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Agricultural Extension at Grass Roots: Functional Dimensions of Agricultural Officers in Decentralized Planning through Local Self-Government Institutions LSGIs in Kerala

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Abstract

Under the decentralized farmer participatory planning in Kerala, Local Self Government Institutions formulate and implement development programmes through people's participation. Kerala has devolved 30 per cent of the total plan funds and connected developmental departments to the LSGIs and a process of participatory planning by involving people at different stages of formulation of development programmes was initiated. The study was conducted in 160 working group members of 40 Panchayats of five agroclimatic zones of Kerala. Ten roles discharged by agricultural officers as part of the agricultural extension function were analyzed. Better performance scores were received for roles such as promoting integrated farming system models with progressive farmers, use of social media for showcasing farm technologies, success stories and networking for marketing of farm produce, promotion of organic and safe to eat standards of food production and enforcing quality control of inputs as fertilizer and Insecticide inspector. Roles such as spreading the innovations in agriculture by scaling up of innovation capacity and forming appropriate platforms, motivating farmers to adopt precision farming and adopting technologies for making farming system climate resilient received low scores. The research system should focus on backstopping officers with suitable strategies to enhance capabilities.

***Key words*:** Farmer participatory planning, Agricultural development, Extension functions, Role performance, Functions of agricultural officers

Panchayati Raj system, the third level polity in India's federal political system, is considered as "Institution of Local Self-Government" while Gram Sabha, involving all voters of the village is considered to be the political space for citizen to participate in the decision-making process. The states were given mandate to enact their own legislations on democratic decentralization following the broad framework outlined in the constitutional amendments. Taking advantage of the provisions of the 73rd and 74th amendments, Kerala successfully evolved a paradigm of decentralized and participatory development planning devolving 30 per cent of the total plan funds and transfer all the developmental departments to the LSGIs. This was also accompanied by formalizing a process of participatory planning by involving the people at different stages of formulation of development programmes.

The need to institutionalize decentralized planning to facilitate effective implementation of large-scale rural development programmes was emphasized by the Planning Commission [1]. In view of the need to improve systems and processes in decentralized planning, Kumar [2] underlined the institutional reforms required to improve the efficiency of project identification, selection of projects, identification of beneficiaries and decision making by Grama Panchayats. Alex and Sulaja [3] observed that decentralization of governance structure had resulted in better delivery of vital services to the poor. For instance, interactions between officials and farmers in Gram Sabhas, the grassroots level platforms improved public service delivery, generating new solutions and useful institutional learnings. According to Kannan [4], regular participation of the officials in Gram Sabha meetings significantly influenced joint agricultural activities such as demonstrations of new technology to farmers, effective deliberations on agricultural issues in Gram Sabha and delivery of agricultural public services. Oommen [5] further observed that decentralization brought the people close to decision makers helping to gain power, enhanced transparency, accountability and efficiency in using public resources. But Harilal and Eswaran [6] observed that local governments were not successful in promoting livelihood opportunities in agriculture. In spite of decentralization, local self-government institutions had not raised to the occasion to triggering vibrancy in agricultural sector. While analyzing various constraints faced by Agricultural officers Victor [7] found out that role overload, role ambiguity, role conflict, group and political pressures, under participation, powerlessness, lack of proper training schedule of the officer, lack of suitability of different schemes and strenuous working conditions as the major factors leading to job stress.

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MATERIALS AND METHODS

Study area

The study was conducted in five districts selected from five agroclimatic zones of Kerala- Thiruvananthapuram (Northern Kerala), Palakkad (Central zone), Malappuram (Northern Kerala), Wayanad (High range zone) and Thrissur (Problem Area Zone). Forty panchayats were selected based on cropping intensity.

Study sample

Sample for the study was drawn following stratified random sampling procedure. One district each was randomly selected from each of the five agro climatic zones of Kerala. From each district eight Panchayaths with high cropping intensity were selected. The sample of respondents comprised of 40 Agricultural Officers, 40 Grama Panchayat Presidents and 80 farmers who are members of the agricultural working group at Panchayat level constituted for participatory planning. The total sample size thus was 160.

There were ten roles of agricultural officers included under the agricultural extension function. These were providing technical advice and training to the farmers and field staff, participating and organizing agricultural exhibitions and seminars , spreading the innovations in agriculture by scaling up of innovation capacity and forming appropriate platforms, use of social media for showcasing farm technologies, success stories and networking for marketing of farm produce, adopting technologies for making farming system climate resilient, promotion of organic and safe to eat standards of food production, motivating farmers to adopt precision farming practices like drip irrigation, fertigation, Shade nets, plastic mulches, greenhouses etc., enforcing quality control of fertilizer and pesticides as fertilizer and Insecticide inspector, promoting self-reliance in organic manures and vegetables and promoting integrated farming system models with progressive farmers.

A respondent is required to judge each function under agricultural extension dimension against a five-point continuum from very good, good, average, poor and very poor based on the extent of role performance with Score values of 5, 4, 3, 2 and 1 respectively. The ratio of total score obtained for the dimension for an officer to the maximum obtainable score depicts the index of performance.

RESULTS AND DISCUSSION

An analysis of various roles under agricultural extension function revealed that roles such as promoting integrated farming system models with progressive farmers (3.05), use of social media for showcasing farm technologies, success stories and networking for marketing of farm produce (2.95), promotion of organic and safe to eat standards of food production (2.95),enforcing quality control of fertilizer and pesticides as fertilizer and Insecticide inspector (2.95), participating and organizing agricultural exhibitions and seminars (2.87), providing technical advice and training to the farmers and field staff (2.85), promoting self-reliance in organic manures and vegetables(2.80) received comparatively better scores within the extension function [8].

But very low performance score was observed in the roles such as spreading the innovations in agriculture by scaling up of innovation capacity and forming appropriate platforms (2.30), motivating farmers to adopt precision farming practices like drip irrigation, fertigation, Shade nets, plastic mulches, greenhouses etc. (2) and adopting technologies for making farming system climate resilient (1.83). At a time, the grass root level agriculture is threatened by the vagaries of climate change, agricultural officers have to discharge this crucial function [9]. The research system should focus on backstopping them with suitable strategies. More over various technologies making cropping systems climate resilient also was demanded by most of the officers [10].

Table 1 Sub dimensions of the agricultural extension functions of agricultural officers (n=40)

S. No.	Item	Mean subdimension score
1.	Promote Integrated Farming System models with progressive farmers	3.05
2.	Use of social media for showcasing farm technologies, success stories and networking for marketing of farm produce	2.95
3.	Promotion of organic and safe to eat standards of food production	2.95
4.	Enforcing quality control of fertilizer and pesticides as fertilizer and Insecticide inspector	2.95
5.	Participating and organizing agricultural exhibitions and seminars	2.87
6.	Providing technical advice and training to the farmers and field staff	2.85
7.	Promoting self-reliance in organic manures and vegetables	2.8
8.	Spreading the innovations in agriculture by scaling up of innovation capacity and forming appropriate platforms	2.3
9.	Motivating farmers to adopt precision farming practices like drip irrigation, fertigation, Shade nets, plastic mulches, greenhouses etc.	2
10.	Adopting technologies for making farming system climate resilient	1.83

Motivating farmers to adopt precision farming practices like drip irrigation, fertigation, Shade nets, plastic mulches and greenhouses is a crucial function helping to scale up water productivity in farming. Farmers are increasingly adopting open precision farming in summer fallows. Many rain shelters and poly houses in the state are underutilized for want of proper technical backing of farmers and fertigation schedule and techniques. In this background, the capabilities of the agricultural officers in this subdimension have to be urgently enhanced [11-12].

Spreading the innovations in agriculture by scaling up of innovation capacity and forming appropriate platforms was the next sub dimension obtaining low score. Agriculture at grass roots has contributed lot of breakthrough innovations. Many innovations developed by farmers remain unrevealed and documented for want of appropriate platforms and networking of actors to support farmers on this innovation eco system.

Agricultural officers should have skills to lead farmers and an awareness of the interactions among stakeholders in the platform. The rich stream of traditional knowledge in rural areas

demands appropriate technical leadership to strengthen farmers to claim benefit sharing in cases of bio prospecting. In the light of the above all agricultural officers have to be urgently trained to improve their performance on this sub dimension [13].

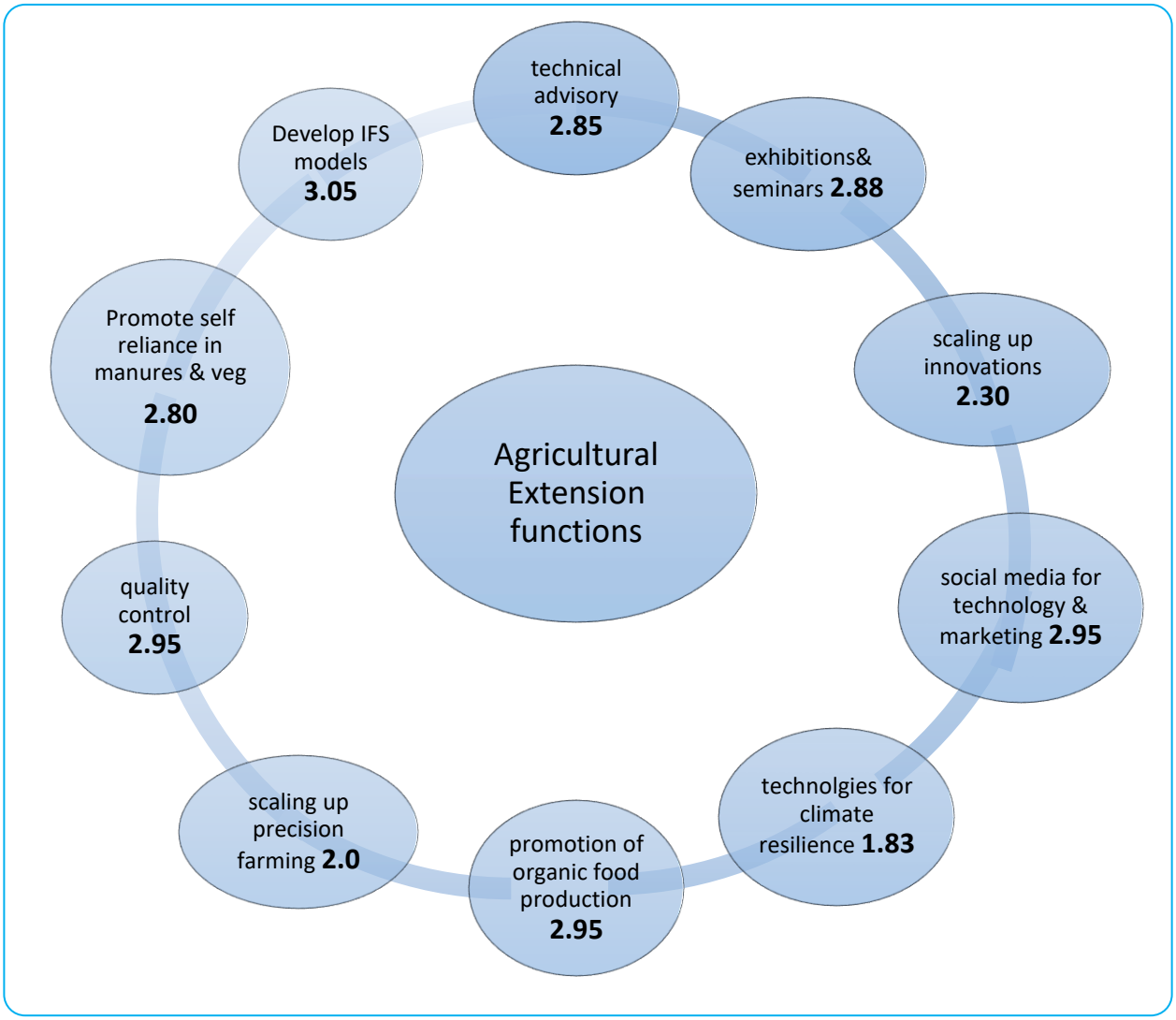


Fig 1 Functions of the agricultural officers related to agricultural extension dimension

Sub dimension of promoting integrated farming system models with progressive farmers obtained highest performance score proving that agricultural officers are satisfactorily discharging this function. The *Subhiksha Keralam* initiative also have considerably helped them in broadening their technical base. Use of social media for showcasing farm technologies, success stories and networking for marketing of farm produce obtained the next high score. This is a positive signal, giving a leadership to farmers in addressing the digital divide. Promotion of organic and safe to eat standards of food production, enforcing quality control of fertilizer and pesticides as fertilizer and Insecticide inspector, participating and organizing agricultural exhibitions and seminars, providing technical advice and training to the farmers and field staff and promoting self-reliance in organic manures and vegetables received satisfactory score levels [14].

Since the agricultural officer has to focus primarily on production and productivity related interventions and related capacity building of farmers, the low scores obtained for the agricultural extension function assumes significance. Agricultural officers should be technically backed of climate resilience and precision farming technologies [15]. More over their innovation platform skills should be diversified. Functioning of biodiversity management committees have to be linked with Krishi bhavan.

CONCLUSION

The study revealed that the agricultural extension function of Agricultural Officers was characterized by satisfactory performance in conventional extension and production-oriented activities, particularly promotion of integrated farming system models, use of social media for dissemination and marketing, promotion of organic and safe food production, enforcement of quality standards, organization of agricultural exhibitions and seminars, and provision of technical advice and training. The highest performance was observed for promoting integrated farming system models with progressive farmers, indicating the effectiveness of Agricultural Officers in facilitating diversified and integrated farming practices. However, relatively low performance was observed in emerging and strategically important areas such as scaling up farmer innovations, promoting precision farming technologies, and adopting climate-resilient farming technologies. The particularly low score for climate-resilient farming indicates a critical capacity gap, especially in the context of increasing

climatic variability and its implications for agricultural production. Similarly, limited performance in precision farming suggests the need for stronger technical support to facilitate the effective utilization of drip irrigation, fertigation, protected cultivation, mulching and related technologies. The findings further highlight the need to strengthen the innovation-management and networking capabilities of Agricultural Officers so that farmer-led innovations and indigenous knowledge can be systematically identified, documented, validated and disseminated through appropriate institutional platforms. Capacity building should therefore move beyond conventional extension approaches and incorporate climate-resilient agriculture, precision farming, digital extension, innovation platforms, biodiversity management and multi-stakeholder networking. Strengthening linkages between Krishi Bhavans, research institutions, local self-governments, farmer groups and biodiversity management committees can further enhance the effectiveness of extension services. Sustained technical backstopping, need-based training and institutional support are essential for enabling Agricultural Officers to respond effectively to emerging challenges and improve the resilience, sustainability and productivity of farming system.

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