Original Research Article

Effectiveness of RythuBharosaKendras (RBKs) services as perceived by farmers in East Godavari district of Andhra Pradesh

ABSTRACT

RythuBharosaKendram is One Stop Shop for supply of Government Certified Agri Inputs (Seeds, Fertilizers & Pesticides), Animal Husbandry & Fisheries Inputs to the farmers and has an attached workshop / Knowledge Center for giving scientific Agri Advisories to the farmers. It is integrated with a Call. The study investigated the effectiveness of services of RBK perceived by farmers in East Godavari district of Andhra Pradesh during 2021-2022. A total sample of 120 farmers was randomly selected from twelvevillages *viz.* Kadiyam, Vemagiri, Muramanda, Kalavacherla, Rajanagram, Velugubanda, Geddanapalli, Bhupalapatnam, S. thimmapuram, Bhatnavalli, Rollapalem and Nadipudi of East Godavari district in Andhra Pradesh. The data were collected with structured interview schedule. The perceived effectiveness of services of RBKs was studied. It was observed that half (50.83%) of the farmers perceived that services rendered by RBKs were moderately effective followed by highly effective (34.17%) and less effective (15.00%) categories. It can be recommended to government and policy makers for improving. restructuring, reforming and modifying the services from RBKs for enhancing its effectiveness further.

Key words:RBKs, Perceived Effectiveness

Introduction

Agriculture is the main source of livelihood for most of the population in India. Pre and post green revolution extension systems in India had played a commendable role in the dissemination of transfer of technologies (*Anuhya et.al 2022*).On the other hand, farmers encounter numerous issues while buying inputs, selling their products and determining market prices etc.There are limited testing facilities for agricultural inputs like seeds, fertilizers and pesticides in the state. All these lead to supply of low-quality inputs to farmers leading to huge losses (*Anuhya et.al 2022*).Availability of extension functionaries to farmers is very less. The present extension worker to farmer ratio is 1:1162 (*Reddy, 2018*).Andhra Pradesh is being an agrarian state. Government of Andhra Pradesh focusing more for the welfare of the farming community by providing hassle free services at village level (*Reddy, 2020*).As a result of that government established10,641 RythuBharosaKendras (RBKs) on 30.05.2020 in all village secretariats with qualified personnel from various disciplines in agriculture and allied sectors. RBK is an innovative approach by the government for providing integrated platform to address the needs of the farmers.Before, farmers who needed assistance had to go to the offices of agriculture, horticulture, veterinary medicine, and fisheries at the Mandal level. However, the technical staff (VAA- Village Agricultural Assistant / VHA- Village Horticulture Assistant / VSA- Village Sericulture Assistant / VFA- Village Fisheries Assistant (only in the locations where intensive fish farming is practised) are now easily accessible to the farmers at village level since implementation of RBK.These centres offering services like delivery of inputs to farmers, technical advisories, soil testing, training farmers, crop insurance crop booking, providing market intelligence, plant health

clinics, interaction with scientists and other experts through audio and video conference on smart TV, technical advisories on best management practices of crop, issuing health and insurance cards for livestock, vaccination for animals.Accordingly, the Agriculture Department has recruited 6758 VillageAgriculture Assistants and placed them in RBKs (*Babu et al. 2021*).The system of RBKs brought the extension system more closely to farming community (*Reddy, 2020*) and strengthening the farmers both economically and technologically.The RBK concept is one of the six initiatives that were nominated by the Centre for the UN Award. The initiative has revolutionised the agriculture sector by meeting farmers' needs from seed to sale ((*Anuhya et.al 2022).*

The RBKs provides single window services for Agriculture and allied sector farmers as the scheme was designed to be as successful as possible in assisting the farming community in enhancing their farm income, participation from the farming community should be higher.Since the inception, the scheme had faced various challenges in its implementation.The ultimate objective of the farming community's wellbeing was hampered by a number of inconsistencies at both the organisational and individual levels.The value and effectiveness of any scheme can only be judged through perception and response of the beneficiaries *(Badodiyaet al*., 2010).The success of this scheme largely depends upon the knowledge possessed and effectiveness perceived by the farmers*(Raju et al.2022*) towards various services and functioning of the RBKs.Therefore, a systematic study was conducted to measure the effectiveness of services of RBKs as perceived by the beneficiary farmers.

METHODOLOGY

The study was conducted in East Godavari district of Andhra Pradesh during 2021-2022 by adopting Exploratoryresearch design. East Godavari was purposively selected for the study as highest number of RBKs were existing. Four mandals were selected with highest number of RBKs. From each selected mandal, three villages were selected by using simple random sampling procedure *viz*kadiyam, vemagiri, muramanda from kadiyam mandal; kalavacherla, Rajanagaram and velugubanda from Rajanagaram mandal; Geddanapalli, Bhupalapatnam, S. thimmapuram from Kirlampudi mandal; Bhatnavilli, Rollapalem, Nadipudi from Amalapuram mandal.From each of the selected village,ten beneficiary farmers were selected randomly, making a total of 120 respondents. The primary data were collected personally with the help of an interview schedule; the interviews were conducted on farmer's field or in their homes through face-to-face contact. The services were categorized into five categories i.e. Capacity building services , input rendering services , veterinary services , information providing services and miscellaneous services.Various statements regarding services of RBKs were presented to the respondents with three possible answers for each statement scored on a continuum 3 to 1 viz. good, fair and poor. Later the responses were tabulated and analysed by using statistical tools such as frequency and percentage. Standard normal deviation (Z) test was used to measure the effectiveness of services of RBKs. Accordingly, the ranks were given to each item based on the Z value. The formula used for the purpose was given below.

$$\bar{Z} = \frac{\sum Z_i}{n} Z_i = \frac{x_i - \bar{x}}{\sigma}$$

Where xi is the score for i^{th} item, $\bar{x}$ is the mean score of all items, n is the number of items and σ is the Standard deviation calculated on x_i values. The perceived effectiveness was categorized into three categories of the level of perceived effectiveness i.e. less effective, moderately effective and highly effective.

RESULTS AND DISCUSSION

The data on classification of sample respondents according to their level of effectiveness of RBK services perceived by farmers was given in Table 1. Majority of the respondents (50.83%) had perceived moderately effective followed by highly effective (34.17%) and less effective (15.00%) of services of RBKs. The respondents were observed in all the categories but the least proportion were found in lessperceived effectiveness category and major proportion of respondents fell in the categories of moderately and high. The findings are accordance with the study reported by Riar and Rupinder (2014),Shrutika (2017).

From the table 2 , it could be concluded that more than three fourth (80.00%) of the farmers perceived effectiveness of service in organization of polambadi/thotabadi/ pasuvigyanbadi by the VAA/VHA/VFA as good followed by fair (13.34%) and poor (6.66%).It was ranked first (Z= 1.32).More than two third (72.50%) of the respondents perceived effectiveness in service of conduct of advisory board meeting once in a month by the technical staff as good followed by fair (15.84%) and poor (11.66%).More than half (55.83%) of the farmers perceived effectiveness in service of maintenance of digital library and information material for enhancement of farmers' knowledge as good followed by fair(23.34%) and poor (20.83%). Less than half (45.00%) of the farmers perceived effectiveness in service of organization of capacity programmes to farmers in recent advances in agriculture by scientists as good followed by fair (32.50%) and poor (22.50%). Nearly two third (65.84%) of the farmers perceived effectiveness in service of maintenance of smart TV at RBK for interaction with scientists and other experts as poor followed by fair (18.33%) and good (15.83%).

It was clear from table 3 that more than three-fourth (76.66%) of the farmers perceived effectiveness in maintenance of digital kiosk for booking inputs at RBKs as good followed by fair (19.16%) and poor (4.18%).it was ranked first (Z = 1.62) among the input rendering services. Majority (72.50%) of the farmers perceived effectiveness in RBKs are providing inputs at lower price compared to local market as good followed by fair (24.17%) and poor (3.33%).more than half (65.84%) of the farmers perceived effectiveness in RBKs are working for delivery of certified product at right price & right time as good followed by fair (27.50%) and poor (6.66%).nearly half (45.00%) of the respondents had perceived effectiveness in service of multi brand quality of inputs are made available to the farmers through RBKs as fair followed by good (27.50%) and poor (27.50%).Most(43.33%) of the farmers perceived effectiveness in faming implements made available for hire from RBK custom hiring centres as poor followed by fair (30.83%) and poor (25.84).Almost half (49.17%) of the farmers perceived effectiveness in supply of bio fertilizers and bio fungicides to the farmers at RBK as poor followed by fair (27.50%) and good (23.33%).more than half (53.33%) of the respondents perceived supply of organic inputs like neem cake, vermicompost ,neem oil at RBK as poor effectiveness followed by fair (29.17%) and good (17.50%). Majority (65.83%)

of the farmers perceived effectiveness in provision of IPM kits like pheromone traps, sticky traps etc to the farmers through RBKs as poor followed by fair (21.67%) and good(12.50%).

The data presented in the table 4 revealed that most (70.00%) of the farmers perceived effectiveness in provision of free vaccination to animals as good (70.00%) followed by fair (23.33%) and poor (6.67%).it was ranked first (Z= 1.12) among the veterinary related services. Majority(65.83%) of the farmers perceived effectiveness in providing of animal health cards at RBK as good followed by fair (26.67%) and poor (7.50%).more than half (55.00%) of the farmers perceived effectiveness in service of firt aid for animals,deworming and semen collection as poor followed by fair (25.84%) and good (19.16%). Less than three-fifth (55.84%) of the farmers perceived effectiveness in providing free animal insurance as poor (55.84%) followed by fair (22.50%) and good (21.66%).

A bird's eye view of table 5 showed that nearly half (48.33%) of the farmers perceived effectiveness in service of RBKs are working towards channelization of Government schemes as good followed by fair (37.50%) and poor (14.17%).It was ranked first (Z= 0.53) among the information providing services.nearly two-fifth (39.16%) of the farmers perceived effectiveness regarding information displayed at RBK are useful to get the information of Government schemes as good followed by fair (35.84%) and poor (25.00%).nearly half (48.33%) of the farmers perceived effectiveness RBKs are working effectively for providing advisory services in integration with call centre as poor followed by fair (28.34%) and good (23.33%).majority (68.33%) of the respondents perceived effectiveness in provision of guidance on extent of loan eligibility through bank mitra and information on government schemes as poor followed by good (18.33%) and fair (13.34%).more than three fourth (80.00%) of the farmers perceived effectiveness in RBK channel for farmers queries and farmers-scientists interaction as poor followed by fair (10.84%) and good (9.16%).

A cursory look at table 6 depicts that majority (72.50%) of the farmers perceived effectiveness in marketing of farm produce at village made easy by RBK through procurement centres as good followed by fair (20.00%) and poor (7.50%).Three fifth (60.83%) of the farmers perceived effectiveness in purchase of surplus produce at MSP when market price falls below MSP as good followed by fair(24.17%) and poor (15.00).Nearly two fifth (39.16%) of the farmers perceived effectiveness in providing free crop insurance as good followed by fair (35.84%) and poor (25.00%).more than half (55.00%) of the farmers perceived effectiveness in promotion of organic farming/naturing farming/ZBNF as poor followed by fair (25.84%) and good (19.16%).more than three fourth (81.66%) of the respondents perceived effectiveness in grouping of farmers into Farmer Producer Organizations (FPO), Cooperative societies, Farmer Interest Groups etc as poor followed by fair (10,83%) and good (7.50%).

Table 1Distribution of farmers according to perception on effectiveness of services provided by RBKs

(n= 120)

S. No.	Category	F	%
1.	Less effective (<52.27)	18	15.00
2.	Moderately effective (52.27 – 59.37)	61	50.83
3.	Highly effective (>59.37)	41	34.17
Total:		**120**	**100.00**
Mean = 55.82		S.D = 5.55	

* F=Frequency %=Percentage

Table 2: Effectiveness as perceived by respondents in relation to capacity building services

S. No	Capacity building services	Good		Fair		Poor		Z Value	Rank
		F	%	F	%	F	%		
1	Organisationof polambadi/ thotabadi / pasuvigyanbadi by VAA/VHA/VFA	96	80.00	16	13.34	8	6.66	1.32	1
2	Conduct of advisory board meeting once in a month by the technical staff in the RBK	87	72.50	19	15.84	14	11.66	1.07	2
3	Maintenance of digital library and information material for enhancement of farmers knowledge	67	55.83	28	23.34	25	20.83	0.54	3
4	Organisation of capacity building programmes to farmers in recent advances in agriculture by scientists	54	45.00	39	32.50	27	22.50	0.31	4
5	Maintenance of smart TV at RBK for interaction with scientists and other experts through audio and video conference and dissemination of technology	19	15.83	22	18.33	79	65.84	-1.07	5

Table 3: Effectiveness as perceived by respondents in relation to Input rendering services

S. No	Input rendering services	Good		Fair		Poor		Z Value	Rank
		F	%	F	%	F	%		
1	Maintenance of digital kiosk for booking inputs at RBK	92	76.66	23	19.16	5	4.18	1.30	1
2	RBKs are providing inputs viz; fertilizers, pesticides, seed at lower price compared to local market	87	72.50	29	24.17	4	3.33	1.24	2
3	RBKs are working for delivery of certified product at right price &right time	79	65.84	33	27.50	8	6.66	1.04	3
4	Multi brand quality of inputs are made available to the farmers through RBKs	33	27.50	54	45.00	33	27.50	-0.13	4
5	Farming implements shall be made available for hire from RBK custom hiring centres	31	25.84	37	30.83	52	43.33	-0.48	5
6	Supply of bio fertilizers and bio fungicides to the Farmers at RBK	28	23.33	33	27.50	59	49.17	-0.64	6
7	Supply of organic inputs like neem cake, vermicompost, neem oil at RBK	21	17.50	35	29.17	64	53.33	-0.84	7
8	Provision of IPM kits like pheromone traps, sticky traps, lures to the farmers by RBK	15	12.50	26	21.67	79	65.83	-1.19	8

Table 4: Effectiveness as perceived by respondents in relation to Veterinary services

S. No	Veterinary services	Good		Fair		Poor		Z Value	Rank
		F	%	F	%	F	%		

1	Provision of free vaccination to animals	84	70.00	28	23.33	8	6.67	1.12	1
2	Providing of animal health cards at RBK	79	65.83	32	26.67	9	7.50	1.02	2
3	First aid for animals, deworming and semen collection	23	19.16	31	25.84	66	55.00	-0.79	3
4	Free animal insurance	26	21.66	27	22.50	67	55.84	-0.81	4

Table 5: Effectiveness as perceived by respondents in relation to Information providing services

S. No	Information providing services	Good		Fair		Poor		Z Value	Rank
		F	%	F	%	F	%		
1	RBKs are working towards channelization of Govt schemes	58	48.33	45	37.50	17	14.17	0.53	1
2	Information displayed at RBKs are useful to get the information of Govt schemes	47	39.16	43	35.84	30	25.00	-0.12	2
3	RBKs are working effectively for providing advisory services in integration with call centre	28	23.33	34	28.34	58	48.33	-0.63	3
4	Provision of guidance on extent of loan eligibility through bank mitra and information on government schemes	22	18.33	16	13.34	82	68.33	-1.11	4
5	RBK channel for farmers queries and farmers - scientists interaction	11	9.16	13	10.84	96	80.00	-1.49	5

Table 6: Effectiveness as perceived by respondents in relation to Miscellaneous services

S. No	Miscellaneous Services	Good		Fair		Poor		Z Value	Rank
		F	%	F	%	F	%		

1	Marketing of produce at village made easy by RBK through procurement centres	87	72.50	24	20.00	9	7.50	1.14	1
2	Purchase of surplus produce at MSP when market price falls below MSP	73	60.83	29	24.17	18	15.00	0.74	2
3	Free crop insurance	47	39.16	43	35.84	30	25.00	-0.12	3
4	Promotion of organic farming /natural farming / ZBNF	23	19.16	31	25.84	66	55.00	-0.79	4
5	Grouping of farmers into Farmer Producer Organizations (FPO), Cooperative societies, Farmer Interest Groups etc	9	7.50	13	10.83	98	81.67	-1.55	5

CONCLUSION

It can be concluded that majority of the respondents had perceived overall moderately tohighly effective on services of RBKs.The focal point of this research study was to assess the effectiveness of RBK services as perceived by the farmers in enhancing their farm income. The findings revealed that farmers perceived RBKs were moderately effective. This server as an indication for the policy makers / researchers / extension functionaries that there was wider gap between intent and execution of programme. This finding throws light to the government and policy makers while drafting the plans for improving. restructuring, reforming and modifying the services from RBKs. Thus, various strategies should be implemented to enhance the effectiveness of services of RBKs further.

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