



Research Paper

A study of marketed and marketable surplus of paddy in Bishnah block of Jammu district, J&K

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ABSTRACT : Rice is the staple food of nearly 65 per cent of the total population in India. The country earned a huge accolade as it ushered the input-intensive green revolution in agriculture, where the yield improvement is ingrained in it. Marketed surplus increased with increasing size of farms and varied from 5.16 q in the first size group to 26.67 q for the large size group with an overall average of 11.57 q. It is quite clear that the marketed surplus increases with the increase in the size of farms. The marketed surplus by different size of farms was worked out as 48.09, 58.20, 62.37 and 57.94 per cent of the total production for small, medium, large and all farms, respectively. The percentage contribution by each size of farms in total marketed surplus was 9.31, 26.88 and 53.81 per cent, respectively, for small, medium and large size of farms. The proportion of sale to total production was observed as 48.09, 58.20, 62.37 and 57.94 per cent for small, medium, large and all farms, respectively.

KEY WORDS : Marketable surplus, Marketed surplus, Paddy

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INTRODUCTION

Green revolution was initiated during the mid sixties at a time when the country was whirling through the tyranny of food deficit. Beginning at the advent of introduction of dwarf wheat germplasm and cultivars from CIMMYT, Mexico in 1964-65, and later the new dwarf high yielding variety of rice (IRS released in 1966) from the International Rice Research Institute (IRRI), Manila, the food production increased manifolds, which transformed the status of the country from food deficit to a net food surplus country. About four-fold increase in food production was achieved when it climbed the height of 213 million tonnes of food grains in 2001-02. During the period, food production grew at a rate of about 100 percentage point every decade from barely 50 million tonnes in 1950-51. But, unfortunately, the achievement seems to have short-lived, because the food security in the country has raised doubts on its sustainability and anxiety in the production front in the recent years.

Rice is the most important crop in India, which played a critical role in food security. It is the important staple food for

more than half of the world population and provides 60-70 per cent body calorie intake to the consumers. Rice is a supreme commodity to mankind, because rice is truly life, culture, tradition and a means of livelihood to millions. In recognition to these important traits, the United Nations General assembly, in a resolution declared the year 2004 as the International Year of Rice. Rice is the 2nd important food crop of the world. It feeds more than 50 per cent of the world population. It is the staple food of most of the people of South-East Asia. Asia accounts for about 90 per cent and 91 per cent of world's rice area and production, respectively. Among the rice growing countries, India is having the largest area under rice in the world and in case of production it is next to China. However, productivity of India is much lower than that of Egypt, Japan, China, Vietnam, USA, and Indonesia as well as the average productivity of the world. It contributes 42 per cent of total food grains production and 45 per cent of the total cereal production in the country. Each and every part of the paddy plant has various uses in the society. It is also used in medicine. Rice bran oil is used as medicine as well as cooking oil (Barah and Pandey, 2005).

With an ever increasing population, demand of rice has

been increased in the country. Thereafter, various efforts such as use of high yielding varieties of rice, hybrid rice, SRI method, responsive to high dose of fertilizers coupled with improved package of practices were made to increase the production and productivity in the country through various centrally sponsored schemes. Production has been increased considerably and country is self-sufficient in rice production so far. It has been observed that the area increased from a level of 30.68 m. hectares during 1st five year plan to 42.63 m. hectares during 10th five year plan, which is nearly 39 per cent increase over 1st five year plan. The rice production has registered an appreciable increase from 25.03 m. tones during 1st five year plan to 85.73 m. tones during 10th five year plan, which is more than three times over the 1st five year plan. Similarly, the average productivity was 816 kg/ha during 1st five year plan, however it has increased to 2011 kg/ha during 10th five year plan, which is about two and half fold over the 1st plan. There were increasing trends in area, production and productivity up to 9th plan. During 10th plan area as well as production was less in comparison to 9th plan whereas the productivity has shown increasing trend.

Rice is grown in all the states and UTs in the country. The state of West Bengal ranks first in area and production of rice. Punjab has the highest productivity in the country. The major rice growing states are West Bengal, Uttar Pradesh, Andhra Pradesh, Punjab, Jammu & Kashmir, Tamil Nadu, Orissa, Bihar and Chhattisgarh. These states contribute about 72 per cent of the total area and 76 per cent of the total rice production in the country. The other states and UTs contribute the rest of 28 per cent of the area and 24 per cent of the total rice in the country. There is a wide variation in the productivity at state level. The states namely Andhra Pradesh, Goa, Haryana, Karnataka, Kerala, Manipur, Punjab, Tamil Nadu, Tripura, West Bengal, Puducherry and Delhi are having productivity above the national average (Anonymous, 2009).

According to the productivity level during 10th plan period (2002-03 to 2006-07), the States can be classified into five groups which are given below :

Sr. No.	Productivity (kg/ha)	States
1.	Above > 2500	Andhra Pradesh, Haryana, Goa, Karnataka, Punjab, Tamil Nadu, West Bengal, Andaman & Nicobar N Islands, Puducherry and Delhi
2.	2000-2500	Jammu & Kashmir, Kerala, Manipur Tripura. and Daman & Diu
3.	1500-2000	Gujarat, Maharashtra, Uttar Pradesh, Uttarakhand, Nagaland, Meghalaya , Mizoram and Dadra & Nagar Haveli
4.	1000-1500	Bihar, Arunachal Pradesh, Assam, Chhattisgarh, Himachal Pradesh, Jharkhand, Rajasthan, Orissa, and Sikkim
5.	Below < 1000	Madhya Pradesh

In J&K State also rice is an important food crop having an area and production of 257.63 thousand ha and 5637 thousand q, respectively. Keeping in view the above facts and importance of rice as a staple food crop of Jammu region, the present study was undertaken with the following objectives.

Objectives:

The present study had the following specific objectives:

- To examine the different factors affecting the marketed and marketable surplus of paddy at the farm level.
- To study the relationship between marketed and marketable surplus with the help of functional analysis.

MATERIALS AND METHODS

A multi-stage stratified random sampling was adopted for the selection of samples, with district, blocks, villages and farmers as the first, second, third and fourth stage sampling units, respectively.

There are 8 development blocks in Jammu district of J&K state. Out of these, Bishnah blocks is one of the most progressive block in which paddy is grown as the most important crop enterprise. The block is closely connected with Jammu city. The topography of the region is plain and the soil of the block is fertile and well served by a network of canals, providing assured system of irrigation. It has been recognized as one of the most suitable and potential areas for paddy cultivation. Thus, the Bishnah block has been purposively selected for the present study.

The selection of villages were made by stratified random sampling methods. The villages have been stratified into three categories according to proportionate area of paddy as given below:

- Villages having area under paddy upto 25 per cent of the gross area sown.
- Villages having area under paddy between 25 per cent to 50 per cent of the gross area sown and
- Villages having 50 per cent or more of the gross area sown under paddy.

Out of the three categories 5 per cent villages were selected randomly from each strata.

From each selected village, a list of owner cultivators was prepared and arranged in ascending order of their operated area and these were stratified into three size groups *i.e.*,

- First size groups below 1.00 hectare
- Second size group from 1.00 hectare to 2.00 hectares and
- Third size group above 2.00 hectares

15 per cent cultivators were selected randomly from each size group. Thus, the sample included 90 farmers distributed in three size groups and located in different parts of the block.

RESULTS AND DATA ANALYSIS

The per farm and per hectare production of paddy by size of farms depicted in Table 1 indicate that the production per hectare of paddy decreases with increasing size of farm. However, it varies from 32.19 q/ha on below 1.00 ha farms to 29.30 q/ha on farms with 2.00 ha and above, with overall average of 31.51 q/ha. The volume of paddy production per farms was worked out as 22.06 q for all farms exhibiting an increasing trend with increasing farm size, obviously, due to more area under paddy on large farms. It varied from 11.27 q in the first size group (*i.e.*, farm size below 1.00 ha) to 37.80 q in the third size group (*i.e.*, farm size of 2.00 ha and above).

Table 2 shows the total production and marketed surplus on per farm basis for different size group of farms. It indicates that as the size of farms increased the percentage of sales to the total production also increased. The below 1.00 ha farms disposed off only 45.79 per cent of the total production. The 1.00 ha to 2.00 ha and 2.00 ha and above ha farms sold 62.74 per cent 70.55 per cent of total production, respectively. In case of all farms, the percentage sale to total production was estimated as 52.45 per cent. The small size of farms had small quantity of marketed surplus. Per farm marketed surplus was 11.57 quintals

for all farms which is 52.45 per cent of total production.

Table 3 indicates the impact of family over marketed surplus. There are mainly two ways by which the size of family influenced the quantity of surplus to be marketed. Firstly, as the size of household increased the level of consumption increases, accordingly, the quantum of marketed surplus decreases. However, in exceptional cases when the size of household is large in order to meet their monetary needs the distress sale occurs. This generally, is more pronounced on small size of farms. The per capita marketed surplus is shown through Table 3 by different size of farms.

Table 4 depicts the per farm production and consumption and its impact on the marketed surplus and indicated that in the first size group the build of the farm produce was consumed 45.29 per cent by the farmers themselves. The proportionate consumption was less in the second (32.81 %) and third (21.73 %) size group of farms which resulted in an increase in the quintals of marketed surplus.

Conclusion:

It is concluded that marketed surplus increased with increasing size of farms. It varied from 5.13 quintals in the first size group, 9.33 q for the medium and 26.67 q for the large size

Table 1: Per farm and per hectare production of paddy at different sized farms

Size of group of farm	Area under paddy (ha)	Per hectare production (q)	Per farm production (q)
Below 1.00 ha	0.35	32.19	11.27
1.00 ha to 2.00 ha	0.45	33.05	14.87
2.00 ha and above	1.29	29.30	37.80
All farms	0.70	31.51	22.06

Table 2: Total production, marketed surplus and percentage on different sized farms (q/ha)

Particulars	Size groups			All farms
	Below 1.00 ha	1.00 ha to 2.00 ha	2.00 ha and above	
Total production	11.27	14.87	37.80	22.06
Marketed surplus (Percentage of sale to total production)	5.16 (45.79)	9.33 (62.74)	26.67 (70.56)	11.57 (52.45)

Table 3: Per farm and per capita marketed surplus on different sized farms

Size of farm (ha)	Average family size (No.)	Per farm marketed surplus (q)	Per head marketed surplus (q)
Below 1.00 ha	7.31	5.13	0.71
1.00 ha to 2.00 ha	9.18	9.33	1.02
2.00 ha and above	10.93	26.67	2.44
All farms	8.78	11.57	1.32

Table 4: Production, consumption and marketed surpluses by various size groups (q/ha)

Particulars	Size of farms (hectares)			All farms
	Below 1.00 ha	1.00 ha to 2.00 ha	2.00 ha and above	
Production	10.73 (100.00)	16.03 (100.00)	42.76 (100.00)	19.97 (100.00)
Consumption	4.86 (45.29)	5.26 (32.81)	9.29 (21.73)	6.02 (30.15)
Marketed surplus	5.16 (48.09)	9.33 (58.20)	26.67 (62.37)	11.57 (57.94)

Note: Figures in parentheses are the percentage of total production

group with an overall average of 11.57 q. Thus, it is clear that the marketed surplus increased with the increase in the size of farms. The marketed surplus by different size of farms have been worked out as 48.06, 58.19, 62.37 and 57.93 per cent of the total production for small, medium, large and all farms, respectively. The percentage contribution by each size of farms in total marketed surplus was 19.31, 26.88 and 53.81 per cent, respectively, for small, medium and large size of farms. The proportion of sale to total production has been worked out as 48.06, 58.19, 62.37 and 57.93 per cent for small, medium, large and all farms, respectively.

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