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AN ECONOMIC ANALYSIS HYBRID PADDY (ARIZE 6444) IN VAISHALI DISTRICT OF BIHAR

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Abstract

Arize 6444 Gold is a high-yielding hybrid rice developed by Bayer CropScience, known for its high yield and high performance. This variety is designed for areas with good water supply and suitable for intensive farming. Arize 6444 Gold has many advantages for farmers, including good resistance to crop diseases such as leaf blight and blast that threaten crop production. It also recommends the location so that crops can remain upright even in adverse weather conditions. Arize 6444 Gold, due to its short growth cycle, can perform multiple planting cycles in a year, making farmers more productive and profitable. This variety has fine grains and high grain yield, meeting the market demand for high quality rice. Overall, Arize 6444 Gold is a good choice for growers looking for high production and competitive markets.

The study titled "AN ECONOMIC ANALYSIS HYBRID PADDY (ARIZE 6444) IN VAISHALI DISTRICT OF BIHAR" conducted during 2023-2024, surveyed 120 respondents in Lalganj Block of Vaishali district of Bihar. The investigation revealed that two marketing channels are active for ARIZE 6444 Gold in this region: Channel-I (Producer-Wholesaler-Consumer) and Channel-II (Producer-Wholesaler-Retailer-Consumer). The favoured choice among respondents was Channel-II. In Channel-I, total marketing cost is Rs 113, total marketing margin is 263 and marketing efficiency in channel-1 is 11.50%.. On the other hand, Channel-II total marketing cost is Rs 100, total marketing margin is Rs 20 and marketing efficiency in channel-2 is 14.20%.

Keywords: Marketing Margin, Marketing Cost, Marketing Efficiency, Respondents, and Marketing Channels

Introduction

Rice (*Oryza sativa*) is a staple food for the majority of people around the world, especially in South and East Asia. India ranks second in production globally after China (28.8%). Hybrid rice technology has been introduced to meet the demand for rice. Studies show that hybrid seeds increase yields by 30% compared to conventional seeds. China's success in increasing its production from hybrid rice seeds by 300 million tons in the last 25 years is a good example of this. India has the largest area under cultivation and has the potential to be a major transformative force in this sector. India is the second largest producer in the world after China (28.8%) with a market share of 21.6%. There is a relationship between production and consumption in both countries. Innovations are being introduced continuously to meet the increasing demand for rice. Among all genetic technologies aimed at improving crops and yields, hybrid rice is the most important and versatile. Studies have confirmed that hybrid rice seeds are 30% higher than conventional seeds. China's hybrid rice production has increased by 300 million tons in the past 25 years. BayerCropScience has developed the Arize 6444 Gold hybrid rice variety. Its designs have strong disease resistance, excellent usability and high production capacity. This type of insect can be grown in many parts of the world because it is very suitable for different growing environments. Arize 6444 Gold variety is known for its excellent appearance, taste and cooking

quality. It is often preferred by farmers who want to increase yields and increase income.

RESEARCH METHODOLOGY:

The methodology used to select the district, the blocks, the villages and the respondents was purposively cum random sampling. The district of Vaishali was selected in order to avoid the inconvenience and time constraints on the investigator. All the blocks falling within the district of Vaishali the block of Lalganj was selected based on the majority of respondents involved in paddy cultivation. A separate list of villages was prepared for the selected block, and five percent of the villages from the selected block with a high number of respondents cultivating paddy were randomly selected. From the villages, a list of all paddy farmers was prepared and then broken down into five size categories based on their land holding size. The size groups were: Marginal size (less than 1 hectare), Small size (1-2 hectares), Semi-medium size (2-4 hectares), Medium size (4-10 hectares), and Large size (more than 10 hectares). From a list of 120 farmers growing paddy, 120 were randomly selected using proportionate random sampling. From the 5 wholesalers/10 distributor / 5 retailers, were selected to study marketing cost, marketing margin and marketing efficiency in the study area. Primary data was collected through suitable designed schedule. Secondary data was collected from books/journal/report/records of district/blocks headquarters. Data from respondents were

collected through survey methods via direct personal interview. Statistical tools were used to analyse the data and present the result. Data pertained to the agricultural year of 2022-2024.

Analytical Tools

1. Marketing Efficiency: $MME = \frac{FP}{MC+MM}$

2. Marketing Cost: $C = C_f + C_{m1} + C_{m2} + C_{m3} + \dots + C_{mn}$

3. Market Margin: $AMI = \frac{Pri - (P_{pi} + C_{mi})}{Pri}$

RESULTS AND DISCUSSION

Table 1: Marketing cost, Marketing margin and Marketing Efficiency of Arize 6444 Gold in Channel I.

Producer-Wholesaler-Consumer

S. No	Particulars	Value in Rupees
		Rs
1.	Producersalepricetowholesaler	1300
2.	Costincurredbytheproducer	
i	Packingcost	15.00
ii	Packingmaterialcost	12.00
iii	Transportationcost	20.00
iv	Marketcost	18.00
v	Labourcost	10.00
vi	LoadingandUnloading cost	10.00
vii	WeightingCharges	8.00
viii	Miscellaneouscharges	20.00
	Totalcost(i-viii)	113.00
3.	MarginofProducer	30.00
4.	Netpricereceivedbyproducer	1157
5.	WholesalersalepricetoConsumer	1420
	Margin of Wholesaler	263
6.	MarketingEfficiency	11.50%

Table 1: Reveals that selling price of Arize 6444 gold to wholesaler is 1300, total

marketing cost incurred by the producer in marketing of Arize 6444 gold is Rs. 113, profit margin of producer in channel-1 is Rs 30, net price received by the producer is Rs 1157, wholesaler selling price to consumer is Rs 1420, margin of wholesaler is Rs 263. Thus total marketing cost is Rs 113, total marketing margin is 263 and marketing efficiency in channel-1 is 11.50%.

Table 2:Marketing cost, Marketing margin and Marketing Efficiency of Arize 6444 Gold in Channel II.

Producer-Wholesaler-Retailer-Consumer

1.	SalespriceofWholesaletoRetailer	1420
2.	CostincurredbytheWholesaler	
I	Loading&Unloadingcharges	8.00
Ii	Carriageuptoshop	20.00
Iii	Weightingcharges	11.00
Iv	Towncharges	20.00
V	Transportation	25.00
Vi	Losses&Miscellaneouscharges	16.00
	TotalCost(i-vi)	100.00
3	MarginofVillageMerchant/Retailer	20.00
5.	Consumerspaidprice	1440
6.	Totalmarketingcost	100
7.	Totalmarketingmargins	20
9.	TotalMarketingEfficiency	14.20%

Table 2:Reveals that wholesaler selling price of Arize 6444 gold to retailer is Rs.1420, marketing cost incurred by wholesaler is Rs 100. Acquiring price of Arize 6444 gold of

retailer is Rs 1420, selling price of retailer to consumer is Rs 1440, profit margin of retailer is Rs 20. Thus total marketing cost is Rs 100, total marketing margin is Rs 20 and marketing efficiency in channel-2 is 14.20%

CONCLUSION:

Arize 6444 Gold's business in Vaishali district of Bihar has proven successful as it caters to the needs and interests of local farmers. The introduction of this hybrid rice variety has been made using its key advantages such as high yield potential, disease resistance and excellent quality, suitable for cultivation in the Vaishali mountains. Focusing on the benefits of Arize 6444 Gold, including its resistance to diseases and ability to withstand adverse weather conditions, the business is successfully solving the problems faced by the people engaged in agriculture in the region. Also, Arize 6444 Gold's short cultivation cycle allows multiple harvests, making it attractive to farmers looking for the best possible yield and profit results. The marketing strategy also highlights the market demand for its high milling yield and benefits, which is encouraging greater adoption. Collaboration with local agricultural organisations and trial trials played a major role in building confidence and making it clear that much can be done in real life. Overall, the marketing plan in Vaishali district has been successful in positioning Arize 6444 Gold as the first choice of farmers and has improved farming practices in the district.

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