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### Consumer demand for organic rice (*Oryza sativa* L.) and its implications for organic rice cultivation and sustainable agricultural system in Rayalaseema, India

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#### Abstract

The growing demand for safe and sustainable food has increased consumer interest in organic products, particularly staple crops such as rice (*Oryza sativa* L.). This study examines consumer perception and purchase behaviour towards organic rice in the Rayalaseema region of Andhra Pradesh, India, with a focus on identifying key determinants of purchase decisions, constraints affecting regular consumption, and implications for sustainable agricultural practices. A cross-sectional survey was conducted among 273 respondents using a structured questionnaire, and the data were analyzed using descriptive statistics and multiple linear regression. The results indicate that consumers exhibit a strong positive perception towards organic rice, particularly in terms of health benefits (mean = 4.549), nutritional value, and environmental sustainability. However, regression analysis revealed that availability is the only statistically significant factor influencing purchase intention ( $p = 0.050$ ), while other factors such as health awareness, environmental concern, price sensitivity, and trust in labelling were not statistically significant. The study further identified major constraints affecting consistent consumption, including lack of access to quality organic rice, limited awareness, high price, and restricted availability. Despite favorable attitudes, these barriers limit the effective realization of consumer demand. The findings highlight that increasing consumer demand has significant potential to promote organic rice cultivation and sustainable agricultural practices. However, strengthening supply chains, improving market accessibility, enhancing consumer awareness, and ensuring quality assurance are essential to bridge the gap between demand and production. Such measures can facilitate the adoption of organic farming and contribute to long-term agricultural sustainability.

**Keywords:** Consumer behaviour, organic farming, organic rice, purchase intention, sustainable agriculture, *Oryza sativa*

#### Introduction

The world's food system has undergone significant change over the past few decades in that there is an increased focus on not only the availability of food but also its nutritional value, safety, and health impacts. Although remarkable strides have been made towards decreasing hunger, there still exists a rising trend in malnutrition cases and diet-associated illnesses such as obesity and hypertension across the globe (Barrett *et al.* (2021) <sup>[1]</sup> and Küster-Boluda and Vidal-Capilla. (2017) <sup>[2]</sup>). Such problems illustrate the need for sustainable food production systems that guarantee availability and quality of food supplies. In this context, the development of value-added crops, including organic and functional foods, has gained significant attention as one of the possible ways of improving human well-being and sustainability (Roberfroid (2000) <sup>[3]</sup> and Duragkar *et al.* (2024) <sup>[4]</sup>).

Organic farming is emerging as a viable agricultural model based on sustainable practices by avoiding the use of artificial fertilizers, chemicals, and genetically engineered products. The negative consequences linked with modern-day agriculture practices have made consumers realize the need to switch to organic foods (Küster-Boluda and Vidal-Capilla. (2017) <sup>[2]</sup>). As a result, there has been an increase in the demand for organic products across the globe due to

issues that involve food security, sustainability, and personal health (Duragkar *et al.* (2024) <sup>[4]</sup>). The change marks a wider shift in consumer behaviour where the choice of food is based on healthiness, sustainability, and ethics (Baker *et al.* (2022) <sup>[5]</sup>).

One of the key food grains used extensively around the world is rice (*Oryza sativa* L.), which is consumed by more than 50 percent of the total population of the world. Rice, as a staple food grain, is significant not only for food security but also for nutrition. Over the past few years, there has been an observable change from the consumption of regular rice to that of organic rice, owing mainly to increased knowledge on food safety and health among consumers (Chen, Z., and Nor Fauzi, N. F. S. (2025) <sup>[6]</sup>). Organic rice is often perceived as being free of toxic chemicals and cultivated using sustainable methods, which makes it attractive to health-oriented consumers (Mohanraj, M., and Srinivasan, G. (2024) <sup>[7]</sup>). However, despite all the benefits associated with organic rice, its usage is still low in many developing countries because of various reasons such as high costs and lack of knowledge about it among consumers.

Consumption behaviour of individuals is greatly impacted by the perceptions they hold towards products. Earlier studies indicate that several determinants influence the

perceptions and preferences of consumers, such as health benefits, quality concerns, environment concerns, and sociodemographic (Verbeke (2005) <sup>[8]</sup> and Sahrin *et al* (2023) <sup>[9]</sup>. Of these determinants, psychological determinants, specifically food neophobia, which is the tendency to avoid trying new types of food items, have been recognized as one of the primary obstacles to adopting innovative food products (Dolgoplova *et al.* (2015) <sup>[10]</sup> and Pagliarini *et al.* (2022) <sup>[11]</sup>. Such psychological hurdles might prevent individuals from moving on from their regular consumption of non-organic rice to adopting organic rice. Other than psychological factors, product-specific features including price, quality, certification, brand, and availability also play a crucial role in influencing consumer buying behaviour. According to the findings of research, while consumers tend to have a favourable attitude towards organic food products, their purchases are ultimately dependent on factors like affordability and availability (Chammas *et al.* (2019) <sup>[12]</sup> and Eng S and Nong K., (2024) <sup>[13]</sup>. Organic rice is considered an expensive product, which implies that only individuals belonging to the high-income bracket consume organic rice, thus constraining the market for organic rice (Amin *et al.* (2020) <sup>[14]</sup>. In addition, any doubt about certification programs as well as inadequate labelling can undermine consumer confidence in organic products Mohanraj, M., and Srinivasan, G. (2024) <sup>[7]</sup>.

In addition, socio-economic and demographic factors are crucial determinants of consumer behaviour towards organic foods. Education, income, age, employment status, and marital status are some of the variables that affect the consumer's awareness and perception and ultimately purchase intention (Chen, Z., and Nor Fauzi, N. F. S. (2025) <sup>[6]</sup> and Mercygnanamani S and Padhmanaban K (2025) <sup>[15]</sup>. High income and educational levels tend to lead to increased awareness and purchase intentions. Furthermore, those who are conscious about health and environmental issues tend to choose organic foods (Mercygnanamani S and Padhmanaban K (2025) <sup>[15]</sup>.

The consumer purchase decision process regarding food products, including organic rice, includes various steps like need identification, information search, alternatives evaluation, purchase decision, and post-purchase behaviour (16). These factors play an important role in affecting consumer decisions when it comes to buying food products. In the context of organic rice purchases, the willingness to pay (WTP) is regarded as one of the most critical criteria for accepting the purchase. The studies have revealed that despite having positive attitudes towards the purchase of organic rice, WTP can be affected by various factors such as the income level of consumers, characteristics of the product, and awareness level of consumers about organic rice (Setiyadi *et al.* (2016) <sup>[17]</sup>.

Although there are several empirical works done regarding the use of organic foods, most of these works have been carried out in the developed nations or metropolitan cities, without paying much attention to regional peculiarities in the developing nations. In addition, not many empirical works exist about consumer perceptions and behaviour regarding organic products, especially when it comes to consumption of organic rice. This paper aims to fill that gap by investigating how consumers perceive organic rice in a region marked with certain socio-economic peculiarities. As

such, the current research must focus on consumer perceptions and buying behaviours toward organic rice, specifically investigating the factors that influence their decision-making process, which includes factors such as awareness, perception of health benefits, prices, and availability of organic rice. In doing so, the study will make valuable contributions to the existing body of knowledge by providing localized evidence on organic rice consumption. Understanding consumer demand for organic rice is essential not only for market development but also for promoting crop-specific sustainable cultivation practices and improving agricultural resilience.

### Objectives of the Study

The present study aims to analyse consumer behaviour toward organic rice, with a specific focus on identifying the determinants of purchase decisions and the barriers affecting regular consumption. The specific objectives of the study are as follows:

1. To identify the key factors influencing consumers' purchase decisions for organic rice.
2. To examine the constraints and challenges that hinder consumers from regularly purchasing organic rice
3. To analyse the implications of consumer demand for promoting organic rice cultivation and sustainable agricultural practices.

### Methodology

#### Study Design and Area

The present study adopted a cross-sectional descriptive survey design to examine consumer perceptions and purchasing behaviour towards organic rice in the Rayalaseema region of Andhra Pradesh, India. The cross-sectional approach enabled the collection of data at a single point in time, providing a clear understanding of existing attitudes and behavioural patterns among consumers.

The study was conducted in the Rayalaseema region, which includes the districts of Anantapur, Kurnool, Chittoor, and YSR Kadapa, along with recently reorganized districts such as Sri Sathya Sai and Nandyal. The region is characterized by semi-arid climatic conditions, low rainfall, and poor soil fertility, making it an important area for studying sustainable agricultural practices such as organic farming.

#### Sampling Design and Sample Size

The target population of the study comprised consumers aged 18 years and above who consume rice as part of their daily diet. A total of 273 respondents were included in the study using a non-probability convenience sampling technique. This method was adopted due to its practicality and ease of access to respondents within the study area. Although convenience sampling may limit the generalizability of the findings, it is considered appropriate for exploratory studies that focus on understanding consumer perception and behaviour. The selected sample size was deemed sufficient to provide meaningful insights into the factors influencing consumer purchase decisions and consumption patterns of organic rice.

#### Data Collection Method

Primary data were collected using a structured questionnaire designed through Google Forms and administered through

both online and offline modes. The use of a mixed-mode approach ensured broader coverage by including respondents from both digitally active and non-digital populations.

#### The questionnaire was structured into four sections

- 1. Demographic Profile:** This section captured information on age, gender, education, occupation, income, and place of residence.
- 2. Awareness and Purchasing Behaviour:** This section assessed respondents' awareness of organic rice, frequency of purchase, preferred purchasing locations, and factors influencing buying decisions.
- 3. Consumer Perception:** Consumer perception was measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Statements were designed to capture attitudes related to health benefits, environmental sustainability, product quality, trust in labelling, and overall preference for organic rice.
- 4. Barriers to Purchase:** This section identified key constraints affecting the purchase of organic rice, including high price, limited availability, lack of awareness, and trust-related issues.

Prior to data collection, informed consent was obtained from all respondents. Participation was voluntary, and confidentiality and anonymity were strictly maintained to ensure ethical standards.

#### Statistical Analysis and Descriptive Tools

The collected data were coded, tabulated, and analysed using Statistical Package for the Social Sciences (SPSS) version 26.0 and Microsoft Excel. Both descriptive and inferential statistical techniques were employed to achieve the study objectives. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to summarize and interpret the distribution of data. These statistical tools are widely applied in behavioural and applied research to provide meaningful insights into patterns and variability within datasets (Mishra *et al.* (2019)<sup>[18]</sup> and Kim (2015)<sup>[19]</sup>.

#### Mean and Standard Deviation

The mean was used to determine the average response for each perception statement:

$$\bar{x} = \sum x_i / n$$

where  $x_i$  represents individual observations and  $n$  denotes the total number of respondents.

The standard deviation (SD) was calculated to measure the dispersion of responses:

$$SD = \sqrt{[\sum (x_i - \bar{x})^2 / n]}$$

A lower standard deviation indicates greater consistency among responses, whereas a higher value reflects increased variability. These measures are fundamental statistical tools for describing central tendency and dispersion in research datasets Kim (2015)<sup>[19]</sup>.

#### Multiple Linear Regression Analysis

Multiple linear regression analysis was employed to examine the influence of independent variables on consumers' purchase intention. This technique enables the estimation of relationships between a dependent variable and multiple predictors and is widely used in social science and behavioural research (Ron (2002)<sup>[20]</sup> and James *et al.* (2013)<sup>[21]</sup>.

The regression model is expressed as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

where  $Y$  represents purchase intention;  $X_1$  to  $X_5$  denote independent variables;  $\beta_0$  is the intercept;  $\beta_1$  to  $\beta_5$  are regression coefficients; and  $\varepsilon$  is the error term.

The coefficient of determination ( $R^2$ ) was used to evaluate the explanatory power of the model, while the F-test was applied to assess the overall significance of the regression model. Prior to conducting the analysis, key assumptions such as linearity, independence of errors, homoscedasticity, and absence of multicollinearity were verified to ensure the validity and robustness of the model James *et al.* (2013)<sup>[21]</sup>.

#### Analysis of Implications for Sustainable Agriculture

To address the third objective, the implications of consumer demand for promoting organic rice cultivation and sustainable agricultural practices were analysed using an interpretative and integrative approach. The results obtained from consumer perception analysis (mean and standard deviation), purchase intention (multiple linear regression), and constraints analysis were collectively examined to establish a linkage between consumer behaviour and agricultural outcomes. A conceptual framework approach was adopted to relate key consumer-driven factors such as health awareness, environmental perception, availability, and price sensitivity with their potential impact on organic rice cultivation. This approach aligns consumer-driven demand analysis with plant-based production systems to evaluate its relevance for sustainable crop cultivation.

#### Results and Discussion

##### Sample Characteristics

The sample consisted of 273 respondents, representing consumers of organic rice within the study area. The gender distribution indicated that 64.1% of the respondents were male, 35.53% were female, and 0.37% identified as other, reflecting a predominantly male respondent base. With respect to age, a majority of respondents belonged to the 21–30 age group (40.29%), followed by those in the 31–40 age group (23.44%), indicating that the sample was largely composed of young adults. This suggests that younger consumers form a significant segment of the organic rice market.

In terms of educational attainment, graduates constituted the largest proportion of respondents (34.8%), indicating a moderately educated sample population. This may imply that education plays an important role in shaping awareness and perception toward organic food products. Regarding occupation, employees represented the highest share (37%), suggesting that salaried individuals form a major portion of the consumer base. The income distribution revealed that

the largest segment of respondents fell within the ₹20,000–₹50,000 monthly income category (38.1%), highlighting the presence of middle-income consumers.

In relation to purchasing behaviour, a substantial majority of respondents (84.62%) reported having purchased organic rice, indicating a high level of product awareness and trial. However, only 38.10% of respondents reported regular consumption, while the remaining respondents were identified as occasional buyers. This disparity suggests that although initial adoption of organic rice is relatively high, consistent consumption remains limited, possibly due to factors such as price, availability, or other constraints.

### Factors Influencing Purchase Decisions

The mean and standard deviation values for the various factors influencing consumers' purchase decisions toward organic rice are presented in Table 1. Among the different dimensions, health-related perceptions emerged as the most influential factor. Respondents strongly agreed that organic rice is "healthier than conventional rice," which recorded the highest mean score of 4.549 (SD = 0.696). Similarly, the statement "better nutritional value" also received a high level of agreement (mean = 4.487, SD = 0.687). These findings indicate that health consciousness plays a dominant role in shaping consumer preferences toward organic rice.

**Table 1:** Mean and Standard Deviation of Factors Influencing Purchase Decisions of Organic Rice

| S. No. | Statement                                 | Mean  | Standard Deviation |
|--------|-------------------------------------------|-------|--------------------|
| 1      | Healthier than conventional rice          | 4.549 | 0.696              |
| 2      | Better nutritional value                  | 4.487 | 0.687              |
| 3      | Improves soil health                      | 4.48  | 0.702              |
| 4      | Purchase due to health concerns           | 4.436 | 0.77               |
| 5      | Safer for children and elderly people     | 4.432 | 0.798              |
| 6      | Trust certification labels                | 4.432 | 0.735              |
| 7      | Supports environmental sustainability     | 4.429 | 0.725              |
| 8      | Tastes better than conventional rice      | 4.377 | 0.782              |
| 9      | Free from pesticide residues              | 4.377 | 0.782              |
| 10     | Availability influences purchase          | 4.355 | 0.81               |
| 11     | Transparent labeling increases confidence | 4.355 | 0.81               |
| 12     | Organic rice is value for money           | 4.344 | 0.813              |
| 13     | Income level affects purchase             | 4.326 | 0.853              |
| 14     | High price discourages purchase           | 4.297 | 0.851              |
| 15     | Promotional offers influence purchase     | 4.293 | 0.876              |

Environmental perceptions also received strong agreement among respondents. Statements such as "improves soil health" (mean = 4.480, SD = 0.702) and "supports environmental sustainability" (mean = 4.429, SD = 0.725) suggest that consumers associate organic rice with ecological benefits and sustainable agricultural practices. This reflects increasing environmental awareness, which positively influences the adoption of organic products. With regard to trust-related factors, respondents exhibited a favourable perception, with mean scores exceeding 4.3. A substantial proportion of respondents (91.21%) reported that they trust certification labels, indicating confidence in organic labelling systems. However, a large percentage (84.25%) also reported difficulty in distinguishing organic rice from conventional rice, highlighting a gap in consumer awareness and product identification.

Price sensitivity was identified as another important determinant influencing purchase decisions, with a mean score of 4.297 (SD = 0.851). This indicates that although consumers recognize the benefits of organic rice, cost considerations continue to influence purchasing behaviour. Similarly, availability recorded a mean score of 4.355 (SD =

0.810), suggesting that accessibility plays a crucial role in influencing consumer decisions. Limited availability in local markets may act as a barrier to regular consumption. Overall, the findings reveal that health benefits, environmental concerns, trust in labelling, price sensitivity, and availability collectively influence consumer purchase decisions, with health-related factors emerging as the most significant motivators.

### Multiple Linear Regression Analysis

The results of the multiple linear regression analysis are presented in Table 2. The overall regression model was found to be statistically significant ( $F(5, 267) = 9.337, p < 0.001$ ), indicating that the set of independent variables jointly explains a significant portion of the variation in consumers' purchase intention toward organic rice. The coefficient of determination ( $R^2$ ) was 0.149, suggesting that approximately 14.9% of the variance in purchase intention is explained by the five predictors included in the model. The adjusted  $R^2$  value of 0.133 indicates a modest explanatory power after accounting for the number of predictors.

**Table 2:** Multiple Linear Regression Results for Purchase Intention toward Organic Rice

| S. No. | Predictor                        | Coefficient ( $\beta$ ) | Std. Error | t-value | p-value |
|--------|----------------------------------|-------------------------|------------|---------|---------|
| 1      | Constant                         | 1.098                   | 0.248      | 4.428   | 0       |
| 2      | Health awareness                 | 0.157                   | 0.13       | 1.202   | 0.231   |
| 3      | Trust in labelling/certification | 0.007                   | 0.097      | 0.073   | 0.942   |
| 4      | Environmental awareness          | 0.158                   | 0.102      | 1.548   | 0.123   |
| 5      | Price sensitivity                | -0.121                  | 0.067      | -1.818  | 0.07    |
| 6      | Availability                     | 0.139                   | 0.071      | 1.966   | 0.050*  |

Model Summary:

$R^2 = 0.149$ , Adjusted  $R^2 = 0.133$ ,  $F(5, 267) = 9.337, p < 0.001$

\*Note:  $p \leq 0.05$  indicates statistical significance.

Among the independent variables, availability emerged as the only statistically significant predictor of purchase intention ( $\beta = 0.139$ ,  $p = 0.050$ ). This finding suggests that improved accessibility and market presence of organic rice positively influence consumers' purchase intentions. Price sensitivity exhibited a negative relationship with purchase intention ( $\beta = -0.121$ ,  $p = 0.070$ ), although the effect was statistically insignificant at the 5% level. This indicates that higher sensitivity to price may reduce consumers' likelihood of purchasing organic rice, but the effect is not strong enough to be considered statistically reliable. Both health awareness ( $\beta = 0.157$ ,  $p = 0.231$ ) and environmental awareness ( $\beta = 0.158$ ,  $p = 0.123$ ) showed positive but statistically insignificant relationships with purchase intention. This suggests that although consumers recognize the health and environmental benefits of organic rice, these factors do not significantly drive their purchasing decisions in the present study.

Similarly, trust in labelling and certification demonstrated a negligible and statistically insignificant effect ( $\beta = 0.007$ ,  $p = 0.942$ ), indicating that trust in labelling does not significantly influence purchase intention in this context. Overall, the regression results indicate that while several factors conceptually influence consumer purchase intention,

availability plays a decisive and statistically significant role, whereas other factors such as price sensitivity, health awareness, environmental awareness, and trust in labelling exhibit limited or non-significant effects within the study area.

### Barriers to Consistent Purchase

The mean scores and ranking of the barriers influencing the consistent purchase of organic rice are presented in Table 3. The results indicate that all identified barriers recorded mean values above the midpoint of the Likert scale (3.0), suggesting that respondents generally agreed on the presence of these constraints. Among the listed barriers, the most significant issue was the lack of access to good quality organic rice, which recorded the highest mean score (mean = 3.835, SD = 1.169). This finding highlights that quality-related availability is a major concern affecting the regular consumption of organic rice. The second most important barrier was the lack of awareness regarding the benefits of organic rice, with a mean score of 3.802 (SD = 1.199). This indicates that insufficient consumer knowledge may hinder informed purchasing decisions and limit consistent consumption.

**Table 3:** Ranking of Barriers Limiting Consistent Purchase of Organic Rice

| S. No. | Barrier                                | Mean  | Standard Deviation | Rank |
|--------|----------------------------------------|-------|--------------------|------|
| 1      | Lack of access to quality organic rice | 3.835 | 1.169              | 1    |
| 2      | Lack of awareness about benefits       | 3.802 | 1.199              | 2    |
| 3      | High price of organic rice             | 3.736 | 1.187              | 3    |
| 4      | Limited variety of organic rice types  | 3.729 | 1.219              | 4    |
| 5      | Limited availability in local market   | 3.641 | 1.171              | 5    |

High price was identified as the third-ranked barrier (mean = 3.736, SD = 1.187), reflecting the sensitivity of consumers to the premium pricing of organic rice. This suggests that cost remains a critical factor restricting its regular purchase. Furthermore, the limited variety of organic rice types available in the market was ranked fourth (mean = 3.729, SD = 1.219), indicating that lack of product diversity may influence consumer preferences and reduce repeat purchases. The least-ranked barrier was the limited availability in local markets, which still recorded a relatively high mean score (mean = 3.641, SD = 1.171). This suggests that although availability is comparatively less critical than other factors, accessibility issues continue to persist. Overall, the findings demonstrate that quality concerns, lack

of awareness, high price, limited variety, and availability collectively act as significant barriers to the consistent purchase of organic rice.

### Implications of Consumer Behaviour for Organic Rice Cultivation and Sustainable Agricultural Practices

The results presented in Table 4 clearly demonstrate the linkage between consumer behaviour and its implications for organic rice cultivation and sustainable agricultural practices. The findings indicate that high health awareness among consumers, supported by the highest mean score (4.549), plays a crucial role in driving demand for organic rice. This suggests that health consciousness is a key motivating factor that can stimulate market expansion.

**Table 4:** Linkage Between Consumer Behaviour and Implications for Organic Rice Cultivation and Sustainable Agriculture

| S. No. | Key Consumer Findings             | Evidence from Study                   | Agricultural Implications                               |
|--------|-----------------------------------|---------------------------------------|---------------------------------------------------------|
| 1      | High health awareness             | Highest mean score (4.549)            | Increased demand for organic rice                       |
| 2      | Positive environmental perception | Mean > 4.4 for sustainability factors | Promotes eco-friendly and sustainable farming practices |
| 3      | Availability is significant       | Regression ( $p = 0.050$ )            | Need to improve production and supply chain systems     |
| 4      | Price sensitivity                 | Mean = 4.297                          | Need for cost-effective organic cultivation methods     |
| 5      | Lack of awareness                 | Ranked 2nd constraint                 | Need for awareness and extension programmes             |

Similarly, the strong agreement with environmental attributes (mean values above 4.4) reflects a growing consumer inclination towards environmentally sustainable products. This positive perception supports the adoption of eco-friendly farming practices and encourages the transition towards sustainable agriculture. The regression analysis

further highlights that availability is the only statistically significant factor influencing purchase intention ( $p = 0.050$ ). This finding emphasizes that, despite favourable perceptions, actual consumption largely depends on market accessibility. It indicates the need for strengthening production systems, improving distribution channels, and

enhancing supply chain efficiency.

In addition, price sensitivity (mean = 4.297) and lack of awareness (ranked second among constraints) continue to act as major limiting factors. These barriers restrict the regular consumption of organic rice and reduce the effective realization of market demand. Addressing these issues through cost-effective production methods and awareness programmes is essential to improve consumer participation. Overall, the table highlights that while consumer demand has strong potential to promote organic rice cultivation, structural constraints such as limited availability, high price, and inadequate awareness hinder its full development. Bridging this gap is critical for encouraging farmer adoption of organic practices and advancing sustainable agricultural systems, particularly in regions like Rayalaseema.

### Conclusion

The present study examined consumer perception and purchase behaviour toward organic rice, with a focus on identifying the key factors influencing purchase decisions, the barriers limiting consistent consumption, and the implications for organic rice cultivation and sustainable agricultural practices. The findings reveal that consumers generally hold a positive perception of organic rice, particularly in relation to its health benefits, nutritional value, and environmental sustainability. Among the various factors analysed, health-related perceptions emerged as the most influential drivers of purchase decisions, indicating that increasing health awareness plays a crucial role in promoting organic food consumption. However, the results of the multiple linear regression analysis indicate that availability is the only statistically significant determinant of purchase intention. This suggests that while consumers recognize the benefits of organic rice, their actual purchasing behaviour is primarily influenced by the ease of access and market presence of the product. Other factors such as health awareness, environmental concern, price sensitivity, and trust in labelling, although positively perceived, did not exhibit a statistically significant impact on purchase intention in the study area.

The study also identified several key barriers that hinder the regular purchase of organic rice. The most prominent constraints include lack of access to good quality organic rice, insufficient awareness regarding its benefits, high price, limited product variety, and restricted availability in local markets. These findings highlight a clear gap between consumer awareness and actual purchasing behaviour, indicating that favourable attitudes alone are insufficient to ensure consistent consumption. Importantly, the study highlights that consumer demand has significant implications for organic rice cultivation and sustainable agricultural development. The growing preference for health-conscious and environmentally friendly food products creates potential market opportunities that can encourage farmers to adopt organic farming practices. However, the persistence of constraints such as limited availability, high prices, and lack of awareness restricts the effective realization of this demand and may discourage the expansion of organic rice cultivation.

Therefore, addressing these challenges through improved supply chain management, enhanced market accessibility, consumer awareness programmes, and quality assurance

mechanisms is essential. Strengthening the linkage between consumer demand and agricultural production can promote organic rice cultivation, improve soil health, reduce chemical inputs, and contribute to environmentally sustainable farming systems. Such efforts will not only enhance consumer welfare but also support the long-term development of sustainable agriculture.

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