

Assessment of Marketable and Marketed Surplus of Rice in Relation to Farm Size

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Abstract

The significance of Rice is due to its multiple uses. Rice is primarily a high energy or calorie food and it contains usually 6-7 per cent protein. To meet the demand of increasing population and maintain the self-sufficiency, the present Rice production level of around 89 million tones, needs to be increased up to 120 million tonnes by the year 2020. U.P. has attained prominent position in Paddy area and production among the Indian states. In the agricultural economy of the district Etah, Paddy plays a remarkably important role. For conducting the research work, a three stage random sampling technique was adopted for selection of block, villages and paddy growers. The analysis showed that the percentage of the produce retained with the farmer reduced with the increase in the farm size. On overall, the percentage of total produce retained with farmer was 22.78 per cent of total paddy production. The percentage of quantity for family consumption was also reduced with increase in farm size. The quantity of marketable surplus both in absolute and percentage term increased with increase in the farm size. However, the quantity of marketed surplus increased in the absolute terms but reduced in percentage term with the increase in farm size.

Keywords: Marketable surplus, marketed surplus, paddy

The significance of Rice is due to its multiple uses. Rice is primarily a high energy or calorie food and it contains usually 6-7 per cent protein. Rice is also rich in amino acid content as compared to other cereals. The biological value of its protein is high. The fat content of Rice is 2.0 per cent. Besides the consumption of Rice in form of various dishes, the by-product of Rice is also used for variety of purposes. The biomass of Paddy straw is found to contain good amount of Nitrogen (0.61 per cent),

Phosphorus (0.08 per cent) and Potash (2.25 per cent). To meet the demand of increasing population and maintain the self-sufficiency, the present Rice production level of around 89 million tones, needs to be increased up to 120 million tonnes by the year 2020. This increase in production has to be achieved in the backdrop of declining and deteriorating resource base such as land, water, labour and other inputs and without adversely affecting the quality of environment. This indeed is a Herculean task.

Accelerated research and with the advantage of all innovative technologies. The sustainable higher production from Rice can be achieved.

The Economy of Uttar Pradesh revolves mostly around the agriculture. Paddy contributes remarkably to provide food security to the people. U.P. has attained prominent position in Paddy area and production among the Indian states. In the agricultural economy of the district Etah, Paddy plays a remarkably important role. Paddy occupied about 17 per cent of net sown area in kharif season. The area, production and productivity of Paddy in district was 54726.10 hectares, 1081934.90 quintals and 19.77 quintals/hectare respectively during 2001-02. Paddy has tremendous importance to both farming and non-farming community of India. The economic position of the farmers is not only depending on the size of the production but to a great extent on the marketed surplus as well (Singh, D., 1992). The marketed surplus is that quantity of the produce, which the farmer actually sells in the locality and market, irrespective of his requirements for family consumption, farm needs and other payments. The marketed surplus may be more, less or equal to the marketable surplus depending on various conditions (Singh, R., 1969). The various important factors that determine the size of marketable and marketed surplus of paddy are analyzed in present research work under different farm size categories to compare the degree of importance of determinants.

Material and Methods

A three-stage sampling technique was adopted for selection of block, villages and paddy growers. The district Etah was selected purposively for the research work. From the list of blocks, a block, which

had highest area under paddy crop was selected randomly. From the list of the total number of the farmers of the each village, a sample of 100 paddy growers (the farmers having 20 per cent and above area under paddy in their cropping patterns) was selected and stratified into 3 farm size groups viz. 70 marginal (0- 1 hectare), 19 small (1-2 hectares) and 11 large farmers (2 and above hectares). Both primary and secondary data were collected for the purpose of the study. First hand (Primary) data were collected from the selected paddy growers through survey method with the help of imaginatively designed and pre-tested schedules and questionnaires. The schedules and questionnaires prepared were sufficiently comprehensive and covered almost all the aspects of Paddy cultivation and marketing. The data were pertained to 2003- 04.

Results and Discussion

Number of households under study and their size of holdings

The number of households under study and their size of cultivated land in different farm size groups are given in Table 1. Out of 100 numbers of households under study, 70 belong to marginal farm size, 19 small farm size and 11 belong to large farm size category. The average size of cultivated land comes to 0.56 hectare, 1.39 hectares and 3.32 hectares in case of marginal, small and large farm size category respectively. Out of the total cultivated land (102.13 hectares), marginal, small and large farm size categories possess 39.20 hectares, 26.41 hectares, and 36.52 hectares respectively, which accounts to 38.38 per cent, 25.86 per cent and 35.76 per cent in case of respective farm size categories.

Table 1: Number of selected households and their holding size in different categories

House-hold category	No. of selected households	Total cultivated land (ha.)	Average size of holdings (ha.)
Marginal (0-1.00 ha.)	70 (70.00)	39.20 (38.38)	0.56
Small (1.00 - 2.00 ha.)	19 (19.00)	26.41 (25.86)	1.39
Large (2.00 ha. and above)	11 (11.00)	36.52 (35.76)	3.32
Total/Overall	100 (100.00)	102.13 (100.00)	1.02

Land utilization

Land resource forms the most important natural wealth of the country and its proper utilization is a matter of utmost concern to the people. The utilization of the land according to its use capability ensures that the resource is utilized to the best

advantage. Its improper use leads to wastage and can lead to progressive deterioration and loss of productivity of this vital resource. Data regarding the pattern of land utilization obtained for the sample households have been presented in Table 2.

Table 2: Per household land utilization pattern (Area in hectares)

Particulars	Farm size groups			
	Marginal	Small	Large	Overall
Total geographical area	0.59 (100.00)	1.47 (100.00)	4.08 (100.00)	1.14 (100.00)
Land put to non- agricultural uses.	0.02 (3.39)	0.04 (2.72)	0.13 (3.19)	0.04 (3.51)
Area under trees groves etc.	0.01 (1.69)	0.04 (2.72)	0.52 (12.75)	0.07 (6.14)
Current and other fallow land.	—	-	0.11 (2.69)	0.001 (0.08)
Net sown area.	0.56 (94.92)	1.39 (94.56)	3.32 (81.37)	1.02 (89.47)
Area sown more than once.	0.53 (89.83)	1.34 (91.16)	3.29 (80.64)	0.98 (85.96)

Cropping intensity

The cropping intensity has been worked out by dividing the total cropped area by cultivated area.

The cropping intensity of sample farms in different categories has been worked out and presented in Table 3.

Table 3: Cropping intensity per farm under different farm size groups

Particulars	Farm size groups			Overall
	Marginal	Small	Large	
Total cropped area (ha.)	1.09	2.73	6.61	2.01
Net sown area (ha.)	0.56	1.39	3.32	1.02
Cropping intensity (%)	194.64	196.41	199.10	197.06

The overall cropping intensity was worked out to be 197.06 per cent (Table 3). The cropping intensity was higher in case of large farm size group. It was because the large farmers have enough resource on their farm as compared to marginal and small farmers. The cropping intensity on marginal, small and large farms was 194.64 per cent, 196.41 per cent and 199.10 per cent respectively.

Marketable and marketable surplus

The marketable and marketed surplus of the paddy under different farm size groups have been assessed and presented in the Table 4. The percentage share of the produce retained with farmer reduces with increase in the farm size. In case of marginal farmers

category, out of the 12.07 quintals Paddy production, 1.95 quintals (16.16 per cent), 0.31 quintal (2.57 per cent), 0.52 quintal (4.31 per cent) and 0.05 quintal (0.41 per cent) is retained for family consumption, seed, used for feed and other purposes and storage losses respectively in case of marginal farm size group (Table 4). In case of small farm size group, out of the 38.82 quintal of Paddy produce, 6.18 quintals (15.92 per cent), 0.96 quintal (2.47 per cent), 1.60 quintals (4.12 per cent) and 0.17 quintal (0.44 per cent) have been kept for family consumption, seed, used for feed and other purposes and storage losses respectively. On large farms, out of the total production of Paddy i.e. 99.18 quintals, the quantity of 14.90 quintals (15.02 per cent), 2.34 quintals (2.36 per cent) 4.07 quintals (4.10 per cent) and 0.61 quintal (0.62 per cent) have

been kept for family consumption, seed, used for feed and other purposes and storage losses respectively and in case of overall farms 4.18 quintals (15.64 per cent), 0.66 quintal (2.47 per cent), 1.12 quintals (4.19 per cent) and 0.13 quintal (0.49 per cent) was retained for use of respective item from the total output of Paddy i.e. 26.73 quintals.

The per farm quantity of marketable surplus in case of marginal, small and large farms size groups was 9.24 quintals, 29.91 quintals and 77.26 quintals

respectively, while the marketed surplus on respective farm size was 9.32 quintals, 28.41 quintals and 72.15 quintals. The percentage of marked surplus to the total production of paddy accounted to 77.22 per cent, 73.18 per cent and 72.75 per cent in case of marginal, small and medium farm size groups respectively, while it was 74.30 per cent in case of overall farm. The percentage of marketable surplus was 76.55 per cent, 77.05 per cent and 77.90 per cent in case of respective farm size groups, while it was 77.22 per cent on overall farms.

Table 4: Per farm marketable surplus and marketed surplus of Paddy on different size groups (qt.)

Particulars	Sample size group			Overall
	Marginal	Small	Large	
Total production	12.07 (100.00)	38.82 (100.00)	99.18 (100.00)	26.73 (100.00)
Produce retained with farmer	2.83 (23.45)	8.91 (22.95)	21.92 (22.10)	6.09 (22.78)
Family consumption	1.95 (16.16)	6.18 (15.92)	14.90 (15.02)	4.18 (15.64)
Seed purpose	0.31 (2.57)	0.96 (2.47)	2.34 (2.36)	0.66 (2.47)
Used for feed and other proposes	0.52 (4.31)	1.60 (4.12)	4.07 (4.10)	1.12 (4.19)
Storage losses	0.05 (0.41)	0.17 (0.44)	0.61 (0.62)	0.13 (0.49)
Marketable surplus	9.24 (76.55)	29.91 (77.05)	77.26 (77.90)	20.64 (77.22)
Marketed surplus	9.32 (77.22)	28.41 (73.18)	72.15 (72.75)	19.86 (74.30)

Figures in parentheses indicate percentage

The marketed surplus was slightly more than the marketable surplus in case of marginal farm size group (Figure 1). It was due to the fact that farmers retain a small quantity of the Paddy than his actual requirements for family and farm needs.

This situation of selling more than the marketable surplus was termed as distress or forced sale. The farmers generally buy the produce from the market in a later period to meet their family and farm requirements.

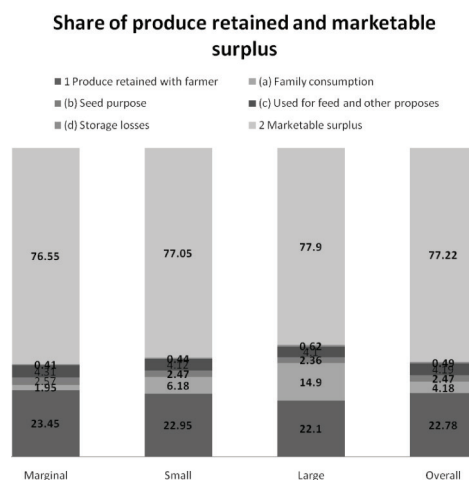


Fig. 1: Share of produce retained and marketable surplus

In case of small and large farmers the quantity of marketed surplus was less than the quantity of marketable surplus (Figure 2) due to the fact that

farmer retains some of their surplus produce and has better retention capacity.

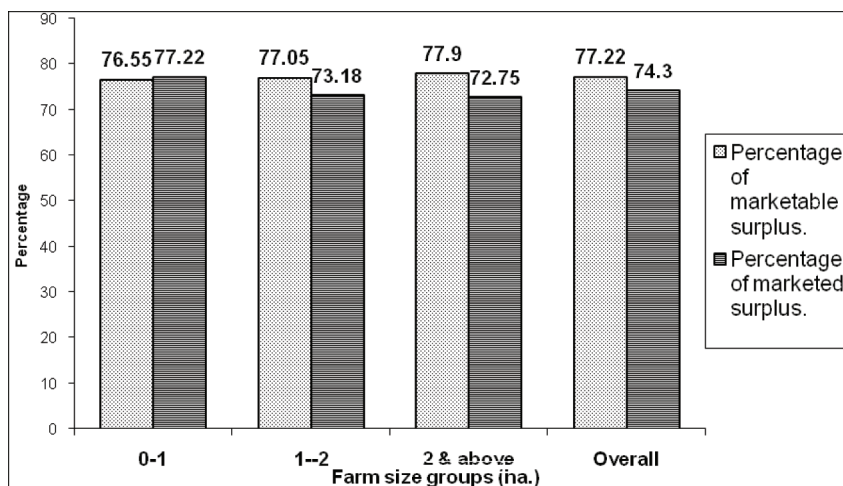


Fig. 2: Share of produce retained and marketable surplus

The marketable and marketed surplus as the percentage of paddy production was 77 and 74 per cent respectively on average of all the farms. The marketable surplus increases with the increase in the farm size both in quantity and percentage terms. The absolute figures of marketed surplus shows the increasing trend with the increase in farm size, while the percentage of marketed surplus to the total production of Paddy decreases with the increase in the farm size.

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