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## A study the farm structure, assets, cropping pattern and cropping intensity of paddy and wheat on different size of farms in Auraiya district, of western U.P.

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**Abstract**

Paddy (*Oryza sativa* L.) belongs to the family Poaceae (Gramineae). India is one of the world's largest producers of paddy and wheat, accounting for 20% of all world paddy and wheat production. In India paddy occupies an area of 427.53 million hectares with annual production 1052.41 million tonnes with productivity 24.62 qt./ha. The area under wheat in India was reported 300.03 million hectares with the total production of 935.06 million tonnes, while productivity was recorded 31.13 quintal per hectare. The area and production of paddy in this state is about 58.61 million hectare and 14.41 million tonnes respectively with productivity of 2460 kg per hectare and the area under wheat in U.P. was 97.3 million hectares and production was 30.30 million tonnes while productivity per hectare was 31.13 quintal. Auraiya district of Uttar Pradesh was selected purposively because of inconvenience of investigation and to avoid difficulties for collection of data due to time and budget constraints. Two block (Bidhuna & Sahar) highest area under paddy and wheat cropping were selected purposively and ten villages were selected randomly. The respondents were stratified into three size groups i.e., (i) marginal (below 1 ha), (ii) small (1-2 ha) and (iii) medium (2-4 ha). The data was collected during the agricultural year 2014-15. The average size of farm worked out i.e. 0.99. on an average, per farm and per hectare investment on fixed assets come to Rs. 557862.00 and Rs. 559596.70, respectively. Cropping intensity came 298.85 per cent. On an average, gross income, net income of paddy and wheat worked out were Rs. 57548.58 Rs. 61211.49 and Rs. 12126.98 Rs. 16689.45, respectively. Input-output ratio of paddy and wheat were worked out viz., 1:1.27 and 1:1.37, respectively.

**Keywords:** Tabular analysis and Weighted mean

**Introduction**

India is one of the world's largest producers of paddy and wheat, accounting for 20% of all world paddy and wheat production. Paddy is grown on an area of 154 million hectares with an annual production of 600 million tonnes in the world with the productivity of 3.9 tonnes/ha during 2010 (Rao, *et al.* 2010). Paddy is India's pre-eminent crop, and is the staple food of the people of the eastern and southern parts of the country. In the world, India ranks first in area but second in production after China. In India, paddy occupies an area of 42.75 million hectares with annual production 104.24 million tonnes with productivity 2.46 tonnes/ha. The area under wheat in India was reported 30.00 million hectares with total production of 93.50 million tonnes, while productivity was recorded 3.11 tonnes per hectare.

Uttar Pradesh is an important paddy growing state in the country. The area and production of paddy in this state is about 5.861 million hectare and 14.41 million tonnes, respectively with productivity of 2.46 tonnes per hectare. The area under wheat in U.P. was 9.73 million hectares and production was 30.30 million tonnes while productivity per hectare was 31.13 quintal.

In Auraiya district area, production and productivity of paddy 52566 thousand ha, 164.32 thousand mt and 31.26 q/ha, whereas, wheat stood 103644 thousand ha, 376.02 thousand mt and 36.28 q/ha, (Arth Evam Sankhya Prabhag, Auraiya, 2014-15). Wheat is an important food crop grown throughout the world. In India, its whole meal flour is used for making Chapatti, Purées, Paratha, Haluwa and upama. Wheat is a staple food of our country and plays an important role in Indian economy. It also played an important role in shaping agriculture and food security policy.

The demand of wheat is increasing and by 2020 has been projected between 105-109 million tonnes. Most of this increase in production will have to manage from increase in productivity, as the land area under wheat is not expected to increase. Efficient input management along with varietal improvements are the two basic aspects that can help us in achieving the target. To fully exploit the potential of wheat varieties the development of special management of water,

nutrient and weed control etc. are prime need which ensure for higher yield. The cost of cultivation is an important economic indicator being taken into consideration by the Govt. of India while fixing procurement/support prices for various agricultural crops. But, wide variations have been noticed in the cost of cultivation of the crops. It varies from region and even from farmer to farmer of a given region. The study of cost and returns provides the idea of profitability and could be a yard stick to planners and policy makers (Legesse and Basavaraja, 2011).

The demand for paddy – wheat is expected to increase due to population increases by 1.6 per cent, and area under paddy – wheat is expected to reduce. Hence, there is a need to increase yield and productivity of paddy – wheat with reduces inputs to feed the burgeoning population. Because of high productivity, stability and less risk the wide adoption of paddy – wheat cropping will have to play a major role in future planning to sustain self sufficiency of foodgrains in coming years. Despite a substantial size of area and production of paddy and wheat in northern states, eastern U.P. and Auraiya district of western U.P. too, farmers are in a miserable condition as they do not get the remunerative price of their produce. This causes a number of problems and a lot of exploitation as experienced at various levels.

### Methodology

The study involves a comprehensive data base of which most are primary in respect to their origin. Keeping in view the limitation of material resources and time factor, the study was conducted using sample survey method for collection of the relevant information. Sampling design, method of data

collection and specification of analytical tools, all these together, constitute the methodological part of present study. The chapter is solely devoted for a detailed discussion on these aspects.

### Sampling technique

The purposive cum random sampling designs were used for the selection of district, blocks, villages and respondents.

### Selection of District:

Auraiya district of western U.P. were selected purposively to avoid the operational inconvenience of the investigator.

**Selection of Block:** Out of seven blocks of selected district, two blocks namely Bidhuna and Sahar having highest area under paddy and wheat were selected randomly.

**Selected of village:** A list of all the villages falling under selected block were prepared and arranged in ascending order according to area covered by paddy and wheat crop and ten villages were selected randomly from the list.

**Selection of respondents:** Lists of paddy-wheat growers of selected villages were prepared along with their size of holding. Thus, the farm holding categorized into three size groups viz. (1) Marginal: (Below 1.0 ha ; ) (2) Small: (1.0-2.0 ha ; ) (3) Medium: (2.0 to 4.0 ha). Fifty growers from each block were selected randomly in proportion to their number in universe in the each size group. From this list a sample of 100 respondents were selected following the proportionate random sampling technique.

**Table a:** Total households and number of households selected under different size group of farms from sample villages

Block – I Bidhuna									
S.N.	Name of village	Size group of farms							
		Marginal (Below 1.0)		Small (1.0-2.0)		Medium (2.0-4.0)		Total	
		P	S	P	S	P	S	P	S
1	Paliya	200	09	45	02	35	02	280	13
2	Muggpur	168	08	40	02	22	01	230	11
3	Purwa Dhane	138	06	48	02	14	01	200	09
4	Belpur Bela	143	07	27	01	20	01	190	09
5	Kalyanpur kakrai	135	06	30	01	15	01	180	08
	Sub total	784	36	190	08	106	06	1073	50
Block – II Sahar									
1	Thakur Gaon	165	08	50	03	45	2	260	13
2	Aghar	150	07	41	02	29	01	220	10
3	Bhaisodi	133	07	35	02	22	01	190	10
4	Pauthi	130	07	20	01	10	01	160	09
5	Anda	110	06	23	01	17	01	150	08
	Sub total	688	35	169	09	123	06	980	50
	Total	1472	71	359	17	229	12	2053	100

P=Total number of households, S=Selected number of households

**Selection of Market:** Bidhuna market where most of the foodgrains of area is being disposed of as such leading Bidhuna market were selected for the study of marketing aspect. A sizeable number of intermediaries were interviewed for assessing the imperfections of paddy and wheat marketing system. The sample markets were well connected with road facilitating smooth transportation of the produce from the study area.

**Collection of Data:** Primary data were collected through personal interview method on well-structured pre-tested schedule specially designed for this study, while secondary

data were collected from published/ unpublished record of district and blocks, headquarters, books, journals, periodicals, news bulletins etc. The primary data from 100 sample farmers (71 marginal, 17small and 12 medium size-groups) were collected through a well prepared and pre-tested schedules of enquiry by interview method.

**Period of study:** The data pertained for the agriculture year 2014-2015.

**Analytical Tools:** Analytical tools used for the analysis and interpretations of the data are given below.

**Tabular analysis:** Tabular analysis was used to compare the different parameters among marginal, small and medium size group of the farmers. Family composition, investment pattern; crop-wise costs and returns etc. were computed and presented in tabular forms. In this computation weighted average were used.

$$W.A. = \frac{\sum W_i X_i}{\sum W_i}$$

Where,

W. A. = Weighted average

$X_i$  = Variable

$W_i$  = Weight of variable

### Result and Discussion

This Discussion deals mainly with the findings of the present study i.e. farm structure, cropping pattern, investment on farm, cropping intensity, cost of cultivation, measures of costs and farm incomes, regression analysis, marginal value productivities, extent of marketable and marketed surplus, pattern of disposal, producer's share in consumer's rupee, marketing costs and margins, price spread in different marketing channels and their relative marketing efficiency, constraints of production and marketing.

### Structure of farms

The study on the structure of sample farms and family are of significant importance as these influence the resource use pattern on farms. The structure of farm family highlights overall condition within and around the farms such as size of holding, family size, age, cropping pattern and intensity of cropping etc.

The characters existing on sample farms are discussed in following page.

### Average size of holding:

The size of holding is supposed to positively correlate with volume of foodgrains production. The farmers having larger size of holding are economic better off and they are in a position to adopt easily the improved farm practices. On the other hand, the farmer having smaller farm unit have been desired to produce as much they can with a view to marketing both their ends meet and also to improve their economic condition.

**Table d:** Average size of sample farm family by size of farms.

S. No.	Size group of farms	No of sample farms	Total Population	Average number of sample farm family		
				Male	Female	Total
1	Marginal	71	674	5.40 (56.90)	4.09 (43.09)	9.49 (100.00)
2	Small	17	269	8.50 (53.72)	7.32 (46.27)	15.82 (100.00)
3	Medium	12	162	7.50 (55.56)	6.00 (44.44)	13.50 (100.00)
Total		100	1105	6.00 (54.29)	5.05 (45.70)	11.05 (100.00)

(Figures in parenthesis show per cent to corresponding total)

Table d indicates that average size of farm family was 11.05 which show increasing trend with decrease in size of farms and varied from 9.49, 15.82 to 13.50 persons per farm.

**Table b:** Average size of sample farm by size group of farms.

S. No.	Size group of farms	Number of farms	Total cultivated area (ha)	Average size of farm (ha)
1	Marginal	71	43.49 (43.63)	0.61
2	Small	17	21.61 (21.68)	1.27
3	Medium	12	34.59 (34.69)	2.88
Total		100	99.69 (100.00)	0.99

(Figures in parenthesis show the per cent to corresponding total)

This table indicates that overall average size of farms was found to be 0.99 ha, which varied from 0.61 ha on marginal, 1.27 ha on small and 2.88 ha on medium farms alongwith total cultivated area 99.69 ha on sample farms.

### Composition of sample farm families according to age

Table c shows the distribution of sample population by size of farms. Out of total sample population viz. 1105, children were constituted 38.37 per cent, adult 50.77 per cent and old age 10.58 per cent. It was noticed that major composition of family member belongs to age group of 15-55 yrs.

**Table c:** Composition of sample farms families according to age.

S. No.	size group of Farm family	Total Population	Children below 15 yrs.	Adult 15-55 yrs.	Old above 55 yrs.
1.	Marginal	674.00 (100.00)	265.00 (39.32)	339.00 (50.29)	70.00 (10.38)
2.	Small	269.00 (100.00)	114.00 (42.37)	125.00 (46.47)	30.00 (11.15)
3.	Medium	162.00 (100.00)	45.00 (27.77)	100.00 (61.72)	17.00 (10.49)
Total		1105.00 (100.00)	424.00 (38.37)	560.00 (50.77)	117.00 (10.58)

(Figures in parenthesis shows per cent to corresponding total)

### Size of family according to size group of farms:

Size of family is of most importance in the context of agricultural occupation. Large family size indicates more working force of the family and may be utilized as labour force at the time of various operations of the farms. The average family size group of sample farm is given in Table d.

### Per farm investment on fixed capital:

Table e exhibits per farm investment on different components of fixed assets under different size group of farms.

**Table e:** Per farm investment for different components under different Size group of farms (in Rs.).

S. NO.	Particulars	Size group of farms			
		Marginal	Small	Medium	Average
1.	Farm Buildings	204528.16 (57.29)	299447.05 (30.66)	445747.5 (38.66)	249610.7 (44.74)
A.	Residential	171239.00 (47.96)	253470.58 (25.95)	393833.33 (34.15)	211930.00 (37.98)
B.	Cattle shed	21260.56 (5.95)	22135.29 (2.27)	23845.00 (2.08)	21719.40 (3.89)
C.	Godown	12028.16 (3.37)	23841.17 (2.44)	28069.16 (2.43)	15961.30 (2.86)
2.	Machinery and implements	61886.46 (17.33)	466627.40 (47.79)	600235.41 (52.06)	212294.29 (38.06)
I	Minor implement	1178.01 (0.33)	1436.17 (0.15)	1214.58 (0.11)	1226.29 (0.21)
a.	Khurpi	191.76 (0.05)	180.00 (0.02)	175.00 (0.01)	187.75 (0.03)
b.	Kudal	269.94 (0.07)	337.64 (0.04)	310.00 (0.04)	286.26 (0.05)
c.	Sickle	261.90 (0.07)	262.65 (0.02)	248.75 (0.02)	260.45 (0.04)
d.	Spade	454.40 (0.13)	655.88 (0.07)	480.83 (0.04)	491.83 (0.09)
II	Major implement	60708.45 (17.00)	465191.20 (47.64)	599020.83 (51.95)	211068.00 (37.85)
a.	Tractor	35563.38 (9.96)	341176.47 (32.89)	407500.00 (35.34)	149150.00 (26.73)
b.	Cultivator	3415.49 (0.95)	22764.70 (2.33)	35791.00 (3.10)	49245.00 (8.82)
c.	Trolley	8098.59 (2.27)	51470.58 (5.27)	84500.00 (7.32)	24640.00 (4.41)
d.	Harrow	2422.53 (0.68)	16794.11 (1.71)	26916.00 (2.33)	7805.00 (1.39)
e.	Thresher	5105.63 (1.44)	24970.58 (2.56)	34125.00 (2.95)	11965.00 (2.14)
f.	Chaff cutter	5052.81 (1.41)	4235.29 (0.44)	4375.00 (0.37)	4832.50 (0.87)
g.	Sprayer	286.61 (0.08)	1267.64 (0.13)	1479.00 (0.12)	596.50 (0.10)
h.	Winnower	645.07 (0.18)	1764.70 (0.18)	3058.33 (0.26)	1125.00 (0.20)
i.	Pata	118.30 (0.03)	747.05 (0.08)	1275.00 (0.11)	364.00 (0.07)
3.	Irrigational structure	12485.91 (3.49)	45941.17 (4.70)	45583.33 (3.95)	22145.00 (3.97)
a.	Diesel engine	5633.80 (1.57)	11941.17 (1.22)	12625.00 (1.10)	7545.00 (1.35)
b.	Electric motor	3422.53 (0.95)	18176.47 (1.86)	17125.00 (1.48)	7575.00 (1.36)
c.	Tube well	3429.57 (0.97)	15823.53 (1.62)	15833.33 (1.37)	7025.00 (1.26)
4.	Live-Stock	78115.49 (21.88)	165936.20 (17.12)	61541.66 (5.33)	73812.00 (13.23)
a.	Buffalo	50647.88 (14.18)	47205.88 (9.95)	42458.33 (3.68)	49080.00 (8.79)
b.	Cow	13232.40 (3.71)	14029.41 (4.88)	16750.00 (1.45)	13790.00 (2.48)
c.	Goat	14235.21 (3.99)	3264.71 (2.39)	2333.33 (0.20)	10942.00 (1.96)
	Total	357016.06 (100.00)	976515.87 (100.00)	1153108.00 (100.00)	557862.00 (100.00)

(Figures in parenthesis show per cent to corresponding total)

Present value of investment on farm building (Residence, cattle-shed and godown) was observed to be Rs. 204528.16, 299447.05 and 445747.5 under marginal, small and medium size farm, respectively. Investment on machinery and implements under marginal, small and medium farms were found to be Rs. 61886.46, Rs. 466627.40 and Rs. 600235.41, respectively. Investment on Irrigational structure under marginal, small and medium farms was found to be Rs. 12485.91, Rs. 45941.17 and Rs. 45583.33, respectively. Investment on livestock under marginal, small and medium farms was found to be Rs. 78115.49, 165936.20 and

61541.66, respectively. Total investment on marginal, small and medium farm was worked out to be Rs. 357016.06, Rs. 976515.87 and Rs. 1153108.00, respectively.

Per farm total investment shows increasing trend with increasing size group of farms. On an overall average of size group of farms it was worked out to be Rs. 557862.00.

#### Per hectare investment on fixed capital:

Per hectare investment for different particulars under different size group of farms has been presented in Table f.

**Table f:** Per hectare investment of different components under differentsize group of farms (in Rs.)

S. NO.	Particulars	Size group of farms			
		Marginal	Small	Medium	Average
1.	Farm Buildings	333904.4 (57.29)	235566.9 (30.66)	1546.39.2 (38.66)	250386.9 (44.74)
A.	Residential	279558.5 (47.96)	199398.4 (25.96)	136629.1 (34.15)	212589.00 (37.98)
(i)	Kachcha	108923.9 (18.69)	31605.74 (4.11)	-	54369.55 (9.71)
(ii)	Pacca	170634.6 (29.27)	167792.7 (21.84)	136629.1 (34.15)	158219.5 (28.27)
B.	Cattle shed	34709.12 (5.96)	17413.23 (2.27)	8272.33 (2.07)	21786.94 (3.89)
(i)	Kachcha	9510.23 (1.63)	3914.85 (0.51)	985.83 (0.26)	5339.55 (0.95)
(ii)	Pacca	25198.89 (4.33)	13498.38 (1.76)	7286.5 (1.82)	16447.39 (2.94)
C.	Godown	19636.69 (3.37)	18755.2 (2.44)	9737.78 (2.43)	16010.93 (2.86)
(i)	Kachcha	8969.88 (1.54)	-	-	3913.13 (0.69)
(ii)	Pacca	10666.81 (1.83)	18755.2 (2.44)	9737.78 (2.43)	12097.8 (2.17)
2.	Machinery and implements	101033.3 (17.34)	367083.1 (47.79)	208234.3 (52.06)	212954.5 (38.06)
I	Minor implement	1932.19 (0.34)	1129.8 (0.15)	421.37 (0.11)	1230.1 (0.22)
a.	Khurpi	313.06 (0.06)	141.60 (0.02)	60.71 (0.02)	188.34 (0.04)
b.	Kudal	440.69 (0.08)	265.61 (0.04)	107.55 (0.03)	287.15 (0.05)
c.	Sickle	427.59 (0.08)	206.61 (0.03)	86.3 (0.02)	261.26 (0.04)
d.	Spade	741.85 (0.12)	515.96 (0.06)	166.81 (0.04)	493.35 (0.09)
II	Major implement	99110.14 (17.00)	365191.20 (47.64)	207813.00 (51.95)	211724.4 (37.84)
a.	Tractor	58059.33 (9.96)	252660.8 (32.89)	141370.3 (35.34)	149613.8 (26.74)
b.	Cultivator	5575.99 (0.96)	17908.37 (2.33)	12416.88 (3.11)	10622.93 (1.89)
c.	Trolley	13221.43 (2.26)	40490.51 (5.27)	29314.83 (7.33)	24716.62 (4.42)
d.	Harrow	3954.93 (0.68)	13211.48 (1.72)	9337.95 (2.33)	7829.27 (1.39)
e.	Thresher	8335.25 (1.43)	19643.68 (2.56)	11838.68 (2.96)	12002.2 (2.15)
f.	Chaff cutter	8249.03 (1.42)	3331.79 (0.43)	1517.77 (0.38)	4847.52 (0.87)
g.	Sprayer	467.92 (0.08)	997.22 (0.13)	513.15 (0.12)	598.35 (0.11)
h.	Winnower	1053.12 (0.18)	1388.25 (0.18)	1061.10 (0.26)	1128.49 (0.20)
i.	Pata	193.14 (0.03)	587.70 (0.07)	442.32 (0.11)	365.13 (0.07)
3.	Irrigational structure	20383.99 (3.49)	36140.68 (4.71)	15813.81 (3.95)	22213.86 (3.96)
a.	Diesel engine	9197.52 (1.58)	9393.81 (1.23)	4379.87 (1.09)	7568.46 (1.35)
b.	Electric motor	5587.49 (0.95)	14298.93 (1.86)	5941.02 (1.49)	7598.55 (1.36)
c.	Tube well	5598.98 (0.96)	12447.94 (1.62)	5492.92 (1.37)	7046.85 (1.25)
4.	Live-Stock	127528.2 (21.88)	129407.60 (16.84)	21350.10 (5.34)	74041.52 (13.23)
a.	Buffalo	82685.67 (14.19)	76436.59 (9.95)	14729.69 (3.68)	49232.62 (8.79)
b.	Cow	21602.67 (3.71)	34136.56 (4.88)	5810.94 (1.45)	13832.88 (2.48)
c.	Goat	23239.83 (3.98)	2568.26 (2.39)	809.48 (0.20)	10976.02 (1.96)
	Total	582849.80 (100.00)	768198.30 (100.00)	400037.40 (100.00)	559596.70 (100.00)

(Figures in parenthesis show the per cent to corresponding total)

Table f displays the investment on farm building (residence, cattle-shed, godown) machinery & implements, irrigational structure, livestock and other.

On an overall average, investment on farm building, machinery and implements, irrigational structure and livestock per hectare was worked out and it came to Rs. 250386.90, 212954.50, 22213.86 and 74041.52, respectively. Total investment on marginal, small and medium size group of farms were found to be Rs.582849.80, Rs.768198.30 and Rs. 400037.40, respectively. On all farms total investment per

hectare was found to be Rs. 559596.70.

#### Cropping pattern:

Cropping pattern deals with the distribution of land available for cultivation under different crops in particular season during a year. It is most important factor which determines the investment for different inputs on a farm and income of farmers based on resource availability and its use under various agro-climatic conditions. Cropping pattern of sample farms are given in Table g.

**Table g:** Cropping pattern by different size group of sample farms (in ha).

S. NO.	Crops	Size of sample farms (ha)			
		Marginal	Small	Medium	Average
(A)	<b>Kharif Crops</b>				
1.	Paddy	0.53 (29.49)	1.03 (28.28)	1.98 (24.86)	0.803 (27.84)
2.	Maize	0.03 (1.47)	0.06 (1.73)	0.22 (2.79)	0.05 (1.98)
3.	Bajara	0.02 (1.37)	0.052 (1.45)	0.13 (1.66)	0.04 (1.49)
4.	Tomato	0.01 (0.71)	0.04 (1.03)	0.165 (2.07)	0.03 (1.21)
5.	Brinjal	0.005 (0.27)	0.024 (0.67)	0.113 (1.42)	0.021 (0.73)
6.	Jowar	0.003 (0.17)	0.018 (0.50)	0.086 (1.08)	0.016 (0.55)
	Total	0.612 (33.41)	1.206 (33.66)	2.706 (33.88)	0.975 (33.80)
(B)	<b>Rabi Crops</b>				
1.	Wheat	0.52 (28.22)	1.06 (29.48)	1.98 (24.79)	0.785 (27.22)
2.	Mustard	0.025 (1.36)	0.041 (1.15)	0.108 (1.35)	0.038 (1.33)
3.	Gram	0.032 (1.75)	0.060 (1.68)	0.154 (1.93)	0.052 (1.80)
4.	Potato	0.012 (0.66)	0.025 (0.69)	0.158 (1.98)	0.032 (1.11)
5.	Sugarcane	0.014 (0.76)	0.038 (1.06)	0.150 (1.88)	0.035 (1.21)
6.	Berseem	0.009 (0.49)	0.010 (0.28)	0.107 (1.34)	0.022 (1.76)
	Total	0.609 (33.24)	1.230 (34.34)	2.657 (33.27)	0.964 (33.43)
C.	<b>Zaid crops</b>				
1	Urd	0.234 (12.77)	0.494 (13.79)	1.166 (14.60)	0.390 (13.52)
2	Moong	0.265 (14.47)	0.491 (13.71)	1.170 (14.65)	0.413 (14.32)
3	Muskmelon	0.075 (4.09)	0.082 (2.29)	0.146 (1.82)	0.085 (2.95)
4	Watermelon	0.037 (2.02)	0.079 (2.21)	0.142 (1.78)	0.057 (1.98)
	Total	0.611 (33.35)	1.146 (32.00)	2.624 (32.85)	0.945 (32.77)
Gross Cropped area		1.83.00 (100.00)	3.58.00 (100.00)	7.98.00 (100.00)	2.88.00 (100.00)
Net cultivated area		0.61	1.27	2.88	0.99

(Figures in parenthesis show the per cent to corresponding gross cropped area)

It is evident from Table g that net cultivated area under marginal, small and medium size of farms was observed to be 0.61, 1.27 and 2.88; and gross cropped area on marginal, small and medium size of farms accounted to be 1.83, 3.58 and 7.98 ha, respectively.

Area under paddy on marginal, small and medium size of farms was found to be 0.53, 1.03 and 1.98 ha, respectively. Overall percentage share of paddy was observed 27.84 per

cent among all crops. Area under wheat on marginal, small and medium size group of farms was calculated 0.52, 1.05 and 1.98 ha, respectively. Overall percentage share of wheat came to be 27.22 per cent among all crops.

#### Cropping intensity:

Cropping intensity of sample farms were calculated & given in Table h.

**Table h:** Cropping intensity on different size group of farms.

S. NO.	Size group of farms	No. of farms	Net cultivated area (ha)	Gross cropped area (ha)	Cropping intensity
1	Marginal	71	0.61	1.83	298.85
2	Small	17	1.27	3.58	281.83
3	Medium	12	2.88	7.98	277.03
	Average	100	0.99	2.884	289.55

Table h shows the maximum cropping intensity was observed (298.85 per cent) on marginal size of sample farms followed by small (281.83 per cent) and medium (277.03 per cent) with an average on sample farms came to 289.55 per cent.

### Summary and Conclusion:

The present chapter summarizes undertaken study entitled “Production and marketing of paddy and wheat in Auraiya district, western U.P.” and salient inferences and conclusions drawn are as follows.

The sample of 100 farmers of selected block were considered to study and resulted average size of holding varied 0.61, 1.27 and 2.88 hectare in respect of marginal, small and medium farms, respectively. On all farms per farm investment to total assets on farm building, implements and machineries, irrigational structure and livestock accounted for 44.74, 38.06, 3.97 and 13.23 per cent, respectively. Cropping pattern of the sample farm for paddy and wheat per cent area to gross cultivated area shows increasing trend with increasing size of farms. Per farm area for paddy was accounted 0.53, 1.03 and 1.98 hectare whereas, it accounted for wheat 0.052, 1.06 and 1.99 hectare under marginal, small and medium farm, respectively. Cropping intensity varied from 298.85, 281.83 and 277.03 per cent for marginal, small and medium farms, respectively, Intensity of cropping showed decreasing trend with increasing size of farms except medium farms.

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