

Theme: Social Justice
Sub Theme: Access to Justice

Implications of Interventions: Sri Lankan Experience on Lifelong Learning for Farmers

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Introduction

It is well recognized that the community driven development programmes are more effective and sustainable as they bring significant benefits to the investment. Such programmes, incorporate rural communities as partners using participatory approaches. The recent studies by Wijeratne *et al.* 2005 a, Wijeratne *et al.*: 2005 b, Wijeratne *et al.*: 2006, Frenando: *et al* 2006, have highlighted the importance of participatory community development programmes, especially in the non-plantation sector. It is also widely regarded that technology mediated Open and Distance Learning (ODL) methods could add a new dimension to the existing technology dissemination interventions, and moreover deliver an effective extension input to the rural clientele.

Understanding the above facts the Faculty of Agriculture, University of Ruhuna, Sri Lanka. implemented a Lifelong Learning for Farmers (L3F) programme,- Grow more mushroom to enhance food security in the southern province of Sri Lanka. The Commonwealth of Learning (COL) supported the programme since 2008, first on a pilot scale, and second as a medium term programme. As the mushroom cultivation is an alternative income generating enterprise, programme focused on the mushroom farmers in the, area. The *Ekamuthu mushroom growers society* has become the major target group. The main objective of this intervention is to uplift the living standards of the mushroom cultivators through integrating relevant production inputs, and facilitating institutional arrangements and stakeholders of the value chain. The Department of Agricultural Economics and Extension is functioning as the focal point for the programme which coordinates expert human resources of the Faculty of Agriculture. Further, it integrates relevant facilities and services towards the programme. In order to disseminate technologies among other extension techniques, Open and Distance Learning (ODL) mode is being used. Further, it is intended to step into a new intervention,- Knowledge dissemination on distance learning mode using mobile phones, with the collaboration of one of the leading mobile phone companies, Mobitel Ltd. The aim of this paper is to explain the major activities geared to uplift the living standards of the mushroom farmers in *Kamburupitiya* area, and highlight the major outcomes.

2. Initial groundwork

2.1. Mobilization of the village

To introduce the programme and attract more farmers towards the enterprise, a series of meetings were conducted at the Faculty of Agriculture and also at the *Vidatha* centre, *Kamburupitiya*. Farmers of the mushroom society and Faculty members participated in the meetings. The concept of L3F, and intended programme were introduced and discussed. This fora facilitated as interactive sessions.

2.2. Village profile survey and need analysis

Prior to the programme, it was necessary to complete the situation analysis stage of the planning cycle. This component was fulfilled by conducting two activities as; 1) village profile

survey, and 2) need analysis. Both aspects were executed through field surveys. The village profile survey was conducted by two experienced enumerators. The survey covered entire Kamburupitiya area and included 100 households. Next, The field investigation of need identification was implemented by a team of undergraduates. There were 158 mushroom farmers. Based on the results of the above two surveys the first perspective plan was evolved, and on the acceptance of this effort led to initiate the programme on a pilot scale.

3. Programme implementation

3.1. Formation of the consortium

According to the concept of L3F a consortium was formed at the beginning of the programme. The consortium include, coordinator and experts of the Ruhuna University, representatives of the *Ekemuthu* mushroom growers society, representatives of Central Bank, Ruhuna Development Bank and *Vidhatha*, - the rural technology centre. It is intended to include representatives from a marketing firm (food city), and Mobitel Ltd. The experience show that the consortium members supported the programme by pooling the knowledge, skills, and information. The formation of consortium reflected on the value chain and further, enhanced the social capital networks.

3.2. Development of extension materials

Two printed pamphlets were developed and distributed among the farmers. They were entitled as; 1) mushroom cultivation: farmers' problems and practical solutions and, 2) basic computer skills. Further, a CD Rom was prepared on mushroom cultivation, and also distributed among the farmers. All these extension materials enhanced the knowledge and skills of the farmers. Moreover such efforts provided a greater confidence, and technical backstopping pertaining to mushroom cultivation.

3.3. Evolvement of a demonstration site

A demonstration site was established at the Faculty premises. In fact, a mushroom shed of (5m x 5m) was constructed according to the scientific standards. This demonstration plot was used for farmer training programmes, and as a result, farmers gained knowledge by practically experiencing different technologies.

3.4. Conduct of farmer trainings

In order to enhance farmers' knowledge and skills, several training programmes were conducted at the Faculty of Agriculture. Professionals of the Faculty as well as experts from outside agencies served us resource persons for training workshops. The training programmes were mainly confined to following topics.

1. Scientific mushroom production and management practices
2. Pests and diseases control of mushroom cultivation
3. Organic farming and home gardening
4. Post-harvest techniques, value added products, preservation, and packaging
5. Marketing, entrepreneurship and managerial skill development
6. Basic computer skills and information technology

All such trainings encouraged farmers to grant more attention to mushroom cultivation, and moreover facilitated positive interaction to build effective social capital networks.

3.5. Outward bound training

The programme arranged an outward bound training (OBT) for food processing, and development of value added products at the *Cathyrich* centre, *Embilipitiya*. After a demonstration

by facilitators, farmers acquired skills and knowledge through learning by doing. Group activities were employed to evolve skills to prepare value added products, and farmers made mushroom moju, chille paste, bites, etc. At present, some farmers make above products by their own, and sell at the local market.

3.6. Cross visits

The programme arranged one day cross visit to Rural Technology Centre, *Hambantota* to provide an insight to use of modern communication technologies for the farmers.

3.7. Web page development

The programme has already developed a web page (http://wikieducator.org/Sri_Lanka/L3_Farmers/University_of_Ruhuna). This facilitates interaction among stakeholders (COL, partners, etc.) in the framework of distance learning mode. Further, technical information can also be disseminated through such interactive media. Once the farmers get used to this mode, they could access more specific information (markets, prices, quality etc.)

3.8. Market intervention

The members of the society have established links with the local market. In fact, at present, there is no problem concerning marketing fresh mushrooms. There are three channels. First, members process fresh mushrooms, packet them and directly sell to the consumers. Second, pocketed fresh mushroom sold to the customers though middlemen (through grocery shops). It is revealed that no 'returns' were found at the end of the day. Finally, few farmers sell fresh mushrooms to buyers on whole sale.

Next, some farmers have already started processing fresh mushrooms to develop value added products such as bites, moju, chille paste, etc. The production is in a small scale, and still market strategies (packaging, labeling, attraction, etc.) should be integrated to the final product. However, even with present condition the value added products can be sold at the local market.

The project has already contacted the Cargils Food City to establish a market link. However, at present the mushroom farmers have not encountered a problem of selling their fresh mushrooms. Next, if there is excess production, now the farmers can turn it to value added products as they were trained on this aspect by the programme.

Interestingly, the programme motivated to add more flavour to the marketing aspect and facilitated a mobile unit, a tricycle. One farmer was given the responsibility to operate the unit, and the unit sells the products of other farmers, too. The seller used to go along the streets and also to the village fair. (Connections: 2010). It seems that mushroom soup is very popular among the traders and consumers of the village fair.

3.9. Directing credit facilities

The programme established a link between one of the regional banks, Ruhuna Development Bank and the members of the society. In fact, this bank operates the credit schemes of Central Bank of Sri Lanka. The programme established a close contacts with the Central Bank Regional Office and invited the Regional Manager to the consortium. The programme facilitated a series of meetings with the Central Bank and local bank officers, and mushroom farmers. As outcomes, all the parties agreed on certain conditions as;

- 1) grant of credit up to SLRs. 100,000 (USD 1000) per farmer to renovate or expand mushroom shed,
- 2) annual interest lower than 13 per cent,
- 3) development plan and estimation should be approved by the programme
- 4) credit will be granted when the application is assured by two members of the society.

The technical team observed the mushroom sheds of the intended credit seekers and helped the farmers to formulate development plan and estimates. The mushroom sheds area of 3m x 5m was considered as standard for estimation. Construction of a shed of this floor area with relevant materials approximates a cost of Rs. 93,000, (USD 930). Further, the bank officials provided instructions to complete the application procedure. As a result of this effort, the farmers benefited from the credit scheme as they obtained financial assistance of SLRs 50,000 (USD 500) to SLRs 90,000 (USD 900) (per farmer).

In many instances farmers encounter the limitation of finding a security to obtain loans. This barrier was removed by introducing a group assurance. A member farmer could obtain credit guaranteed by two other member farmers. This, in fact, is a very convenient and fast method of obtaining a loan.

3.10. Links with the rural development centre

The programme established a very sound link with the *Vidatha Centre, Kamburupitiya*. This institute serves as a facilitating point, and recently shifted to an adjoining location of Faculty of Agriculture. In fact, at present the monthly meetings of the society is being held at this place. The *Vidatha* centre is equipped with computer facilities. Therefore, to reach farmers through ODL, the *Vidatha* centre is acting as a focal point. Further, it acts as a knowledge dissemination centre.

3.11. Enhancement of social capital

The programme has mobilized and strengthened the mushroom farmers in the area through the forum, *Ekamuthu* mushroom growers society. At present, the members are meeting monthly to discuss their major issues and take decisions in the context of participatory approach. Information or awareness packages being introduced through this forum, and even after the project period this can be used as a platform. In fact, this assured sustainability. At present, members are well integrated and sharing their resources to expand mushroom production. Enhancement of social capital has already benefited the farmers. There are many positive practical implications. Following examples can be highlighted in this context.

- 1) Farmers encountered a problem of filling bags as the operation is done manually, Now farmers grouped together and exchange their labour, so that one farmer could complete his operation within few days. This is a valid example for sharing resources in the community
- 2) The social capital has made a positive attitude to help each other by supporting to a group credit scheme. At present, a farmer can obtain credit on the assurance of intra-membership.
- 3) Further, a tricycle is given to one member through the society expecting benefit for him and also for the entire membership as any member can handover his/her products to sell.
- 4) The farmers tend to have frequent contacts with the experts at the Faculty and also with the professional of external agencies. This nature of formal and informal contacts have motivated the farmers.

Such situations imply building of a strong social capital among the members.

3.12. Motivation towards experimentation

Farmers visited the Faculty more frequently and as a result, familiarized with the activities going on, especially the experiment and trial of new technologies. This environment has provided a sense of experimentation at the farmer level. Some farmers geared for experiment with their own resources. A farmer has tried growing mushrooms at both ends of comparatively a long bag. This intervention has given positive results on the production, but still the cost effectiveness has to be investigated.

3.13. Production trends

Prior to the implementation of the programme, farmers cultivated mushroom on ad-hoc basis and very few farmers made continuous production. Further, scale of operation was very small, limited to 200-500 bags. However, at present, many farmers have a scale of 2000 bags. Some farmers are very enthusiastic as they care for 3500 bags. An average farmer earns approximately SLRs. 20,000 (USD 200) per month which is a significant share of the household income. Furthermore, farmers are more satisfied and enjoying the enterprise.

3.14. Execution of mobile phone intervention

The programme intends to step into a new intervention -Knowledge dissemination on distance mode using mobile phones. This venture is completely new to Sri Lanka, and add a flavour to the programme. The technical team and the national coordinator made a series of discussions, negotiations, and workshops with the executive officials of the Mobitel Ltd, and finally the company came to an agreement to provide its service to the programme. Hence, in the near future this leading company will become a partner in the programme and serve as a service provider. At this initial stage of communication intervention, the Mobitel Ltd and the technical team agreed to implement the voice mail venture on a pilot scale for the mushroom growers. The concept and framework of this intervention is well explained by the document entitled learning through interactive voice educational systems (Uni. of British Colombia : 2009)

The basic phenomenon behind this new method is to convey ideas to a group of farmers using voice mails. In the initial step, it is expected to conduct this programme to selected 100 farmers who already use mobile phones. Each farmer will receive a voice mail daily (1-2 minute) containing a small portion of a lesson. Each week farmer has to send an answer to a question via SMS. Further, farmers can interact with professionals pertaining to their day-to-day problems, and obtain advice.

The costs and returns were calculated for 100 mushroom bags and table 1 demonstrates the major components

Table: 1 Costs and returns for 100 mushroom bags

Item No.	Item	Cost (SLRs)	Cost ¹ (USD)
Cost			
1.	Seeds	120	1.09
2.	Polypropylene bags	200	1.18
3.	Conduits and cotton lids	100	0.91
4.	CaO	11	0.1
5.	MgSo ₄	5	0.05
6.	Rice polish	100	0.91
7.	Green gram flour	120	1.09
8.	Transport cost for saw dust	100	0.91
9.	Labour cost for filling bags	750	6.8
10.	Labour cost for maintenance	450	4.1
	Total Cost	1956	17.14

Income			
	Harvesting period-3 months		
	Harvest @ 0.35 kg per bag-35 kg		
	Total income (market price SLRs 150.00)	5,250	47.72
Profit			
	Income Rs. 5250, cost SLRs 1956	3,294	30

¹USD = SLRs 110

As illustrated in the table 1 a farmers can obtain a profit of SLRs 3294 from 100 bags over a period of 3 months. if a farmer maintains 2000 bags, profit will be SLRs 65880 for 3 months. Hence, the monthly profit confines SLRs 21960(USD 200).

References

Commonwealth of Learning (2010). *Connections* , News form Commonwealth of Learning, Vol 15, No1.

Fernando, N.; Wijesuriya, W., and Wijeratne, M. (2006). Application of Quantitative Techniques for PRA Tools. *Proceedings*, the 10th Anniversary International Symposium: Issues and Challenges of the 21st Century, University of Saberagamuwa, Belihuloya, Sri Lanka, July, 26-36.

Wijeratne, M.; Wikramartne, M.A.P.D.P.; and De Silva W.N. (2005a). Application of Participatory Rural Appraisal (PRA) techniques in rural development programme: Case study in Elpitiya watta village. *Proceedings*, 61st annual session of the Sri Lanka Association for the Advancement of Science (SLAAS), 97.

Wijeratne, M.; De Silva, N., and Sndika, A.L. (2005 b). *Use of Participatory Rural Appraisals Principals in Agricultural Department*, A.J. Prints, Dehiwala, Sri Lanka, 91.

Wijeratne, M.; Koralagama, D.; and De Silva, N. (2006). Application of Participatory Rural Appraisal (PRA) Techniques: A case study in *Weligama Wasama*. *Proceedings*, 62nd annual session if Sri Lanka Association for the Advancement of Science (SLAAS), 166-167.

Uni. of British Colombia (2009). *Learning through interactive voice educational system*, Paper of the network of computing lab. University of British Colombia.