DISTRIBUTION STRATEGIES OF RICE EXPORTERS IN INDIA (WITH SPECIAL REFERENCE TO STATE OF PUNJAB)

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Abstract

Rice is one of the commodities which are exported to many countries in the world and contributes considerable share in the total national exports and agricultural exports. The basmati and non-basmati rice exports to fetch good export price in the international market is on the rise. India may become the largest exporter of rice in next few years amid higher demand anticipated from African and Middle East countries and competitive prices. In the proposed research paper an attempt shall be made to analyze the different distribution strategies were adopted by Indian rice exporters in the changed national and international scenario. For conducting present research the primary data was collected from a sample of 100 Rice Exports/Millers from Punjab State. The collected data was classified, processed and analyzed with the use of various statistical tools i.e., Mean, S.D., Chi-Square etc.

Keywords Distribution strategies, Basmati Rice, Non-Basmati Rice, Marketing development, Quality product, Exporters, Millers.

Introduction

The origin of rice is buried in obscurity and the depths of time. Till today, we do not know when it was first discovered and domesticated and perhaps this is one fact we will never come to know. In the long and turbulent history of the human race, one of the most important developments that led to the development of civilizations was the domestication of rice, for this one single variety of grain has fed and nourished more people over a longer period of time than any other crop.

Rice is not a tropical plant but is still associated with a wet, humid climate. It is generally believed that the domestication of rice began somewhere in the Asian arc. According to some schools of thought, it is probably a descendent of wild grass that was cultivated in the foothills of the Eastern Himalayas and the upper tracts of the Irrawaddy and Mekong river basins. Another school of thought believes that the rice plant may have originated in southern India and then spread to the north of the country.

Traditionally, countries in Asia have the largest share in world rice production. With over 200 million metric tons, China is the world's leading rice producer, while India is the country with the largest area where rice is harvested. The United States produces more than eight million metric tons of paddy rice, which places it among the top 20 rice producers globally.

Rice is the world's second most important cereal crop following only corn, based on production volume. More than 470 million metric tons of husked rice was produced in the past two harvesting years worldwide. The basmati and non-basmati rice exports to fetch good export price in the international market is on the rise. India may become the largest exporter of rice in next few years amid higher demand anticipated from African and Middle East countries and competitive prices.

With this, any country take advantage with the proper use of specific resources of its own and other countries. It offers a number of opportunities to expand its output base, to specialize in certain areas of large production, to gain access to raw materials and machineries and also to acquire latest technological knowledge. With the proper regulation and control, it effects production, employment, income, industrialization etc. positively for the development of an economy. India is expected to emerge as the largest exporter of rice both basmati and non-basmati.

The rice production and consumption pattern in the major rice producing and consuming countries are set to change drastically. By 2016, the global rice-eating population is projected to consume over 50 million tones. Significant increases are expected in South and South- East Asia and Sub-Saharan Africa (SSA). World's largest proportional increase in rice consumption in the next ten years will be in Africa.

Research Objectives

Indian rice exporters adopt various distribution strategies, price strategies, competition strategies and promotion strategies for the growth of rice exports to different countries. Hence, in the proposed research paper an attempt shall be made to analyze the different distribution strategies adopted by Indian rice exporters in the changed national and international scenario.

Review of Literature

A number of researchers in past have studied the various aspects of Indian exports including agriculture and rice. As there is a complete change in the global market because of new development like WTO agreements, so there is a need of in-depth understanding of the marketing strategies of rice exports

from India. A few studies have been undertaken to analyze India/Punjab export performance.

Singh (1994) pointed out that India's share in the world production of rice was 20.79 percent and its export share of 4.5 percent in world's rice trade (1992-93) did seen very poor. Although, the export quantity of rice had increased, yet the export percentage was only 0.91 percent of the total rice production of the country during 1992-93. The study also indicated that there was good market for some Indian rice varieties, especially, basmati rice in the world market, the export earnings from which had increased significantly from about Rs.340 crores in 1987-88 to Rs. 700 crores in 1992-93. The production and productivity of rice in the country had increased substantially but in certain states like Bihar, Orissa, Assam, Eastern Uttar Pradesh and Madhya Pradesh, the productivity was lower than the national average. The productivity of rice in these states had increased even at the rate of national average, about 2.50 million tones of additional quantity of rice could be produced which would certainly increase India's export position. By considering all these factors, the study concluded that it should not be difficult for India to export about one million ton of rice.

Rai (1996) stated that the instability in the quantum of rice exports as measured by co-efficient of variation (89.93%). The corresponding co-efficient for export earnings was reported as 96.14 percent indicating that the instability in the export earnings was higher than in volume of exports. The log linear export turnover function revealed that 91 percent of variations in export earnings of rice has been explained by variations in net national product at current prices, domestic production of the last year, total value of world trade, index of ratio of export to domestic wholesale price. The study concluded that rice was the most favorable export commodity based on the advantage, it enjoys in the international price competition.

Goletti (1997) concluded that the restrictions on inter-provincial movements of rice seriously limit the flow of rice from one place to another in the country. These restrictions are equivalent to implicit taxes on rice movements. Only 42 percent of the rice price gap is explained by cost of transportation and marketing. The remaining 58 percent is the result of various constraints related to infrastructure. The elimination of these implicit taxes on domestic trade would raise national income by almost $100 million per year.

The study also highlighted that information system is not effective. Most of the information about prices, regulations and market conditions are communicated by personal channels. Thus, there is a need of official (public sector) channels of communication like other countries to meet the challenges of changing international environment. The study further suggested the effects to improve the export performance, like, improved quality of rice, reduction in the cost of shipping with the improvement in port infrastructure and suitable measures for image building of Indian exporters. There is also need of stable and credible export policy of Indian government.

P.R Gajri, K.S Gill, Rachhpal Singh, B.S Gill (1999) In rice culture the effect of puddling puddle quality, weed growth and yield of crop depends upon initial soil manipulations by pre-puddling tillage. However, the role of pre-puddling tillage on these aspects has not been studied adequately. These effects were studied for three years (1994–1996) in a field experiment with a rice–wheat cropping system at Punjab Agricultural University, Ludhiana. Treatments included pre-puddling tillage treatments no tillage (PT_0), one discing one harrowing (PT_2) and one discing and three harrowings (PT_4)) in rice in combination with four tillage systems, varying in depth and intensity of soil disruption in wheat on puddle quality, weed growth and yield of rice and wheat on a sandy loam soil (Dystric Cambisol). Pre-puddling tillage improved puddle quality in terms of increased puddle depth and tended to decrease percolation rate. Weed infestation in rice decreased with increase in intensity of pre-puddling tillage. Mean dry weed biomass 35–40 days after transplanting was 1.6 Mg ha^{-1} in PT_0, 0.6 Mg ha^{-1} in PT_2 and 0.5 Mg ha^{-1} in PT_4. Leaving some area untilled between rows (strip tillage) in wheat resulted in a larger weed biomass in rice, than with inversion of soil. Pre-puddling tillage did not affect rice yield during the first two years but significantly increased it during the third year when rice yield was 4.1 Mg ha^{-1} in PT_0 compared with 5.8 Mg ha^{-1} in PT_2 and 6.1 Mg ha^{-1} in PT_4. Manual weeding at 40 days after transplanting masked the effect of pre-puddling tillage on rice yield. In general, rice yield decreased exponentially with increase in weed biomass recorded at harvest of the rice crop. Pre-puddling tillage did not affect wheat yield significantly. The results suggest that for effective weed control, high rice yield and water use efficiency, the field must receive pre-puddling tillage at least once.

C.C. Giri, G. Vijaya Laxmi (2000) Rice is the most important food crop in tropical and subtropical regions of the world. Yield enhancement to increase rice production is one of the essential strategies to meet the demand for food of the growing population. Both abiotic and biotic features limit adversely the productivity of rice growing areas. Conventional breeding has been an effective means for developing high yielding varieties, however; it is associated with its own limitations. It is envisaged that recent trends in biotechnology can contribute to the agronomic improvement of rice in terms of yield and nutritional quality as a supplement to traditional breeding methods. Genetic transformation of rice has demonstrated numerous important opportunities resulting in the genetic improvement of existing elite rice varieties and production of new plant types. Significant advances have been made in the genetic engineering of rice since the first transgenic rice plant production in the late 1980s. Several gene transfer protocols have been employed successfully for the introduction of foreign genes to rice. In more than 60 rice cultivars belonging to indica, japonica, javanica, and elite African cultivars, the protocol has been standardized for transgenic rice production. Selection and use of appropriate promoters, selectable markers, and reporter genes has been helpful for development of efficient protocols for transgenic rice in a number of rice cultivars. The present review is an attempt to assess the current state of development in transgenic rice for the transfer of agronomical useful genes, emphasizing the application and future prospects of transgenic rice production for the genetic improvement of this food crop.

B.M Schafer, G Kirchhof (2000) Soil morphological, physical, chemical and mineralogical properties are described at five locations in major rice (*Oryza sativa* L.) growing areas of the Philippines (two sites) and in Indonesia (three sites) which were selected for lowland rice-based cropping systems research. The data were used to classify the soils into the local soil series, soil taxonomy and The Australian Soil Classification systems. These data were intended to facilitate transfer of knowledge of improved farming systems technology to other lowland rice growing areas in the regions. The soils were classified as Andsisols, Inceptisols and Vertisols, and were characterised by clay contents ranging from 370 to 870 g kg^{-1} and cation exchange values ranging between 17 and 68 cmol (p+) kg^{-1} for whole soil pH values were neutral to mildly alkaline. Land surface and root zone attributes were qualitatively evaluated for limitations to post-rice crop production by interpretation of modified surface and sub-soil properties associated with rice production. Leakiness of bunds was also examined and mainly attributed to

biological activity and for the development of drainage channels. Climatic data are presented for each of the five sites and the characteristics for potential rainfall incidence are given for the post-rice dry season crop period. The soil sites selected have a range of properties which are deemed to represent large areas of soils used for rice production in these two countries.

Sharma (2000) analyzed that demand for Indian exports increases when its export prices fall in relation to world prices. Furthermore, the real appreciation of the rupee adversely affects India's exports. Export supply is positively related to the domestic relative price of exports and higher domestic demand reduces export supply.

Singh (2000) pointed out that the long list of Basmati lines may confuse non-skilled importers and consumers as well. At least 60 lines of Basmati rice are released on the world seed market. The list includes the name of the major pure lines and various hybrids as well. Of the largest aromatic germplasm maintained at IRRI, about 86 are described by the name Basmati irrespective of grain dimensions and intensity of aroma: Pakistan (67), India (9), Nepal (7), Bangladesh (2) and Sri Lanka (1) Comparing these with Basmati standards, only 18 qualify as Basmati.

Kumar (2001) revealed that that excessive competition, lack of demand, cost of transportation, poor performance due to poor quality and high prices etc. are the main problems of rice exporters as well as processed food exporters. The study indicated that prices at par with Competitor's prices is the most popular pricing strategy. Size of order and competition is regarded as major factor in pricing by rice exporters. Innovative packaging, cost-cutting, innovative marketing methods and improvement in quality are the generally used competitive strategies by Indian processed food exporters including rice.

The study recommended that high prices of raw material make more costly the rice exports leads to uncompetitive in foreign markets. Hence, the government should provide raw material at subsidized rates to exporters. The rice exporters should keep in mind the size of order while deciding the level of export price. The quality improvement and cost-cutting should be followed as competitive advantages to face competition. The small and inefficient units should go for merger and joint venture to face competition at international level.

Ahuja (2001) pointed out that the WTO Agreement allows for remission/drawback of taxes/duties only on the inputs used in production of

exports, and not on the capital goods used in export production. This treatment is iniquitous to the interest of developing countries that have raised tariffs on the import of capital goods in general. Developing countries impose tariffs not just for granting protection to its domestic industry but also for raising revenue since there are limitations in raising revenue through other taxes. To remove the biasness of some developing countries on exports relating to higher import duties, over-valued exchange rates and lack of easy access to imports if manufactured exports, an export subsidy mechanism should be used. Similarly, the study advocated the pure (non-neutral) and compensatory (neutral) subsidies an incentive for saving the interest of exporters. Pure subsidies (non-neutral) are meant to give exporters an advantage over competitors in the international market whereas compensatory subsidies (neutral) are meant to neutralize government-imposed handicaps. For example, providing credit to exporters at lower than market rate is a pure subsidy whereas duty refund or drawback by the government to exporters is in the nature of compensatory subsidy. Compensatory subsidy is given to remove the double incidence of tax on export products.

Dass (2003) pointed out that price determination is usually influenced by several factors. In food processing industry, product quality is rated as the most important followed by the price charged by the competitors; consumer paying capacity and size of demand is a descending order respectively. The importance of product quality as a factor of price determination increases with the increase of size and gross margin. To have big orders and sufficient margin, the quality of the product becomes very important.

Burns (2004) analyzed that approximately one-third of the 363 samples, collected from a range of retail outlets and catering suppliers, one-third were labeled as from India, one-third from Pakistan, and the final one third were not labeled with the country of origin. A small number of samples were labeled as mixed origin. All samples claimed to be Basmati rice as written on their labeling. While 196 (54%) samples were found to contain only Basmati rice, non-Basmati rice was detected in 167 (46%) leading to incredibility of these countries exports.

Calpe (2004) concluded that rice continues to be one of the most protected commodities in both developing and developed countries, subject to high tariff and non-tariff barriers, export restrictions or aids, state trading and domestic market interventions. The study also stated that rice is not a

homogenous commodity and there are more than 50 different published international price quotations for rice. In fact, there are distinct sub-markets featured according to a number of criteria, the most important of which are variety, quality and the degree of processing. This becomes a very difficult proposition for the importing country while making a decision of the country to trade with.

Thanh (2005) concluded that rice exporters are facing severe competition. However, there is need to improve production quality to face this competition. This will need of education, training, mobilizing of farmers engaged in production for exports. Thus, there should be well organized extension programmes (e.g. education, training etc).

Pal (2005) suggested that the reform measures initiated by the AoA would open up new opportunities for developing countries during the Uruguay Round. The effect of the AoA on world markets predicted that reduction in domestic support and export subsidies in the developed countries would lead to a deepening of world trade in agriculture, a spatial redistribution of agricultural production, an increase in the share of developing countries in global agricultural exports and more transparency in agricultural trade.

Ramphal (2006) pointed out that the Indian government imposes tariffs on agricultural imports, without disturbing the domestic consumer surplus, to compensate the subsidies given by developed countries on their exports. The study suggested that the tariff revenue generated through developed countries subsidies can be utilized to increase the public investment in Indian Agriculture export sector to enhance its productive efficiency that is a necessary condition for increase in the growth rate of agricultural exports in the WTO regime. India needs to maintain its agricultural tariff rates at WTO final bound level to safeguard the productive efficiency of Indian Agriculture based on true competitive advantage.

Anderson (2006) estimated the impact of removing all trade related distortions inclusive of agricultural subsidies. The free merchandise trade would increase farm land and export performance of agriculture in developing countries.

Sushil Pandey, Suresh Pal (2007) Allocation of research resources between favorable and unfavorable rice-growing environments is analyzed in this paper using the case of India. The resource allocation in rice research for all ecosystems of India is approximated by the full-time equivalent (FTE) of scientist time spent in research. This was estimated through a survey of all

major public research organizations involved in rice research. The FTEs were adjusted for any cost differences per scientist time across the rice growing environments. Unadjusted FTEs indicated a high congruence in resource allocation while adjusted FTEs showed slight under investment in rainfed environment. The use of equity weights amplified the extent of under investment in rainfed environments. It is concluded that, in the case of rice research, rainfed environments in India remain under-invested moderately. Options for addressing this imbalance and the overall implications for resource allocation are discussed.

Banik (2007) revealed that NTBs have recently become more dominant than tariffs in restricting market access. The Multilateral Trade Negotiations (MTNs) under WTO have led to a steady fall in industrial tariffs. Due to WTO commitments, it is not easy for a country to increase tariffs without substantive negotiations with, and compensation to, affected parties, and many countries are therefore now using NTBs to protect their economy. NTBs (e.g. antidumping procedures, countervailing procedures, sanitary and phyto-sanitary sanctions, import licensing, rules of origin, tariff quota and government procurement) affect adversely the country's exports. The study also pointed out that improvement in labour productivity (in raw material and finished goods) is the main reason of export growth whereas government regulations, rules and procedures etc. raise the cost of production and affects the exports adversely. The study also found out that the lack of infrastructure facilities indirectly raises the costs of Indian exports.

Giordani (2012) analyzed the effect of export policy on food prices especially on staple foods. The study has used the monthly data on trade measures across 125 countries and 29 food products for the period 2008-10. Finally the study estimated that a 1 percent surge in world restrictions increased international food prices by 1.1 percent.

Daisuke Takahashi (2012) this study aims to evaluate the distributional effect of the governmental rice policy in Japan on producers, consumers, and government expenditures from 1986 to 2010 using a partial equilibrium model. Policy measures include government purchase of rice, output payment, and acreage control. The simulation result shows that acreage control has been the principal policy measure for transferring income to producers, especially since the enforcement of the WTO Agreement on Agriculture. Acreage control is the policy measure with the lowest total efficiency and highest budgetary efficiency. This result implies that the

government's goal of transferring income to producers with minimum government cost has been achieved through a combination of policy measures.

B.Vijaya Lakshmi (2014) The Genotype (G) x Environment (E) interaction and stability for grain yield and associated traits were studied for 13 rice genotypes in five environments from kharif 2007 to kharif 2011. The stability analysis showed significant differences among genotypes for all the traits studied including grain yield. The linear component of environment was significant for all the characters and the pooled deviation was significant for plant height, productive tillers/plant, panicle length and test weight. Based on the stability parameters, BPT 2411 followed by BPT 2409 and BPT 2295 showed higher grain yield over the mean with regression coefficient near unity and non significant deviation from regression. Thus they found to be stable and may be recommended for commercial cultivation in this region.

Sources of data collection

Data was collected from both primary and secondary sources. Primary data was collected through questionnaire and structured interviews which was administered to the managerial staff of rice exporters. Secondary data was collected from the economic survey of Govt. of India, DGCI&S, EXIM bank, APEDA, Company sources and rice exporters association etc.

Sample size

For conducting present research the primary data was collected from a sample of 100 Rice Exports/Millers from Punjab State and the Secondary information was collected from known published sources Govt. Departments and agencies and WTO, FAO and World Bank websites, etc.

Sampling methods and data analysis

The collected data was classified, processed and analyzed with the use of appropriate statistical tools.

Distribution strategies

Each distribution strategy has its own implications. They may focus on one or another strategy. The whole set of combination of strategies is responsible for either pummel or poor export performance. It is a general practice for the exporters to adopt suitable measures to got success for beating the competition.

Table1 Method of Receiving Orders

Method of receiving orders		Small Scale Units	Medium Scale Units	Large Scale Units	Overall
	No.	124	72	4	200
Directly from foreign buyers	Mean	3.00	2.13	2.25	2.67
	S.D.	.000	.887	.957	.688
	F	59.806			
	Sig.	.000			
Government Agencies	Mean	1.52	1.11	1.00	1.36
	S.D.	.850	.396	.000	.737
	F	7.875			
	Sig.	.001			
Merchant Exporters	Mean	2.37	1.99	2.00	2.23
	S.D.	.781	.796	1.155	.811
	F	5.527			
	Sig.	.005			
Any other method	Mean	1.73	2.15	1.75	1.88
	S.D.	.810	.664	.500	.780
	F	7.315			
		.001			

In the above table, method of receiving orders directly from foreign buyers with highest mean value of 3.00 has been adopted to a large extent to get success in the promotion strategy by small scale rice exporters whereas with mean value of (2.13) and (2.25) have been adopted by medium scale units and large scale units. The above table depicts that method of receiving orders through government agencies by small scale units with highest S.D. value of .850 while with a mean value of 1.11units adopted by medium scale units. Whereas with a mean of 1.00 units adopted by large scale units.

From the above table we can see that in case of small scale units, S.D. value of .781of receiving orders through merchant exporters while in case of medium scale units S.D. value of .796 and whereas with a mean value of 2.00 receiving orders through merchant exporters by large scale units. The above table reveals that in case of small scale units S.D. value of .810 receiving orders from any other method whereas with a mean of 2.15 in case of medium scale units and with S.D. value of .500 in case of large scale units.

The overall results of above table reveals that method of receiving orders directly from foreign buyers with a mean value of 2.67 have dynamic place in promotion strategy followed by merchant exporters (2.23), any other method

(1.88) and government agencies (1.36). Hence, the rice exporters are highly concentrating on orders receiving directly from foreign buyers.

Table 2 Different Methods Adopted by the Firms to Improve the Sale

Methods		Small Scale Units	Medium Scale Units	Large Scale Units	Overall
	No.	124	72	4	200
Improve Packaging	Mean	2.02	2.14	2.00	2.06
	S.D.	.710	.756	.816	.727
	F	.660			
	Sig.	.518			
Improve Labeling	Mean	1.65	1.65	1.50	1.65
	S.D.	.513	.715	1.00	.601
	F	.122			
	Sig.	.886			
Additional Varieties	Mean	1.63	1.93	1.25	1.73
	S.D.				
	F	5.306			
	Sig.	.006			
Improve Quality	Mean	1.79	1.65	1.25	1.73
	S.D.	.591	.845	.500	.707
	F	1.462			
	Sig.	.235			
Improved Performance	Mean	2.15	2.07	2.00	2.19
	S.D.	.858	.653	.500	.788
	F	.394			
	Sig.	.675			

In the above table, different methods are adopted by the firms to improve the sales. Medium scale units with a mean value of 2.14 are improving packaging to enhance its sales whereas small scale units with a mean value of 2.02 and large scale units are opting this method with a mean value of 2.00.

From the above table, we can see that small scale units and medium scale units both are having same mean value (1.65) in case of improving labeling. It means both units are using this method similarly while large scale units with a S.D. value of 1.00 using third method of improving. The table depicts that medium scale units with a mean value of 1.93 is adopting additional varieties followed by small scale units (1.63) and large scale units (1.25).

The above table indicates that small scale units are improving quality with a S.D. value of .591 followed by medium scale units with a mean value of 1.65 and large scale units with a S.D. value of .500.

A close perusal of the table reveals that small scale with a S.D. value of .858 is improving performance to extent its sales followed by medium scale units with a S.D. value of .653 and large scale units with a mean value of 2.00.

The overall results shows that firms are adopting improved performance method for improve the sales with mean value of 2.19 followed by improve packaging (2.06). Additional varieties and improve quality are improving the sales simultaneously with the same mean value of 1.73 followed by improve labeling with a mean value of 1.65.

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