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## Study on customer satisfaction towards the Zuari agro chemical fertilizers in south Goa district

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### Abstract

The present “Study on Customer Satisfaction towards Zuari Agro Chemical Fertilizer in South Goa district” was mainly aimed to study the customer satisfaction of Zuari fertilizers in the state of Goa, analyse the farmer’s perception towards the fertilizers on the bases of performance, price and availability and identify the constraints and area of improvement for marketing. For the present study, a multistage purposive cum random sampling technique was adopted. South Goa having the majority of the cultivable land was selected for the study purpose. Out of 7 blocks in South Goa, Canacona block is the one which is selected as most of the people occupation in the study area was farming. 3 villages i.e., Agonda, Khotigao, Goadongri from Canacona block were selected randomly. From the selected villages, list of Zuari fertilizers users was prepared and 30, 40, 30 farmers were selected respectively from the above said villages. Thus, the total sample size of farmers was 100. The data for present study pertained to agricultural year 2021-2022. Secondary data was collected from different sources like web-site, relevant magazines, articles, dealer’s and Zuari regional office. The data on socio-economic profile, farming activities, satisfaction towards fertilizers based on price, availability, performance and constraints towards the fertilizer use were collected from farmers using pre- tested questionnaires of these purposes.

**Keywords:** customer satisfaction, price, performance, availability, constraints, socio-economic

### Introduction

The India fertilizers market is projected to register a CAGR of 11.9% during the forecast period (2021-2026). The impact of global pandemic Covid-19, on the Indian fertilizer market, is low, as the government exempted this sector from lockdown restrictions. But the sector faced challenges in terms of shortage of labour and raw materials due to lockdown. The government of India took measures to ensure fertilizers are available to the farmers in the midst of lockdown which resulted in the increased sales of fertilizers. India is the second-largest consumer of fertilizers in the world with an annual consumption of more than 55.0 million metric tons. Among the various type of fertilizers used in India, Urea is one of the highest consumed fertilizers in the country as a source of Nitrogen. In 2020-21, the primary sales volumes for fertilizers grew at a healthy rate of 7.8% to 66.26 million MT from 61.4 million MT in 2019-20, following the healthy monsoon. While urea sales grew by 4.5% to 35.1 million MT in 2020-21 from 33.6 million MT in 2019-20, non-urea sales grew by 11.7% to 31.1 million MT in 2020-21 from 27.8 million MT in FY2019. The fertilizer industry is a key industry for the Indian economy in terms of assuring food security to the country. India is the 2nd largest consumer of fertilizers (urea accounts for over 2/3rd of the overall fertiliser consumption) and is also the 3rd largest producer of nitrogenous fertilizers (China and the US rank before India). In terms of production of phosphatic fertilizers, India has production capacity spread across the private and co-operative sector, whereas the requirement of potash is completely met through imports. The domestic consumption of urea grew moderately at a CAGR of ~1.3% from 31.9 million MT in FY2016 to 33.6 million MT in FY2020. Demand for urea remains stable because of the traditionally high usage and also the fact that the freeing up of retail prices for non-urea fertilizers, following the implementation of nutrient-based subsidy (NBS) for these fertilizers, has led to a significant price differential of urea vis-à-vis non-urea fertilizers. The Indian P&K fertilizer industry works under the NBS scheme i.e., from 1 April 2010, as per which prices of these fertilizers have been partially deregulated. The performance of the Indian P&K fertilizers industry has remained volatile, post the introduction of the NBS due to economic (such as demand-supply, commodity prices and currency movements) and regulatory (such as subsidy delay) issues.

As a result, the domestic consumption of P&K fertilizers has been volatile with volumes fluctuating between 20.6 million MT on the lower side and 31.5 million MT on the higher side. However, during FY2020, P&K fertilizer sales volumes reported a 6% growth to 27.8 million MT, despite imports being lower by 17% since the systemic inventory level at the beginning of the year was high. The imports of DAP and MOP declined 23% and 11% respectively whereas imports of NPK increased by 16% in FY2020. Domestically manufactured P&K volumes remained stagnant with a growth rate of ~1% during FY2020. Import dependence, forex fluctuations, Agro-climatic risks and retail price differential of P&K fertilizers vis-à-vis urea continue to remain the key challenges for the P&K industry.

**Material and Method**

**Selection of District**

Out of 2 districts i.e., South Goa and North Goa, South Goa was selected for the study purpose as majority of the cultivable land is available in the study area.

**Selection of Block**

There are total 7 Taluka in South Goa and out of all Canacona block is the one which was selected for the study as most of the people’s occupation in Canacona is farming.

**Selection of Village**

Out of 8 villages from Canacona block, 3 village were selected randomly for the study purpose.

**Selection of Respondents**

From the selected villages list of all Zuari fertilizer users were obtained from the dealers. 10% farmers were randomly selected from each village and then farmers were classified into groups. i.e., marginal, small, semi medium, medium, large.

**Analytical Tools and Techniques**

Taking into consideration and convenience and survey method will be used for the collection of data selected farmers will be personally interviewed and necessary information will be collected. Tabular method and some analytical tools were adopted for the analysis of data. The data Analysis was presented in the form of tables, charts and diagram. The statistical techniques such as percentile and descriptive analysis were used to find the frequencies.

**Range:** Stated succinctly we have the following formula:

$$\text{Range} = \text{Maximum Value} - \text{Minimum Value.}$$

**Percentage formula**

The percentage formula is used to find the share of a whole in terms of 100. Using this formula, you can represent a number as a fraction of 100.

$$\text{Percentage} (\text{Value}/\text{Total Value}) \times 100$$

$$\% \text{ Increase} [(\text{New number} - \text{Original number})/\text{Original number}] \times 10$$

**Result and Discussion**

Table 1: To analyse the customer satisfaction towards Zuari Agro Chemical Fertilizer base on price, performance and availability of the fertilizers. The below table shows the percentage of the respondents respectively.

**Table 1:** To analyse the customer satisfaction

| Sr. No | Particular          | % of respondents towards price | % of respondents towards performance | % of respondents towards availability |
|--------|---------------------|--------------------------------|--------------------------------------|---------------------------------------|
| 1      | Highly satisfied    | 10                             | 50                                   | 10                                    |
| 2      | Satisfied           | 14                             | 32                                   | 16                                    |
| 3      | Neutral             | 4                              | 10                                   | 8                                     |
| 4      | Dissatisfied        | 44                             | 8                                    | 42                                    |
| 5      | Highly dissatisfied | 28                             | 0                                    | 24                                    |
|        | Total               | 100                            | 100                                  | 100                                   |

Figure 1: Display the Percentage of the respondents towards the Zuari Agro fertilizers on the base of price, performance and availability with the use of bar graph.



**Fig 1:** Customer Satisfaction on the Bases of Price, Performance and Availability

**Interpretation:** From the above fig1. It is interpreted that out of 100 respondents 10% of the respondents were highly satisfied with Zuari Agro chemical fertilizers company's price and 14% of the respondents were satisfied, 4% of the respondents were neutral, 44% of the respondents were dissatisfied, 28% of the respondents were highly dissatisfied with the Zuari Agro chemical fertilizers company's prices respectively.

Secondly it also shows that 50% of the respondents were highly satisfied with the performance of the Zuari Agro chemical fertilizers, 32% of the respondents were satisfied

with the performance, 12% of the respondents were neutral with the performance, 8% of the respondents were dissatisfied with the performance, 0% of the respondents were highly dissatisfied with the performance of the Zuari Agro chemical fertilizers respectively.

And lastly it also shows that 10% of the respondents were highly satisfied with the availability of Zuari Agro chemical fertilizers and 16% of the respondents were satisfied, 8% of the respondents were neutral, 42% of the respondents were dissatisfied, 24% of the respondents were highly dissatisfied with the availability of Zuari Agro chemical fertilizers.

**Table 2:** Constraints in Adopting Zuari Agro chemical fertilizers

| Sr.no | Constraints  | No's of responders | % of responders | Rank |
|-------|--|--------------------|-----------------|------|
| 1     | Lack of knowledge on use of and market information on fertilizer due to limited access to fertilizer specific extension service. | 12                 | 12              | IV   |
| 2     | Non availability of Zuari Agro chemical fertilizer locally at time and in sufficient amount when needed.                         | 16                 | 16              | III  |
| 3     | Slow process of soil testing which cause improper application of fertilizer which causes a major loss to farmers.                | 36                 | 36              | I    |
| 4     | Transportation being a major issue, as most of the dealers is in urban area.   | 28                 | 28              | II   |
| 5     | Lack of guidance from extension personal   | 8                  | 8               | V    |
|       | Total  | 100                | 100             |      |

Interpretation: As seen from the above table the major important constraints faced by the farmers in adopting Zuari Agro chemical fertilizer were; slow process of soil testing which cause improper application of fertilizer which cause a major loss to farmers which account 36% of the response, followed by transportation being a major issue has most of the dealer's is in urban area i.e. 28%, non-availability of fertilizer at proper time and in sufficient amount when needed i.e. 16%, lack of knowledge on use of and market information on fertilizer due to limited access to fertilizer specific extension service i.e. 12% and lack of guidance from extension personal i.e. 8%.

#### Suggestion for adopting Zuari Agro Chemical Fertilizers

- Technical aspects on Zuari fertilizer should be provided by extension agencies
- Made availability of Zuari fertilizer in village
- Implement soil testing laboratories in some of the villages
- Farmers should be identified to provide training to the other farmers at village level
- Special training about Zuari speciality
- Fertilizer should be organized by KVKs at village level for farmers.
- Awareness campaign on popularization of Zuari speciality fertilizer
- Company has to distribute according to the demand of the product in the market.
- Company has to put some attractive offers to attract dealers and customers.
- It is necessary to avoid high stock to remove under sale pricing.
- To assess the improvement and service by external parameters of customer satisfaction level and service by external agencies on regular period.

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