



PRODUCTIVITY OF CEREAL CROPS, PULSES AND VEGETABLES: HOUSEHOLD LEVEL INVESTIGATION IN HIMACHAL PRADESH

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ABSTRACT

In the present paper an attempt has been made to analyze the productivity of cereal crops, pulses and vegetables among the sample households by size class of land holdings. Results show that the productivity of vegetables crops is comparatively high as compared to cereal crops and pulses. To increase the productivity of these crops, Government must provide desired high yielding variety of seeds on cheap rate, open more fertilizer outlets in the study areas and provide more adequate supply of plant protection materials on cheap rate.

KEY WORDS; productivity, household, Himachal Pradesh

1. INTRODUCTION

In the developing countries, the largest proportion of income derived from agricultural sector. Agricultural development is not only helpful in the development of industrial sector, but also provides lot of employment opportunities. The most important fact of Indian agriculture is that it has large potential for development. Technological changes, new and superior resources in the mode of cultivation viz; new and better agricultural implements, improved seeds and better irrigation facilities have helped in the fast growth of agricultural sector in India. Agricultural progress is normally regarded as a precondition of economic development. Agriculture has been the major source of livelihood in Indian Economy. About 70 per cent of the Indian population gets its livelihood from agriculture and allied activities. The state of Himachal Pradesh has achieved the distinction of being regarded as a model of Hill development. Agriculture and allied activities continued to be the mainstay of majority of the population in the State.

2. OBJECTIVES

- i. To analyze the productivity of cereal crops, pulses and vegetables among the sample households by size class of land holdings.
- ii. To provide a set of suggestions keeping in view the findings of the study.

3. RESEARCH METHODOLOGY

A multistage random sampling technique has been adopted in order to select a representative sample for the present study. At the first stage all the district arranged in ascending order on the basis of population and one tribal i.e. Kinnaur and two non-tribal viz; Mandi and Shimla districts has been selected randomly. At the second stage all the blocks in the selected districts arranged in ascending on the basis of population and one block in each selected district has been selected randomly i.e. pooh block in Kinnaur district and Dharampur and Mashobra block in Mandi and Shimla district respectively. At the third stage all the panchayats in the selected blocks arranged in ascending order on the basis of their population and one panchayat in each selected block has been chosen randomly, After this a sample of 100 households has been selected randomly in proportion to the total number of households falling in each land holdings category viz; 60 households from marginal class size of holdings, 25 households from small class size holdings and rest 15 households from medium class size holdings.

4. RESULTS AND DISCUSSIONS

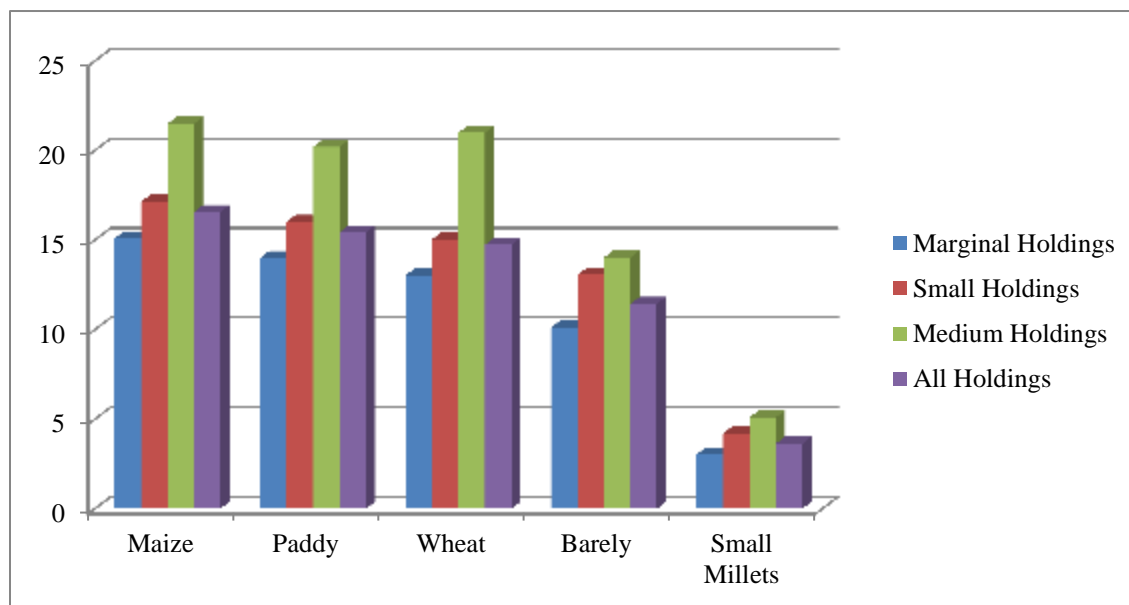
4.1 Productivity of Cereal Crops among the Sample Households

The per hectare productivity of cereal crops has been presented in Table 1. This table shows that the per hectare productivity of maize crop on the marginal, small and medium size of holdings has been worked out 15.10, 17.15 and 21.50 quintals respectively. By adjoining all the holdings together this value came out 16.57 quintals.

**Table-1: Productivity of Cereal Crops among the Sample Households**

(Per Hectare in Quintals)

Sr. No.	Particulars	Marginal Holdings	Small Holdings	Medium Holdings	All Holdings
1.	Maize	15.10	17.15	21.50	16.57
2.	Paddy	14.00	16.02	20.20	15.44
3.	Wheat	13.04	15.04	21.00	14.73
4.	Barely	10.12	13.06	14.03	11.44
6.	Small Millets	3.03	4.21	5.10	3.64

**Figure-1: Productivity of Cereal crops among the Sample Households**

The per hectare productivity of paddy crop on the marginal, small and medium size of holdings has been worked out 14.00, 16.02 and 20.20 quintals respectively and by adjoining all the holdings together this value came out 15.44 quintals per hectare. The per hectare productivity of wheat crop at overall level has been worked out 14.73 quintals whereas on the marginal, small and medium size of holdings it has been worked out 13.04, 15.04 and 21.00 quintals respectively. The per hectare productivity of barely crop on the marginal, small and medium size of holdings ranges between 10.12 to 14.03 quintals respectively, whereas at overall level this value came out 11.44 quintals. The per hectare productivity of small millet crops on

the marginal, small and medium size of holdings has been worked out 3.03, 4.21 and 5.10 quintals respectively and by adjoining all the holdings together this value came out 3.64 quintals.

4.2 Productivity of Pulses among the Sample Households

The per hectare productivity of pulses among the sample households is presented in Table 2. The per hectare productivity of rongi pulse has been worked out 2.02, 3.09 and 5.40 quintals on the marginal, small and medium size of holdings respectively. While among all the holdings together this value came out 2.79 quintals per hectare.

Table-2: Productivity of Pulses among the Sample Households

(Per Hectare in Quintals)

Sr. No.	Particulars	Marginal Holdings	Small Holdings	Medium Holdings	All Holdings
1.	Rongi	2.02	3.09	5.40	2.79
2.	Mash	4.10	5.07	7.90	4.91
3.	Rajmash	12.00	14.08	15.00	12.97
4.	Gram	4.04	5.59	8.00	5.02
5.	Lentil	5.00	6.04	7.40	5.62
6.	Kulthi	8.09	9.13	10.00	8.64

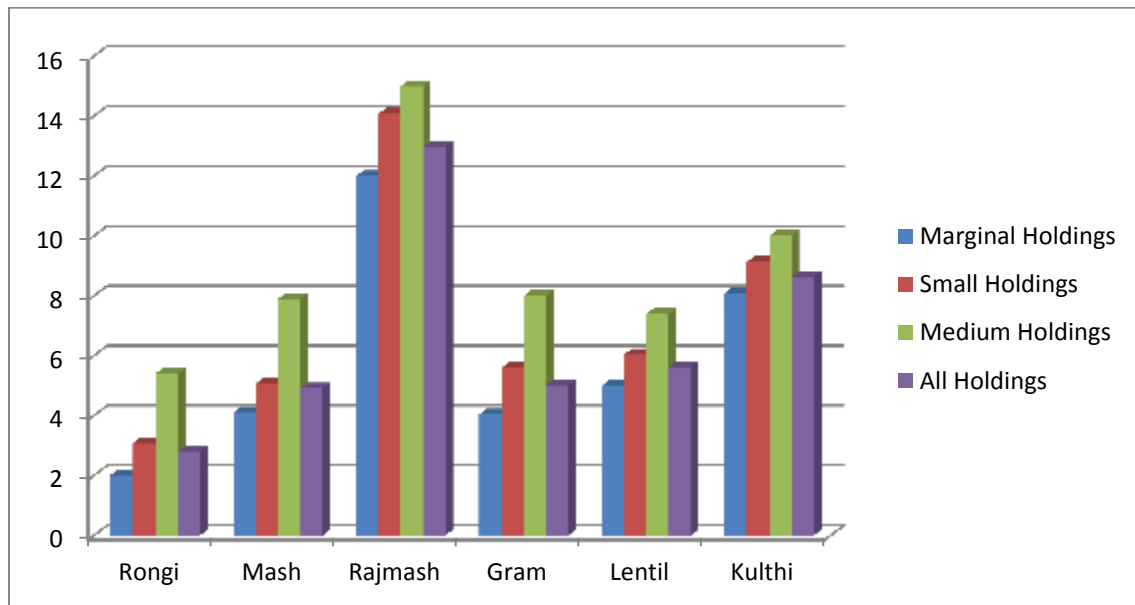


Figure-2: Productivity of Pulses among the Sample Households

The per hectare productivity of mash pulse at overall level has been worked out 4.91 quintals and on marginal, small, and medium size of holdings it ranges between 4.10 to 7.90 quintals respectively. The per hectare productivity of rajmash pulse has been worked out 12.00, 14.08 and 15.00 quintals on the marginal, small and medium size of holdings respectively. At overall level this value came out 12.97 quintals per hectare.

The per hectare productivity of gram pulse, ranges between 4.04 to 8.00 quintals on the marginal to medium size of holdings respectively. Among all the holdings together this value came out 5.02 quintals. Further the per hectare productivity of lentil pulse on marginal, small and medium size of holdings has been worked out 5.00, 6.04 and 7.40 quintals. Among all the holdings together this value came out 5.62 quintals. The per hectare productivity of kulthi pulse has been

worked out 8.09, 9.13 and 10.00 quintals on the marginal, small and medium size of holdings respectively. Among all the holdings together this value came out 8.64 quintals.

4.3 Productivity of Vegetable among the Sample Households

The per hectare productivity of vegetables among the sample households has been presented in Table 4. The Table shows that the per hectare productivity of potato has been worked out 98.00, 100.00 and 120.00 quintals on the marginal, small and medium size of holdings respectively. Among all the holdings together this value came out 101.80. The per hectare productivity of peas at overall level has been worked out 58.35 quintals and on marginal to medium size of holdings it ranges between 56.00 to 65.00 quintals respectively.

Table-4: Productivity of Vegetables among the Sample Households

(Per Hectare in Quintals)

Sr. No.	Particulars	Marginal Holdings	Small Holdings	Medium Holdings	All Holdings
1.	Potato	98.00	100.00	120.00	101.80
2.	Peas	56.00	60.00	65.00	58.35
3.	Tomato	180.00	200.00	220.00	191.00
4.	Cabbage	165.10	170.10	180.00	168.59
5.	Cauliflower	140.00	152.00	160.00	146.00
6.	Beans	68.00	72.00	82.00	71.10
7.	Capsicum	89.00	94.00	107.00	92.95

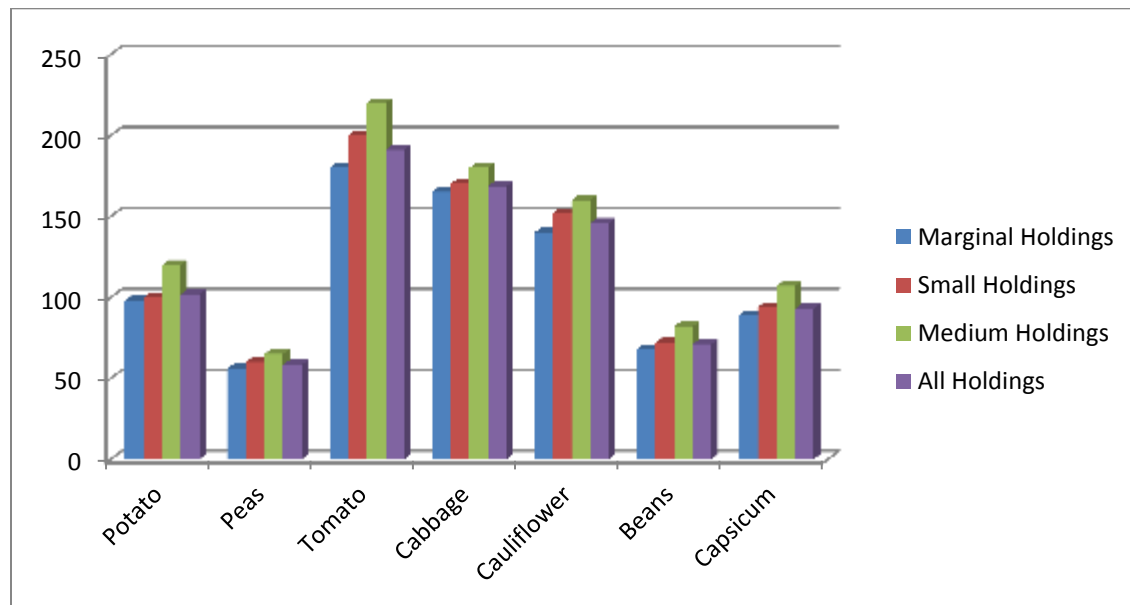


Figure-4: Productivity of Vegetables among the Sample Households

The per hectare productivity of tomato has been worked out 180.00, 200.00 and 220.00 quintals on the marginal, small and medium size of holdings respectively. Among all the holdings together this value came out 191.00 quintals. The per hectare productivity of cabbage on the marginal, small and medium size of holdings has been worked out 165.10, 170.10 and 180.00 quintals respectively, whereas at overall level this value came out 168.59 quintals per hectare. Further the per hectare productivity of cauliflower at overall level came out 146.00 quintals and on marginal to medium size of holdings it ranges between 140.00 to 160.00 quintals respectively. The per hectare productivity of bean has been worked out 68.00, 72.00 and 82.00 quintals on the marginal, small and medium size of holdings respectively. Among all the holdings together this value came out 71.10 quintals. The per hectare productivity of capsicum on marginal to medium size of holdings ranges between 89.00 to 107.00 quintals, while at over level this value came out 92.95 quintals.

5. CONCLUSION AND RECOMMENDATIONS

From the above analyze and discussion it can be concluded that among cereal crops maize crop productivity is highest than of other crops viz; paddy, wheat, barley and small millets. In case of pulses and vegetables productivity of rajmash and tomato is highest. However the productivity of vegetables is comparatively high as compared to cereal crops, and pulses. To increase the productivity of these crops, Government must provide desired high yielding variety of seeds on cheap rate, open more fertilizer outlets in the study areas, distribute organic manure to the households to overcome the problem of manure, provide more adequate supply of plant protection material on cheap rate and more extension services regarding agriculture

should be provide to households to keeping their knowledge update.

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