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Examination of Rythu Bharosa Kendra (RBK) Services in Vizianagaram District of Andhra Pradesh with a View to Improving Service Delivery to Farmers

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Rythu Bharosa Kendra is a State Government initiative of Andhra Pradesh in India for providing various services to the farmers from seed to sale at gross root level. The present study highlights the knowledge level of farmers along with the constraints and suggestions of farmers regarding the

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services provided by RBK. Ex post facto research design was employed to conduct the study, using multi stage proportionate random sampling procedure, a sample of 140 farmers were selected from Vizianagaram district. Descriptive statistics was used to analyse and categorize the data regarding knowledge level of farmers and to identify and rank the constraints and suggestions Garrett's Ranking Technique was employed. The findings of the study identified that nearly three-fourths (73.00%) of the farmers had medium level of knowledge regarding services rendered by RBKs followed by high (17.71%) and low (9.29%) levels of knowledge. The prime constraints faced by the farmers were lack of expertise to use digital kiosk, delay in disbursement of payment for the marketed produce and lack of proper infrastructure facilities. The foremost suggestions given by the farmers were on time disbursement of payment for the marketed produce and timely supply of inputs and Rythu Bharosa to farmers and improving infrastructure facilities of RBK. The findings of the study will aid policy makers to formulate new interventions for improving the services of RBK and also functionaries of RBK in improving the existing lacunae and formulating new ones.

Keywords: Constraints; garrett's ranking technique; knowledge level; Rythu Bharosa Kendra (RBK); suggestions.

1. INTRODUCTION

In India, agriculture is the predominant source of livelihood for majority of the population. Pre and post green revolution extension systems had played a major role in the dissemination of transfer of technologies. To the contrary, farmers encountered many issues in availing agricultural services [1]. At national level the present extension worker to farmer ratio is 1:1162 which is low as against to recommended ratio of 1:750 [2]. To provide advisory services and address the requirements of each farmer successfully a strong integrated platform is necessary at village level [3]. Knowing the importance of agriculture in the state of Andhra Pradesh, the government has established 10,641 Rythu Bharosa Kendra (RBKs) on May 30,2020 across the state in every village secretariat to provide information on latest production technologies and also quality inputs to the farmers at their village level and the main goal of these RBKs was to provide support and assistance to farmers in various aspects of agriculture to improve their livelihoods and ensure sustainable farming practices. These Rythu Bharosa Kendra (RBKs) started functioning across the state from kharif 2020. Similarly, the Department of Agriculture has recruited 6,758 village agriculture Assistants to manage these RBKs at gross root level [4].

To have better synergy and conjunction the Agri input shop and knowledge centre integrated and called as Rythu Bharosa kendras (RBK) or Farmer Assurance Centres. RBKs supplies government certified Agri, animal husbandry and fisheries inputs to the farmers. Besides, it has a workshop or knowledge centre for providing scientific Agri advisory services to farmers [5]. Community Hiring Centres (CHCs) of RBKs provide machinery for a group of five to six members in a village with forty per cent subsidy and fifty per cent of bank loan. This machinery was maintained by these group of farmers and made available to the marginal and small farmers to hire at low cost [6]. Some other services of RBK include training farmers, soil testing, providing crop insurance, conducting demonstrations, identifying beneficiaries for various schemes, providing market intelligence, issue of animal health cards etc [3]. Therefore, the concept has revolutionised agriculture sector by catering all the needs of farmers from seed to sale [7].

The Rythu Bharosa Kendras (RBKs) is one among six initiatives nominated for United Nations Organizations (UNO) awards and has recognized internationally lifting the pride of the nation [2]. The RBK system has taken a giant step in bringing the extension system closer to the farming community and making it more transparent [3]. In spite of its recognition internationally the scheme from its inception encountered numerous challenges in its implementation and the ideal objective of wellbeing of farming community was hindered by various inconsistencies both at individual and organizational level [8].

The success of the initiative depends on knowledge possessed by the farmers [9] regarding the products and services and RBKs. The acceptance and implementation of innovations are typically preceded by a change in knowledge and understanding [10]. Before farmers adopt and use new innovations or practices, there was a need to acquire new

knowledge and understanding about those innovations. When farmers gain a deeper knowledge on how Rythu Bharosa Kendras can benefit them, they are more likely to access the services. This change in knowledge was often a crucial step in the process of introducing and successfully utilizing the services of RBKs. Inspite of this, scanty studies have noticed on farmers' knowledge about RBKs and the problems faced by them [7]. Keeping in view, present study was conducted with the objective of:

- ✓ To understand the knowledge level of farmers on Rythu Bharosa Kendras (RBKs)
- ✓ To elicit the constraints encountered by the farmers in availing the products and services of Rythu Bharosa Kendras RBK).
- ✓ To document the suggestions given by the farmers for enhancing the functioning of RBK [11].

2. METHODOLOGY

The study was carried out in the year 2022-23, using Ex-post-facto research design. Vizianagaram district was selected purposively as the district is predominantly an agricultural district with 68.40 per cent of the workers were engaged in agriculture and about 82.00 per cent of the population of the district were living in the rural areas and depend on agriculture for their livelihood. The sampling procedure of mandals and villages was purposive based on highest number of RBKs (Department of Agriculture-Vizianagaram, 2022) and highest number of farmers (SLAP report, 2015-16) respectively. Two mandals (Garividi and Gurla) of the district were selected. Initially from Garividi mandal four villages having highest number of farmers that is Vedullavalsa (1047), Sivaram (995), Bondapalli (752) and Baguvalsa (748) villages were selected. Similarly, in Gurla mandal kella (1055), chodavaram (891), vallapuram (759) and jammu (757) villages were choosen. Further multi stage proportionate random sampling was used to select two per cent population as sample from the chosen villages. Accordingly, the sample size was finalized as 140. Primary data was collected using well-structured and pre-tested interview schedule. The data collected was then analysed and categorized using descriptive statistics like frequency, percentage, mean and standard deviation to attain meaningful interpretation of findings of the study.

The knowledge of farmers on RBKs was measured by a schedule developed for the study that comprises of 15 questions which contains multiple choice questions, fill in the blanks, true or false statements with a score of one for correct response and zero for incorrect response. The maximum score a respondent can get was 15 and minimum score of respondents was 0. The total score of individuals was obtained by summing up the score of all the items. Further respondents were categorized into three groups based on mean and standard deviation as low, medium and high levels of knowledge.

To identify and rank the constraints and suggestions Garrett's Ranking Technique was used. Garrett's Ranking technique provides the change of orders of the factors and advantages into numerical scores. The principal advantage of this technique over simple frequency distribution is that the constraints and suggestions were arranged based on their preference or importance from the point of view of respondents. The Garrett's formula for converting ranks into percent was given by

$$\text{Per cent Position} = 100 * (Rij-0.5)/Nj$$

Rij = Rank given for i th item by the j th sample respondents
Nj = Number of factors ranked by j th sample respondents

The per cent position of the rank was transformed into scores mentioned in the table given by Garrett and Woodworth [12]. For each factor, the scores of individual respondents were added together and divided by the total number of the respondents for whom the scores were added. Mean scores for all these factors were arranged in the descending order and ranked accordingly.

3. RESULTS AND DISCUSSION

3.1 Knowledge of Farmers Regarding the Product and Services of Rythu Bharosa Kendras (RBKs)

According to Table 1 it reveals that cent per cent of the respondents had knowledge on RBKs acted as one stop shop for Agri and allied services (100.00%) and cost of e-crop booking , crop insurance (100%) followed by organizing advisory board meetings by RBKs (97.86%), schedule of polambadi programme (92.14%), required parameters for procurement of produce

(87.86%), established year of RBK (87.14%), availability of Custom Hiring Centres (CHCs) in RBKs (76.43%), duration for delivery of stocks (69.29%), availability of soil and seed testing facility in RBKs (60.00%), provision of organic inputs (55.71%), veterinary services provided by RBKs (49.29%), toll free number of RBKs (35.71%), purpose of digital kiosk in RBK (30.00%) you tube channel of RBK (28.57%), interval of magazine publication of RBKs (26.43%).

Farmers had cent per cent knowledge on RBKs acted as one stop shop for Agri and allied services and cost of e-crop booking and crop insurance the reason might be that RBKs functioning at village level rendering wide range of services hence farmers are aware that RBKs acted as one stop shop for Agri and allied services. Similarly, knowledge regarding e-crop booking and crop insurance ensures that farmers get the right insurance coverage and manage risk effectively. More than ninety per cent of farmers were aware of organizing advisory board meetings by RBKs as in these meetings farmers discussed and decided on requirements of the products and services needed in their village, followed by schedule of polambadi programme (Farmer field schools) since it allows peer- to-peer learning by fostering collaborative learning environment where they shared experiences, exchanged ideas and collectively found solutions to common challenges faced by them in villages. Similarly farmers had more than eighty per cent of knowledge about required parameters for procurement of produce since RBKs had provided an opportunity to farmers to sell their produce in their village when market price falls below MSP and most of the farmers utilizing this service, they have got to know the required criteria for procurement of produce and established year of RBK since, it was newly formed Andhra Pradesh state government initiative most of the farmers were aware when it has been established.

Farmers had fifty to eighty per cent of knowledge regarding availability of Custom Hiring centres (CHCs), duration for delivery of stocks, availability of soil and seed testing facility in RBKs, provision of organic inputs, the possible reason for the outcome was that all these services were cost effective especially for farmers with limited financial resources. whereas other farmers might have perceived as irrelevant to their specific need.

Table 1. Distribution of farmers according to their knowledge on RBKs. (n=140)

S.no	Knowledge of farmers on services rendered by RBKs	Correct response		Incorrect response		Rank
		F	P	F	P	
1	Established year of RBK	122	87.14	18	12.86	VI
2	Schedule of polambadi programme (Farmer field schools)	129	92.14	11	7.86	IV
3	Provision of organic inputs	78	55.71	62	44.29	X
4	You tube channel of RBK	40	28.57	100	71.43	XIV
5	Required parameters for procurement of produce	123	87.86	17	12.14	V
6	RBKs acted as one stop shop for Agri and allied services	140	100	0	0	I
7	Cost of e crop booking and crop insurance	140	100	0	0	II
8	Availability of Custom Hiring centres (CHCs) in RBKs	107	76.43	33	23.57	VII
9	Availability of soil and seed testing facility in RBKs.	84	60.00	56	40.00	IX
10	Toll free number of RBKs	50	35.71	90	64.29	XII
11	Duration for delivery of stocks	97	69.29	43	30.71	VIII
12	Veterinary services provided by RBKs	69	49.29	71	50.71	XI
13	Interval of magazine publication of RBKs	37	26.43	103	73.57	XV
14	Organizing advisory board meetings by RBKs	137	97.86	3	2.14	III
15	Purpose of digital kiosk in RBK	42	30.00	98	70.00	XIII

Table 2. Distribution of respondents according to their overall knowledge on RBKs (n=140)

S. No	Category	Frequency	Percentage
1.	Low knowledge level (<7)	13	9.29
2.	Medium knowledge level (7 to 12)	102	73.00
3.	High knowledge level (>12)	25	17.71
Total		**140**	**100**
Mean= 10.06 Standard Deviation= 2.44			

Farmers had less than fifty per cent of knowledge about all the veterinary services provided by RBKs, the possible reason might be that existing relationship with local veterinarians and also farmers might have strong cultural beliefs about using certain practices for treating their animals. Accordingly, farmers had less than forty per cent of knowledge regarding toll free number of RBKs, purpose of digital kiosk in RBK, you tube channel of RBK and interval of magazine publication of RBKs the reasons for low knowledge of these services might be that lack of proper promotion regarding these services by the technical staff of RBK and also due to limited access of internet in the villages.

From the Table 2 it was inferred that nearly three-fourths (73.00%) of the farmers had medium level of knowledge regarding RBKs followed by high (17.71%) and low (9.29%) levels of knowledge on RBKs. The findings are in consonance with the findings of Meena [13], Kaur et al. [10].

The possible reason might be that, RBKs were located at village level and farmers had regular contact with the RBK technical staff. Also, to increase the knowledge of farmers regarding products and services of RBKs, Government has taken effective publicity and awareness campaigns so that farmers can avail the services to the maximum.

3.2 Constraints Encountered by the Farmers in Availing the Products and Services of Rythu Bharosa Kendras (RBK)

According to Table 3 the major problems faced by the respondents while availing the services of RBKs ranked according to their Garrett Mean Score. It was found that the respondents faced problems regarding lack of expertise in using digital kiosk or / ICT tools (73.07), delay in receiving the payment for marketed produce (63.07), lack of proper infrastructure facilities (60.32), delay in supply of inputs and Rythu Bharosa (55.67), inadequate market information from the staff of RBKs (52.82), inadequate information regarding local agriculture problems (49.15), inconvenient time of training programmes (42.90), delay in soil testing reports (40.77), insufficient IPM kits (35.55) and delay in issue of animal health cards (22.48).

Table 3. Constraints encountered by the farmers in availing the services of RBKs. (n=140)

S.No	Constraints	Garrett Score	Mean Score (MS)	Rank
1	Inconvenient time of training programmes	42	42.90	VII
2	Lack of proper infrastructure facilities	63	60.32	III
3	Inadequate market information from the staff of RBKs	52	52.82	V
4	Delay in soil testing reports	36	40.77	VIII
5	Lack of expertise in using digital kiosk	81	73.07	I
6	Delay in receiving the payment for the marketed produce	70	63.07	II
7	Delay in supply of inputs and Rythu Bharosa	58	55.67	IV
8	Delay in issue of animal health cards	13	22.48	X
9	Inadequate information regarding local agriculture problems	29	49.15	VI
10	Insufficient IPM kits	18	35.55	IX

The prime constraints encountered by farmers was that lack of expertise in using digital kiosk as all the farmers may not have same level of digital literacy or access to technology. So this hindered them in using digital kiosk to access essential agriculture information, government schemes, weather updates, etc on their own. Secondly, delay in receiving the payment for marketed produce as the RBK system may involve complex administrative procedures which lead to delay in processing and disbursing payments to farmers on the other hand farmers often rely on credit or loan for agricultural inputs and equipment, irregular payments may expose farmers to various financial risks hence it has been a possible reason for the outcome. Infrastructure facilities like soil testing labs, training centres, market information boards, veterinary clinics were not available in some villages.

3.3 Suggestions Given by the Farmers for Enhancing the Functioning of RBKs

Findings from the Table 4 mentions the suggestions given by the respondents to overcome the problems faced by them in availing the RBK services which was ranked according to their Garrett Mean Scores. It was observed that on time disbursement of payment for the marketed produce (70.83), timely supply of inputs and Rythu Bharosa to farmers (61.38), improving infrastructure facilities of RBK (61.28), organizing more Polambadi programmes (57.59), provision of adequate market information from Village Agriculture Assistant (50.49), conducting trainings for farmers to solve local agricultural problems (43.09), increase the technical competency for the staff of RBK (42.94), provision of sufficient quantities of IPM kits to the farmers (39.35), on time issue of animal health cards (37.49) and provision of information on crop loan eligibility from bank mitra/ technical staff of RBK (31.56) were the major suggestions by the respondents.

The foremost suggestions given by farmers was that initially on time disbursement of payment for the marketed produce as timely payments allow farmers to plan their expenses, repay loans, invest in their farms and meet their daily needs without any financial instability. Secondly, Timely supply of inputs and rythu bharosa as it ensures efficient planning of the agricultural operations and allow them to take better decisions on resource allocation leading to optimum utilization of resources. Rythu Bharosa was introduced to improve the livelihoods of farmers and ensure their well-being by providing direct financial assistance from the government. The eligible farmers receive amount annually or instalments so, timely supply of rythu bharosa can assist farmers in meeting various agricultural expenses. Similarly, other major suggestions from farmers were that improving infrastructure facilities since it is essential to optimize the functioning of agricultural support system and maximize its benefits for farmers.

Table 4. Suggestions given by the farmers for enhancing the functioning of RBKs. (n=140)

S.No	Constraints	Garrett Score	Mean Score (MS)	Rank
1	Improving infrastructure facilities of RBK	63	61.28	III
2	Provision of adequate market information from Village Agriculture Assistant (VAA)	52	50.49	V
3	Increase the technical competency for the staff of RBK	42	42.94	VII
4	Provision of sufficient quantities of IPM kits to the farmers	37	39.35	VIII
5	Timely supply of inputs and Rythu Bharosa to farmers	70	61.38	II
6	On time disbursement of payment for the marketed produce	82	70.83	I
7	Organizing more Polambadi programmes	58	57.59	IV
8	On time issue of animal health cards	29	37.49	IX
9	Provision of information on crop loan eligibility from bank mitra/ technical staff of RBK	18	31.56	X
10	Conducting trainings for farmers to solve local agricultural problems	48	43.09	VI

4. CONCLUSION

The RBK concept is a big move into the agriculture sector for the wellbeing of farming community by meeting all their needs at panchayat level. The results of the study revealed that farmers had medium to high knowledge on RBKs which would help them in utilizing the services effectively. On the other hand, they have minimal knowledge on purpose of digital kiosk in RBK, you tube channel of RBK and publication of RBK magazine. The full potential of scheme mostly depends on the knowledge of the farmers to make use of all services of RBKs. Therefore, there is need to provide farmers with the access to information, training and workshops regarding ICT services provided at RBKs also RBKs should focus on improving their communication and outreach strategies. Continuous support and monitoring can help ensure that farmers maintain and apply this knowledge effectively in their farming practices. Most of the farmers expressed that lack of expertise to use digital kiosk, delay in disbursement of payment for the marketed produce and lack of proper infrastructure facilities as the major constraints faced by them and suggested on time disbursement of payment for the marketed produce and timely supply of inputs and Rythu Bharosa to farmers and improving infrastructure facilities of RBK for efficient functioning of RBKs. The findings of the study will aid policy makers to formulate new interventions for improving the services of RBK.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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