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# Golden Research Thoughts

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## FARM PRODUCTION PATTERNS IN THE CHAR AREAS OF SONITPUR DISTRICT OF ASSAM



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### INTRODUCTION:

The riverine island of the Brahmaputra is known as *char* or *chapor* in the local terms. Despite all round backwardness of the char area, the contribution of agriculture of char areas towards the state economy has been considerably large. The char development department of Assam estimated the magnitude of coverage to be 3, 60,927 hectare in the State with the inclusion of 2251 numbers of villages. Out of this geographical area 2, 42,277 hectare is cultivable. Hence the magnitude of char areas in the district is sufficiently large to influence the economy of the State of Assam.

After 1960, rapid changes in the agriculture has been taking place to raise the over all performance of agriculture through developing new strategies from Government side and generating

time to time new production technology in the country. In spite of these measures normal food requirement remains unsatisfied in the weaker areas of the country wherefrom production levels are below the the national averages. State of Assam is facing food crisis due to rapid increase in population which is not followed by proportionate increase in areas and productivities. The agriculture is the mainstay of the char people. On the other hand, the char areas are characterized by all round backwardness and majority of the people are below



poverty line. For upliftment of agriculture in these areas suitable strategies are to be formulated. For successful planning information regarding the suitable crop and other farm enterprises along with the production pattern in the farms of the area are of utmost importance. This study is therefore, planned to examine the production patterns of the char areas of the Sonitpur district of Assam.

### METHODOLOGY

The sample of this study is taken using the two-stage random sampling technique. The villages under the char area are the first unit of sampling and the farm households are the second for this investigation. A sample of 12 char villages (10 per cent) are selected at random. From the selected

**FARM PRODUCTION PATTERNS IN THE CHAR AREAS OF SONITPUR DISTRICT OF ASSAM**

villages a list of the farm households is prepared along with the operational area per farm. These are then arranged in ascending order of their operational areas and their distribution are transformed to get four size classes of marginal, small, medium and large for the study. A sample of 20 per cent farms is selected at random from each of these categories of farms giving a total sample of 50 marginal, 45 small, 40 medium and 35 large farm with a grand total of 170 farm holding for the investigation. The study is based on the primary data pertaining to the year 2014-15.

**Results and discussion**

The results of the study are discussed below.

The farm production patterns include the various important enterprises of crops and other activities associated with the production and incomes of the farm. The importance of the crop activities are shown through the levels of their coverage of the total gross cropped areas and of the other activities through the volume of their numbers or units. These are worked out for each of the farm groups of the char area and the results are depicted in Table 1.

**Table 1. Farm production patterns**

Enterprises	Unit	Marginal farm	Small farm	Medium farm	Large farm	Entire farm
<b>A) Crop enterprises</b>						
<b>Kharif crops</b>						
Sali rice	Per cent	6.21	9.35	11.13	12.36	9.82
Jute	„	6.36	8.65	9.48	9.67	8.49
Black gram	„	3.68	0.98	1.99	2.53	2.31
<b>Rabi Crops</b>						
Wheat	„	6.72	7.79	7.23	6.55	7.11
Lathyrus	„	19.91	12.50	7.65	5.92	11.45
Mustard	„	2.98	4.72	5.12	9.78	5.68
Mustard+lentil	„	1.83	2.58	5.72	6.82	4.50
Nizer	„	--	--	1.28	1.76	0.62
Coriander	„	0.39	0.87	0.59	2.24	0.85
Chilli	„	3.78	1.52	2.79	1.23	2.36
Sweet potato	„	--	1.00	1.92	1.34	0.95
Brinjal	„	4.85	3.78	1.83	--	2.59
Potato+sweet gourd	„	--	--	1.15	0.85	0.62
Garlic	„	0.78	0.59	0.89	0.76	0.87
Onion	„	0.53	0.75	--	--	0.29
Radish	„	1.03	1.59	1.82	1.75	2.21
Tomato	„	--	--	0.23	1.43	0.39
Knolkhol	„	0.23	0.54	0.75	0.85	0.62
Bitter gourd	„	0.25	0.35	--	0.96	0.41
<b>Summer crops</b>						
Boro rice	„	26.73	27.86	23.53	21.23	24.85
Early ahu rice	„	3.69	4.33	4.78	4.48	4.29
Pointed gourd	„	2.06	2.95	3.46	2.78	2.95
Lady's finger	„	5.62	3.85	2.80	2.56	3.72
Ridge gourd	„	2.37	3.45	3.86	2.15	3.05
Cropped area	„	100.00	100.00	100.00	100.00	100.00
Net area	„	(1.33)	(2.54)	(3.71)	(5.95)	(3.36)
Cropping intensity	Hectare	0.81	1.59	2.35	3.87	2.10
Farm income/ha cropped area	Per cent	164.20	159.75	157.87	153.75	160.00
	Rs.	53035.92	51515.28	43972.70	36884.60	51923.09
<b>B) Other enterprises</b>						
Cattle	Unit	0.61	0.85	1.78	2.36	1.38
Goat	„	0.45	0.62	0.63	1.02	0.66
Poultry	„	4.24	5.08	6.27	8.03	5.82
Duck	„	0.25	0.33	0.76	1.12	0.64
Farm income/ha cropped area	Rs.	58852.64	56491.19	48032.59	40486.67	40995.73

Figures in parentheses indicate area in hectare.

Farm income is the return to the fixed farm resources per hectare cropped area.

The enterprises in the table indicate that, the crop enterprise mix includes *Sali* rice, jute and black gram during *kharif* season; wheat, lathyrus, mustard, mustard + lentil, nizer, coriander, chilli, sweet potato, brinjal, potato + sweet gourd, garlic, onion, radish, tomato, knolkhol and bitter gourd during the rabi season and boro rice, early *ahu* rice, pointed gourd, lady's finger and ridge gourd during the summer season. The enterprises other than crops covered mostly local breeds of cattle, goat, poultry and duck.

The distribution of the gross cropped area brings out that for the average farm of the entire area, the most important crop activity is found to be the *boro* rice occupying 24.85 per cent of total cropped area. This is followed by lathyrus covering 11.45 per cent cropped area and *Sali* rice with 9.82 per cent cropped area. The next important crop is jute with 8.49 per cent cropped area. The position of least important crop is shared by nizer, potato+ sweet gourd and knolkhol covering 0.62 per cent cropped area. Among enterprises other than crops, cattle (cow) is raised to the extent of 1.38 units, goat 0.66, poultry 5.82 units and duck is included to the point of 0.64 units per farm. The cropping intensity is worked out to be 160.00 per cent for this farm.

The farm category wise distribution of cropped area indicates that *boro* rice is the most dominant crop enterprise in each of the farm sizes covering 21.23 per cent cropped area in large holding to 27.86 per cent in small farm. The next important crop is lathyrus in small farm with 12.50 per cent cropped area and in marginal holding covering 19.91 per cent cropped area. This position is occupied by *Sali* rice in each of medium and large holding with 11.13 and 12.36 per cent cropped area, respectively. This is followed by jute in each of the small (8.65 per cent area) medium (9.48 per cent) and large holding (9.67 per cent). Wheat occupied this rank in marginal farm. The least important crop is knolkhol covering 0.23 per cent cropped area in marginal farm. This rank is claimed by bitter gourd (with 0.35 per cent cropped area) in small farm, tomato (with 0.23 per cent) in medium farm and garlic (with 0.76 per cent) in large holding. Nizer, potato + sweet gourd and tomato are not cultivated in marginal and small farms. Sweet potato is also not raised in marginal farm. Medium farm does not raise onion and bitter gourd. In the same way, brinjal and onion is not found in large holding. Among other enterprises, cattle, goat, poultry and duck are found to be maintained in all the farm sizes with increasing trend to the farm sizes. Cattle is included ranging from 0.61 units in marginal farm to 2.36 units in large holding. Goat is raised from 0.45 units in marginal to 1.02 units in large farm. Poultry and duck is maintained from 4.24 and 0.25 units, respectively in marginal farm to 8.03 and 1.12 units respectively, in large farm.

The cropping intensity is found to be decreased with the increase in farm sizes decreasing from 164.20 per cent in marginal to 153.75 per cent in large holding. The average annual farm income (return to fixed farm resources) per hectare cropped area is estimated for each farm category. These incomes for crop activities alone and for all farm activities indicate inverse relationship to the farm sizes. The income generated from crops alone decreased from Rs. 53035.92 per hectare in marginal farm to Rs. 36884.60 in large holding. The total income derived from all farm enterprises decreased from Rs. 58852.64 per hectare in marginal farm to Rs. 40486.67 in large farm.

The overall analysis of the existing farm production-plans brings out that almost all the crops enlisted are raised in all the farms. All the enterprises other than crops are raised in each of the farm categories. Boro rice is found to be the most dominant crop in each of the farm categories covering 21.00 to 28.00 per cent cropped area. This is followed by lathyrus in marginal and small farms and by

Sali rice in medium and large holdings covering within 11.00 to 20.00 per cent cropped area. Among other enterprises poultry is found to be the popular activity in each of the farm sizes. The remaining cattle, goat and duck are also found in each farm sizes to a limited extent each. The cropping intensity of study area indicates inverse relationship to the sizes of farm and found within 153.00 to 165.00 per cent. The annual farm incomes per hectare cropped area for each generated from crop enterprises alone and that from all activities of the farm also show negative relationship to the farm sizes.

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