Original Research Article

MARKETING OF HYBRID PADDY SEEDS IN SAHARSA DISTRICT OF BIHAR

Abstract

Agriculture plays an important role in the Indian economy. India has a dominant position in theproduction of paddy next to China at the world level. Bihar is one of the major paddy-producing states in India. The present study was conducted in the year 2021-2022 at the Saharsa district of Bihar. A sample of hybrid paddy-growing farmers from six villages was selected purposively. Thus making a sample size of 100. The results showed that the majority of the respondents of the hybrid paddy growers belongs to the medium adoption category.

With agriculture being one of its strongest sectors in the Indian economy, the state also achieves significantly high agricultural production every year. About 80 per cent of the state's population is employed in agriculture, which is much higher than the corresponding average figure for India as a whole.

Agricultural marketing plays a vital role inthe agricultural development of the state which is a pre-requisite for development in other sectors and also for the overall development of the economy of the state. Therefore this paper attempts to analyse the production and marketing system of paddy seeds like marketing channels and marketing problems faced by the farmers in the study area. In this study, it comes out that Bihar is predominantly a Retailer influenced market. The farmer purchases the products at the suggestion of retailers. So, the company should build strong relationships with dealers, which are influenced by more margins, by providing more incentives and more of other benefits.

Keywords: Hybrids, Retailer, Productivity, BLB, drought, marketing.

1. Introduction

Agriculture in India has an extensive background. At present India ranks 2nd in the world's in agricultural production, which contributes a major share of the GDP of the country. The agricultural sector accounts for 50% of all available labour force in India. In India, nearly 70% of the livelihood is dependent on agriculture (MOA&FW, 2016).

Among cereals, rice is the most nutritious and about 40 Per cent of world population consumes it as a major source of calorie and energy. Rice (***Oryzasativa)*** is the seed of the monocot plants. As a cereal grain, it is the most widely consumed staple food for a wider part of the world's human population, especially in Asia. Rice is the most important grain with regard to human nutrition and caloric intake, providing more than one-fifth of the calories consumed worldwide by the human species. India is the second largest producer of rice in the world and accounts for about 20-25 per cent of the total global rice production (Anonymous, 2002).

Despite India standing second in rice production, the productivity is far below the global average. This is mainly due to demographic factors and non-adoption of improved and modern technologies, which siphon out whatever quantity produced to unimaginable levels. If this situation continues, the country has to face acute scarcity in meeting the nutritional demands of the over-exploding population in due course of time. Hence, to reap the maximum harvest from the scarce and unexpandable resource, land, the food production should be enhanced at a rapid rate.

2. Research Objectives

2.1. Research Objectives

- To study the socio- economic profile of respondents in study area.
- To examine the performance of hybrid seeds in study area with respect to its marketing channel and reached to the farmers.

3. Materials and methods

3.1 Selection of district

The state Bihar comprises 9 divisions with 38 districts and 2 state police districts and among which Saharsa district was purposively selected for the study. The district has a suitable

climatic condition for paddy cultivation and the net sown area is 107,143 ha with 177 % cropping intensity. A wide range of paddy hybrids are cultivated in the district.

3.2 Selection of Block

There are 10 blocks in the Saharsa district of Bihar and out of which Saur Bazar block were purposively selected for the studybecause of the high demand for paddy seeds and the high cultivation of hybrid paddy in the area.

3.3 Selection of Villages

A complete list of the village of the selected block was obtained from the block development office of the concerned block. There 10 % of villages were selected randomly Out of 56 villages.

Table 1: Selected Villages under Saur Bazar block

S.No.	Selected Villages
1.	Baijnathpur
2.	Raghunathpur
3.	Bhagwanpur
4.	Bhawanipur
5.	Dhamsena
6.	Saur

***Source**: Research Data*

3.4 Selection of Respondents

A village-wise list of all the respondents having paddy farms in the sample village was prepared along with the size of their operational holding. Further, these respondents were distributed on the basis of their holding size. From the complete list of all farmers of different villages, farmers were selected randomly for the study.

3.5 Analytical tools

Results were expressed using analytical tools. The socio-economic was calculated using a percentage formula [**Percentage**= (Value/Total Value) ×100]. The market share of different brands was calculated by the index of market efficiency.

4. Results and Discussion

4.1 Socio-Economic Profile of Respondents in the Study Area

Table No. 2: Detailed description of Sample Size of Different Size farm Groups (values in numbers)**.**

Total respondents: 100

Age (in years)	No. of Respondents					Overall	Percentage
	Marginal	Small	Semi - medium	Medium	Large		
15-25 year	4	2	1	1	0	8	**8 %**
25-35 year	13	4	6	4	2	29	**29 %**
35-45 year	15	4	11	7	4	41	**41 %**
45-55 year	6	1	1	1	4	13	**13 %**
Above 55	3	2	1	2	1	9	**9 %**
Total	**41**	**13**	**20**	**15**	**11**	**100**	**100%**

Source:SurveyData

Out of the total surveyed population, it was found that 41 % of the farmers belong to the age group of 35-45 in which 46.3 % were marginal and small farmers, 43.9% were semi-medium and medium farmers and 9.7 % were large farmers. They were economically active brackets with sufficient land holding. On the other hand, 37 % were young farmers belonging to the age group of 15-25 and 25-35 collectively in which 62.1 % were marginal and small farmers, 32.43 were semi-medium and medium farmers. 11 % were large farmers. They were active to adopt new technologies and ideas.

Table 3: Detail Description of Literacy in Different Size Farm Groups. (Values in numbers)

Total respondents: 100

Literacy level	No. of Respondents					Overall	Percentage
	Marginal	Small	Semi -	Medium	Large		

			medium				
Below SSC	21	8	2	3	1	35	**35 %**
SSC	12	2	9	4	3	30	**30 %**
HSC	9	3	5	5	7	29	**29 %**
Graduation	0	1	2	1	2	6	**6 %**
Total	**42**	**14**	**18**	**13**	**13**	**100**	**100%**

Source:SurveyData

Out of the total surveyed population, it was found that 94 % of farmers were undergraduates. It shows mostly farmers go for farming after HSC. 29 % of farmers completed their education up to HSC. Only 1% of marginal and small farmers were graduates and 28 % completed their education up to SSC.

Table no 4: Farmers Land Holding Size

Total respondents: 100

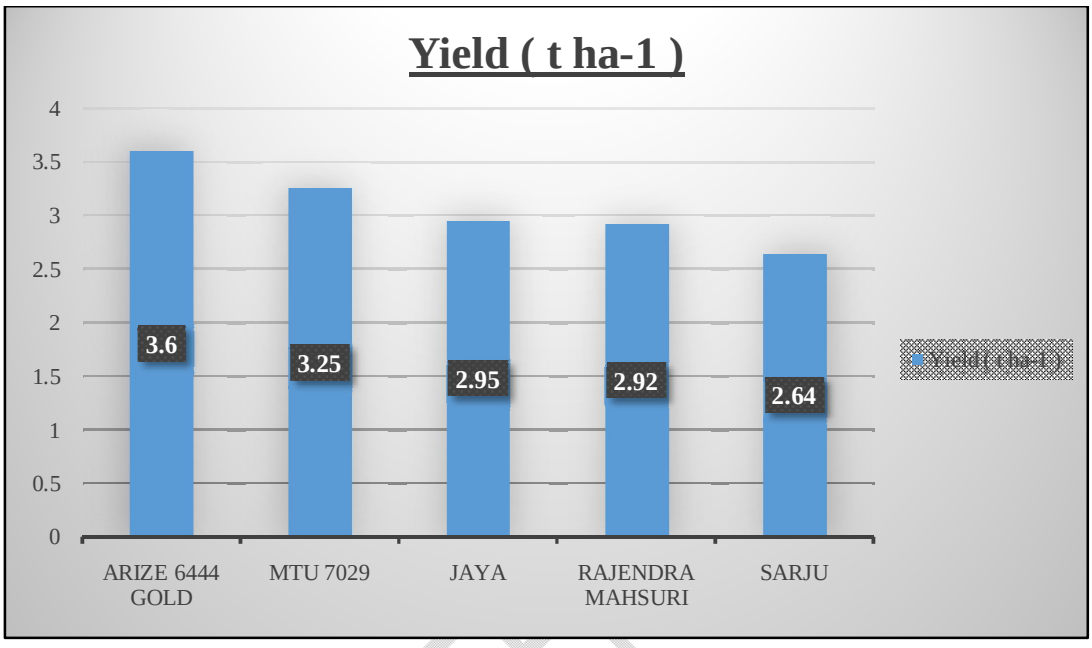
S.No.	Category	No. of Farmers	Percentage
1.	Marginal (Below 1hectare)	44	44 %
2.	Small (1-2 hectare)	12	12 %
3.	Semi Medium (2-4 hectare)	20	20 %
4.	Medium (4-10 hectare)	13	13 %
5.	Large (10 hectare and above)	11	11 %
	TOTAL	100	100 %

Source:SurveyData

Out of the total surveyed population, it was found that 14 % of the farmers were large landholders (>10 hectares) while 56 % of farmers have marginal and small land holdings. The result shows that most of the farmers had land holding below 2 hectares.

4.2 Performance of Hybrid Paddy Seeds in Saharsa district of Bihar with respect to its Marketing Channel

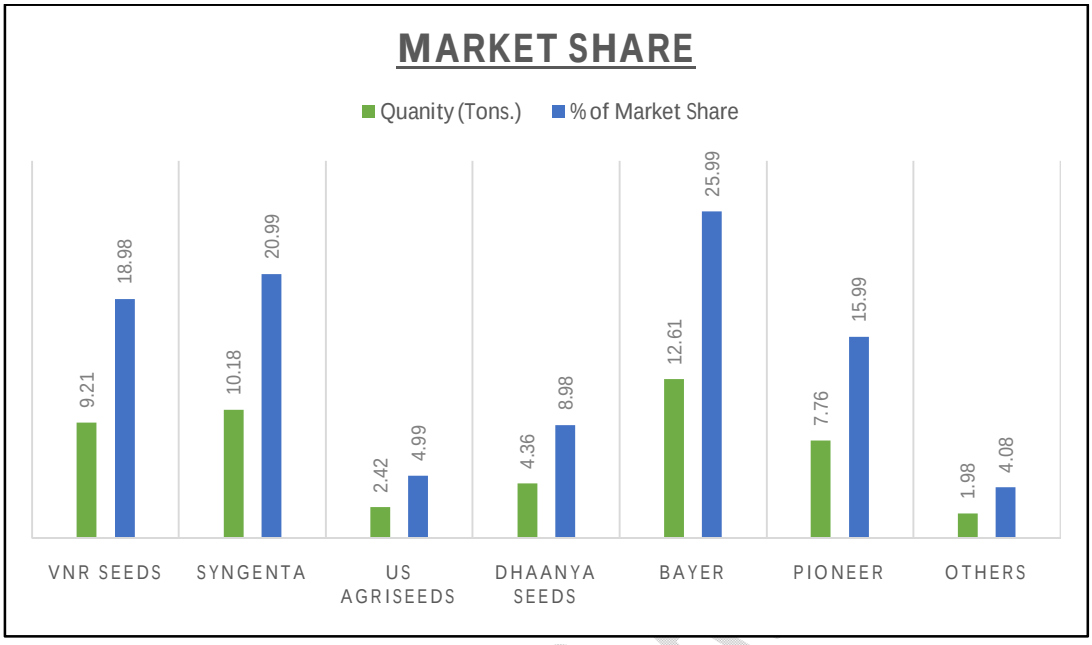
Fig 1: Performance of most preferred rice varieties/hybrids



Source: New Frontiers in Agricultural Extension - (CIMMYT)

The above figure depicts that among the yields of five mostpreferred varieties/hybrids, Arize6444 Gold (3.60 tha^{-1}) and MTU 7029 (3.25 tha^{-1}) showed a bit more than Jaya (2.95 tha^{-1}), RajendraMahsuri (2.92 tha^{-1}), and Sarju52 (2.64 tha^{-1})

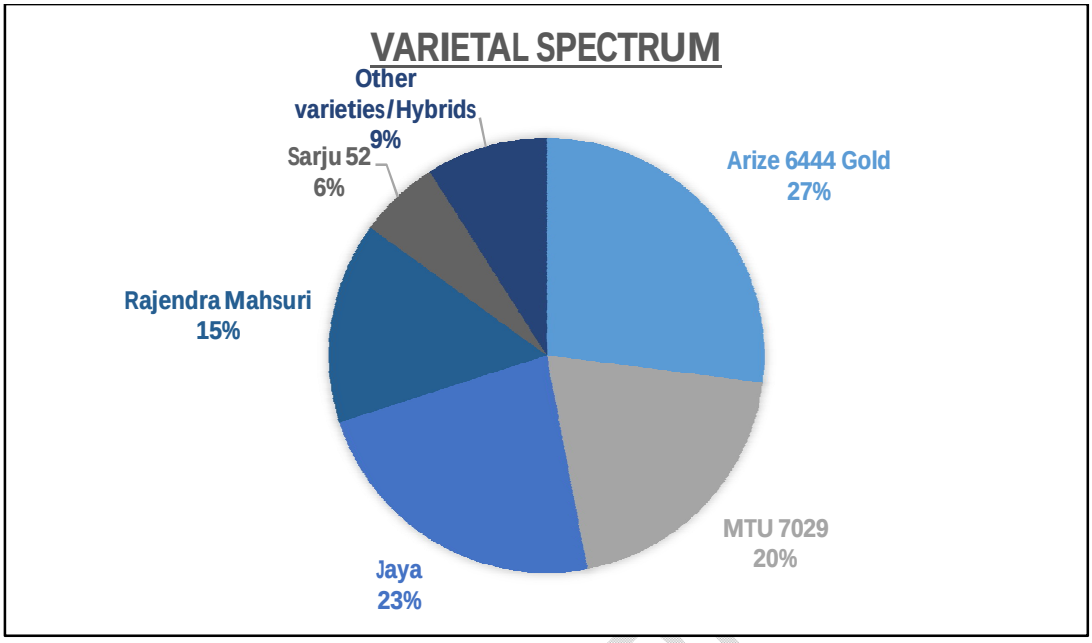
Fig 2: Market share of major companies in the field of hybrid paddy seeds



Source: Survey Data

The above figure shows the market share of hybrid paddy in the Saharsa district of different companies is 48.52 Mt. Bayer is the **major player** with sales of 12.61 Mt, followed by Syngenta with 10.18 Mt and VNR Seeds with 9.21 Mt and there are many companies which are doing business extensively in the Saharsa district. The data in the above table depicts that the performance of Hybrid paddy seeds in the Saharsa district of Bihar is quite good and has the ability to increase productivity.

Fig 3: Varietal spectrum of rice varieties/hybrids in Saharsa.



Source: Survey Data

The above data reveals that 27, 20, 23 and 15% of hybrid growers preferred Arize 6444 Gold, Jaya, MTU 7029 and RajendraMahsuri, respectively. Sarju 52 (6 %) and a few other varieties and hybrids were grown in the district. It seems farmers indeed may have remained convinced that old varieties are more stable with more yield than the new varieties. Explaining the preference for a hybrid (Arize 6444 Gold) is easy because the yields are higher.

Other varieties/hybrids: Aghani, BPT 5204, Jaishree, PHB71, Shriram 505, Dhanya 775

5. Conclusion

The study reveals that farmers' acceptance of hybrid seeds in different regions of Bihar is a positive indication of the growth of the seed industry and its diversification in Bihar. It is concluded in the study carried out in the Saharsa district of Bihar that Saharsa has a huge potential to grow hybrid paddy, as the district is widely suitable for hybrid paddy cultivation. The area receives proper rainfall during monsoons which fulfils water needs and is beneficial to farmers. ARIZE hybrid paddy varieties are suitable products as per the farmer's expectations as it was tolerant to bacterial leaf blight and gave high yield as compared to other fine varieties used in the study area, therefore the company should focus more on these traits for the advertisement of their products. The farmers can increase their income by

ensuring the growth of vegetables just after hybrid paddy. The study area has high demand for ARIZE seeds because of BLB tolerance and high yield. The ARIZE 6444 GOLD is a variety which is very much popular in the study area.

6. Recommendations

6.1. Recommendation to the study

The study reveals that ARIZE hybrids were very much popular among the farmers of the Saharsa district of Bihar. During the season of paddy cultivation, farmers first looks for OPV varieties for the family consumption as a priority.

6.2. Recommendations to the future researchers.

Future researchers should focus on gathering knowledge about retailers view of selling the ARIZE and other hybrids seeds in the area because retailers plays a very important role in influencing decisions of farmers in purchasing of seed.

7. References

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