



Status of land holdings and agricultural development: a case study of Bibipur village, Haryana, India

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Abstract: Agriculture is primary activity of human being from ancient time. It is still a major activity throughout the world. Agricultural level from ancient time to present has changed a lot. Agriculture is main demanding occupation because the food demand of world is increasing with increase in population. Agriculture not only provides work to farmers, but also supply raw material for many industries. Every year thousand of studies are being done on agricultural level that how an area is good in agricultural production, how an area can be converted in good agricultural site and how its productivity can be increased. After the emergence of Green Revolution, agricultural level has changed world over and it greatly influenced the India specially Haryana, Punjab and western U.P. states. Agricultural level any village, region or country depends on various factors such as land surface, soils type and condition, water availability, drainage pattern, irrigation, agricultural practices, level of mechanization, uses of chemical fertilizers, insecticides, pesticides etc. All these factors determine the growth of agricultural level at any place.

Key Words: Agriculture Production, Agricultural Level, Drainage Pattern, Mechanization

INTRODUCTION

“Agenda 21” has defined Land as a physical entity in terms of its topography and spatial nature thus including natural resources like the soil, minerals, water and biota existing on the land (Vats 1977). These components provide a variety of services essential to the maintenance of life-support systems and the productive capacity of the environment (Ester and Norton 1977). Land is a primary resource and its utilization has been the focal theme in understanding the historical development of various civilizations of the world (Date and Pawar 1988; Hussain 1976). Haryana is one of the most

progressive states in India so far as agriculture is concerned (Sinha 1958; Singh 1979). Haryana has experienced considerable changes in area, production and yield of various crops and particularly in the selection of the cropping pattern since the adoption of new farm technology in 1965-66. Soil is an important natural resource for human beings and crops (Subbiah and Ahamad 1980). Its nature and fertility determines the crop productivity and agricultural production of an area. It is also very significant environmental attribute for human beings.

STUDY AREA

The present study has been undertaken at micro-level in Bibipur village of Jind district in Haryana. It is a historical village and was founded in 13th century. It lies between 29° 14' 24" to 29° 14' 59" north latitudes and 76° 16' 25" to 76° 17' 06" east longitudes (Fig. 1). The village is located in south direction from Jind town. It is about 10 kilometers away from the district headquarter on State Highways No. 14, which is called Jind-Bhiwani road. The village is surrounded by Ghimana in the north-east, Igra in south-west, Ramgarh in north and Behabalpur in east. The village is almost a level plain with medium textured sandy and sandy loam soils. The village economy is primarily based on agriculture and livestock.

STATEMENT OF PROBLEM

Agriculture is mainstay of the economy of Bibipur village and well developed. The residents are well aware about high yielding variety seeds, bio chemical inputs and modern machinery. Water availability in the village is adequate. Therefore, the present study aims to analysis the land holding characteristics and status of agricultural level in the Bibipurvillage with respect to economic status of farmers. It also aims to study that how HYV seeds, land characteristics and irrigation influence the level of agriculture.

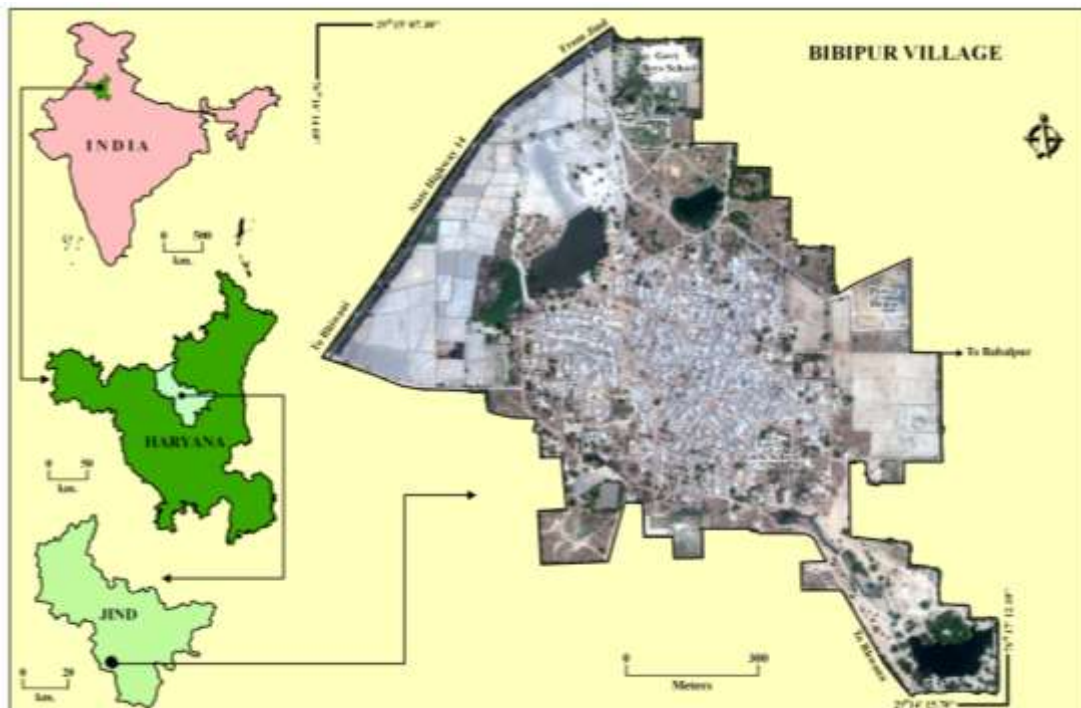


Fig.1: Location Map of Bibipur Village.

OBJECTIVES OF THE STUDY

The following are the main objective of the present study-

- To study the land holding characteristics according to economic status of households.
- To evaluate the level of yield and agricultural productivity with respect to economic status.
- To examine the source and season wise irrigated area under different economic groups.

MATERIAL AND METHODS

The present study is based on the data collected through primary household's survey. The survey was conducted from October 20, 2012 to October 26, 2012. A well structured questionnaire was designed before proceeding into the field and all 893 households of the village were surveyed. The data were also collected from different secondary sources like patwari, school, anganwadi etc. The collected information has been analyzed and interpreted with the help of simple statistical technique such as percentage. The analyzed data has been presented with the help of tables. The primary data collected from the households of Bibipur village was classified in different economic classes in order to capture their inter class differences in the livestock distribution and structure of village. The major economic classes identified from the collected data with their number of households have been presented in the following tables.

Size of landholding	No. of household	Household in (%)
Landless	290	32.5
Below 2.5	263	29.5
2.5 to 5.0	163	18.2
5.0 to 10.0	122	13.7
Above 10	55	6.1
Total	893	100.00

RESULTS AND DISCUSSION

Distribution of landholding characteristics according to economic status

This table reveals the landholding characteristics of Bibipur village according to occupational status. In Bibipur village 603 households is area owned. Highly area owned household's lies under the landless group and less area owned household's lies under the 10.0-20.0 groups. After that, we also fined in Bibipur village 155 households is leased in and 131 households is leased out. Highly leased in and leased out households lies under the below 2.5 group and less household's lies under the landless and others group.

Economic Status	Area Owned	Leased In	Leased Out
Landless	413	14	3
Below 2.5	225	55	43
2.5 - 5.0	160	35	28
5.0 – 10.0	121	31	40
10.0 – 20.0	54	20	17
Total	603	155	131

Source: Primary Survey, 2012

Source wise irrigated area according to economic status

This table reveals the irrigated, un-irrigated and total irrigated area of Rabi, Kharif and Zaid crops on the basis of economic status. In Rabi crops maximum irrigated area under land less category. And minimum irrigated area under 10.0 to 20.0. Below 2.5 has maximum irrigated area also after land less category. In kharif crops more irrigated area in these descending order. In zaid crops maximum irrigated area of total area lies under land less category. And minimum is under 10.0 to 20.0 category. Overall result shows that maximum land holding of total irrigated area under land less category or below 2.5 category.

Size of Holding	Canal	Tube well	Others	Total
Landless	2.50(2.2)	108.75(96.8)	1(0.8)	112.25(3.5)
Below 2.5	115.25(20.2)	436.2(76.4)	18.75(3.2)	570.20(18.0)
2.5-5.0	132.25(18.5)	575.5(80.6)	5.50(0.7)	713.25(22.7)
5.0-10.0	183(19.3)	741.81(78.4)	20.50(2.1)	945.31(29.9)
10.0-20.0	114.50(13.9)	667.5(81.2)	40(4.8)	822.00(25.9)
Total	547.50(17.3)	2529.76(79.9)	85.75(2.7)	3163.01(100)

Figures in parentheses are percentage of total

Distribution of irrigated and un-irrigated area according to economic status

This table reveals the total irrigated and un-irrigated area of the Bibipur village under different crops. Highest irrigated area 97.2 percent of the village lies under the kharif crops. In this crop highest irrigated area (870.96) acres lies under the landless group and lowest lies under the 10.0-20.0 group. After that we also find the highest total irrigated area 97.1 percent lies under the rabi crops. In this crop highest irrigated area 98.9 percent lies under the landless group and lowest irrigated area 92 percentiles under 10.0-20.0 group. In zaid crop total irrigated area is 87 percent. Highest irrigated area (15) acres in zaid crop lies under the landless group and lowest lies under the 10.0-20.0 groups.

Distribution of yield and productivity under different crops according to economic status

The figure 2 suggests that the maximum yield (acre/kg) under all the crops of is under those respondents having land between 10.0 and 20.0 groups. The productivity is highest under the respondents having land between 10 and 20 groups.

Economic status	Kharif			Rabi			Zaid		
	Irrigated	Un-irrigated	Total	Irrigated	Un-irrigated	Total	Irrigated	Unirrigated	Total
Landless	870.96(97.2)	24.89(2.8)	895.85(33.1)	840.92(98.9)	8.5(1.1)	849.42(30.8)	15.6(88.6)	2(11.4)	17.6(38.0)
Below 2.5	774.64(96.6)	26.59(3.4)	801.23(29.6)	788.33(98.0)	15.75(2.0)	804.08(29.2)	10.8(84.4)	2(15.6)	12.8(27.6)
2.5-5.0	424.74(97.2)	11.85(2.8)	436.59(16.1)	487.45(98.6)	6.8(1.4)	494.25(17.9)	8.4(80.7)	2(19.3)	10.4(22.4)
5.0-10.0	349.07(97.9)	7.15(2.1)	356.22(13.1)	395.19(97.3)	10.75(2.7)	405.94(14.7)	4.3(100)	-	4.3(9.4)
10.0-20.0	212.33(96.7)	7.22(3.3)	219.44(8.1)	188.51(92.6)	1.92(7.4)	203.46(7.4)	1.15(100)	-	1.15(2.5)
Total	2632.6(97.2)	76.84(2.8)	2709.44(100)	2700.4(97.1)	56.75(2.1)	2757.15(100)	40.25(87.0)	6(13.0)	46.25(100)

Figures in parentheses are percentage of total

Economic Status	Rice		Cotton		Wheat		Mustard		Annual productivity (Rs.)
	Yield per acres (kg)	Productivity per acres (Rs.)	Yield per acres (kg)	Productivity per acres (Rs.)	Yield per acres (kg)	Productivity per acres (Rs.)	Yield per acres (kg)	Productivity per acres (Rs.)	
Landless	1516.6	34882	819.7	35247	1643.6	23010	627.2	20071	28381.2
Below 2.5	1341.2	30849	830.7	35720	1726.6	24172	750.0	24000	28789.7
2.5-5.0	1018	23414	806.7	34688	1627.6	22786	892.8	28571	27448.9
5.0-10.0	1235	28405	797.9	34310	1760.8	24652	983.	31480	28837.6
10.0-20.0	1708.1	39286	861.0	37023	1736.1	24305	910.7	29144	31200.1

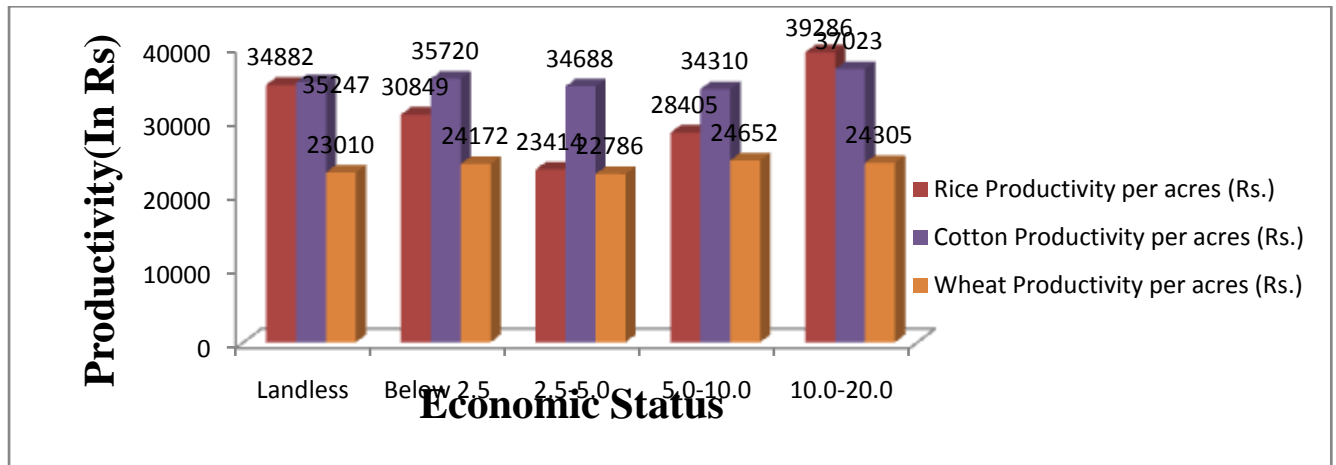


Fig 2. Distribution of yield and productivity under different crops according to economic status.

CONCLUSIONS

Agriculture is the primary occupation of Bibipur Village residents and 603 households out of 893 have their own land holdings. However, 155 households lease in their lands to other farmers and 131 lease out their agriculture land for farming operations to other farmers. Among various economic status groups marginal farmers households have the maximum area owned (235 households) and leased out lands (44 households). The present study shows that there is no significant variation in the landholding characteristics and level of irrigation. The irrigation condition of the village is also good and fields are irrigated both by canals and tube wells. About 80 percent of the cultivated area is tube wells irrigated followed by canal and other sources of irrigation. The irrigated area during kharif and rabi season is more than 95 percent. However, zaid crop are also well irrigated and more than 85 percent cultivated areas during the season is irrigated.

Crop yield and productivity are two important indicators of agriculture development. Among different economic groups, annual yield per acre of rice crop was observed to be highest in large economic group (17081.1 kg). It was also analyzed from the study that modern agriculture technology is well

accepted by Bibipur village households. They are well aware about all bio-chemical inputs, High Yielding Variety seeds, insecticides, pesticides etc.

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