattern of the state. The food-grains specifically cereals and pulses have shown a negative change. This means the area under these crops has decreased within the study period.

Table: 1
Temporal Changes in the Cropping Patterns of Himachal Pradesh (Percent) 2001-2011

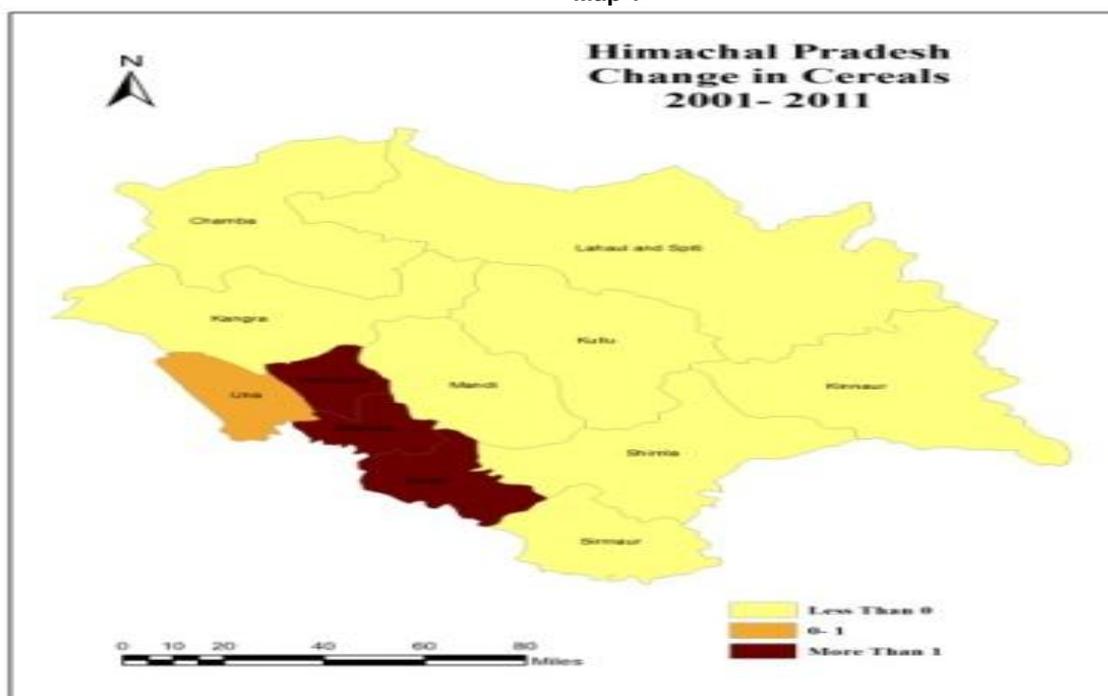
District	Food Grains					
	Cereals		% Change	Pulses		% Change
Years	2001	2011		2001	2011	
Bilaspur	95.52	97.83	2.31	3.29	0.80	-2.49
Chamba	91.61	90.35	-1.26	5.50	5.35	-0.15
Hamirpur	98.00	99.38	1.38	1.74	0.18	-1.56
Kangra	94.32	93.71	-0.61	3.14	1.88	-1.26
Kinnaur	69.69	44.17	-25.52	8.18	20.58	12.4
Kullu	80.36	74.91	-5.45	4.62	5.17	0.55
Lahaul-Spiti	40.54	13.43	-27.11	27.04	10.94	-16.1
Mandi	90.89	89.05	-1.84	3.22	2.28	-0.94
Shimla	68.21	44.27	-23.94	5.14	5.89	0.75
Sirmour	89.03	85.48	-3.55	6.20	5.13	-1.07
Solan	85.92	88.10	2.18	9.83	4.16	-5.67
Una	95.34	95.52	0.18	3.30	0.91	-2.39
State	84.02	82.43	-1.59	4.59	0.32	-4.27

Source: Directorate of Land Records, Government of Himachal Pradesh, Shimla

In case of cereals the share of its area has changed negatively. Similar trend has been followed by all the districts. Except for districts of Bilaspur, Hamirpur, Solan and Una all the remaining districts have changed negatively. The corresponding map also presents a similar but clearer picture. Map 1

represents the change in the area of cereals, where yellow colour represents the negatively changed districts. Its very evident from the map that the share of negatively changed districts is more as compared to positively changed districts.

Map 1

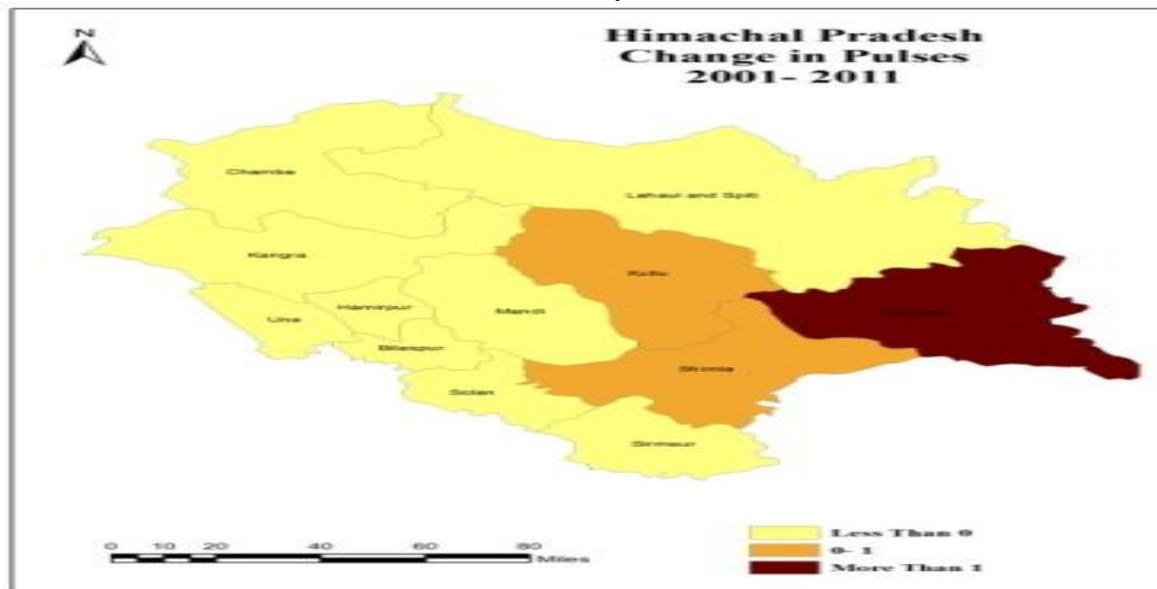


Source: Census of India 2011, Administrative Atlas of Himachal Pradesh

Pulses show a similar trend. Hereby the whole state has negatively changed its share of area to total cropped area. Only three districts i.e. Kinnaur, Shimla and Kullu have changed positively. The change however is not so considerable in case of

Shimla and Kullu as it is only 0.75 and 0.55 percent respectively. The image is much clear from Map 2, where yellow colour is also representing the negatively changed districts and their share is also very high as compare to positively changed districts.

Map 2



Source: Census of India 2011, Administrative Atlas of Himachal Pradesh

Decrease in the share of area under food-grains doesn't mean that there is a shift from primary sector to any other sector. But it means that there is change in the agricultural or cropping pattern in the state. Increase in the population, change in the food demands, change in climate coupled with many other reasons are responsible for this change in cropping

pattern. The state of Himachal Pradesh has shifted towards fruits especially towards apple in late 70's and 80's. District Shimla, Kullu and Kinnaur were the first to incorporate this change and later on all other districts followed the similar trend. But in late 90's the state has shifted towards vegetables too.

Table 2
Temporal Changes in the Cropping Patterns of Himachal Pradesh (Percent)
2001-2011

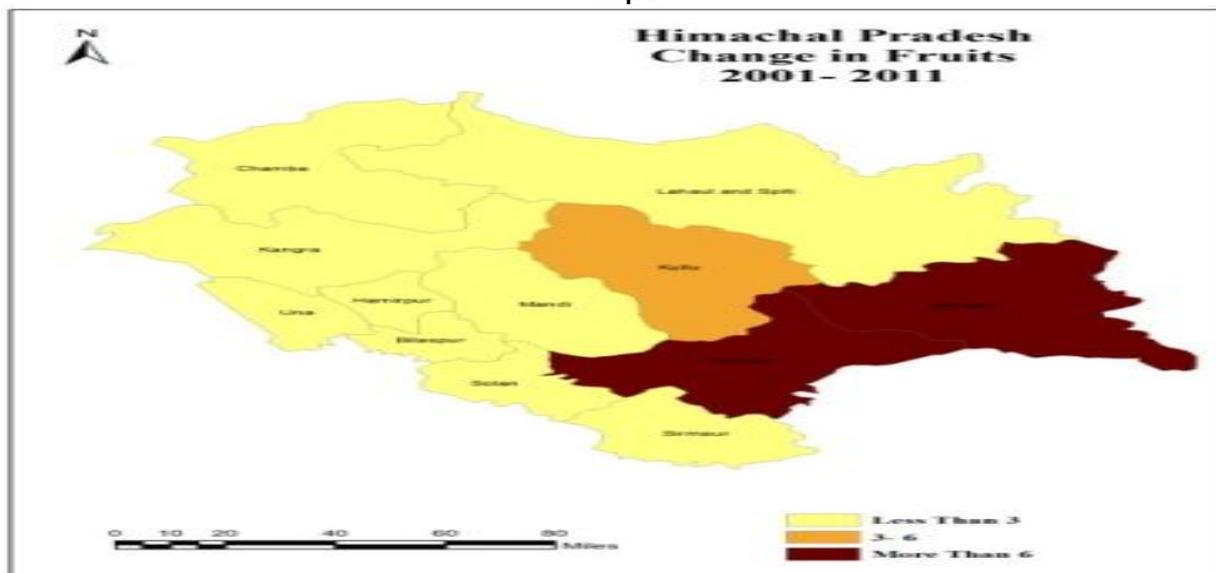
District	Fruits			Vegetables		
	2001	2011	% Change	2001	2011	% Change
Bilaspur	0.54	0.66	0.12	0.64	0.69	0.05
Chamba	1.94	2.43	0.49	0.94	1.84	0.9
Hamirpur	0.02	0.12	0.1	0.21	0.37	0.16
Kangra	1.69	3.15	1.46	0.86	1.24	0.38
Kinnaur	17.48	32.38	14.9	4.64	2.85	-1.79
Kullu	11.48	15.15	3.67	3.52	4.75	1.23
Lahaul-Spiti	0.43	1.77	1.34	31.97	73.84	41.87
Mandi	3.24	3.97	0.73	2.67	4.68	2.01
Shimla	17.04	34.31	17.27	9.59	15.52	5.93
Sirmour	2.01	2.45	0.44	2.74	6.92	4.18
Solan	1.06	1.37	0.31	3.16	5.92	2.76
Una	0.31	1.31	1	1.03	2.01	0.98
State	3.98	6.79	2.81	2.57	4.50	1.93

Source: Directorate of Land Records, Government of Himachal Pradesh, Shimla

Table 2 clearly shows the image of this change. In case of fruits the state has changed positively. This positive change in the share of area of fruits was also followed by all the districts. The change in the cropping pattern can be clearly depicted

as there is no district with negative change. Map 3 also shows the image clearly where yellow colour shows those districts where the process of change is a little slow as compared to other districts.

Map 3

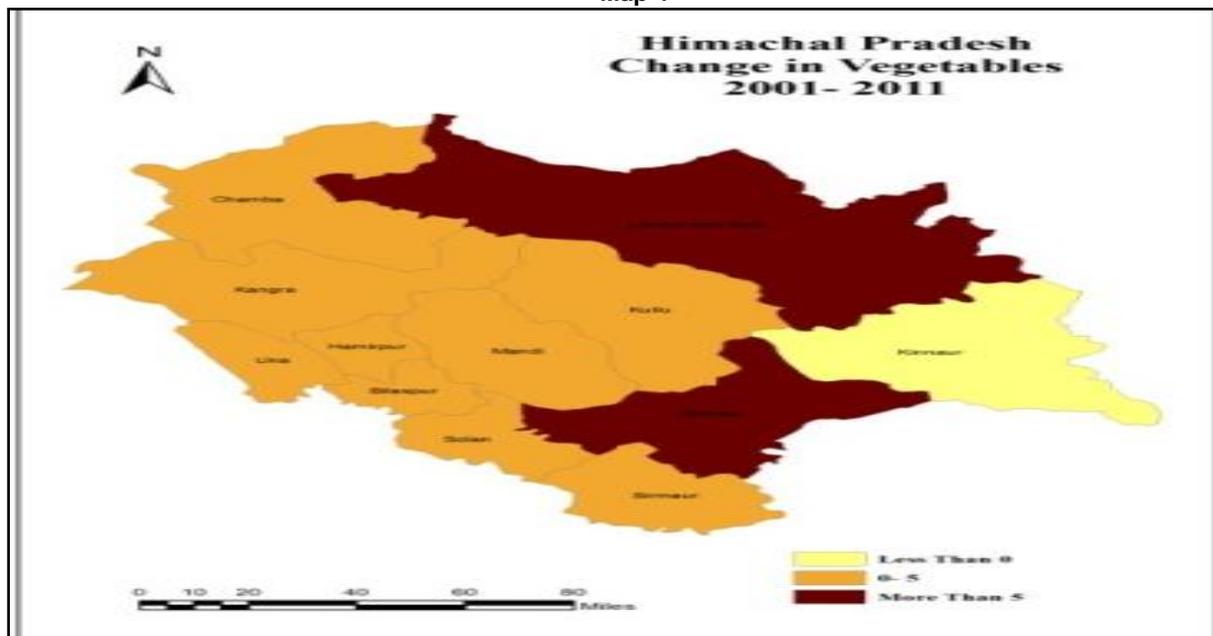


Source: Census of India 2011, Administrative Atlas of Himachal Pradesh

In case of vegetables the process of change is positive, as the state has changed positively. Except from district Kinnaur all the districts have shown a positive change. District Kinnaur has negatively changed (-1.79 percent) its area under vegetables as it has changed positively towards fruits and pulses. Its change towards fruits and pulses is quite high i.e. 14.9 percent and 12.4 percent respectively. Map 4 also shows the percent change in the area of vegetables. The yellow colour shows the negative change in the percent share of area of vegetable crops, and district Kinnaur falls under this

category. Apart from this light brown colour in the map depicts the districts where the change over one decade in percent change of area under vegetable crops is moderate. However the high rate of change is shown by dark brown colour and this change is very high in two districts i.e. Lahaul Spiti and Shimla. Best example of change is projected by district Lahaul and Spiti as it has positively changed from 31.97 percent in 2001 to 73.84 percent 2011 in its percent share of area under vegetable crops. The change in the percent share over one decade is 41.87 percent.

Map 4



Source: Census of India 2011, Administrative Atlas of Himachal Pradesh

Change in the cropping pattern of Himachal Pradesh is not only generated from the reasons like population growth or change in food demands. But there are other major factors behind these changes

like the establishment of Horticulture Produce Marketing and Processing Corporation (HPMC) which provides facilities like post harvest infrastructural such as link roads, cold storage, grading and packing

facilities. In order to provide technical backup to the growing horticulture sector, a separate university of Horticulture and Forestry was established in 1985. The central government played a very important role in strengthening the R & D infrastructure in the state by establishing Central Potato Research Institute at Shimla, National Institute of Mushroom Research at Solan. Central Government's contribution towards agriculture like IARI Regional Research Station for Vegetable Research at Kullu is the major factor contributing towards change in cropping pattern. The launching of WTO and open trade strategy has posed competition from cheaper imports. Good example of government policies is the implementation of New Policy on Seed Development (NPSD) in October 1988 by the government of India, which made the import of seeds easier and fastened the spread of the cultivation of high value cash crops. Apart from above discussed factors which are favoring the changing cropping pattern in the state there are other few factors favoring this process like the first three five year plans (From 1951 to 1966) of government solved the problem of transportation and communication, power and social services including education and health in the state as more than half of the total plan outlay was devoted towards these facilities. Huge markets in Delhi, Punjab and Haryana are an important contributory factor encouraging the cultivation of fruits and off-season vegetables in the state.

Conclusion

In a nutshell to conclude the above discussion it can be said that the state is changing its traditional pattern of cropping very rapidly. The state is shifting from its old tradition of growing cereals and pulses towards growing fruits and vegetables. This shift is generated due to the change in the food preferences of the people on one side and money on the other. Climate is the most important factor which is facilitating this change. But apart from climate state and centre government is also playing an important role in changing cropping style of farmers by providing them infrastructural facilities like roads, market etc and by strengthening R and D networks by establishing various research institutes in the state.

But farmers are still suffering from various problems like ageing of trees, change in climate, lack of knowledge etc. To tackle these problems government has to provide support to farmers so as to enable them to bear with the changing cropping pattern.

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