

FACTORS INFLUENCING FARMERS PERCEPTION ON FERTILIZER SERVICES OFFERED AT RYTHU BHAROSA KENDRAS

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ABSTRACT

The current study was carried out during the year 2022 and 2023 to know the factors influencing farmers perception on fertilizer services offered at Rythu Bharosa Kendras in Rayalaseema region of Andhra Pradesh. A representative sample of 120 farmers in two districts of Andhra Pradesh i.e., Tirupati and Chittoor were selected for the study. Through pre-structured interview schedule, farmers perception was collected. Representative farmers were very satisfied about the physical location of the Rythu Bharosa Kendras with the highest mean score of 4.62. Respondents were very unsatisfied about in time availability of all the fertilizers in RBK with respect to cropping pattern with the lowest mean score of 1.86. 42.50% of the representative sample had moderate perception, 37.50% of them had poor perception and 20.00% of the sample farmers had good perception on fertilizer services offered at Rythu Bharosa Kendra. Impact of farmers socio-economic factors like education, major occupation, farming experience, farm size, annual income and farmers age on their perception over fertilizer services offered at Rythu Bharosa Kendras were analysed. It was noticed that only farming experience and major occupation have significant impact on their perception over fertilizer services offered at Rythu Bharosa Kendras.

Keywords: cropping pattern, perception, major occupation, farmers age

INTRODUCTION

In India, agriculture played a prominent role in economy and employment. In 2022-23, share of Gross Value Added of agriculture and allied sectors in India's total economy was 18.3% and provided an employment opportunity to around two – third of the population in India. Further in agriculture sector, India emerged as net exporter with a value of \$ 50.2 billion in financial year 2022-23. Andhra Pradesh was one of the most prominent agricultural states and considered as rice bowl of India. Around 66.64 % of state population were from rural areas. In 2022-23 GVA growth rates for Agriculture and Allied sectors was 13.18%. Agriculture sector reported 20.72% growth, while horticulture sector gained 12.58% growth. Similarly, Livestock and fisheries reported a growth rate of 7.32% and 19.41 % respectively (Sarada et al., 2023). In order to meet the current requirement of food to the growing population, there was a huge need to improve the productivity. Further the issues pertaining to farming has to addressed effectively (Vinaya and Shivamurthy, 2021). Hence there exist an urgent need to identify the magnitude of various constraints in agriculture and allied sectors (Karravula et al., 2022). Farm inputs includes seeds, fertilizers, plant protection chemicals, credit facilities, crop insurance and farm machinery (Karravula et al., 2023). Availability of proper information about this farm inputs

will enhance the overall efficiency of farming operations and further improve the net profit to the farmers (Babu, 2019). Several interventions were implemented by both the state and central government through various programmes like PM Kisan, YSR Rythu Bharosa and etc. To support the overall farming operations. As a part of these interventions, state government of Andhra Pradesh has launched the centres as one stop solution for all agriculture and allied issues in the name of Rythu Bharosa Kendras in each corner of the state on May 30, 2020 (Damodara Reddy et al., 2022). These centres played a prominent role in each and every aspect of farming. Currently, 10778 RBKs were offering their services to the farmers across the state (Jyosthna et al., 2022). Further the state government ambitiously started selling of certified agricultural inputs to the farmers in these centres (Rakesh et al., 2022). The main objective of RBK was to streamline all the stakeholders of agriculture into a single channel to offer farmers the required inputs to improve their productivity, farm income and sustainability. In this context the present study was being conducted to study the farmers perception on fertilizer services offered at Rythu Bharosa Kendras (Jaiswal & Sigh, 2018) and to analyse the factors influencing farmers (Padaliya and Rathod 2023) perception on fertilizer services offered at Rythu Bharosa Kendras particularly in Tirupati and Chittoor districts of Andhra Pradesh.

OBJECTIVES

- (1) To study the farmers perception on fertilizer services offered at Rythu Bharosa Kendras
- (2) To study the factors influencing farmers perception on fertilizer services offered at Rythu Bharosa Kendras

METHODOLOGY

The current study was carried out during the year 2022 and 2023 in Tirupati and Chittoor districts of Andhra Pradesh. Out of 35 and 33 mandals of Tirupati and Chittoor districts respectively, three mandals in each district was selected randomly. In Tirupati district, Yerved, Renigunta, Chandragiri mandals were selected since different ranges of crops were cultivated in these three mandals of Tirupati district. In Chittoor district, mandals selected for study were Chittoor, Bangarupalem and Gudipala based on the range of crops cultivated in these mandals. Two Rythu Bharosa Kendras were selected out of each selected mandals in each district based on farmers fertilizers consumption. Rythu Bharosa Kendras selected were Amanduru, Merlapaka, Karakambadi, Gajulamandem, Ramireddipalle and Buchinaidupalle in Tirupati districts. In Chittoor district, Mutthukur, Thalambedu, Thimojipalli, Setteri, Panaturu and Papisamudram were selected for the study. Ten farmers from each Rythu Bharosa Kendras were selected randomly for the study thus making sample size of one hundred and twenty. Farmers perception over the fertilizers services offered at Rythu Bharosa Kendras and factors influencing farmers perception on fertilizers services offered at Rythu Bharosa Kendras was collected through pre structured interview schedule.

Farmers perception on fertilizers services offered at Rythu Bharosa Kendras

Farmers perception on fertilizers services offered by Rythu Bharosa Kendras was collected through five-point scale which includes very satisfied, satisfied, neutral, unsatisfied and very unsatisfied with a score of five, four, three, two and one respectively awarded to each and every factor in the pre-structured interview schedule based on the farmers' response.

Farmers perception score will be classified into 3 categories based on mean and standard deviation. Score below Mean - ½ S.D was classified as poor category, score between Mean + ½ S.D and Mean - ½ S.D was classified as moderate category and score above Mean + ½ S.D. was classified as good category.

RESULTS AND DISCUSSION

Farmers perception on fertilizer services offered at Rythu Bharosa Kendras

Farmers perception on fertilizers services offered by Rythu Bharosa Kendras was collected through five-point scale which includes very satisfied, satisfied, neutral, unsatisfied and very unsatisfied with a score of five, four, three, two and one respectively awarded to each and every factor based on the farmers response. Factors mentioned in the pre-structured interview schedule were availability of farmers preferred fertilizers brands in RBK, availability of wide range of fertilizers in RBK as per the requirement of farmers, adequate quantity of fertilizers available at RBK, quality aspects of fertilizers purchased in RBK, price of fertilizers purchased in RBK in comparison with other agencies, performance of digital kiosk in placing fertilizers orders, internal environment at RBK, functional hours of RBK, staff performance in RBK, price to quality comparison of fertilizers purchased in RBK with fertilizers purchased from other agencies, meeting immediate fertilizers requirement, time gap between ordering & supply of fertilizers from RBK, accessibility to fertilizers in RBK with comparison to other agencies, recommendation on technical aspects of fertilizers from VAA/VHA & etc, physical location of RBK and in time availability of all the fertilizers in RBK with respect to cropping pattern. The respondents perception score was calculated by adding up the awarded score for each statement individually. Based on those score, mean score was calculated and ranks were awarded. From the Table 1, it was clearly depicted that farmers were very satisfied about the physical location of RBK with a highest mean score of 4.62, ranked I. As a result of which farmers got access to information and inputs pertaining to crop cultivation aspects. Followed by staff performance of RBK with a next highest score of 4.35, ranked II, next in order was recommendation on technical aspects of fertilizers from VAA/VHA and etc. with a mean of 4.31. ranked III. Farmers were further satisfied with the functional hours of the Rythu Bharosa Kendras with a mean score of 4.25. In fertilizer prospective, sample farmers were very much satisfied about the price of fertilizers purchased in RBK in comparison with other agencies with a score of 4.24. It represented that positive perception of farmers on price of fertilizers offered in Rythu Bharosa Kendras. Further sample farmers quoted that, since Rythu Bharosa Kendras were located in the vicinity of their field localities which resulted in reduction in the transportation charges of fertilizers from point of purchase to fields. Followed by, sample farmers were satisfied about the internal environment of Rythu Bharosa Kendras with a mean score of 4.23. Followed by, Price to quality comparison of fertilizers purchased in RBK

with fertilizers purchased from other agencies, performance of Digital kiosk in placing fertilizers orders, quality aspects of fertilizers purchased in RBK, availability of farmers preferred fertilizers brands in RBK, accessibility to fertilizers in RBK with comparison to other agencies, time gap between ordering and supply of fertilizers from RBK, adequate

quantity of fertilizers available at RBK, availability of wide range of fertilizers in RBK as per the requirement of farmers, meeting immediate fertilizers requirement with a mean score of 4.21, 3.96, 3.92, 3.82, 3.61, 2.47, 2.17, 2.12, 1.97 and 1.86 respectively.

Table 1 : Farmers perception on fertilizers services offered at Rythu Bharosa Kendras

(n = 120)

Sr. No.	Parameters	Mean	Ranks
1	Physical location of RBK	4.62	I
2	Staff performance in RBK	4.35	II
3	Recommendation on technical aspects of fertilizers from VAA/VHA and etc.	4.31	III
4	Functional hours of RBK	4.25	IV
5	Price of fertilizers purchased in RBK in comparison with other agencies	4.24	V
6	Internal environment at RBK	4.23	VI
7	Price to quality comparison of fertilizers purchased in RBK with fertilizers purchased from other agencies	4.21	VII
8	Performance of Digital kiosk in placing fertilizers orders	3.96	VIII
9	Quality aspects of fertilizers purchased in RBK	3.92	IX
10	Availability of farmers preferred fertilizers brands in RBK	3.82	X
11	Accessibility to fertilizers in RBK with comparison to other agencies	3.61	XI
12	Time gap between ordering and supply of fertilizers from RBK	2.47	XII
13	Adequate quantity of fertilizers available at RBK	2.17	XIII
14	Availability of wide range of fertilizers in RBK as per the requirement of farmers	2.12	XIV
15	Meeting immediate fertilizers requirement	1.97	XV
16	In time availability of all the fertilizers in RBK with respect to cropping pattern	1.86	XVI

Table 2 : Farmers overall perception regarding fertilizers services offered at Rythu Bharosa Kendras

(n=120)

Sr. No	Participatory category	Participatory criteria	Participatory score	No, of farmers	Percent
1	Poor	<(Mean - ½SD)	52.00	45	37.5
2	Moderate	(Mean ± ½ SD)	52.00 – 60.25	51	42.5
3	Good	>(Mean - ½ SD)	60.25	24	20
				Mean	56.13
				Standard Deviation	8.25

From the Table 2 and Fig 1, it was clear that 42.5 percent of the sample farmers had moderate perception on fertilizer services offered at Rythu Bharosa Kendras followed by 37.5 percent of the farmers had poor perception on fertilizer services offered at Rythu Bharosa Kendras and 20 percent of the sample farmers had good perception on fertilizer services offered at Rythu Bharosa Kendras

Factors influencing farmers perception on fertilizer services offered by Rythu Bharosa Kendras

Based on the information collected from the sample farmers Correlation and Chi- square test was used to identify and analyse the influence of sample farmers socio-economic factors like education, major occupation, farming experience, land holdings, annual income and farmers age on the farmers perception on fertilizer services offered at Rythu Bharosa Kendras.

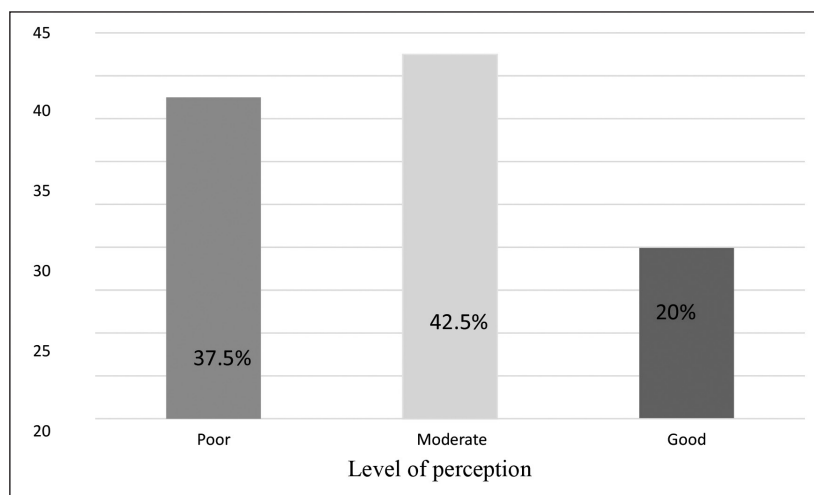


Fig. 1 : Farmers overall perception regarding fertilizers services offered at Rythu Bharosa Kendras

Table 3 : Correlation between socio-economic factors and farmers perception on fertilizers services offered at Rythu Bharosa Kendras (n=120)

Sr. No	Socio economic factors	P- value
1	Education	0.438
2	Major occupation	0.029*
3	Farming experience	0.021*
4	Farm size	0.263
5	Annual income	0.490
6	Age	0.108

*("P" value > 0.05 – not significant: "P" value < 0.05 – significant)

From the Table 3, it was noticed that only farming

experience & major occupation of the farmers have significant impact on their perception on fertilizer services offered by Rythu Bharosa Kendras (since their P value is less than 0.05). Further, Chi square test was used to assess the extent of influence of major occupation and Farming experience on the perception of farmers regarding fertilizer services offered by RBKs.

Table 4 mentioned that there was a significant relationship between major occupation and farmers perception on Rythu Bharosa Kendra fertilizer services because the computed p – value (0.029) was less than the acceptable level of significance (0.05). From this it was clear that, major occupation has significant impact on farmers perception on Rythu Bharosa Kendra fertilizer services.

Table 4 : Test of significance between major occupation and farmers perception on fertilizers services offered at Rythu Bharosa Kendras (n=120)

OccupationCategory	Level of farmers perception			Total	Chi- square value	P- value
	Poor	Moderate	Good			
Agriculture	39	32	17	88	7.091*	0.029
	44.3%	36.4%	19.3%	100.0%		
Horticulture	06	19	07	32		
	18.8%	59.4%	21.9%	100.0%		
Total	45	51	24	120		
	37.5%	42.5%	20%	100%		

*("P" value > 0.05 – not significant: "P" value < 0.05 – significant)

Table 5 : Test of significance between farming experience and farmers perception on fertilizers services offered at Rythu Bharosa Kendras (n=120)

Farming experience	Level of farmers perception			Total	Chi-square value	P-value
	Poor	Moderate	Good			
< 10 years	02	04	0	06	14.851*	0.021
	33.3%	66.7%	0.0%	100.0%		
10 -20 years	17	33	10	60		
	28.3%	55.0%	16.7%	100.0%		
21 – 30 years	19	12	08	39		
	48.7%	30.8%	20.5%	100.0%		
>30 years	07	02	06	15		
	46.7%	13.3%	40.0%	100.0%		
Total	45	51	24	120		
	37.5%	42.5%	20.0%	100.0%		

*("P" value > 0.05 – not significant: "P" value < 0.05 – significant)

Table 5 clearly mentioned that there was a significant relationship between farming experience and farmers perception on Rythu Bharosa Kendra fertilizer services because the computed p – value (0.021) was less than the acceptable level of significance (0.05). From this it was clear that, farming experience have significant impact on the farmers perception on Rythu Bharosa Kendra fertilizer services.

CONCLUSION

This article has examined the farmers perception on fertilizers services offered at Rythu Bharosa Kendras. 42.50%, 37.50% and 20.00% of the representative sample had moderate, poor and good perception on Rythu Bharosa Kendra fertilizer services. Sample farmers were satisfied over the physical location of RBK and price of fertilizers purchased in RBK in comparison with other agencies like private fertilizer wholesalers, retailers, fellow farmers, non-institutional financiers & etc. Further, it was noticed that only farming experience and major occupation of the farmers have significant impact on their perception over fertilizer services offered at Rythu Bharosa Kendras. Therefore, ensuring the availability of all necessary fertilizers in line with farmers' cropping patterns will result in significant operational advantages to the farmers.

POLICY IMPLICATION

To enhance the operational aspects of Rythu Bharosa Kendras (RBKs), particularly concerning fertilizers and their price optimization for farmers, the following policy

recommendations were made. Since RBKs are located near villages, this significantly reduces or eliminates the cost of transporting fertilizers from the point of purchase to the agricultural fields. Consequently, farmers are more inclined to buy the fertilizers available at these centres. Therefore, implementing location-specific fertilizer demand forecasting before the cropping season and improving the fertilizer supply chain from the fertilizer hub to the RBKs, are essential. This approach ensures the prompt availability of all necessary fertilizers at the RBKs, aligning with the farmers' cropping patterns. Ultimately, this will provide greater convenience for farmers, streamline their operations, and reduce cultivation costs.

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CONFLICT OF INTEREST

No conflict of interest in this entire research.

REFERENCES

- Babu, S.K. (2019). Awareness and Perception of farmers towards SHG scheme in Rayalaseema regions of Andhra Pradesh. Ph.D. Thesis submitted to Acharya N.G. Ranga Agriculture University, Guntur.
- Damodara Reddy, A.K., Bala Hussain Reddy, P., Sailaja, V

- and Nafeez Umar, Sk. (2022). Awareness of farmers towards Rythu Bharosa Kendras (RBKs) products and services in Prakasam district of Andhra Pradesh. *The Journal of Research ANGRAU*. 50(3): 144 - 148.
- Jaiswal, M and Singh, A. (2018). Study on awareness and perception regarding soil health card. *Journal of Pharmacognosy and Phytochemistry*, SP (4): 395-400.
- Jyosthna, Mk., Chowdary, Raghavendra and Jyothi, I. (2022). A study on perception and utilization of services of Rythu Bharosa Kendra's (RBKs) by the farmers in Chittoor district of Andhra Pradesh, India. *Current Journal of Applied Science and Technology*. 41(27): 40-47.
- Karravula, Rakesh, Naik, R. M. and Kalasariya, Neeta (2022) Adoption level of private bio-fertilizers by farmers. *Guj. J. Ext. Edu.* 33(2):94-96.
- Karravula, Rakesh and Naik, R. M. (2023) Attitude of farmers towards use of private bio-fertilizers. *Guj. J. Ext. Edu.* 36(2):51-53.
- Padaliya, D.A and Rathod, R.B (2023). Analysis of socio personal characteristics of cotton growers. *Guj. J. Ext. Edu.* 36(2):23-30.
- Rajesh, M., Kishore, N. and Devi, I., Kumari, P. (2022). Awareness of farmers towards products and services offered by RBKs in Rayalaseema region Andhra Pradesh—A case study *International Journal of Agricultural Sciences*. DOI:10.15740/HAS/IJAS/18.2/832-835.
- Sarada., O., Suneel Kumar, G.V and Sivanarayana, G. (2023). Services offered by RBKs and training needs of village agricultural assistants in Guntur district. *The Journal of Research ANGRAU*.51(1): 152-162.
- Vinaya Kumar H. M., and Shivamurthy, M. (2021) Factor influencing fishery-based farmers' perception and their response to climate-induced crisis management. *Environ. Dev. Sustain. Springer*. 23, 11766–11791.

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