

Identifying Limitations of Agricultural Extension Workers in Implementing Farm Business Schools : A Sri Lankan Case Study

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ABSTRACT

The Farm Business School (FBS) is an agricultural extension approach currently popular in driving farmers to commercial agriculture with the development of entrepreneurial skills. The Climate Smart Irrigated Agriculture Project (CSIAP) intends to apply this approach using Agricultural Extension Workers (AEWs) as the facilitators. Hence, it is important to provide training to AEWs on the concept and related subject matter included in the FBS curriculum. Further, to deploy an effective FBS at the grassroots level, the limitations encountered by the AEWs in performing the role as facilitators have to be well identified and remedial measures have to be applied. The main objective of this paper is to address the above issue. The CSIAP implemented four training of trainers programmes in dry zone areas in Sri Lanka from May to July 2023. PRA technique, pair-wise ranking was conducted with four trainee groups numbered 24,25,28, and 25 in each location, respectively. The PRA techniques and pair-wise ranking are used to rank the grassroots-level limitations of AEWs. Different locations showed priority ranking differently for identified limitations and evaluated the outcomes of the training programme. Yet, some seemed common. The fuel problem was identified as a limitation due to the recent economic crisis experienced in the country. The large extension coverage, contradiction with state policies and farmers' wishes, inability to reach the targets, limited opportunities to refresh knowledge and multi-purpose duties assigned are the main constraints associated with working at the grass-root level.

KEYWORDS: Agricultural extension, Entrepreneurship, PRA

Introduction

The agricultural sector significantly contributes to the Sri Lankan economy as it claims 7.5 per cent of the GDP (Central Bank, 2022). Further, it has gained 20 per cent of foreign exchange and employed 27 per cent of the active labour force. The current population is 22 million and it shows an increasing future trend. The formidable issue in the entire world is to combat the food problem and ensure food security for the nations, especially in developing countries. Sri Lanka too, seriously facing this problem. It was reported that 6.26 million people are food insecure (WFP, 2022).

In fact, with the COVID pandemic and current economic crisis, and the issue of banning chemical fertilizers in 2021 as a state policy, the food problem aggravated significantly. Therefore, immediate attention has to be granted to remove the limitations existing in the food crops sector and implement viable solutions to uplift it.

The research-extension-utilizer sub-systems play an immense role in the generation of technology/knowledge, dissemination of such outcomes, and application of intervention to achieve higher production levels. The application of interventions is very much confined to the farmers and value chain actors. The main source of receiving the new technology to the clients is the delivery or dissemination framework, - the agricultural extension mechanism. Agricultural extension is one of the main instruments responsible for agricultural development. In the global context, different extension approaches were deployed and outcomes are varied to a significant extent. Traditionally, extension is regarded as technology/knowledge transfer from the research institutes to utilizers (Rogers, 1995) but at present, it has extended its mandate to include marketing, capacity building, entrepreneurship and value chain development.

Extension involves the conscious use of communication of information to help people form sound opinions and make good decisions (van den Ban and Hawkins, 1996). Röling (1988) explained extension as a communication of intervention by an institute to induce change in voluntary behaviour. Such definitions consider extension as a dissemination apparatus that ensures the flow of information between the above-mentioned sub-sectors. In the current context, the extension has expanded its role to include market orientation, commercial farming, entrepreneurial skills, capacity building, farm planning, value chain, etc. GFRAS (2017) denominates extension as several activities through which information and services required by actors along the value chain are provided for the development of technical, organizational, and management skills and practice towards the improvement of livelihoods and well-being. Sri Lanka implemented a range of extension approaches during the past three decades in the food production sector (Wijeratne and De Silva, 2021). Agricultural extension has a wider mandate to play in the context of food security and at present, the participatory approaches are prominent in reaching the expected goals (Wijeratne and De Silva, 2024). The concept of Farmer Business School (FBS) is an agricultural extension approach that incorporates the above subject areas and makes an effort to bring the farmers to a level of entrepreneur in the competitive market. FBS is a forum or venue that brings farmers together to carry out a collective and collaborative inquiry to address business and marketing problems and opportunities (FAO, 2015). This approach is regarded as a participatory action learning process and emerged from the concept of farmer field schools. The main emphasis is to provide relevant skills and knowledge to bring the farmers to an entrepreneurial platform where they could be geared for commercial production in the competitive market. Tham-Agyekuni *et al.* (2021) have demonstrated that cocoa FBS participants in Ghana had greater knowledge, positive attitudes, and better skills than non-participants.

Further, FBS experience showed that farmers have accessed knowledge and skills to perform vegetable cultivation as a business (Naval *et al.* 2021); improved productivity and food security (Owiredu *et al.* 2022); profitability can be sustained as the B/C ratio is acceptable (Adetarami *et al.* 2022); investment can be justifiable and leads to economies of scale (Boer, 2013) and applied the knowledge appropriately to capture the market according to the seasonal variations (Boer, 2013). The FBS principles are similar to those of Farmer Fields Schools (FFSs) which focused on Integrated Pest Management and Tripp *et al.* (2005) have recorded positive and negative outcomes in the rice culture.

The Climate Smart Irrigated Agriculture Project (CSIAP) supported by the World Bank intends to apply FBS as an agricultural extension approach in the tank-based irrigated areas in the dry zone of Sri Lanka. The Agricultural Extension Workers (AEWs) play a key role as facilitators in introducing and disseminating knowledge and skills to a group of farmers in the context of FBS (CSIAP, 2022). In turn, farmers should apply such knowledge and skills in the production process with gained entrepreneurial capacity. This can be regarded as a two-step flow of information in the linear model. Hence, a series of training of trainers workshops were executed with the AEWs in respective areas. The training modules are confined to (1) farm business school – concepts and implementation, (2) climate-smart agricultural practices, (3) enterprise development and value chain, (4) agri-business and agricultural marketing, and (5) capacity building and financial management. At the same time, an investigation was done to identify the limitations encountered by the AEWs in performing their duties at the grassroots level. This is a crucial issue because without understanding the limitations and making remedial measures for such, the role of the facilitator will become ineffective. As a result, the expected outcomes of FBS may not be achieved and further, benefits to the investment made cannot be justified. The main objective of this paper is to reveal the existing limitations of AEWs in the CSIAP target areas where FBSs are in operation. As the project is ongoing, understanding of such evidence is valuable in correcting the issues and reaching project benefits.

Methodology

Locations

The CSIAP implemented four five-day workshops for AEWs in the dry zone districts; viz. Anuradhapura, Puttalam, Kurunegala, and Monaragala and 24, 25, 28 and 25 members participated, respectively in each location. All the AEWs serving in the S CSIAP target ranges (AI ranges) were taken as the sample. The trainings were executed during May – July 2023.

Training sessions and PRA

The sessions included interactive group dynamics, discussions, debates, slide shows, video films, brainstorming sessions, presentations etc. At one training programme, a PRA session was conducted with the group of AEWs to understand the existing working environment where the FBSs intend to implement.

The participatory techniques, pair-wise ranking and semi-structured interviews were exercised to obtain the data for the study.

The use of PRA tools in rural development and outcomes are explained by Wijeratne and De Silva (2021). First, the members had a brainstorming session and limitations were listed out and then, used the relevant pair-wise matrix. The AEW devoted approximately an hour to structure the outcome. After completing the matrix, presented the results to the entire audience followed by a lengthy discussion (Figure 1).



Figure 1: Brainstorming sessions, PRA exercises, preparation and presentation of PRA outputs

Results and Discussion

The semi-structured interviews revealed that the refresher type training facilitated to advance the knowledge and skills in the subject areas of extension concepts, commercial production, marketing, business economics, financial management including farm records and farm planning, value chain, capacity building and working with adult farmers. Moreover, the above exercise indicated that the training facilitated to improve the soft skills such as presentation skills, group dynamics, critical thinking, decision-making abilities, communication skills, time management, career skills and social integration.

Tables 1,2,3 and 4 demonstrate the outputs of the pair-wise ranking exercise conducted in the Anuradhapura, Puttalam, Kurunegala and Monaragala districts. Even though priority ranking is different in the four districts, several common limitations can be identified. The fuel problem, large extension coverage, unable to meet targets, reluctance to change attitudes, comply with many duties, etc. are the main constraints identified.

Table 1: Issues faced by Agricultural Extension Workers (AEWs) perceived through pair-wise ranking PRA activity – Anuradhapura district

Issues	No. of times concerned over the other issues	Priority
Fuel problem	4	1
Contradictions with higher officials	0	5
Too many duties assigned	1	4
Large Extension coverage	3	2
Targets cannot be achieved	2	3

Table 2: Issues faced by Agricultural Extension Workers (AEWs) perceived through pair-wise ranking PRA activity – Kurunegala district

Issues	No. of times concerned over the other issues	Priority
Not updating new technology	2	3
Limited audio-visual aids	1	4
Fuel problem	4	1
Targets cannot be achieved	0	5
Large Extension coverage	3	2

Table 3: Issues faced by Agricultural Extension Workers (AEWs) perceived through pair-wise ranking PRA activity – Monaragala district

Issues	No. of times concerned over the other issues	Priority
Lack of training/ updates	5	1
Large extension coverage	3	3
Need to produce a number of reports	0	6
Problem of transportation facilities	1	5
Administration problems	4	2
Implementation of the government policies at the grass-roots level	2	4

Table 4: Issues faced by Agricultural Extension Workers (AEWs) perceived through pair-wise ranking PRA activity – Puttalam district

Issues	No. of times concerned over the other issues	Priority
Fuel problem	3	2
Large extension coverage	4	1
Problem of wild animals while doing fieldwork	1	4
Limited audio-visual aids	4	1
Impact of climate change/ hazards	4	1
Administrative problems	2	3
Reluctant to change attitudes by the farmers	3	2

“One of our major problems is the transport difficulties, we cannot meet the fuel expenses through the standard rates for fuel”, the AEWs stated. The transport problem was rated as No. 1 priority in Anuradhapura, Kegalle and Monaragala districts whilst ranked as No. 2 priority in Puttalam district (Tables 1 to 4). The fuel problem emerged with the recent economic crisis of the country's limited transportation. Limited fuel quota and highly increased price (approximately 300%) affected the mobility of the AEWs. The fuel quota system introduced by the state during this period limited the official work assigned to AEWs and further, the price increase made a barrier not only to carry out official duties but also for day-to-day activities of the normal life. Execution of the FBSs is a group activity and farmers have to gather at a pre-identified venue, which can be away from the residence. Under this condition, farmer participation in FBSs is a questionable issue. However, now the quota system is removed. Hence, it is important to estimate the monthly travel distance and allocate an allowance to cover the fuel cost. “We have given an unmanageable extension coverage. Although we pointed out this to the management throughout the past decade, the problem did not resolve” as per the views of AEWs. Large extension coverage was ranked as No. 1 priority in Anuradhapura and Puttalam districts, whilst given No. 2 priority in Kurunegala and No. 3 priority in Monaragala districts (Tables 1 to 4). This problem emerged when 2,500 grass-root level AEWs working as Krushikarma Viyapathi Sevaka (KVSs) were removed from the line of command of the Department of Agriculture to the Department of Public Administration with the introduction of the 13th amendment to the constitution. This created a vacuum between the extension and the farmers and the middle-level extension officers have to rest the responsibility of serving a large area. The extension officer to farmer ratio drastically decreased from 1: 750 to 1: 3000 or more. Further, this structural change affected the line of command and disturbed the information flow. Certain remedial measures were taken in the past, but the problem is not completely solved. An increase of the extension workers is one possible alternative but the cost incurred with this may be unbearable to the state. Therefore, it is worthwhile to promote cyber extension with the necessary equipment. Further, it is necessary to launch training programmes for extension workers and farmers to comply with cyber extension and obtain the service from the Agricultural Information Unit of the Department of Agriculture, Peradeniya.

According to the principles of extension, in connection with the provision of services, two ends can be explained – extension exclusively and extension with providing other services required for agricultural development. In the first scenario, the extension system provides only the knowledge/technology inputs. This means that the AEWs have to disseminate only the extension messages. The second scenario has a mandate to include the provision of other inputs with the main task of extension. Analysis of Sri Lankan extension systems identified the problems of multiple duties assigned to AEWs and implemented the Training and Visit System (T and V) Agricultural Extension and limited the extension system mandate to the first scenario (Benor *et al.*, 1984). However, this approach did not last more than ten years and the Sri Lankan extension system in the food crops sector gradually shifted to the second option.

At present, the multifunctional duties assigned to AEW have become a limitation to performing extension work. The pair-wise ranking exercises demonstrate that too many duties are associated with other input supplies, providing various reports (data collection on rural households for different purposes, statistics etc.) to the authority, and participating in meetings are time-consuming and restricting the opportunities for extension work (Tables 1 to 4).

Contradictions with the policies and unable to cooperate or achieve the expected targets are linked to each other. The PRA exercises have ranked these two factors (Tables 1 to 4) and explanations were provided at the discussion. Normally the agricultural programmes are decided at the national level on the state policies and transmitted to the grassroot level through the extension system. The AEWs make the extension–farmer link in the extension system using vertical coordination. As per the AEWs views “the production targets (e.g. crop extents, organic production, production under GAP, etc.) set at the national level were unable to be achieved; the farmers are confronted with resource limitations and marketing problems”. Hence, it is important to focus on farmer need and resource base identification before making policies at the national or regional level pertaining to the expected interventions. Grass-root level information and farmers' willingness should be conveyed to the policymakers through the extension system.

Agricultural extension is left with a large number of practitioners in the field but with a comparatively limited number of professionals. This is a global experience. “We do not have enough facilities to update our knowledge”, the AEWs stated. The discussion on PRA revealed that very few training programmes were conducted during the last year and on average, AEWs received 1 – 2 such activities. “The past training sessions are very much confined to agronomic practices, but we felt that we need some training on the commercial aspects based on farm economics, these were not covered at all” was the response of AEWs revealed in the discussions in this regard. This fact has significant importance as the concept of FBS attempts to bring the farmers to a platform of entrepreneurs. Hence as a trainer, AEW has to ascertain thorough knowledge and skills in the subject areas of basic economic principles, farm planning, value chain, marketing, farm records and finance, consumer preference, capacity building etc. It was revealed that most of the AEWs have marginally covered the basic economic principles at the level of a diploma. Therefore, it is essential to conduct training sessions in the above areas to refresh their knowledge and skills. Further, transport difficulties were also indicated by the AEWs as they had to travel long distances to reach training locations and spend time. Limitations in audio-visual aids, specimens/equipment to demonstrate for farmer training were also highlighted. Specific to the Puttalam district, the problem of wild animals was ranked by the AEWs. This is mainly due to wild elephants. However, no one was injured but faced tragic circumstances.

Conclusion

The training programme has improved the knowledge and skills of the AEWs in the subject areas relevant to commercial agriculture and entrepreneurial skills, which are important to executing FBSs.

The PRA exercise identified fuel problems, large extension coverage, unable to reach the targets, multi-purpose duties, contradiction with state policies and lack of opportunities to update with current knowledge are the main limitations encountered by the AEWs. As remedial measures, allocation of fuel allowance for pre-determined activities, use of cyber extension, need identification at the grass-root level, and provision of refresher type of training to AEWs, especially in the subject areas relevant to FBSs can be suggested.

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