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## Market share analysis and factors determining farmers' adoption of GROMOR fertilizers in Buldhana district

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### Abstract

The present study entitled "Market Share Analysis and Factors Determining Adoption of GROMOR Fertilizers in Buldhana District," was conducted during 2025-26 to assess the market share of GROMOR fertilizers and to analyse the factors influencing their adoption by farmers. The study was conducted in Sangrampur, Shegaon and Khamgaon tehsils of Buldhana district, Maharashtra, covering ninety selected farmers through a structured interview schedule. Secondary data on fertilizer sales were collected from Coromandel International Limited, fertilizer dealers and the Department of Agriculture, while primary data on adoption behaviour were collected directly from farmers. The market share was estimated using the percentage method, and the factors determining adoption were analysed using multiple linear regression. The results revealed that GROMOR fertilizers held an overall market share of 24.03 per cent in Buldhana district, with the highest share recorded in Sangrampur tehsil (28.47%) followed by Khamgaon (22.27%) and Shegaon (21.51%). Among fertilizer grades, GROMOR recorded its strongest position in phosphatic and complex fertilizers such as 14:35:14 (42.38%), 20:20:00:13 (42.24%) and SSP (39.95%), while its share in Urea (5.33%) and MOP (6.37%) remained comparatively low. The multiple regression analysis showed that age of farmer and cropping intensity had a significant positive influence on adoption, while education of farmer and price of fertilizer had a significant negative influence, with the model explaining 89.1 per cent of the variation in adoption i.e.  $R^2 = 0.891$ . The study suggests strengthening dealer networks and product availability in the Urea and MOP segments to further improve the market position of GROMOR fertilizers in the district.

**Keywords:** GROMOR, market share, fertilizer adoption, regression analysis, Buldhana district

### Introduction

Fertilizers have played a vital role in modern agriculture by significantly increasing crop yields and supplying essential nutrients required for plant growth and improved soil fertility. In India, fertilizer use gained momentum after independence, particularly during the Green Revolution of the 1960s, and the country is today among the world's largest producers and consumers of fertilizers, reflecting the critical role of fertilizers in ensuring food security. Maharashtra is one of India's leading fertilizer-consuming states, accounting for about 11 per cent of the country's total fertilizer consumption, with granular fertilizers such as Urea, DAP, SSP, MOP and NPK complexes forming the bulk of consumption. Buldhana district of the Amravati division is predominantly agricultural, with soybean, cotton, pigeon pea, wheat, chickpea and sorghum as the major crops, creating substantial demand for balanced fertilizer application.

Buldhana district is one of the major agricultural areas in Maharashtra and sees the cultivation of crops such as soybean, cotton, pigeon pea, gram, wheat and others. Since this range of crops is grown, there is a demand for various grades of fertilizer. As a result, there is noticeable competition among the different fertilizer brands. Knowledge of GROMOR's market position and the advantages that its users perceive can offer useful information to fertilizer companies, dealers and agricultural extension agencies. The study currently under consideration therefore concentrates on two points: the market share of GROMOR fertilizers and the advantages that farmers believe they gain from using them. It is anticipated that the

study will lead to a better understanding of GROMOR's position in relation to other fertilizer brands and of the main benefits which account for its acceptance by farmers. The study on market share analysis and farmers perceived advantages of GROMOR fertilizers in Buldhana district was undertaken with the following objectives:

1. To study market share of GROMOR fertilizers in Buldhana district.
2. To analyze the factors determining adoption of GROMOR fertilizers in Buldhana district.

## Methodology

### Study area and sampling design

The present study was conducted in Buldhana district of the Vidarbha region of Maharashtra, selected purposively based on the number of farmers using GROMOR granular fertilizers and dealers marketing them. Out of the thirteen talukas of the district, three talukas, viz., Sangrampur, Shegaon, and Khamgaon, were selected. From each taluka, three villages were selected, and from each village ten farmers were selected randomly, making a total sample of 90 farmers.

The study pertains to the year 2025-26. Secondary data relating to the total fertilizer stock sold by dealers and the corresponding sales of GROMOR fertilizers were collected from dealers and Coromandel International Limited. Primary data on farmers' perceived advantages in the adoption of GROMOR fertilizers were collected from the selected 90 farmers through personal interview using a specially designed schedule.

## Analytical methods

1. **Market share of GROMOR fertilizers:** Market share was worked out by using the following formula (Percentage method):

$$\text{Market Share} = (\text{Sales of GROMOR fertilizers} / \text{Total sales of all brands}) \times 100$$

2. **Factors determining adoption of GROMOR fertilizers:** The factors influencing adoption were analysed using a multiple linear regression model of the following form:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5$$

Where, Y = Level of adoption of GROMOR fertilizers (dependent variable); a = Intercept;  $b_1 \dots b_5$  = Regression coefficients; and

$X_1$  = Age of farmer (years);  $X_2$  = Education of farmer (years of schooling);  $X_3$  = Income of farmer (Rs.);  $X_4$  = Price of fertilizer (Rs./kg);  $X_5$  = Cropping intensity.

## Results and discussion

### 1. Market share of GROMOR fertilizers

Market share is the proportion of total sales in a market that belongs to a particular company, brand, or product. The present study assessed the market share of GROMOR fertilizers separately for the three selected tehsils of Buldhana district, namely Sangrampur, Shegaon and Khamgaon, before arriving at the overall district-level position.

**Table 1:** Market share of GROMOR fertilizers in Buldhana district, 2025-26

| Sr. No. | Name / Grade of the fertilizers |             | Total Stock Sale By Dealers (All Brands) in Metric Tonnes | Total GROMOR Fertilizers Sale by Dealers in Metric Tonnes | Market Share of GROMOR Fertilizers in Percentage |
|---------|---------------------------------|-------------|-----------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------|
| 1       | Straight Fertilizers            | Urea        | 65769.00                                                  | 3504.40                                                   | 5.33                                             |
| 2       |                                 | SSP         | 32888.00                                                  | 13140.00                                                  | 39.95                                            |
| 3       |                                 | MOP         | 22928.00                                                  | 1460.00                                                   | 6.37                                             |
| 4       | Complex Fertilizers             | DAP         | 6690.00                                                   | 2477.60                                                   | 37.03                                            |
| 5       |                                 | 20:20:00:13 | 58414.00                                                  | 24672.60                                                  | 42.24                                            |
| 6       |                                 | 10:26:26    | 16996.00                                                  | 3971.20                                                   | 23.37                                            |
| 7       |                                 | 15:15:15    | 10788.00                                                  | 2774.00                                                   | 25.71                                            |
| 8       |                                 | 24:24:00    | 3095.00                                                   | 102.20                                                    | 3.30                                             |
| 9       |                                 | 14:35:14    | 1030.00                                                   | 436.50                                                    | 42.38                                            |
| Total   |                                 |             | 218598.00                                                 | 52538.50                                                  | 24.03                                            |

Table 1 represents market share analysis of Buldhana district total chemical fertilizer sales in 2025-26 reached 218,598 MT, with GROMOR dealers accounting for 52,538.50 MT, accounting to a 24.03 per cent market share. This demonstrates GROMOR's strong presence in the district's fertilizer market. Among straight fertilizers, SSP had the highest GROMOR market share at 39.95 per cent.

Urea and MOP had lower shares at 5.33 per cent and 6.37 per cent, respectively. In the category of complex fertilizers, 14:35:14 and 20:20:00:13 led with shares of 42.38 per cent and 42.24 per cent, also DAP covers 37.03 per cent market shares respectively, while 15:15:15 and 10:26:26 had shares of 25.71 per cent and 23.37 per cent. The fertilizer grade 24:24:00 had the smallest market share at 3.30 per cent.

**Table 2:** Market share of GROMOR fertilizers in Sangrampur tehsil, 2025-26

| Sr. No. | Name / Grade of the fertilizers |             | Total Stock Sale By Dealers (All Brands) in Metric Tonnes | Total GROMOR Fertilizers Sale by Dealers in Metric Tonnes | Market Share of GROMOR Fertilizers in Percentage |
|---------|---------------------------------|-------------|-----------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------|
| 1       | Straight Fertilizers            | Urea        | 3893.00                                                   | 455.00                                                    | 11.69                                            |
| 2       |                                 | SSP         | 3046.00                                                   | 1060.00                                                   | 34.80                                            |
| 3       |                                 | MOP         | 429.00                                                    | 127.00                                                    | 29.60                                            |
| 4       | Complex Fertilizers             | DAP         | 1693.00                                                   | 525.00                                                    | 31.01                                            |
| 5       |                                 | 20:20:00:13 | 2313.00                                                   | 1005.00                                                   | 43.45                                            |
| 6       |                                 | 10:26:26    | 926.50                                                    | 364.00                                                    | 28.49                                            |
| 7       |                                 | 15:15:15    | 739.50                                                    | 180.00                                                    | 24.34                                            |
| 8       |                                 | 24:24:00    | 383.50                                                    | 99.00                                                     | 25.81                                            |
| 9       |                                 | 14:35:14    | 20.00                                                     | 12.00                                                     | 60.00                                            |
| Total   |                                 |             | 13443.50                                                  | 3827.00                                                   | 28.47                                            |

Table 2 shows that the total fertilizer stock sold by dealers in Sangrampur tehsil was 13,443.50 MT, of which 3,827.00 MT was accounted for by GROMOR fertilizers, giving an overall market share of 28.47 per cent, the highest among the three tehsils. Among straight fertilizers, SSP recorded the highest market share (34.80 per cent), MOP (29.60 per cent) and Urea (11.69 per cent). Among complex fertilizers, 20:20:00:13 recorded the highest share (43.45 per cent),

followed by DAP (31.01 per cent), 10:26:26 (28.49 per cent), 24:24:00 (25.81 per cent) and 15:15:15 (24.34 per cent). The grade 14:35:14 recorded the highest percentage share (60.00 per cent), though its sales volume was very low. Overall, GROMOR performed well across several fertilizer grades in this tehsil, with scope for improvement in Urea.

**Table 3:** Market share of GROMOR fertilizers in Shegaon tehsil, 2025-26

| Sr. No. | Name / Grade of the fertilizers |             | Total Stock Sale By Dealers<br>(All Brands) in Metric Tonnes | Total GROMOR<br>Fertilizers Sale by Dealers<br>in Metric Tonnes | Market Share of<br>GROMOR<br>Fertilizers in<br>Percentage |
|---------|---------------------------------|-------------|--------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------|
| 1       | Straight Fertilizers            | Urea        | 2851.00                                                      | 400.00                                                          | 14.03                                                     |
| 2       |                                 | SSP         | 2680.50                                                      | 510.00                                                          | 19.03                                                     |
| 3       |                                 | MOP         | 188.50                                                       | 19.00                                                           | 10.08                                                     |
| 4       | Complex Fertilizers             | DAP         | 1308.00                                                      | 455.00                                                          | 34.79                                                     |
| 5       |                                 | 20:20:00:13 | 2287.00                                                      | 580.00                                                          | 25.36                                                     |
| 6       |                                 | 10:26:26    | 676.00                                                       | 200.00                                                          | 29.59                                                     |
| 7       |                                 | 15:15:15    | 559.50                                                       | 116.00                                                          | 20.73                                                     |
| 8       |                                 | 24:24:00    | 296.00                                                       | 51.00                                                           | 17.23                                                     |
| 9       |                                 | 14:35:14    | 10.00                                                        | 3.75                                                            | 37.50                                                     |
| Total   |                                 |             | 10856.50                                                     | 2334.75                                                         | 21.51                                                     |

Table 3 reveals that the total fertilizer stock sold by dealers in Shegaon tehsil was 10,856.50 MT, of which 2,334.75 MT was GROMOR fertilizers, giving an overall market share of 21.51 per cent, the lowest among the three tehsils. Among complex fertilizers, DAP recorded the highest market share (34.79 per cent), followed by 10:26:26 (29.59 per cent),

20:20:00:13 (25.36 per cent) and 15:15:15 (20.73 per cent). Among straight fertilizers, SSP (19.03 per cent), MOP (10.08 per cent) and Urea (14.03 per cent) recorded comparatively lower shares. Although Urea had a high sales volume overall, GROMOR's share in this segment remained comparatively low in Shegaon.

**Table 4:** Market share of GROMOR fertilizers in Khamgaon tehsil, 2025-26

| Sr. No. | Name / Grade of the fertilizers |             | Total Stock Sale By Dealers (All Brands) in Metric Tonnes | Total GROMOR Fertilizers Sale by Dealers in Metric Tonnes | Market Share of GROMOR Fertilizers in Percentage |
|---------|---------------------------------|-------------|-----------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------|
| 1       | Straight Fertilizers            | Urea        | 6213.00                                                   | 650.00                                                    | 10.46                                            |
| 2       |                                 | SSP         | 4294.00                                                   | 1010.00                                                   | 23.52                                            |
| 3       |                                 | MOP         | 472.00                                                    | 155.00                                                    | 32.84                                            |
| 4       | Complex Fertilizers             | DAP         | 2471.00                                                   | 830.00                                                    | 33.59                                            |
| 5       |                                 | 20:20:00:13 | 4589.00                                                   | 925.00                                                    | 20.16                                            |
| 6       |                                 | 10:26:26    | 1116.00                                                   | 395.00                                                    | 35.39                                            |
| 7       |                                 | 15:15:15    | 944.00                                                    | 476.00                                                    | 50.42                                            |
| 8       |                                 | 24:24:00    | 609.00                                                    | 115.00                                                    | 18.88                                            |
| 9       |                                 | 14:35:14    | 180.00                                                    | 95.00                                                     | 52.78                                            |
| Total   |                                 |             | 22488.00                                                  | 4651.00                                                   | 22.27                                            |

Table 4 indicates that the total fertilizer stock sold by dealers in Khamgaon tehsil was 22,488.00 MT, of which

4,651.00 MT was GROMOR fertilizers, giving an overall market share of 22.27 per cent. Among straight fertilizers,

MOP recorded the highest market share (32.84 per cent), followed by SSP (23.52 per cent) and Urea (10.46 per cent), indicating a balanced presence of GROMOR across the major fertilizer categories in this tehsil. Among complex fertilizers, 14:35:14 registered the highest share (52.78 per cent), although its sales volume was relatively low, followed

by 15:15:15 (50.42 per cent), 10:26:26 (35.39 per cent), 20:20:00:13 (20.16 per cent) and 24:24:00 (18.88 per cent). Overall, GROMOR held a satisfactory market position in Khamgaon tehsil, particularly in DAP and complex fertilizer grades, with scope to strengthen its presence in Urea and 24:24:00.

**Table 5:** Overall market share of GROMOR fertilizers in Buldhana district and selected tehsils, 2025-26 (%)

| Geographical Area                             | Buldhana District | Sangrampur Tehsil | Shegaon Tehsil | Khamgaon Tehsil |
|-----------------------------------------------|-------------------|-------------------|----------------|-----------------|
| GROMOR Fertilizers Market Share in Percentage | 24.03             | 28.47             | 21.51          | 22.27           |

The overall tehsil-wise market share of GROMOR fertilizers is presented in Table 4. The market share of GROMOR in Buldhana district as a whole was 24.03 per cent, meaning that nearly one-fourth of the fertilizer market of the district is accounted for by GROMOR products. Among the selected tehsils, Sangrampur recorded the highest market share (28.47 per cent), reflecting stronger acceptance and wider adoption of GROMOR fertilizers among farmers of the tehsil, followed by Khamgaon (22.27 per cent) and Shegaon (21.51 per cent). These variations indicate that the demand for and adoption of GROMOR fertilizers differ across tehsils due to factors such as farmers'

awareness, dealer availability, cropping pattern and local preferences. Overall, GROMOR has established a significant presence in Buldhana district, with particularly strong performance in Sangrampur tehsil. (Deshmukh & Ingole, 2019) <sup>[2]</sup>.

## 2. Factors determining adoption of GROMOR fertilizers

The factors determining in the adoption of GROMOR fertilizers by farmers in Buldhana district were analysed using multiple linear regression, and the results are presented following.

**Table 6:** Factors determining adoption of GROMOR fertilizers in Buldhana district

| Sr. No. | Particulars                            | Regression Coefficient |
|---------|----------------------------------------|------------------------|
| 1       | Intercept (a)                          | -12.041<br>(4.233)     |
| 2       | Age of Farmer (X <sub>1</sub> )        | 3.977***<br>(0.465)    |
| 3       | Education of Farmer (X <sub>2</sub> )  | -0.421***<br>(0.143)   |
| 4       | Income of Farmer (X <sub>3</sub> )     | 0.089<br>(0.099)       |
| 5       | Price of Fertilizers (X <sub>4</sub> ) | -0.155***<br>(0.035)   |
| 6       | Cropping Intensity (X <sub>5</sub> )   | 2.650***<br>(1.894)    |
|         | R <sup>2</sup>                         | 0.891                  |

(Note: \*\*\*, \*\*, \* Significant at 1%, 5% and 10% level of Significance)  
(Figures in parentheses indicates the standard error.)

Table 6 represents the explanatory variables included in the model together explained 89.1 per cent of the variation in adoption of GROMOR fertilizers ( $R^2 = 0.891$ ), indicating a high explanatory power of the model. Age of farmer ( $X_1$ ) and cropping intensity ( $X_5$ ) showed a positive and highly significant relationship with adoption (3.977 and 2.650, respectively, significant at 1% level), suggesting that older and more experienced farmers, as well as farmers with higher cropping intensity, were more likely to adopt GROMOR fertilizers. In contrast, education of farmer ( $X_2$ ) and price of fertilizer ( $X_4$ ) exhibited a negative and significant relationship with adoption (-0.421 and -0.155, respectively, significant at 1% level), implying that adoption declined with higher education levels and rising fertilizer prices. Income of farmer ( $X_3$ ) showed a positive but statistically non-significant coefficient (0.089), indicating that income alone was not a decisive factor in adoption decisions. (Deshmukh & Ingole, 2019; Kapoor & Kumar, 2015) <sup>[2, 4]</sup>.

## Conclusion

The study revealed that GROMOR fertilizers have established a satisfactory market position in Buldhana district, with an overall market share of 24.03 per cent, and comparatively stronger performance in phosphatic and complex fertilizer grades than in Urea and MOP. Among the selected tehsils, Sangrampur recorded the highest market share, indicating scope for replicating its marketing approach in Khamgaon and Shegaon. The regression analysis identified age of farmer and cropping intensity as significant positive drivers of adoption, while education of farmer and fertilizer price acted as significant negative influences, together explaining a high proportion (89.1%) of the variation in adoption behaviour. Strengthening dealer networks, ensuring competitive pricing and enhancing awareness programmes, particularly for Urea and MOP, would help further improve the market position and adoption of GROMOR fertilizers in the district.

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