

NON-GOVERNMENTAL SOURCES OF AGRICULTURAL EXTENSION IN KERALA : STATUS AND POTENTIAL

By

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THESIS

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requirement for the degree of*

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2005

DECLARATION

I, hereby declare that this thesis entitled “**Non-governmental sources of agricultural extension in Kerala: Status and potential**” is a bonafide record of research work done by me during the course of research and that the thesis has not previously formed the basis for the award to me of any degree, diploma, associateship, fellowship or other similar title, of any other University or Society.

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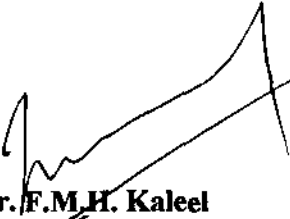
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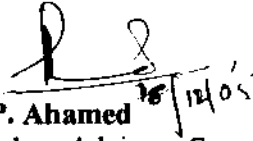
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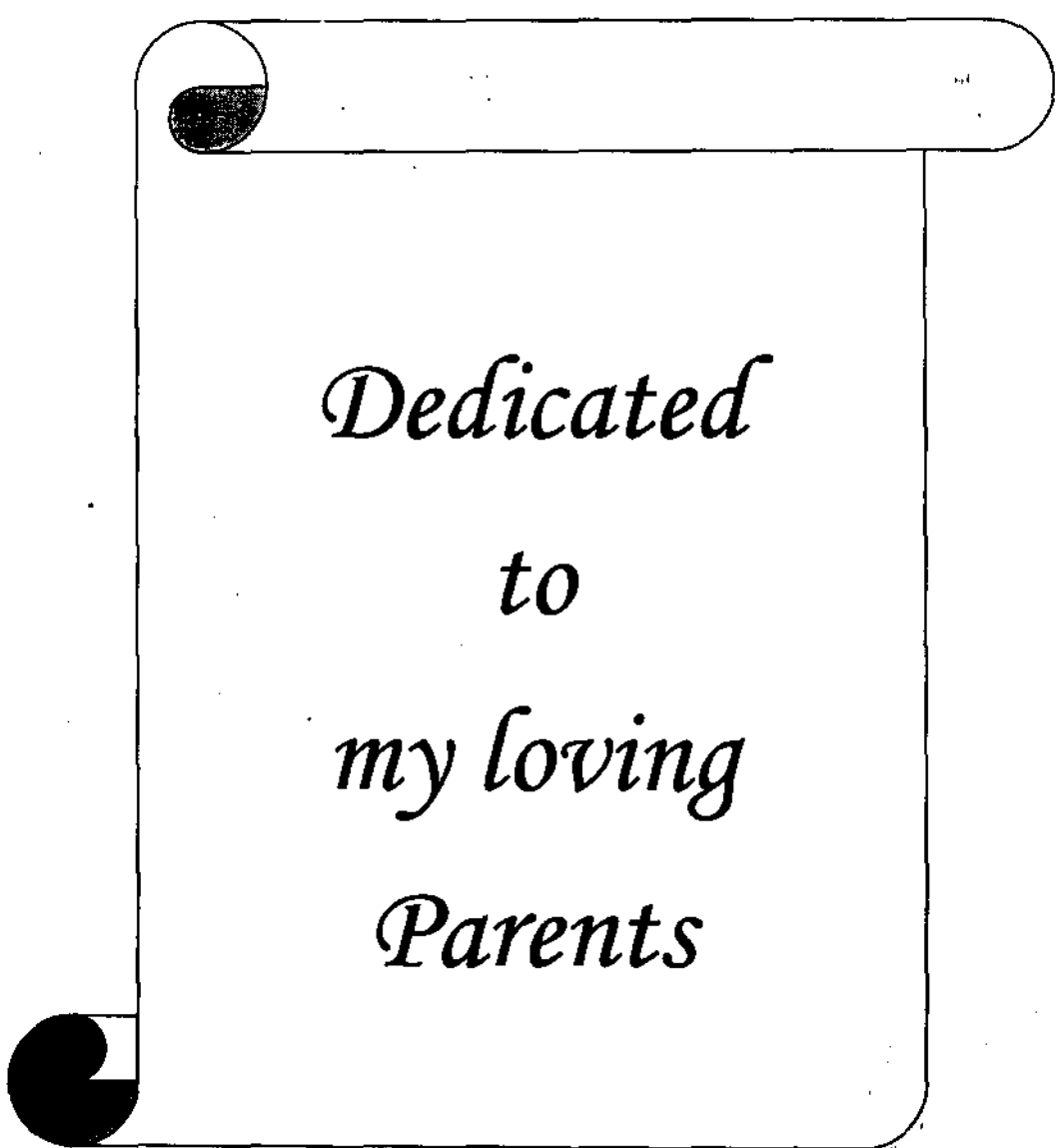
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Dedicated
to
my loving
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LIST OF ABBREVIATIONS USED

AFPRO	- Action for Food PROduction
AIAMED	- All India Association for Micro Enterprise Development
AIDS	- Acquired Immune Deficiency Syndrome
ANGRAU	- Acharya NG Ranga Agricultural University
BAIF	- Bharatiya Agro-Industries Federation
BAMCO	- Bharath Agro Processing and Marketing Co-operative Limited
CAPART	- Council for Advancement of People's Action and Rural Technology
CHAI	- Catholic Health Association of India
CMED	- China MEDical Technologies
Co.	- Company
CREA-AACREA	- <i>Consortios Regionales de Experimentacion Agricola (Agricultural Experimentation Regional Consortia) -- Association Argentina de Regionales de Experimentacion Agricola (Argentine Association of Agricultural Experimentation Regional Consortia)</i>
CSWB	- Central Social Welfare Board
DoA	- Department of Agriculture
DST	- Department of Science and Technology
FWWB	- Friends of Women's World Banking
GATT	- General Agreement on Tariff and Trade
GMOs	- Genetically Modified Organisms
GOs	- Government Organizations
HRD	- Human Resource Development
ICCOA	- Indian Competence Centre for Organic Agriculture
ICTs	- Information and Communication Technologies
IFFCO	- Indian Farmers' Fertilizer CO-operative
INDNET	- INDia NETwork
KAU	- Kerala Agricultural University
KRIBHCO	- KRishak BHarati CO-operative
KRWSA	- Kerala Rural Water Supply and Sanitation Agency
Ltd.	- Limited
MLA	- Member of the Legislative Assembly
MP	- Member of the Parliament
MSSRF	- MS Swaminathan Research Foundation
NABARD	- National Bank for Agriculture and Rural Development

N.E.S	- National Extension Service
NGOs	- Non-Governmental Organizations
NRM	- Natural Resource Management
NWDPR	- National Watershed Development Project for Rainfed Areas
PRADAN	- Professional Assistance for Development Action
Pvt.	- Private
RMK	- Rashtriya Mahila Kosh
RPOs	- Rural Producer Organizations
SDC, CapDeck	- Swiss Agency for Development and Co-operation – Capacity Building for Decentralization in Kerala
SHG	- Self Help Group
SIDA	- <i>Styrelsen for Internationellt Utvecklings-samarbete</i>
SIDBI	- Small Industries Development Bank of India
S.L.F	- Stiff Little Fingers
SPSS	- Statistical Package for the Social Sciences
TOT	- Transfer of Technology
TRYSEM	- Training of Rural Youth for Self Employment
UK	- United Kingdom
UPASI	- United Planters' Association of Southern India
USA	- United States of America
VFPC-K	- Vegetable and Fruit Promotion Council - Kerala
WTO	- World Trade Organization

Introduction

CHAPTER 1

INTRODUCTION

Agriculture is an important element in the social fabric of Indian society and plays an essential role in the formation of its cultural identity. Whatever the economic structure has been in the past or is today, unquestionably India's economy will continue to be based on agriculture in the foreseeable years. A vibrant agriculture in India is central to the well being of the largest section of the population living in rural villages, as well as for the welfare of the urban population and those working in agro-industrial enterprises.

Many factors contribute to the development of agriculture, including extension as an institutional input. The term 'agricultural extension' can mean different things to different people. Extension may be described as the process of assisting farmers to become aware of, and adopt improved techniques to increase their production efficiency, income, and all-round development of life situation. It is easy to say and define, but the process of changing farmer behavior is complex and most often, an institutional affair. Paramount amongst these is that extension recommendations must be relevant to the conditions of the client, regardless of the extension method used. This in turn, necessitates that extension must understand the characteristics of the targeted farming systems and the factors which impinge on these systems and must be underpinned by an effective technology generation/adaptation capacity. Therefore, the goals of extension include the transferring of knowledge from researchers to farmers, helping farmers to make better decisions, enabling farmers to clarify their own goals and possibilities, and thereby stimulating desirable agricultural development.

Traditionally, Indian agriculture has been subsistence oriented with low energy and input. This subsistence nature of agriculture is now changing into commercial, technologically dynamic, knowledge intensive agriculture with high amount of input use in judicious way and better market orientation. Farm technologies are

constantly changing and farmers need to be provided with the know how to use agricultural innovations for the exploitation of inherent yield potential. And also, entry of the private corporate sector, non-professional agriculturists, the educated elite and others into the agricultural field has led to increased demand for timely and technically sound advice with reliable market oriented information. Worldwide, the public sector plays a dominant role in the provision of agricultural extension and services (Axinn and Thorat, 1972; Lees, 1990; Swanson *et al.*, 1997). According to a worldwide survey conducted by the FAO in 1988-89, about 81 per cent of extension work around the world is carried out through the Ministry of Department of Agriculture (Swanson *et al.*, 1990; Umali and Schwartz, 1994). Globally, some 600, 000 extension workers are engaged in the provision of agricultural information to farmers (Swanson *et al.*, 1990; Maalouf *et al.*, 1991), of which 95 per cent is carried out by public extension (Swanson *et al.*, 1990).

Now, however, serious reservations are being expressed about the performance and capability of this sector, placing the future of the public extension system in doubt. Rogers (1987), for example argues that the performance of public agricultural extension in developing countries has been disappointing and has failed to transfer agricultural technology to the farmers. Furthermore, large number of farmers remains outside the ambit of extension providers (Prinsley *et al.*, 1994). Presently, three out of four Asian farmers have no contact with extension services (Maalouf *et al.*, 1991). This is attributed to a number of factors including poorly motivated staff, a preponderance of non-extension activities, inadequate operational funds, lack of relevant technology, top-down planning, centralized management and a general absence of accountability in the public sector (Baxter *et al.*, 1984; Antholt, 1994). Overall, public extension services have consistently failed to deal with the site-specific needs and problems of the farmers (Ahmad, 1999). As a result of the relatively poor performance record of public sector extension over the past two decades, politicians, extension specialists and industry experts have been advocating a thorough reconsideration of extension delivery as the old system was 'not doing enough, not doing it well and not being relevant'(Rivera, 1991). Critics of public extension claim that its services need to be reoriented, redirected and revitalized (Rivera and Cary, 1997).

The extension focus should be on quality, cost of production, value addition, market led extension and cyber application in agriculture. These challenges require a change in the role of present extension system. The inclusion of the non-governmental sector or sources to ensure competition is gaining credence as one solution, especially with regard to agricultural input supply firms. It is assumed that a market driven extension service will provide the most rational and efficient mechanism to 'get agriculture moving and usher in a second Green Revolution'.

The process of funding and delivering the extension services by private individuals or organizations is called Private Extension (Shekara, 2001a). At present, considerable numbers of private extension service providers are there in the field, playing active role in technology dissemination to the farmers and influencing their ultimate profit. Today's agriculture is commercializing and hence the independent farmer of yesterday is more depending on them than ever before. The farmer depends on his neighbours; progressive farmers; relatives; extension workers; input dealers for seeds, fertilizers, pesticides, weedicides, and machinery; labourers for regular work; middle men for selling; banks for credit; and Government for support policy and nature for good production.

Green revolution of the sixties paved the way for entry of agri-business companies selling seeds, fertilizers, pesticides and machinery. Today, farm consultants and large number of consultancy firms are catering to the needs of hi-tech agriculture, large holdings and commercial and irrigated crops. Commodity based farmers' organizations are operating, focusing not only on production but also processing and marketing. Non- Governmental Organizations (NGO's) are serving the farmers in risk prone areas. Role of mass media in agricultural extension has become more meaningful and powerful. Revolution in information technology has made the common man's access to information easy and cost effective. Umali and Schwartz (1994) highlighted a wide range of suppliers of agricultural extension services: the public sector (as represented by Ministries / Departments of Agriculture), non-governmental organizations, non-profit

organizations (e.g. universities and commodity foundations), international research centres, and the private sector. The private sector may include: (1) farmer associations whose membership is organized by locality or commodity, (2) private production and marketing firms such as input manufacturers and distributors, agro-marketing and processing firms, trade associations and (3) private consultancy firms.

The private sector is the motor of economic growth, which, in turn, is an essential, although not sufficient basis for fighting poverty and improving people's quality of life. This has provided domestic farming the much-needed breather. The increased use of private technology has brought higher yields and income, allowing farmers and consumers to reach higher levels of welfare. It has given further boost to the process of overall development of agricultural infrastructure and allied activities. This has finally manifested itself in a vertical growth of employment opportunities in the rural areas. Instead of confining itself just to the implements aspect of the farm sector, it has also gone onto make its presence felt in other areas of farming: seeds, fertilizers, agricultural chemicals, tractors and other agriculture machinery, food processing and agriculture-based allied industries, marketing of farm produce, extension services and the like.

Although, not well-documented, private extension exists in Kerala through various sources. These non-governmental extension sources have become active in the field of agriculture and have already created a niche for themselves in catalyzing agricultural development. No major studies have so far been taken up to analyze their working. Kerala's agricultural situation is passing through a difficult phase today and it is high time attention is focused on this very important aspect.

This study has been, thus, formulated with the following specific objectives:

1. To collect and consolidate the different types of non-governmental extension sources involved in providing extension in the state

2. To classify the non-governmental extension sources based on their involvement in agricultural development
3. To analyze the activity focus, extension approaches followed and the mode of operation of the selected non-governmental extension agencies
4. To identify the success indicators of these non-governmental extension providers
5. To analyze the salient personal and socio-economic characteristics of the beneficiaries under different agricultural programmes implemented by the non-governmental extension providers
6. To appraise the suggestions of the beneficiaries in improving the non-governmental extension services

Scope and importance of the study

A remarkable feature of Kerala agriculture during the last one-and-a half-decade has been the increased participation of private sector alongside the public sector initiatives. While the public sector was already doing a lot for making the agri-scenario look greener, an increased investment by the private sector gave further boost to the process of overall development of agriculture.

Non-governmental extension agencies with their advantage of non-rigid, locality-specific, felt need based, beneficiary oriented and committed nature of service have established a plethora of roles which can effect development, especially in farming sector. However, no empirical investigation has been made to document and assess the different facets of non-governmental extension providers in the state and to analyze their mode of operation. In this context, an analysis of the effectiveness of non-governmental extension agencies of Kerala, their different forms, predominant roles, activity focus, and extension approaches and methods followed would be of much utility. This study is also designed to identify and analyze the reasons behind the success of these functionaries,

and hopefully will provide effective guidelines for the public extension functionaries to reorient and redirect their activities.

The outcome of the study may benefit in bringing about necessary organizational and strategic changes needed for TOT. The public extension set up can also take strategic decision as how to work in liaison and parallel with the private stream. By revealing the current style, areas and nature of non-governmental extension providers, it could suggest the needed promotional strategies. The study would further boost their performance and promote the developmental activities and would also help them in modifying and streamlining their approaches and methods. It would act as impetus for any service-minded person or organization interested in providing extension service, by providing them with a direction to follow as they go about performing their role. The scientific procedures and tools developed for the conduct and analysis of the study would enrich the research methodology in social science. It is therefore hoped that the results of this study would be of significant use to planners, policy makers, researchers, developmental agencies, other similar organizations and practitioners of agricultural development.

Limitations of the study

The present study was undertaken by a single researcher as a part of the requirement of Master's degree program. Hence the limitations of time and resources have restricted the exploration of the area in greater depth and in a more comprehensive manner. To get a full picture of non-governmental extension, a large number of organizations need to be studied. Through this study, because of the above said limitations, only a selected number could be analyzed. Besides, the study was confined to Kerala state only. This limitation has narrowed down the scope of generalizing the result. Furthermore, in selecting well functioning agencies, no special screening was done. It was arrived at based on their existing popularity; review of literature; and also after discussions with experts. Since the study was based on the expressed opinion of the

respondents, it may not be free from their personal biases and prejudices. Moreover, the study to be complete and the findings to be more meaningful, it is necessary to make a comparative study with the governmental extension agencies. This points towards future investigations in this direction.

However, sincere attempts have been made to accomplish the objectives and make the study as systematic and objective as possible, so that the findings of the study would provide a better insight into the various aspects of non-governmental extension.

Presentation of the study

The thesis is presented in five chapters. The first chapter deals with introduction highlighting the objectives, scope and importance, and limitations of the study as already seen. The second chapter presents the theoretical orientation covering the review of literature pertaining to this study, while the third chapter comprises of the methodology used in the research work including the selection of respondents and variables, operationalization and empirical measurement of the selected variables, techniques of data collection, and statistical procedures used for the study. The fourth chapter brings out the results of the study supported with discussion on the results. The final chapter gives the summary. The references, appendices and abstract are given at the end.

Review of Literature

CHAPTER 2

REVIEW OF LITERATURE

Any scientific endeavour becomes clearer, valid and concrete, when it is supported by pertinent studies conducted earlier in that regard. Review of such efforts, either theoretical or empirical would help to outline the new problem areas and develop a conceptual framework for the study. It also helps to get an insight into the various empirical procedures adopted in the previous studies and the findings obtained by these studies. Keeping this in mind, a comprehensive review of the available literature having direct or indirect bearing on this study has been carried out in accordance with the objectives of this study. It is presented under the following sub-headings:

- 2.1 Concept of non-governmental extension
- 2.2 Reasons behind the evolution of non-governmental extension
- 2.3 Types of non-governmental extension providers and their role in agricultural development
- 2.4 Approaches and methods followed by non-governmental extension agencies
- 2.5 Beneficiaries of non-governmental extension sources
- 2.6 Effects of non-governmental extension
- 2.7 Success indicators of non-governmental extension agencies
- 2.8 Constraints faced by non-governmental extension providers

2.1 CONCEPT OF NON-GOVERNMENTAL EXTENSION

Savas (1987) defined privatization as the act of reducing the role of government or increasing the role of private sector in an activity or in the ownership of assets.

Bloome (1993) indicated that private extension involved any personnel in the private sector that delivered advisory services in areas of agriculture and was seen as an alternative to public extension.

Use of the term privatization often tends to be misleading. In its pure sense, privatization implies full transfer of ownership (usually by way of sale) from government to a private entity, with that entity meeting all costs and receiving any profits (Rivera and Cary, 1997).

Saravanan and Gouda (1999) operationalized in the following manner, "privatization of agricultural extension service refers to the services rendered in the area of agriculture and allied aspects by extension personnel working in private agencies or organizations for which farmers are expected to pay a fee and it can be viewed as supplementary or alternative to public extension services".

Privatization is a process that reduces the involvement of state of public sector and brings in divestiture, i.e., sole by the state of the whole or part of its holding of the equity share of government owned enterprises to private sector (Prasad and Khan, 2001).

Rath and Tiwari (2001) described that privatization or commercialisation of public extension service was a change from providing a free public service financed by government to a commercial operation financed by user charges or cost recovery.

Chapman and Tripp (2003) defined private extension as simply the provision of a service or advice by a private firm in exchange for a fee; the terms and conditions of the transaction were negotiated in an open market.

According to Dakhore and Deshmukh (2003), privatization is the process by which government reduces its role and encourages private sector to take up their roles.

2.2 REASONS BEHIND THE EVOLUTION OF NON-GOVERNMENTAL EXTENSION

The staff expansion has led to large budgets for field staff maintenance to the extent that after salaries are paid, there is little money left over to cover essential operating costs-transport etc., and is one reason why privatization of existing extension services has already occurred in some countries and is being proposed in others (Huffman, 1978; Evenson, 1986).

Roth (1987) asserted that public sector was over burdened by numerous activities and he suggested that moving of some of them to the private sector might allow more effective implementation of essential services.

The public sector has been criticized for its low performance and capability (Sofranko *et al.*, 1988; Ahmad *et al.*, 2001).

Public sector extension, facing criticism for its cost and its lack of efficiency and for not pursuing programmes that foster equity, is confronted with a number of possibilities for change. There has been a trend, perceptible throughout various extension systems undergoing adjustment, of greater flexibility and multiple partners in funding agricultural advisory services (OECD, 1989).

Rivera (1989) mentioned that the disappointing performance of the public sector extension was the main reason for the emergence of a more efficient private sector extension system.

In developing countries, bureaucratic inefficiency and poor program design and implementation have led to poor performance and incoherent links with client farmers and the research sector. Support for extension declined in the 1980s and donors were unwilling to fund large-scale public sector recurrent expenditures, which led to

further under-financing, staffing shortages and contraction of extension services (Amanor and Farrington, 1991).

Though returns to investment in extension were found reasonable and perhaps comparable to those on other public services (Gill, 1991), the increasing restraints on government finances and reduced donor interest have led to significant cuts in public extension services. Public extension services are under pressure because of their own poor performance and are often criticized for being inefficient and ineffective; lacking clear objectives, motivation and incentives, being poorly managed and not accountable to clients; and lacking in relevant technologies (Haug, 1999). Limited operational budgets, perennial vacancies in remote and inaccessible areas and its narrow focus on technology dissemination have also led to erosion of credibility on public extension (Sulaiman and Gadewar, 1994).

Democratisation has resulted in a dramatic fall in public sector power. Methodologically, direct farm-level links are stressed between researchers and farmers. More sustainable approaches to extension funding involve greater flexibility and multiple partners (Gustafson, 1991).

A recent worldwide review by Rivera *et al.* (2001) referred extension system as 'failing' and 'moribund', being in a state of 'disarray or barely functioning at all'. Similar observations have been made in the past by others (Kaimowitz, 1991; Ameer, 1994). It is conceivable that there are some generic and universal difficulties in the operation of public extension systems, and in the typical bureaucratic-political environment within which they are budgeted and managed (Dinar, 1996).

Public sector extension was severally attacked in the 1980s for not being relevant, for insufficient impact and, sometimes, for not pursuing programmes that foster equity (Rivera, 1991).

Financial burden on governments have forced to make sharp reduction in budget of public extension programmes (Van den Ban and Hawkins, 1996).

Rivera *et al.* (1991) mentioned that public funding for agricultural extension; including credit funds were inadequate to effectively reach the farmers. They suggested that involvement of private sector in extension could make the situation better.

Wilson (1991) reported that state withdrawal from service provision required commercial farmers to arrange their own services; encourage producer organizations to provide services; promote private extension by input suppliers, produce buyers, NGOs, environmental groups and others.

The private good nature of many extension services has raised interest in privatizing extension services (Cary, 1993, 1998; Linder, 1993).

Privatization represents one of several options governments are pursuing in attempts to solve sustainability problems plaguing public financed extension services (Ameur, 1994).

An environment of declining government budgets combined with waning donor interest has led to significant cuts in public extension services (Farrington, 1994).

Government models for provisioning of agricultural research, development and extension (RD&E) are considered to have fallen into desperate plight in many countries due to poor progress in achieving policy aims such as export, food security and social well-being (Gros, 1994).

Jaffee and Srivastava (1994) observed that in many developing countries the large-scale centralized state farms and public seed corporations established to multiply and disseminate improved seeds of selected crops were ineffectual, failing to meet the diverse crop and varietal requirements of farmers. Governments and assisting agencies were reassessing their strategies, paying greater attention to the potential contributions of private firms, co-operatives, other non-governmental organizations (NGOs), and farmers themselves.

Growing fiscal deficits and greater awareness of the huge economic cost of often-inefficient government activities have renewed interest in transferring the delivery of important services from the public to the private sector in developing countries (Umali *et al.*, 1994).

According to Dhillon and Hansra (1995) the role of NGOs in rural development has been recognized and considered vital because of the following reasons.

1. Government alone cannot mobilize resources needed for meeting the needs of the people
2. The quality and efficiency of government sponsored programmes increase when people are involved in programme planning and implementation
3. Voluntary organizations complement very well with the development efforts of government in terms of geographic and programme needs
4. They have first hand experience and knowledge of local needs, problems and resources at local level
5. They are closer to the minds and the hearts of the people
6. They have strong commitment and zeal for voluntary action
7. Voluntary sector is more responsive and can operate with greater flexibility

Vanclay and Lawrence (1995) referred to public extension as being in a 'state of crisis' brought on by pressures relating to finance, effectiveness, legitimation and theory.

Rivera (1996a) reported that public sector extension was criticized for various reasons: for not being relevant, for not being adequately effective, for not being efficient and sometimes, for not pursuing programs that foster equity.

"Extension does not stand alone. It needs a supportive service" (Rivera, 1996b).

Marsh and Pannell (1997) reported that government agencies were involved in extension with a change in their focus. There had been a withdrawal from areas perceived to be adequately supplied by the private sector, partly because of funding restrictions.

Scarborough *et al.* (1997) reported that conventional government-run agricultural extension services notably failed to deliver improved agricultural productivity and standards of living in many parts of the developing world. This was especially true in remote and marginal upland areas, and even in the lowlands, conventional extension approaches had been criticized for promoting chemical-intensive, standardized, and often-inappropriate packages of farming practices.

Pandya (1998) reported that the evolution of agriculture could be possible only through a faster evolution of extension and a strategy is needed to anticipate the evolution and plan adjustments. He recognized the need for flexibility and adoption of multiple approaches to extension and also stressed the need to promote involvement of user groups and the private sector in extension.

The public extension agencies often produced positive results in early years but soon encountered a range of common problems, including difficulty in measuring impacts, lack of political support, lack of accountability to clients, lack of financial sustainability, and poor links to sources of new technology. Many systems were unable to respond to changing priorities, needs and opportunities due in part to the lack of incentives and flexibility within public agencies for the efficient delivery of quality services to widely dispersed rural people (Feder *et al.*, 1999).

Structural and functional changes in agricultural extension are important to meet the needs and challenges of the new millennium. The globalization and liberalization era has made people to rethink the role of public extension in developing countries. These include: (1) fiscal crisis/financial burdens on governments, (2) disappointing (non-accountability) public extension services, (3) opportunities and challenges of agriculture in GATT. In this climate, privatizing the public extension

service has come in an alternative to public extension service (Saravanan and Gouda, 1999).

Chandrakandan and Karthikeyan (2001) specified the factors for privatization of agricultural extension service in India: (1) types of crops cultivated throughout the country (2) socio-economic strata differences among the farming community viz., tenancy ownership, leased, small, marginal, medium and large farmers categories (3) entirely drastic agro-climatic variations along and across the length and breadth of the country (4) different approaches followed in various developing and developed countries and their utility possibilities in our country, environment etc. (5) changes in rainfall pattern, vagaries of monsoon, floods, cyclone etc.

Davidson *et al.* (2001) mentioned that government was looking for an extension service that was cost effective, responsible to farmers' needs and environmentally sustainable and thus the government was inclined towards the privatization of extension services.

Feder *et al.* (2001) pointed out that putting responsibility in the hands of farmers to determine agricultural extension programs could make services more responsive to local conditions, more accountable, more effective and more sustainable. To realize these benefits, they suggested that the role of the public sector have to be redefined to permit multiple approaches that account for user diversity and to develop partnerships with farmer organizations, NGOs, and the private sector for service delivery.

The scarcities of financial resources for extension and in some cases the lack of skilled manpower and dearth of organizational capacity led to major changes in ideological, economic and technical perspectives of agricultural extension. Also, the forces for worldwide structural adjustment resulting from massive debts by nations North and South, the onslaught of conservative ideology emphasizing efficiencies over welfare, the accelerating reaction against subsidies in agriculture, all these contributed to the

critical assessment of extension. Thus, governments began to discredit and withdraw their commitment to extension (FAO, 2001a).

Ghosh (2001) reported that the increasing inability of the governments to adequately fund its extension machinery was however, the real force behind the search for alternative approaches such as 'cost sharing' and 'privatization'.

Ojha (2001) mentioned that with the decline in public funding and donor support, extension systems were seeking diverse funding sources and financing models to address the long-standing issue of sustainability. He added that besides central governments, local governments, donors, external NGOs and users themselves could finance extension.

In recent years not only in India but also in many countries the government extension services are heavily criticized. The major criticism are: expensive, hierarchal, not serving to the interest of the farmers, environmental issues, more sustainable production methods, conflicting role (information, education, advice and administration), subsidy issues, taking away the working time, many farmers left, non-accountability to clients and so on (Perumal, 2001).

While extension was originally conceived as a way of transferring technology to farmers, there is now wide recognition that this task needs to expand considerably (Rivera *et al.*, 2001; Alex *et al.*, 2002a). In the same way the earlier reliance on the development of extension models that could be widely replicated across countries and regions has proved to be ineffective. There is an increasing realization that new extension approaches need to emerge locally, based on experimentation, learning and adaptation to prevailing circumstances (Echeverria, 2003).

Saravanan *et al.* (2001) mentioned that commercialization of agriculture hastened the emergence of private consultancy in mid 1990s.

The genesis of Private Extension may be because of two reasons: (i) the inability of the Public Extension to reach all the farmers, all the time, regarding all problems created the space, which is gradually filled by Private Extension. (ii) the services which are not fully covered by Public Extension are covered by private Extension: input supply, market support, processing etc. (Shekara, 2001b).

Shekara (2001b) stated that increasing restraints on government finances and emergence of new extension arrangements offered by the private and voluntary sector accelerated the process of limiting the role of government in extension.

He listed out some of the problems in public extension system as follows:

1. Public extension services are widely viewed as supply driven rather than demand driven.
2. Commercialization of agriculture gave rise to specialized client and demand for location specific extension services which are not catered by public extension system.
3. Public extension deals with a large area, large population and diverse cropping pattern. Extension services provided are general in nature rather than specific and intensive.
4. High cost, low impact of extension programmes, growing conflicts between farmer's interest and policy goals, poor motivation of staff and conflicting roles.
5. Insufficient fact to face contact between extension worker and farmer.
6. Inadequate funds for operational purpose.
7. Majority of the extension services are curative in nature.
8. Inadequate technical qualifications of Village Level Extension Workers.
9. Incomplete extension services.
10. Inadequate internal organization structure.
11. Inefficiency of extension personnel.
12. Inappropriateness or irrelevance of extension content.
13. Dilution of impact.

Ansari and Singh (2002) indicated a dramatic shift in the extension approach by the integration of Indian agriculture with the global agent. He opined that private sector would be able to play a major role.

Collion (2002) mentioned that traditional public agricultural extension had been under serious pressure to reform since the 1990s. Specifically, he highlighted the pressures: (a) reductions in state budgets that are causing a downsizing in public services, (b) increasing information about extension's ineffectiveness, (c) lack of relevance and accountability, (d) poor performance in reaching low income and women farmers and (e) trends in decentralization that contradict the traditional top-down extension format.

Batra and Mahmood (2003) revealed that many public extension services had been inefficient and poorly targeted and had been unsustainable. The most common problems were recurrent cost funding problems during and subsequent to the project, inadequate research extension linkage, under qualified front-line extension staff having insufficient practical knowledge of production systems and relevant technology, top-down approaches to developing recommendations and ineffective contact farmer systems. Other problems included insufficient availability of technology, little consideration of production economics and risks, and differential access by farmers to resources, insensitivity of projects to specific fiscal, institutional and farming system conditions, weak commitment of implementing agencies and weak monitoring systems.

Chapman and Tripp (2003) mentioned that the retreat of governments from managing agricultural input and output marketing, a diversification in the sources of agricultural research, and increased opportunities for trade, had opened many new opportunities for the private sector, including extension provision.

Fiscal crisis of the government, poor performance of public extension system, changing context and opportunities like improved transport network, mass media, competency of extension personnel etc. forced the privatization of extension services (Dakhore and Deshmukh, 2003).

The practice of delivering the same technical message to all farmers using the same extension methodology will not support the needs of the farmers who are much interested in export oriented and commercial agriculture. Farmers need new skills in farm management and marketing. The shrinking of public sector resources and downsizing and streamlining of extension personnel, forces to go for privatization. The public institution was made inefficient, less productive causes financial losses and creates discontent among the farmers. Moreover, the present public extension system has only limited professionals who are unable to cover the existing 500 districts, 6000 blocks and over 6 lakh villages in India. So there exists a need for specialized extension services for farmers who are opting for commercial or export oriented agriculture (Kumar *et al.*, 2003).

Patel *et al.* (2003) reported that emerging issues such as financial constraints of government, inability of public extension to reach increasing need of farmers would make privatization of agricultural extension services unavoidable.

Rao *et al.* (2003) mentioned that an increasing shift from food to non-food uses made private industry a much more important player in coarse cereal economics.

Considering the Indian agricultural scenarios and issues such as disappointing technology transfer, problems in supplying timely and quality farm inputs, market gluts and lack of infrastructure development, lack of appropriate government policy support and challenges in WTO, the era calls for increased private sector participation (Saravanan and Gouda, 2003).

The contribution of public extension in attaining self-reliance in food production is very well recognized. But in this changing time, public extension alone cannot be adequately addressed with the limited resources and wide ratio between farmers and extension workers and also by added responsibility of handling emerging issues like marketing extension, agri-business and WTO. So it required the combined strengths and synergies of a pluralistic, multi-agency system which includes private corporate sector, farmers organizations, co-operatives, NGOs, para-professionals, small

agri-business, self-help groups, input dealers and suppliers, electronic and print media and information technology system (Sakuntalai *et al.*, 2003).

Albert (2004) pointed out that review of public sector tasks led to the privatization of public sector enterprises and the commercialization of agricultural services - thereby cutting costs on the one hand and creating revenues on the other.

The search for private-sector solutions for the provision of infrastructure and services is gaining momentum, since public-sector budgets cannot finance the necessary investment for and maintenance of these infrastructure facilities for rapidly growing populations. Moreover, the management of public-sector enterprises has proved unsatisfactory and inefficient in many cases (Bichmann, 2004).

Changes in economic and political factors are forcing the public sector to redefine its role from one of an active player in markets and allocation of resources, to an overseer and regulator among private sector entities, and provider of the public goods (LeGouis, 1991).

Hartwich *et al.* (2004) mentioned that public extension was constrained by the elements like lack of funds, bureaucratic inefficiency, inappropriate strategy, and the lack of a meaningful relationship between extension implementers and clientele - i.e. accountability.

The reasons behind the privatization of agricultural extension services are as (i) more financial burden on government-falling public investment in agriculture; (ii) disappointing performance of public extension services; (iii) commercialization of agriculture; (iv) technological advancement especially in the area of information and communication; (v) impact of globalization and WTO; etc. (Coutts, 1995).

2.3 TYPES OF NON-GOVERNMENTAL EXTENSION SOURCES AND THEIR ROLE IN AGRICULTURAL DEVELOPMENT

Peasant organizations can act as a “user constituency”, giving resource poor farmers the capacity to “reach up” (Hyden, 1983) and to pull down (Roling, 1988) State research and extension services and exert influence in making institutional and socio-political changes required for more relevant research policy.

Extension will be operated through technology transfer consultants, now comprising private companies, farmers’ organizations and NGOs which are commissioned by government to perform specified activities (Berdegue, 1990).

In some cases, NGOs have developed new technologies such as soya production in Bangladesh (Buckland and Graham, 1990) or management practices such as the sloping agricultural land technology in the Philippines (Watson and Laquihon, 1993), but more often they have sought to adapt existing technologies, such as PRADAN’s efforts in India to scale down technologies developed by government for mushroom and raw silk production and so make them accessible to small-scale farmers (Vasimalai, 1993).

Swanson *et al.* (1990) mentioned about the activities often performed by private extension staff: provision of marketing information (prices, places of sale, grade requirements and so on); collection and purchase of output; advice concerning and/or administration of credit programmes; assistance to small-scale enterprises involved in activities such as food processing or manufacture of farm implements, and teaching at farmer training centres.

Farmer’s organization can also act as ‘interface’ to mediate the relationship between the concerns of research and extension agencies and the indigenous knowledge, innovative capacity and expectations of peasant farmers (Bebbington, 1991).

France, Norway and Taiwan provide examples of the prominent role farmers' organizations can play in funding and organizing agricultural extension (Haug, 1991; Ameer, 1994; Umali and Schwartz, 1994; Nagel, 1997).

Bloome (1992) indicated that consultants from a number of fields, together with the farm-supply industries, general farm and commodity organizations, and the farm press routinely delivered information to farmers that were previously delivered primarily by Extension.

Chambers and Toulmin (1992) reported that farmers' organizations could also actively adopt and disseminate agricultural technologies in programmes they themselves manage and control. They quoted examples for this like community based research and extension programmes supported by NGOs such as Oxfam and World Neighbours in West Africa.

NGOs have made considerable impact on the development of rural poor as well as dissemination of technologies. Through new methods and approach, NGOs can develop and deliver same technologies as GOs (Barr, 1993).

Cary (1993) mentioned that in economically developed countries with a predominance of large scale commercial farming, increasingly the technologies of modern, industrialized farming were being developed by non-government industrial institutions; such technologies were appropriable for private marketing and generally had little need for government extension.

Pazvakambwa (1994) made a list of private agricultural extension service providers in Zimbabwe and studied on their contributions to agricultural development as follows:

Agency	Role
1. Agricultural research trust farm	Research section and a commercial agricultural production section focusing on income generation; maize variety evaluation programme and variety trials for sunflower and other oil seeds; and agronomic trials on irrigation, tillage etc.
2. CARE International	Long- term development initiatives in agriculture and natural resources; strengthening the capacity of banks and NGO financial institutions to extend credit to micro enterprises in the informal sector of the economy; establishing and facilitating market systems for agricultural products in rural areas, and creating jobs by expanding financial services in both rural and urban areas; a small dams rehabilitation programme aims at reducing the vulnerability and food-insecurity of drought-prone areas; agribusiness entrepreneur network and training programme with the objective of establishing a sustainable network of agribusiness agents in rural communities to facilitate the distribution of agro-inputs and outputs to and from smallholder farmers; a rain water harvesting project promotes rain water harvesting and a land reform project supports complementary approaches to equitable and sustainable land reform in the country.

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| 3. Catholic Development Agency | Water development and sanitation programme funds small irrigation schemes; a sustainable agriculture programme trains local farmers on sustainable agriculture through the use of organic material from local farm production. |
| 4. Commercial Farmers' Union | Boosting agricultural production and increasing productivity and efficiency in the large-scale commercial farming sector. |
| 5. Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) | Sustainable management of natural resources. |
| 6. Farmers' Development Trust (Farmer organization) | Training and extension for emergent and existing tobacco, horticulture, cotton farmers etc.; irrigation development; financial brokerage services and advocacy for better services, cheaper inputs and competitive markets. |
| 7. Intermediate Technology Development Group (ITDG) | Focuses on developing and disseminating appropriate technologies for the production and marketing of agricultural produce; improving technology adoption, policy formulation and programme development like Food Security Programme, the General Rural Livelihoods Project, the Natural Resources Programme etc. |

8. Silveira House
Focuses on research, extension and skills training in various fields, including agriculture, home economics and the development and use of appropriate technologies such as solar dryers for horticultural produce; advocacy work and employment creation.
9. Southern Alliance Indigenous Resources (SAFIRE)
Developing the self-sufficiency of the rural communities through improving the management and sustainable utilization of indigenous natural resources; participatory natural resources management; implementing programmes like Managing our Indigenous Tree Inheritance Programme ; Sengwe Women Crafts Project; Community Drought Mitigation Project, and Community-Based Natural Resource Management Programme.
10. Zimbabwe Farmers' Union
Provide technical and market information as a means of improving the welfare of small holder farmers, assist farmers with transporting their produced markets, implement community development programmes like the Market Capacity Building Programme, the Study Group Programme, Women and Youth Development Programmes, Agro-forestry, the Livestock Revolving Fund and the livestock and crops insurance programmes.
11. Zimbabwe Fertilizer Co. Pvt. Ltd.
Manufacturing and marketing agricultural chemicals and fertilizers.

Schwartz (1994) stated that private sector extension services were generally focusing on cash crops, or on sale of inputs (seed, chemicals, fertilizer and machinery). Extension specialists working for private agribusiness firms often served multiple capacities (e.g., processor/exporter field staff provided production advice to out growers and enforced delivery of output, and input supply firm representatives combined education and marketing). She cited 'Francophone West Africa' as an example for a private firm, which provided extension information on cotton together with supplies of inputs, and purchases, grades and markets the output.

Shetty (1994) while comparing NGO activities with governmental efforts in the popularization of sericulture showed that NGOs played an important role and contributed better than government system, by raising the level of technology, offering superior technology and training, organizing the farmers for activities like technology absorption, narrowing the gap between lab and land, acting as trouble shooters at the field level at proper time etc.

Voluntary organizations can play the following constructive roles in the field of rural development (Dhillon and Hansra, 1995).

1. Helping in identification of potential beneficiaries of different schemes of rural development, their proper selection and getting services of public institutions.
2. Securing people's participation, which is very important for the success of rural development programmes, as it increases acceptability and utilization of services.
3. Implementing different rural development programmes.
4. Ensuring that benefits of different rural development programmes reach the rural poor.
5. Acting as a link between the administration and the people to bring about changes in their attitude through education, persuasion, motivation and building up of awareness.

6. Educating, mobilizing and organizing the rural poor at the grass roots level and making them aware of their rights and responsibilities.
7. Disseminating information pertaining to new technology through demonstration and teaching.
8. Providing necessary raw materials to beneficiaries of different schemes and ensuring the marketing and sale of their finished products.
9. Training and motivating grass root level workers and organizing seminars, conferences and workshops for their professional growth.
10. Mobilizing financial and human resources from within the community and promoting self-reliance.
11. Improving the condition of the rural poor, improving the status of the women, preventing environmental degradation and promoting literacy.
12. Giving food, clothing and medicines etc. to the victims of natural and man-made calamities.
13. Providing facilities for education, health, drinking water, roads, communications etc. to the rural poor.
14. Setting an example in the field of flexibility, initiative, low cost techniques, simple and effective methods and ability to improve.

Malik (1995) has identified the areas of voluntary efforts in development as follows:

- a. Dissemination of information and augmenting of alternatives for rural development, provision of economic and efficient delivery mechanism and also transmission of the communities' feedback to the government.
- b. To demystify technology and show how local manpower, resources and skills and local knowledge could be harnessed in the process of development.
- c. To train a cadre of grass root workers for professional voluntarism and

- d. To mobilize and organize the poor and generate awareness towards making government machinery accountable particularly for quality of service to the community at the village level.

On the role of farmers' organizations, Chris and Nicola (1997) reported that a strong structure of farmers' organizations could offer an opportunity for greater efficiency, effectiveness and equity of provision and access. They could also be a vehicle through which farmers could pay a contribution for services, become actively involved in the planning and management of extension, and act as a voice for their members, in getting services which meet their needs.

Carney (1998) investigated changing public and private roles in extension and worked on some of the newly emerged extension systems around the world. The new structures include those with changes to the suppliers of extension; those which are decentralized, mixed private and public roles; farmer driven provisioning; extension from private companies; groups of companies-producer associations providing extension services; extension providers share-cropping with farmers; and other organizations providing extension.

Gogte (1998) mentioned about the role played by 'Gram Vardhini', a NGO working for the eco-development of upper catchments in the Western Ghats. The main emphasis of its work was to involve the people in restoring the ecological balance of the area, while trying to improve the quality of their life.

Suresh (1998) while studying on the role of NGOs in development identified the following roles: a) planner and implementer of development programmes b) mobilizer of local resources and initiative c) catalyst, enabler and innovator d) builder of self-reliant sustainable society e) mediator of people and government f) supporter and partner of government programmes in activating delivery system, implementing rural development programmes etc. g) agent to demystify technology and disseminate

information h) factor of transformation, conscientisation and improvement of the poor i) facilitator of development education, training, professionalisation etc.

Ashry *et al.* (1999) mentioned that NGOs played great roles in tackling the environmental problems resulted from agricultural practices and non-sustainable agricultural production in humid, arid and semi-arid areas. Protection of wet lands, management for pollution abatement, improved water management in irrigated areas and redesigning of drainage projects to restore the damaged ecosystem were well taken care off by the NGOs.

Nowadays, the internet is assumed to be an important channel for services marketing. The internet is leading to profound changes in the way firms interact with consumers. Consumers now have increased obtaining information access to electronic market places and use this information in a sophisticated way to select their services (Parasuraman and Zinkhan, 2002). Indeed, the internet was pointed out as being responsible for a revolution in the services sector. Its potential allows service firms to enlarge their market worldwide (Lovelock *et al.*, 1999), providing firms with an unprecedented ability to communicate directly and effectively with potential customers. This is due to, among other things, the cost-effectiveness of the internet and the convenience for the customers. Increasing digitalization will make it progressively easier to alter particular aspects of a service and quickly observe how customers respond (Wyner, 2000).

Gurumoorthy (2000) defined SHG as a viable organized set up to disburse micro-credit to the rural women for the purpose of making them enterprising women and encouraging them to enter into entrepreneurial activities.

Saravanan and Resmy (2000) mentioned about the role of private extension: farm advisory services for profit maximization of clients; timely input supply for better production; providing market information and market intelligence; processing the clients

produce; providing credit facilities for farmers; providing infrastructure facilities e.g., transport, storage.

A commodity-based link to extension may also be initiated from the farmers' side. A good example is the activity of producer co-operatives or commodity associations that organize the provision of extension advice on behalf of their members. The Maharashtra Grape Growers' Association is one of India's oldest farmers' organizations, which organizes discussion groups and seminars, and publishes printed materials such as a monthly information newsletter. The association carries out research and development on a designated research farm and provides facilities for soil, water and plant testing and brings outside experts to solve specific problems (Sulaiman and Sadamate, 2000).

Information Technology (IT) will become due to a need for a higher precision in the use of chemicals and in the care of farm animals, and due to demands for food documentation. Farmers will want IT applications that support the operational aspects of farming, i.e. real-time decision support on high-bandwidth wireless Internet connections. E-mail and chat applications enriched by photos, videos and sound will become important elements in a revived agricultural extension service in a future Network Agriculture (Thyssen, 2000).

Van den Ban (2000) mentioned that apart from governmental support, agricultural extension could be financed through other alternative means as commercial companies, farmers' associations, consultancy and accounting firms and non-governmental organizations.

The NGOs engaged in extension activities include mostly voluntary agencies (partly or fully funded by government for extension activities), business houses, agricultural processing firms, producers' co-operatives, input agencies and private consultants (Chandrakandan and Karthikeyan, 2001).

Dasgupta (2001) indicated that micro-financing through SHGs had offered several benefits as, an increase in savings mobilized by the poor; access to the required

amount of appropriate credit by the poor; matching the demand and supply of credit structure and the opening of a new market for financial institutions; reduction in transaction costs for both lenders and borrowers; significant improvement in recovery; introduction of subsidy-less and corruption-less credit; and the empowerment of poor women.

Feder *et al.* (2001) mentioned about variety of services provided by RPOs: (1) participating in extension service delivery (providers) (2) contributing to financing extension programs (either through their own funds, or matching grants) (3) contributing to technology uptake by improving access to agricultural input supplies, marketing and processing (4) participating in priority setting at national and/or local levels and participating on the boards of extension agencies.

According to Ghosh (2001) private firms were involved in extension to (i) promote sales of production inputs or services (ii) assure continuous supply and quality agricultural products and (iii) promote or project returns on investment in farms.

Rao (2001) mentioned that print and audiovisual media were important sources for quick communication of technology to all people in all areas. He added that private media and organizations should have national outlook and desire to serve the people at large.

In the present globalization and liberalization era, plant breeders' rights, patent rights to specific technologies have drawn the attention of private sector into agricultural extension service. Most of the consultancy are mainly concentrating on all aspects of horticulture crops, especially project appraisal, production packages, land purchase, seed production, input management, information management, propagation, packages and irrigation management (drip and sprinkler irrigation), disease and pest control measures, seed production in field crops (Saravanan *et al.*, 2001).

Private extension service provider is an individual or organization other than government who is providing single service or integrated services to the farmers. In the

Indian context, following service providers are identified: (i) unemployed agricultural graduates (ii) agricultural consultants/firms (iii) para technicians (iv) progressive farmers (v) farmers' organizations/co-operatives (vi) non-governmental organizations (NGOs) (vii) Krishi Vigyan Kendras (KVKs) (viii) agri-business companies (ix) input dealers (x) newspapers (xi) agricultural magazines (xii) private television channels (xiii) private sector banks (xiv) internet (xv) donor agencies (Shekara, 2001a).

Shekara (2001c) noticed two types of private extension services. The first is the entirely private type, which is directly involved in farming activities through consultants, agri-business, agricultural input industries etc. The second type consists of farmers' organizations, NGOs etc., which remain largely dependent on government subsidies.

Now there are many other actors in the extension system beyond the traditional public extension agencies. These other actors operate as private for-profit firms or private non-profit agencies. The latter may be further classified into member-based organizations, such as producer and community organizations, and non-governmental organizations (NGOs) that are not member-based. In most cases, these private agencies do not specialize in providing advisory services but combine advisory services with other services. Some specialized for-profit private consultancy firms provide commercial services (as in the UK, Estonia, Venezuela, and others). But most private for-profit advisory services are provided through out-grower schemes, input dealers, export firms, veterinarians, farmer service centres, and credit programmes in which advisory services are part of a variety of input and output marketing services (Alex *et al.*, 2002a).

Alex *et al.* (2002b) mentioned about some of the services provided by private extension agencies: (1) commercial advisory services (2) sales of newspapers, magazines (3) information provided with sale of inputs (4) extension provided to contract growers (5) advertising in newspapers, radio, television, magazines etc.

Currle *et al.* (2002) mentioned that private organizations played a great role in the provision of extension services in Thuringia state in Germany. They provided support for individual farms in areas of technical, economic and financial, and administrative farm management.

de Kool (2002) reported that Uganda National Farmers Federation (UNFFE) played an important role in the new government's Plan for Modernization of Agriculture (PMA). Services to the member organizations included the following: providing agricultural advisory services; providing agricultural and related information through the 'Farmers' Voice' magazine, topical cassettes, brochures, and other publicity material; organizing and conducting training programmes for farmers; organizing agricultural fairs; mainstreaming gender in all aspects of the activities of the Federation and lobbying and advocating for farmer-friendly agricultural policies.

Commodity associations that fund their own research usually provide some type of extension to disseminate the results among their members. In Colombia, a Rice Producers' Federation funds adaptive research and extension in which local farmers participate in identifying priorities and evaluating results (Estrada *et al.*, 2002).

Hanyani-Mlambo (2002) highlighted the need for farmers' organizations and NGOs: (i) establishing an inventory / database or profiles of all the stakeholders, highlighting their roles, what they do, and their mandates, missions, beneficiaries etc.; (ii) revamping policy initiatives; (iii) ensuring that farmers are not short-changed; (iv) protecting farmers' interests; (v) addressing non-technical issues such as the marketing of agricultural commodities, establishing reasonable pricing policies and disseminating research results for implementation; (vi) mobilizing and empowering farmer groups; (vii) building the capacity of institutions; (viii) providing funding for the facilitation and co-ordination of activities and, (ix) call meeting and co-ordinate the service providers.

Kanji *et al.* (2002) reported that NGOs promoted land reforms and land rights in Mozambique and Kenya.

MANAGE (2002) pointed out that agriclinics and agribusiness centres in India offered a very broad range of services including general agricultural services, soil testing, nursery management, organic production and food processing.

Mbozi (2002) outlined the activities of Participatory Ecological Land-Use Management (PELUM) Association, a regional network of 138 civil society organizations with over 15 development partners working in nine countries in eastern and southern Africa. The members were involved in a wide range of activities in sustainable agriculture, food security, and natural resource management. The activities included training, information dissemination, drought relief, seed multiplication and delivery, financial support, advocacy and lobbying.

The Indian government has launched an ambitious initiative to encourage private extension with the Ministry of Agriculture and the National bank (NABARD). Graduates are being trained to become 'agripreneurs' and on completion of their courses they receive a loan to establish an 'agriclinic' or 'agribusiness centre'. Farmers are expected to pay a fee for their services and the agripreneurs are expected to identify the demand for a broad range of services from soil testing to advice on organic production and food processing (Shekara and Charyulu, 2002).

In Punjab, Pepsi introduced new technology of deep chiselling and new methods of transplantation besides introducing new seed varieties of tomato to meet the processing requirement of its processing plant in Punjab. The extension workers of the company remain in constant touch with the farmers and provide them advice on when, how much and which input to use (Singh, 2002).

Singh and Chahota (2002) reported that changing global scenario in agriculture necessitated the complete revamp of the extension system. They opined that involvement of organizations and institutions at local level could play good role for TOT. Panchayats, NGOs, voluntary organizations, stronger farmers' organizations, co-

operatives, corporate sector, para technicians etc. could give the desired impetus to the lethargic extension system.

Pluralistic institutional arrangements are emerging and are finding acceptance everywhere. Farmer associations are equal partners in extension in countries such as South Korea and Taiwan. In Israel, farmers even “contract-in” certain services. China is encouraging constitution of farmer associations to take up various productions, marketing and extension functions. NGOs and the private sector play an important extension role in India, Bangladesh, Malaysia and Sri Lanka. Extension provision by private companies to farmers growing crops under contract is gaining importance in India and China. Mechanisms for regular consultations with NGOs and farmer representatives on issues related to agriculture and fisheries have been created in the Philippines (Sulaiman and Hall, 2002).

Commodity firms or input suppliers may be motivated to provide extension services (e.g., crop management advice, weather reports) to their clients. Rallis, an input marketing company, has established rural service centres to provide a range of integrated services to farmers growing wheat, soybean, vegetables and fruits. In return for a fee, farmers are provided with regular visits by agronomists, assistance with credit arrangements, access to farm inputs, soil testing and guaranteed market for their produce. So also, EID Parry initiated farmer extension services through locally managed information centres in order to strengthen the relationship between its sugar mill in Tamil Nadu and the contract sugarcane farmers. The farmers are provided with more timely information on the status of their account in terms of credit, input supplies and produce sales and can access a range of extension advice (Chapman and Tripp, 2003).

Chathukulam (2003) based on his study on SHGs in Kerala, concluded that SHGs not only provided a means of survival for poor women, but also served as nascent institutions for the building up of women’s specific social capital, which could serve a long term sustainability function in poverty reduction. Apart from increasing women’s networks and fostering trust, they enabled them to acquire skill in conflict management

and organized participation in forums like Grama Sabha, which would also have a long-term effect on enhancing women's overall ability to address poverty.

There are mainly two types of private extension services in the world, one which is directly involved in farming activities through farmers co-operatives, society, banks, private agro-business, agricultural input industries, processing industries, marketing firms and multimedia; another is farmers association, self-help organization and NGOs which remain largest dependence on government association (Dakhore and Deshmukh, 2003).

Fulton *et al.* (2003) reported that the Australian institutional and organizational structures supporting learning and change included the state and federal departments of agriculture and natural resource management; private extension providers; private agricultural business; vocational educational and training providers; the national training authority; state training authorities; industry training advisory bodies; research and development corporations; universities; farmer organizations; and other non-government organizations. They opined that the relationships between various organizations (e.g., public and private; research and extension) would influence learning and change on farm.

Garforth *et al.* (2003) mentioned that arrival of new ICTs had reduced the cost of information transfer. They said that the farmers in developed countries were using them increasingly for specific tasks such as business planning.

Garforth *et al.* (2003) mentioned that agricultural extension had been provided not only by government-based extension agencies, but also by farmers, scientists, NGOs, commercial companies and mass media organizations. Food security, improved nutrition, equity and poverty alleviation had also become a part of the agenda of organizations providing extension services.

Kelly *et al.* (2003) mentioned that private sector could expand input distribution networks to zones and farmers who did not have any access.

Besides government, non-governmental organizations, self-help groups, co-operatives and panchayats will need to play a great role in agricultural development (Mruthunjaya and Chauhan, 2003).

Padma *et al.* (2003) defined NGOs as non-profit organizations primarily set up to reflect the needs and requirements of the grass root people.

Pal and Saxena (2003) noted that private sector was assuming greater roles in funding and performance of agricultural research. Its presence was particularly significant in the developed countries where it contributed about half of the research efforts.

Pandya and Patel (2003) observed that animal husbandry services like general information on animal husbandry, availability of financial aid for purchasing animals, information on selection of animals, services for natural/ artificial insemination, availability of cattle feeds, information on balanced feeding, availability of veterinary services, availability of drinking water, availability of milking equipment, services in milk marketing and guidance on technical problem were found successfully served by private extension services.

Patel and Patel (2003) opined that the use of ICTs could help the extension system to be more effective in marketing farmers' information needs. Beyond traditional tools of radio, television and print media, efforts would be required to concentrate more on creation and effective use of newer ICT tools like satellite communication, multi-media, web-based communication, interactive video discs, video conferencing etc.

Patel *et al.* (2003) opined that farmers' group, co-operatives, private firms, NGOs could play an important role in providing extension services. According to them the roles of private extension were: (1) farm advisory services for profit maximization (2) timely input supply for better production (3) providing market information and market intelligence (4) processing and marketing the client's produce.

Roy (2003) mentioned about livestock extension services supplied by dairy unions in India: (i) Animal health care services: veterinary first aid and emergency care, vaccinations, deworming, mastitis control, brucellosis screening (ii) Artificial insemination and infertility camps (iii) feed and fodder activities: promotion of ration and feed management, varietal demonstration on fodder crops and silvipasture demonstration, promotion of fodder production on individual farmers' lands and seed multiplication of fodder crops at farmers' lands, fodder demonstration unit at union land, supply of quality seeds of fodder crops, promotion and demonstration of fodder management techniques (iv) other training and institution building activities.

Singh and Narain (2003) indicated that private extension system played a crucial role in the dissemination of farm input technologies (pesticides, seeds, fertilizers, farm machinery and veterinary services).

India has a large and diverse private sector involvement in its agricultural development. These include all non-public sector agencies such as:

1. Input agencies (dealing with seeds, fertilizers, pesticides, equipment),
2. Large agri-business houses (involved in manufacture and sale of inputs and purchase of outputs),
3. Agro-processing firms involved in contract farming,
4. Farmer organizations and producer co-operatives,
5. Non-Governmental Organizations (NGOs),
6. Media (print, radio, and television) and web based agri-service providers,
7. Agri-consultancy providers (individuals and firms),
8. Financial agencies involved in rural credit delivery and
9. Informal extension agents such as progressive farmers and local dealers selling agri-inputs at the village and rural markets (Sulaiman, 2003a).

Sulaiman (2003a) listed different types of private sector involved in agricultural development in India, each with their examples and services offered by them:

1. Input agencies: -

- a. IFFCO and KRIBHCO – conduct farmers meetings, organize crop seminars, arrange soil testing facilities and also implement village adoption programmes.
- b. Tata Chemicals Ltd. (Agro-chemical Co.) – initiated Tata Kisan Kendras (TKKs) with the objective to provide the farmers with a package of inputs and services. They provide diagnostic services such as soil, water and plant testing; access to credit and insurance; post-harvest management services and extension education programmes, including training of rural farmers and rural women.
- c. AGROCEL (Agri-chemical Co.) – provides all inputs and necessary technical guidance to farmers.
- d. Dhanuka (Pesticide Co.) – arrange soil testing facilities, training and organize farmer tours.

2. Agri-business initiatives: -

- a. Mahindra and Mahindra Ltd. (tractor and utility vehicles manufacturer) – sell quality farm inputs (seeds, fertilizers and pesticides), rent out farm equipment (tractors, harvesters, dryers etc.), arrange credit (in partnership with banks), offer farm advice by trained field supervisors who visit fields and supervise critical farm operations, and buy the produce (through contract with the processing units).
- b. Rallis (Agri-input Co.) – visit by agronomists to the fields of farmers at regular intervals (on an agreed schedule), facilitates credit to farmers (through banks), input supply (seeds, fertilizer and plant protection chemicals), soil testing and procures the entire produce of the grower (on behalf of other market partners).
- c. Indian Tobacco Co. (ITC) – initiated e-choupals, which are village internet kiosks that enable access to information on all aspects of cultivation

through the ITC website in the local language, daily information from different markets of the state and the price ITC offers for the produce for the next day; provide forum to post and receive farming queries via e-mail, detailed district-specific weather information (sourced from the State Department of Meteorology), an assured price at ITC's procurement centres, proper weighing and immediate payment and quality inputs and services(offered by various partners).

3. Farmers organizations and producer cooperatives: -

- a. Grape Growers Association of Maharashtra – organizes regular group discussions and seminars and publishes leaflets, booklets and a monthly 'Draksh Vrutha' (in Marathi language), imports plant growth regulators dipping oil etc., and distributes it to the growers at a no-loss-no-profit basis, brings experts to tackle major problems in grape cultivation, has an independent research and development wing, own research farms and facilitates for soil, water and plant analysis.
- b. UPASI- engaged in research, statistical analysis, commodity affairs, industrial relations, taxation, finance, legal issues, publications and public relations and represents the growers' interest in national and international forums, organizes conferences, seminars, workshops and rural development programmes.
- c. Rubber Producers Societies (RPS in Kerala); Sugar Co-operatives in Maharashtra; and Vegetable and Lac Co-operatives in Bihar - improve the marketing prospects in specific commodities where market operations are disadvantageous to producers and provide farmers the advantage of economies of scale by bringing together produce from individual farms and marketing the same.

4. NGOs: -

BAIF, PRADAN, AFPRO- mainly involved in watershed development, promotion of micro credit through organizing SHGs, implementing programmes related to organic culture etc.

5. Information Technology and Media: -

- a. E-TV (private TV channel) - telecast agricultural programmes in Telegu, Kannada, and Marathi languages everyday.
- b. Teja TV (private TV channel)-telecast on-line (live) phone-in programme in collaboration with DoA and ANGRAU to answer farmers' questions everyday.
- c. Newspapers and farm magazines- provide news and articles on different aspects of agriculture.

6. Financial institutions: -

- a. BASIX- provides financial services and technical assistance for the rural poor.

7. Consultancy: -

(a) AGROCEL (b) TKKs (c) Para technicians (those without professional degrees but trained in specific skills) (d) Nagarjuna chemicals and fertilizers (farm management services) in Karnataka and Andhra Pradesh (e) Samikya agri-tech in Andhra Pradesh

8. Agro- processing and trading firms: -

- a. Global green – undertakes contract farming primarily for producing gherkins and other products like baby corn.
- b. Milk Co-operatives and NESTLE (private milk processing company in Punjab) - provide a number of extension and other support services to milk producers.
- c. EID Parry, Tamil Nadu- provides a range of extension services.

According to Sulaiman (2003b) the range of services provided by private firms included: access to advice on farm management; access to good quality inputs; access to credit; and access to a transparent commodity purchasing system.

Vengatesan and Govind (2003) defined SHG as a silent revolution promoting women development in many parts of the world.

Jose (2004) mentioned about services rendered by private extension agencies: (1) Information: prices of commodities; details of manufactures, buyers, nurseries, input dealers, stock position etc.; credit, sources and formalities; cultivation of crops and package of practices; solution to specific problems; tele-conferencing with experts; e-commerce; health education; video film production; publishing agricultural magazines; organizing agricultural exhibitions, demonstrations, training, film-shows; information on government benefits etc. (2) Consultancy: project planning and implementation for individual farmer or groups or organizations (3) Input supply: seeds, seedlings, fertilizers, pesticides, weedicides, credit, labour etc.(4) Infrastructure: transport, cold storage, store houses, machineries (rent and repair), processing, packaging etc. (5) Technical service: soil testing, diagnosis of diseases and pests, leaf analysis, water analysis etc. (6) Marketing services: buying and selling agents (7) Other services: crop, livestock and life insurance agents (8) Enterprises: contract farming, seed production, procurement, packaging, marketing, organic farming etc.

Pesche (2004) reported on the role played by farmer organizations in Mali. A federation of farmer organizations or associations, 'AOPP' (*Association des organisations paysannes professionnelles*) was formed to help farmers. Together with government agencies and agricultural research institutes it offered agricultural extension services to farmers and also promoted the production of certified seed for sorghum, maize and groundnuts. AOPP conducted training measures and field trials to make farmers aware on the importance of using composite and certified seed to raise production. The association experts placed great emphasis on using farm-produced compost instead of

inorganic fertilizers and this enriched the soil with various nutrients and improved its water storage capacity.

The new role for the old private sector banks will be in providing technology linked financial solutions with a human touch (Krishna, 2005). The OPSBs with their intense rural linkage and legacy of being seen as a small man's bank are ideally positioned to play a pivotal role in this transformation (Padmakumar, 2005).

2.4 APPROACHES AND METHODS FOLLOWED BY NON-GOVERNMENTAL EXTENSION SOURCES:-

Robert (1985) indicated that contract farming approach was used by private companies and parastatals for tobacco in Jamaica. The cigarette company of Jamaica, an affiliate of Carreras Rothman Limited, trained all contract farmers beginning with the fundamentals of tobacco production.

Judd *et al.* (1986) saw market orientation as critical to sustainability and effectiveness of all private extension programs, including those focused on poverty reduction and environmental conservation. They mentioned that market-based approach helped clients respond to market signals by providing information on markets (prices, quantities, location, timing); market requirements (grades and standards, quality); technical market information (post-harvest handling/packaging processing); and prospective markets (new and alternative markets).

Participatory approaches have positive effects for most of the generic problems of extension. On the problem of scale and coverage, participatory approaches produce farmer leaders with appropriate local backgrounds, including women, who are able to perform many extension agent roles in a cost effective manner (Russel 1986; Axinn, 1988).

Participatory approaches have been found to adjust complementary services more closely to farmer needs. Participatory approaches also have a positive effect in

terms of tracing cause and effect through farmer-led experimentation and analysis, and farmer feed back. A key positive impact of participation is accountability (Axinn, 1988), and reduces farmer dependence on external inputs (Roling and Pretty, 1997).

Commodity-specific extension has been practiced across the parastatal, private and social sectors, including agro processing and marketing firms and farmers' associations (Umali and Schwartz, 1994; Nagel, 1997). The focus is often on one commercial or export crop linked to established marketing or processing outlets or on one aspect of farming, such as livestock or dairying (Axinn, 1988).

Participatory extension approach establishes mechanisms for clients to influence and share control over development initiatives and resource decisions that affect them. It includes clients in extension decisions and may evolve into full control of activities by the clients. Thus, participation is both a means to distribute primary benefits more widely and one of the objectives by which development is measured (Beyer, 1989).

One of NGO's main concerns has been to identify the needs of the rural people in sustainable agricultural development. They have therefore pioneered a wide range of participatory methods for diagnosis and in some contexts have developed and introduced system approaches for testing new technology, for example in Chile (Sotomayor, 1991). In some cases, these approaches have extended beyond farming systems into processing and marketing, as with soya in Bangladesh (Buckland and Graham, 1990) and sesame in the Gambia (Gilbert, 1990).

Copestake (1990) found out that most of the private voluntary organizations were using community-based approaches to technology development.

Farmer participatory research is a logical extension of NGO operational strategies emphasizing a village-level/bottom-up approach to the design and implementation of development activities (Gilbert, 1990).

Hercus (1991) stated that commercialization had a positive effect on moving “beyond the farm gate” into an involvement of the extension staff in the entire production-processing-transporting-marketing chain. There also had been the shift in focus to a client orientation and a concern to identify and produce results rather than simply to engage in activities.

MacGarry *et al.* (1993) mentioned about ‘Silveira House’, one of the oldest and most active NGOs in Zimbabwe, which laid great emphasis on group formation, group work and group solidarity.

Pazvakavambwa (1994) made profiles of providers of private agricultural extension services in Zimbabwe. He focused on the major extension approaches used by different agencies and they are as follows:

Agency	Extension Approaches
1. Agricultural Research Trust Farm	Field experiments, demonstrations, field days and discussion group meetings.
2. CARE-International	Need assessments, orientation sessions and the training of all involved actors as part of individual or community mobilization and capacity building activities.
3. Catholic Development Agency	Group extension methodology.
4. Commercial Farmers’ Union	Periodic news letters based on interest, e.g., grain, cereal, coffee and oilseeds; technical publications to disseminate research results; “circuses”, where invited speakers disseminate research results through farmers’ club at two annual events – one for winter and one for

summer crops; crop competitions as extension vehicles (e.g., the Maize 10-Tonne Club, the Soybean 4-Tonne Club and the Maize Grower of the Year); and successful farmers (competition winners) host field days, which are held in conjunction with on farm discussions.

5. Communal Areas Management Programme for Indigenous Resources (CAMPFIRE)

Group extension activities.

6. Farmers' Development Trust

Lectures, practicals and demonstrations.

7. Intermediate Technology Development Group (ITDG)

Action research, with an emphasis on participatory extension approaches, conducting pilot programmes and research.

8. Silveira House

Short-and long-term courses, workshops, lectures, demonstrations and practicals.

9. Southern Alliance for Indigenous Resources (SAFIRE)

Participatory rural appraisals and training courses.

10. Zimbabwe Farmers' Union

Study group method to provide technical and/or production information; commodity associations, the Market Capacity Building Programme and exchange visits.

11. Zimbabwe Fertilizer Company
Private Limited
- Group extension methods such as meetings, farmer training, demonstrations and field days, sponsors competitions such as the commercial and communal areas' Tobacco Grower of the Year.

Voluntary action involves planning and implementation of the activities in a group. Voluntary action is problem oriented and participation of the affected people in problem solving is part of its methodology. The group initiating this action may work formally or informally. When it works formally, it is known as voluntary organization or a NGO (Philip, 1995).

Roling (1995) mentioned that NGOs had contributed with approaches like community Development Approach, Farmer –to Farmer Extension, Farmer-First and Beyond Farmer-First.

Suryana and Erwidodo (1996) reported that the Ministry of Agriculture in Indonesia was focusing on creating a policy environment to foster private sector development and market efficiency. Steps to revitalize small-scale farming were being taken by introducing an agri-business approach to commodity based farming systems. The approach was to identify a primary commodity or produce based on market preference and co-ordinate groups of neighbouring farmers and make them into groups to realize economics of scale.

Axinn (1997) mentioned that in the twenty-first century it would be increasingly necessary to take a whole-systems approach to organize positive change in rural places. This would require agricultural extension systems which help farm men and women to organize themselves in ways which empower them – to lead extension and to exert enough power and influence over research systems so that they could generate useful, practical information which would meet the needs and interest of farming people.

Strategies for achieving more participation through farmer – led approaches to extension were significant and should guide the future.

Participatory approaches enhance quality of trust (Pretty and Volouhe, 1997) and give a feeling of ownership (Chamala and Shingi, 1997).

Farmer-to-Farmer extension employs a wide variety of methods. Common ones include:

- Training of farmers and farmer-extensionists by external agents and other farmers in technological developments, communication, extension and training skills.
- Cross-visits among farmers and exposure of farmers to other institutions.
- Facilitation of farmers' research into, and testing and adoption of new technologies and management practices.
- Farmer group formation and development, and regular group meetings for planning, learning, sharing experiences and problems, evaluation etc.

Others include: conscientization; leadership training, facilitation of farmers' research, mass mobilization, forming and managing linkages among farmers, NGOs and government, and developing conflict resolution skills. Ultimately each farmer-to-farmer extension network has to decide upon the field methods best suited to its own objectives, resources, demography, agro-ecology, and social and economic situation (Garforth, 1997).

With private sector involvement there has been a change in extension ideology away from the "linear model" of technology transfer. It resulted in a move away from the linear 'top down' approaches from scientists to farmers towards extension methodologies that emphasize information flows, adult learning principles and participation by stakeholders. Under the new paradigm, it is held that extension should be 'demand-pull' rather than "Science-push". Increased use of farmer groups for

agricultural extension has been the other major change associated with the new paradigm. Group-based extension done well has many advantages because of its emphasis on adult learning principles and encouragement of producer “ownership” of both problems and solutions. It also facilitates the entry of rural people other than producers into agricultural issues (Marsh and Pannell, 1997).

In most countries, private sector companies were the important contributors to technology transfer and the advancement of agricultural development through, mainly contract arrangements with farmers (Rivera and Cary, 1997).

Stringfellow *et al.* (1997) mentioned that NGOs and donor agencies mainly followed participatory and market-oriented approaches.

Mustafa *et al.* (1999) mentioned that non-governmental organizations followed participatory community development approach.

Contracting schemes are one of the private sector mechanisms for providing services to small-scale farmers (Mullen *et al.*, 2000).

Based on a study Charles and Shepherd (2001) argued that contract farming worked best as a partnership between agribusiness and farmers. It could increase the income of farmers as well as their technical and managerial skills while reducing farmers’ risks and uncertainties. Contract farming provided small and medium farmers with access to profitable competitive markets, to agricultural inputs, technology and advice from which they would otherwise be excluded. Contract farming had potential where small-scale agriculture was widespread and where high-value-crops, animals and animal products were demanded on internal markets (supermarkets, fast-food outlets) or on external markets (export).

FAO (2001b) pointed out that many of the multinational companies, processing plants, small companies, farmers’ co-operatives, and individual entrepreneurs were following contract farming as the major extension approach. Farmers (out growers)

produced a certain quantity and quality of a crop, animal species or animal product, and sold it exclusively to the agricultural company which contracted them. In return, the company provided the out growers with inputs, credit, technical advice and marketing services.

Assurance of farm-gate market for their produce has made several farmers to change cropping pattern that fit into contract farming. Medicinal and aromatic crops, fruit crops, a few vegetable crops like medicinal cucumber (gerkin), marigold, dhavana, export quality grapes, mango, and processing type tomato are a few examples in this regard. Seed to seed agreements with advance fixation of rates for their produce are commonly seen in contract farming. Mutual trust is the key word in this business. Technical guidance and constant supervision are offered to farmers along with the best quality inputs starting from planting material to ensure benefit for both the sides. Farmers feel secured in contract farming because contractors take half of the risk of quality as well as the quantity of production (Gowda, 2001).

Hunt and Nalini (2001) reported that non-governmental organizations considered the provision of micro finance to women to be a major strategy for empowering women.

Shah (2001) reported that the Indian Government's National Watershed Development Programme was working mainly through non-governmental organizations and with community participation as a central principle.

Titapiwatanakun (2001) mentioned that private operators commonly implemented contract farming arrangements as a strategy for supply chain integration, securing the supply of raw material, and providing income security to primary producers. The contractors often provided technological support and supervision to receive reliable and high-quality produce, and as such, there was typically a flow of information to local farmers.

According to Tulachan and Hokkonen (2002), the NGOs working at the grassroots level were attempting to use a participatory approach in livestock planning processes.

World Bank Group (2002) observed regeneration of agricultural extension in Bangladesh through partnership with farmer groups, NGOs and other private extension agencies. Important changes were introduced: extension through farmer groups, budgetary planning at the grass roots level, extension for homestead farming by NGOs under contract, and introduction of multimedia techniques into extension. Under contract, NGOs could work with Bangladeshi women to improve homestead gardening practices. They organized women into groups to encourage them to take up intensive homestead cultivation and improve food handling and preparation. Women responded enthusiastically, taking readily to homestead production and better food handling. The results included improved family health and the generation of income through sales of surpluses. Building on their success, women had also used these homestead groups to obtain group loans and start micro-enterprises.

Bingen *et al.* (2003) mentioned about different extension approaches mediated by non-governmental organizations in Mali, Mozambique and Cameroon. Contract/Business programs such as out grower and cash crop schemes were used to facilitate farmer access to goods and services required for production and marketing of a target commodity. Project / Technology programs and Process / Human capacity investments facilitated promotion of improved technology, technology adoption and marketing.

Suthinarakom and Trimong (2003) examined the philosophy and practice of Thai Non-Governmental organizations working for sustainable agricultural development and the findings revealed that their philosophy was rooted in the concept of community involvement, empowerment and self-reliance.

Akroyd (2004) mentioned that non-governmental extension service providers widely held participatory approaches to research and extension to result in more accountable, relevant, and cost effective services.

Bajwa (2004) reported that a number of non-government organizations (NGOs), rural support programmes (RSPs) and farmers' co-operatives (e.g., Salt land Water Users Association) were providing basic extension services with their focus on small farmers. They worked with the farmers after organizing them into community based organizations or community organizations.

GTZ (2001) attempted to identify major extension approaches and were as follows:

1. Training and Visit
2. Contract Farming
3. Strategic Extension Campaign
4. Farmer-to-Farmer Extension
5. Farmer Field Schools
6. Partner-centred Extension
7. Participatory extension

2.5 BENEFICIARIES OF NON-GOVERNMENTAL EXTENSION SOURCES

Garforth (1982) mentioned that NGOs were best equipped to serve poorer and more marginal groups.

World Bank (1986a) indicated that private consultancy firms catered to the specialized needs of large-scale farmers.

World Bank (1986b) mentioned that medium and large-scale livestock enterprises were the primary beneficiaries of private sector clinical services in some developing countries.

Wise (1988) mentioned that medium and large-scale farms that raised improved breeds in Africa, Asia and Latin America used private veterinarians to vaccinate their animals.

Farrington and Biggs (1990) mentioned that a wide range of agencies outside the public sectors was involved in generating, introducing, testing and promoting agricultural technology, particularly for small farmers and landless labourers in marginal areas of less developed countries.

Narayanan (1991) reported that private extension service providers focused on market-oriented extension to increase market power of producers, especially small holders, through producer organizations/co-operatives and promoted collective action, increased bargaining power and economies of scale.

Rightfully, the private sector has come to be acknowledged as major information providers to both large and small farmers involved in monocropping (Cary and Wilkinson, 1992).

Mustafa *et al.* (1993) reported that the NGOs had helped to organize landless labourers in Bangladesh to acquire and operate water-pumping technology.

Pazvakavambwa (1994) examined the kind of beneficiaries of different private agricultural extension service providers as given below:

- | | |
|-------------------------------------|---|
| 1) Agricultural Research Trust Farm | Members and affiliate groups, large-scale commercial farmers and small holder farmers. |
| 2) CARE International | Farmers; poor people in rural areas; the informal sector, rural enterprises in general, and rural micro entrepreneurs (particularly women). |

- | | |
|--|---|
| 3) Catholic Development agency | Rural communities. |
| 4) Commercial Farmers' Union | Large-Scale commercial farmers. |
| 5) Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) | All rural communities that are guardians of natural resources. |
| 6) Farmers' Development Trust | Small-scale, resettlement and communal-area farmers, co-operatives involved in tobacco, paprika, cotton and irrigated-crop production. |
| 7) Intermediate Technology Development group (ITDG) | Small-scale farmers. |
| 8) Silveira House | Poor and marginalized groups, school leavers and unemployed youth. |
| 9) Southern Alliance for Indigenous Resources (SAFIRE) | Rural communities, community-based organizations, central government agencies, local government authorities, partner NGOs, international organizations and bilateral and multilateral funding agencies. |
| 10) Zimbabwe Farmers' Union | Small holder farmers. |
| 11) Zimbabwe Fertilizer Co. Pvt. Ltd. | Large-scale commercial and small holder farmers. |

Schwartz (1994) cited 'ALCOSA', a vegetable processor / exporter in the Guatemala, which provided extension services combined with credit, input supply and output purchasing to small farmers in Guatemala's central highlands (on broccoli, cauliflower and brussels sprouts).

Haan *et al.* (1995) while discussing on livestock services, mentioned that private sector played an important role in the establishment and functioning of effective livestock services such as animal health, artificial insemination, livestock extension, credit and marketing services for small holders in low income countries.

Indu (1997) based on her study, reported that beneficiaries of NGOs were significantly different from non-beneficiaries with regard to their farm size, extension contact, organizational participation, level of aspiration and attitude towards NGOs.

Tribhuwan (1999) noted that the Institute of Development Educational Activities and Studies (IDEAS), a Pune based NGO played a major role in developing and implementing income generation packages to uplift the socio-economic status of poor tribals, rural inhabitants and the urban downtrodden.

Farmer's organizations in particular are often seen as the beneficiaries of privatized extension reforms, but they require long term investment to build organizational capacity, before increased decision-making regarding extension service provision should be transferred to them (Kidd *et al.*, 2000).

De and Sahu (2001) while discussing on privatization of fisheries extension argued that private extension programmes with benefits to farmers would have a tremendous scope. Market-oriented farmers, mainly the prawn farmers of the coastal belt and carp producers of Andhra Pradesh, West Bengal and Orissa indicated their willingness to pay for quality and reliable services.

In irrigated areas and especially in commercial and high value cash crops like grapes, sugarcane, cardamom and ornamental plants, the big farmers are receiving advice and other extension services from private consultancy/TOT firms (Ghosh, 2001).

Small – scale farmers in various countries have indicated a willingness to pay for extension services that meet their needs (Holloway and Ehui, 2001; Gautam, 2002).

Oestmann and Dymond (2001) reported that contractual arrangements were used by private operators in vanilla production in Uganda and in snow pea production in Guatemala and the small farmers in poor areas could be more effectively targeted under this framework. This gave small-scale farmers an advantage over large- scale producers, as they were more able to effectively utilize sources of low-cost family labour.

Ojha and Morin (2001) reported that NGOs were particularly effective at reaching resource-poor farmers.

Saravanan *et al.* (2001) pointed out that non-agricultural sector people and few big farmers were mostly the main clients of private consultancy.

Satish (2001) indicated that several SHGs included very poor people as their members.

Shekara (2001a) pointed out that private consultancy services were mainly availed by big farmers, farmers growing commercial crops like coffee, tea, spices, flowers, grapes, having big poultry, dairy farms and landscaping.

Cristovao *et al.* (2002) mentioned that members of the Association for Viticultural Development in the Douro Valley (ADVID) were farmers with minimum of 2 acres.

Loolaid (2002) pointed out that farmers, project specific groups and farmers' organizations were the major beneficiaries of private agricultural advisory services in Estonia.

Malik (2002) highlighted the relative role and performance of Self-Help Groups (SHGs) in extending credit to rural households particularly the landless households and small and marginal cultivators.

MANAGE (2002) reported that agriclincs and agribusiness centres provided assistance to any farmer or group of farmers who was willing to pay the fee.

Seibel and Shyam (2002) described SHGs as self reliant, autonomous local financial intermediaries with 85 per cent women as their members, most of them from the lowest castes and other disadvantaged groups.

Zeller *et al.* (2002) pointed out that non-governmental organizations in Bangladesh were successful in targeting the functionally landless.

Chavai *et al.* (2003) reported that in different parts of the country, especially in areas growing commercial crops, the big farmers were receiving advice and other extension services from private consultancy firms.

Fieldman (2003) indicated that non-governmental organizations were better able to distribute resources and organize rural dwellers.

IFAD (2003) indicated that local NGOs and producer group with regards to extension work were more precisely targeted towards the needs of women, small and marginal farmers.

Kimmins (2003) quoted the African Agricultural Technology foundation (AATF) as an example for the not-for-profit company, which was set up in Africa to facilitate the transfer, adaptation and uptake of agricultural technologies by small holders.

PAN Horti Consultants and Viji Hi-tech are two consultancy firms in Coimbatore district of Tamil Nadu providing consultancy services on agriculture to commercial firms, agro-based industries and entrepreneur farmers (Saravanan and Gouda, 2003).

Sulaiman (2003a) mentioned that vast majority of the borrowers of BASIX (a new generation financial institution established for the promotion of sustainable livelihoods) were the rural poor, particularly the landless and women. BASIX also lent to rural commercial farmers and non-farm enterprises, which generated much, needed wage employment for the rural poor.

2.6 EFFECTS OF NON-GOVERNMENTAL EXTENSION

Amanor and Farrington (1991) mentioned that NGOs had been used to supplement public sector extension services especially in the area of rural development. This had certain advantages for increasing extension coverage and encouraging farmer participation in technology systems.

Privatization of extension may suggest an opportunity for public extension to reduce costs and redirect its services towards disadvantaged regions and farmers; it may also suggest the need for a dual-purpose extension system which is technique and production oriented for commercial farmers and problem solving and basic needs oriented for poor subsistence farmers (Rivera and Wilson, 1991).

Zijp (1998) highlighted that delinking public funding for extension from private delivery and involving the private sector could make extension more efficient and effective in helping farmers to be more productive, profitable and sustainable.

On privatization, Devara (2001) opined that government investment was high in the public sector resulting in large-scale losses every year. This investment should be reduced and private participation should be encouraged. As a result, there would be increased availability of funds to use and invest.

Jegadeesan (2001) while studying on the privatization of agricultural extension reported about the expected consequences of privatization. With respect to that, majority of the scientists and respondents agreed with positive consequences like increased extension worker professionalism, additional income to farmers, increased

production rate of commercial crops, which would result in increased foreign exchange and quality extension service.

The privatization is the demand of time in order to bring efficiency, quality and also accountability in every sector of activity. Going private would some extent take the burden away from the public sector, cut down on expenses, improve management and staff professionalism and make users' problems become main priorities (Rath and Tiwari, 2001).

Gisselquist *et al.* (2002) mentioned that increased use of private technology had brought higher yields and incomes, allowing farmers and consumers to reach higher levels of welfare. These results challenged governments to open their regulatory systems to allow market entry and the introduction of private technology through seeds and other inputs.

Dakhore and Deshmukh (2003) opined that privatization would create a healthy service that in turn would reduce the financial burden of the government.

Vinayagam *et al.* (2003) opined that along with progressiveness in agricultural technology, agricultural extension system also needed to be privatized. The privatization in agricultural extension would widen the scope of agri-business and reduce the cost of public extension system

2.7 SUCCESS INDICATORS OF NON-GOVERNMENTAL EXTENSION SOURCES

According to Mukherjee (1979), voluntary organizations were supposed to be potentially superior to official agencies as their workers were more sincerely devoted to the task of reducing the sufferings of poor than the governmental staff, since they were not bound by rigid bureaucratic set up.

Pray and Echeverria (1990) focused on research-technology transfer links within the private sector and commented public sector managers to learn from their private counter parts. Unlike public extension, marketing was a high status activity in the private sector, with at least as much status as research. This helped to ensure research relevance and to eliminate poorly conceived research projects at an early stage. The private sector usually spent a greater portion of its budget on linkage activities such as preparation of promotional materials and training of marketing staff.

Rivera and Haug (1991) studied on the government supported, privately run research and extension (R/E) circles in Norway. The R/E circles are farmer-initiated, based on farmer membership, and the members are responsible for running them and they regarded it as a success. The main factors contributing to the circles' success appear to be: building the system on an existing structure; the presence of political support; public/private collaboration (fee-based membership); the initiative comes from the farmers; the system is farmer-led; the combination of research and extension in one function at the local level; and the adaptive, on-farm research being carried out.

Harter and Hass (1992) indicated that Portugal's extension services and the U.S. system benefited from links to universities.

Farrington *et al.* (1993) reported that NGOs worked in response to perceived needs at several levels: (1) to meet the technical requirements of certain types of innovation. (2) to manage "lumpy" assets. (3) to manage common property resources.

NGOs are flexible and adaptive to the needs each situation brings with it (Kumar, 1993).

NGOs should be treated as an important part of the overall transfer of technology mechanism. They should be linked with existing research and extension systems. The rapport and credibility of the NGOs with the users should be fully exploited and full advantage of their quick decision process be taken in strengthening some of the weak links in the existing transfer of technology programmes like seed supply, mid-

season corrections, recycling of waste, evolving location specific technology, energy requirement, watershed and integrated development (Menon, 1993).

Satish and Vardhan (1993) mentioned that one of the main strengths of NGOs had been their work in-group formation. They quoted the example of Action for World solidarity in India, which worked with grass roots organizations to achieve simultaneous action in an Integrated Pest Management Programme.

Non-governmental extension agencies can be an efficient and cost effective way to provide farmers with the information they need for their enterprise. Privatized extension services can perform the role often better than governmental extension services, because competition forces them to provide the information for which clients feel a need, at as low a cost as possible (Umali and Schwartz, 1994).

According to Dhillon and Hansra (1995) the role of NGOs in rural development has been recognized and considered vital because of the following reasons: (i) government alone cannot mobilize resources needed for meeting the needs of the people (ii) the quality and efficiency of government sponsored programmes increase when people are involved in programme planning and implementation (iii) voluntary organizations complement very well with the development efforts of the government in terms of geographic and programme needs (iv) they have first hand experience and knowledge of local needs, problems and resources at local level (v) they are closer to the minds and hearts of the people (vi) they have strong commitment and zeal for voluntary action (vii) voluntary sector is more responsive and can operate with greater flexibility.

According to Kothari (1995), small voluntary organization could take bottom-up approach and adopt the role, which is required in a particular area for a particular section of the society. As they were small, they did not have to face a large hierarchy or bureaucracy. He further added that voluntary agency should not be judged or assessed on the basis of the number of rural projects it has opened or its budget or the number of employees it has, which most of the voluntary agencies were fond of quoting. It should

be arrived on the basis of how consciously it has tried to generate self-reliance amongst the target group, how well it has organized them to deal with structural inequalities and to what extent it has involved the participation of local men and women.

NGOs are superior to official agencies in three respects (i) their workers can be more sincerely devoted to the task of reducing the sufferings of the poor than the governmental staff (ii) they are able to produce better rapport than the government staff (iii) they are not born by rigid bureaucratic rules. They are flexible and adaptive to the needs each situation brings with it (Kumar, 1995).

Different development approaches are used by the various NGOs successfully. The government has recognized the role of NGOs and is slowly involving them in planning the development strategies. The number of NGOs involved in rural development is also steadily increasing. Voluntary organizations are bold to experiment with new methods and approaches. They have successfully organized people to fight against injustice and exploitation. Their apolitical nature has given NGOs this added advantage. In the area of creating public opinion to tackle social problems and to bring about changes in the existing laws, voluntary organizations have much to be proud of (Philip, 1995).

Tulachan *et al.* (1995) indicated that the success of private extension service lies in its prioritization and focus in site and activity selection with a heavy emphasis on market development.

Farrington (1997) reported that the majority of NGOs were small and horizontally structured with short lines of communication and were therefore capable of responding flexibly and rapidly to clients needs and to changing circumstances. They were also characterized by a work ethic conducive to generating sustainable processes and impacts. NGOs were concerned with the rural people and they often maintained a field presence in remote locations, where it was difficult to keep government staff in post.

Non-governmental organizations with their advantage of non-rigid, locality-specific, felt need based, beneficiary oriented and committed nature of service have established multitude of roles which can effect rural development. The NGOs work in specific areas and have close contacts with their users due to proximity and frequent visits. The level of credibility is high due to sincerity and honesty of purpose and dedication to the cause of mission. The NGOs have their own objectives and within the framework of discipline and policy, a stable programme can be designed. They have an element of permanency because of high level of people's participation and do not suffer from adhocism and frequent changes. They believe more in the institutional rather than individual approach and ensure better co-ordination and team work (Indu, 1997).

Improving efficiency and quality of service provision and client involvement in priority setting help to generate needed support. True farmer ownership of programs adds significantly to program sustainability (Scarborough *et al.*, 1997).

Veluswamy and Manoharan (1998) while studying on the extent of participation of beneficiaries in the activities of NGO noted that participation was an important variable to indicate the success of any programme.

NGOs have an edge over others because of their strengths like: (1) the lean overheads and operating costs to reach the poor and needy (2) flexibility and responsiveness in operation to invent appropriate solution (3) nearness to client groups made them to be sensitive to community need (4) capacity for innovation and experimentation with new groups and untried development approach (5) stimulating and mobilizing interest in the community (6) dependence on customer satisfaction and (7) act as a test bed and sound board for government policies and programmes (Bhat, 1999).

Saravanan (1999b) reported that private extension agents were provided with remuneration in the form of share crop & it increased the extension personnel's accountability and commitment to the service.

Non-governmental organizations have the advantages of flexibility of operations, limited expenditure on staff, and emphasis on quality over quantity even while being focused on achieving targets and the ability to attract funds from diverse sources (Sood, 1999).

Adams (2000) reported clarity of purpose of extension services; the quality and qualifications of advisers; increased motivation of advisers; the use of mass media and information technology; collaboration between extension and research; and the implementation of sound rural development policies as the main factors determining the success of private extension services.

French (2000) specified that new communication technologies were making it possible for non-governmental organizations to mobilize powerful coalitions of private citizens to force government and corporate decision makers to take global environmental issues into account.

Involvement of beneficiaries in organizational activities, group activity and co-operation among the villagers has contributed to the success of organizational programmes (Mannambeth, 2000).

As the faith of the people in the government machinery is crumbling, the implementation of schemes is becoming a major hurdle. Therefore, a number of NGOs with a remarkable record in the formation of self help groups have been approached to assist the implementation of the scheme. It is hoped that NGOs' with their participatory bottom up approach and flexible decision-making would ensure a degree of participation and transparency in the loan disbursement. With wider out-reach and useful delivery mechanisms, they can participate in generating awareness and formation of viable groups (Pant, 2000).

Rao (2000) based on a study conducted among the NGOs involved in training the rural youth under TRYSEM, revealed that the trainees who received training from the NGOs were better employed than the ones trained in government and public institutions.

NGOs took interest in arranging employment for their trainees, while in government and public institutions, once the training was over the trainees had to try for employment on their own. It was also found that the facilities for training in some NGOs were much better than government and public institutions.

Rivera *et al.* (2000) noticed that private service delivery was often more efficient in serving clients. Extension programmes implemented by the private sector were typically more operationally efficient, more accountable for their performance and results, and more flexible in promoting extension staff for good job performance and dismissing staff for poor performance.

Sahu (2000) highlighted the reasons behind the success of voluntary organizations. According to him participatory culture was a factor that contributed for the success in rural development. Voluntary organizations put more emphasis on people's involvement in decision-making and implementation of any developmental programme. They tried to reduce hierarchical distance between leaders and the people at village level. The other advantage which made the voluntary organizations more successful in their effort was that they aimed at strengthening notions of self-help and self-reliance through programmes such as social forestry, watershed management etc. Planning from the bottom was the other main strength of these organizations in the development process. He further suggested that government and other funding agencies should provide financial assistance for the success of these organizations.

Government also realized that there were lots of advantages to enrolling NGOs in the development process: NGOs are motivated and enthusiastic; they have flexibility in operations; they are close to the people; they provide additional manpower to conduct developmental activities (Sharma, 2000).

Sushama and Parvathy (2000) reported that the activities of 'Pazhakulam Social Service Society (PASSS)', a Kerala-based non-governmental organization were multifaceted and effective. They indicated united effort of both the organization's

members as well as the people as the factor contributing to the successful functioning of the NGO.

In a comprehensive review of Associative Peasant Business Firms, farmers' organizations that were being promoted in Chile, Berdegue (2001) showed that those peasant associations that focused on specialized commodity marketed with high transaction costs were viable. Those associations that were formed to gain advantage in traditional wholesale commodity markets did less well, and those that lack effective links to specific markets would collapse from lack of purpose.

Private organizations have more flexible functional structure. Their focus is on development of usable technologies and there are strong linkages between technology development and dissemination. In most of the cases, research, commercial production and marketing are vertically integrated. Usually, there is a tie up between research organization and marketing firms. Under these organizational structures there is tendency to quickly respond to client's needs. Production of proprietary materials and appropriation of research benefits largely govern the strategic response of private organization to changing market force (De and Sahu, 2001).

Feder *et al.* (2001) mentioned that all privatization efforts reported improvements in accountability usually expressed in terms of client orientation and satisfaction (thus avoiding the cause and effect problem). Private sector initiatives were not affected by other public service liabilities. All privatized efforts claimed improved efficiency, cost-effectiveness and reduced public sector costs by servicing the needs of farmer clients who could afford to pay for the information, thus overcoming the problems of sustainability and dependence on fiscal allocations. Incentives existed for private providers of extension to maintain close links with knowledge generation agencies in order to have a marketable product.

Gowda (2001) observed that some of the successful voluntary organizations like BAIF had their own research support system apart from good linkages with public research and educational institutions.

Voluntary organizations have flexible and pragmatic approach, which helps in better implementation of the programme. Normally, they adopt a multi functional approach, which arises from a deeper understanding of their clients. In their area of operation, dedicated and disciplined personnel with a missionary zeal are some of the facets, which have been responsible for their success (Jasu, 2001).

Non-governmental organizations' long-term links to communities and local groups, their willingness to utilize participatory technology testing and transfer (TT&T) methods and the inclusion of the farmer as a full team member, tend to make interventions more appropriate and sustainable (Muir *et al.*, 2001).

The NGOs have long history of service and dedication and they work with specific objectives and mission. They play a crucial role in mobilizing and motivating the rural poor to take advantage of the on-going projects through their meaningful participation. They work in specific areas and have close contacts with their users due to proximity and frequent visits. The level of credibility is high due to sincerity and honesty of purpose and dedication to the cause of mission. They have an element of permanency because of high level of peoples' participation and do not suffer from adhocism and frequent changes. They believe more in the institutional rather than individual approach and ensure better co-ordination and team work. The rapport and credibility of the NGOs with the users should be fully exploited and full advantage of their quick decision process should be taken in strengthening some of the weak links in the existing TOT programmes (Indu, 1997; Nataraju *et al.*, 2001).

Radhakrishnan and Karippai (2001) acclaimed private extension service to be more demand-driven, need-based and sustained approach.

The outcome of privatization efforts however depends to a large extent on the modus operandi besides, the socio-political and economic situations prevailing in respective countries and also on the regulatory impediments to the private sector development in less developed countries in particular (Rath and Tiwari, 2001).

Sherin *et al.* (2001) mentioned that NGOs were effective in using their change agency for SHG formation and they observed social commitment with the development objectives, freedom from political interference and flexibility in the style of functioning as the indications for the effectiveness.

Alex *et al.* (2002a) argued that private sector (whether private companies, NGOs, Rural Producer Organization or specialized consulting firms) could provide extension services more efficiently and effectively than public sector agencies. The transfer of funding for extension to private end-users provided them with great ownership and thereby enhanced a demand - driven service. Each type of private provider had its own niche and, they mentioned about their comparative advantages.

1. NGOs are often quite flexible, committed to working with poor and disadvantaged, able to provide intensive and integrated assistance to target grass-roots community organizations, and adapt approaches to local situations. They often have skills in building local organizations and linking them to markets.
2. Producer organizations empower farmers to express demands, contract service providers who meet their needs, and enhance accountability. Clear commodity focus and sufficient human and financial resources also enabled better service provision.

Where privatized extension is successful, it is more likely to involve strong farmer participation and to feature joint problem solving rather than standardized solutions (Byerlee and Echeverria, 2002).

Hanyani-Mlambo (2002) made a list of the private extension service providers and observed the factors that attributed to their success and were as follows:

International and private research centres	Highly qualified personnel, abundant financial resources, better logistical support (transport and equipment)
Farmers' associations	Grass roots representation, more grass roots contact, more aware of farmers' needs, member based (district and village level), so effective two-way communication, specific interest groups provide specific, relevant information to clients
NGOs and donor-supported rural development programmes	Abundant financial resources, better logistical support (transport and equipment), multidisciplinary teams and more holistic approaches, good networking skills, participatory and bottom-up approaches ensures effective grass roots and community participation, provide training extension, and finance from one source greatly improved understanding of community needs (through accountability and demonstration of impact to donors), small independent decision-making units facilitate quick decision-making and greater flexibility in project and programme implementation
Private agrochemical input suppliers and commodity processors	Abundant financial resources, tend to be collaborative: desire to maximize profits
Bat actors	Least-cost option for dissemination and accomplishment of extension objectives

Proost and Duijsings (2002) indicated that national farmers' association was the major extension service provides in the Netherlands and it supplied information requested by the client.

World Bank Group (2002) mentioned that NGOs.GOs partnership had built up the capacity of NGOs.

Chandrakandan (2003) mentioned that the potentiality of private extension in terms of information technology and creation of market tie up should be explored. When private extension services multiply in size and number, cost effective extension service would be provided, due to market competition. It had been demonstrated time and again that private enterprises were far more efficient than governmental agencies in delivering good and services. It was also well known that farmers did not hesitate to pay for any valuable information, fail-safe services and delivery mechanisms. They would patronize any system that would empower them with skills in sustainable agriculture, encourage micro-credit system, organize group action and tap collective wisdom, make available quality inputs at the desired time, encourage value-addition at farm level through efficient post-harvest technologies and instil the spirit of co-operative spirit while marketing the final produce. A combination of all these would go a long way to prove the success of a viable and meaningful private rural extension system.

There is growing recognition that, even where public financing of extension is justified, private service delivery is often more efficient in serving clients and Anderson and Feder (2003) regarded contracted extension strategies followed by private service delivery as reasons for their success.

Padma *et al.* (2003) indicated that NGOs could feel the needs of the layman, closely realize the class division, gender-divide from various angles and could ensure the socio-economic justice to the common man.

Standen (2003) observed some of the success factors of non-governmental extension agencies and were as follows:

- respect for skills/expertise of each sector,
- selection of the right people for the right jobs,
- trust between the people,
- good mix of experience (with the 'war stories') and enthusiasm of youth,
- tolerance of difference,
- meeting client needs and a focus on outcomes,
- agreement on outcomes,
- quality training built in for all involved,
- clear definition of roles and responsibilities,
- commitment to deliver agreed roles,
- establishment of a team approach where each player respects and relies on each other to perform their agreed roles,
- very good project management skills in the people responsible for the project delivery,
- preparedness to spend time when necessary and available to bring people into the team,
- preparedness to drive through when deadlines and resources require action,
- time and budget management,
- operation through short-term work placements for selected staff and
- acceptance by the public sector that extension is not their sole domain.

Tobar (2003) mentioned about 'CREA-AACREA', an associative private agricultural extension in Argentina, whose success was mainly attributed to its formal and informal technology transfer, solidarity, openness and willingness to share knowledge and information.

Campos *et al.* (2004) analyzed the aspects of NGOs contributing to most of their success and found out the engendering of a sense of 'ownership' among the stakeholders as the crucial factor in explaining their success.

Hartwich *et al.* (2004) pointed out that by forming partnerships with the public sector, private firms could gain access to knowledge and innovations that would allow them to maximize their profits. Such partnerships would also allow firms to direct the research and development process in such a way that the innovations produced, more closely fit their needs.

Narain and Singh (2004) analyzed the strengths of private extension agencies and their services. According to them the strengths were easy availability of all inputs as well as their technologies to beneficiaries; increased efficiency of delivery channel through local approaches; timely and demand driven services, cheap services; community mobilization; increased quantity as well as better quality of services; direct linkage between agencies and farmers and improved agricultural production and productivity.

Reddy and Singh (2004) found that strength of private extension was its ability of giving better quality service.

2.8 CONSTRAINTS FACED BY THE NON-GOVERNMENTAL EXTENSION SOURCES

According to Leonard (1985), the most obvious shortcoming was the difficulty of collecting user fees and establishing cost-accounting procedures to set charges at appropriate levels.

Charles (1987) mentioned that private veterinarians were not able to practice their vocation to the fullest extent possible and the reasons were government restrictions, lack of access to veterinary supplies and inadequate transport facilities and infrastructure.

World Bank (1987) mentioned that poor performance of private extension services was due in part to fiscal constraints.

Kohl (1991) reported that some NGOs were more accountable to external funding agencies than to the clientele they claimed to serve. Donor pressure to achieve short-term impacts, combined with a lack of cross learning had led in some cases to the promotion of inappropriate technology, such as protected horticultural system in the Bolivian Andes.

Some “fashionable” locations have become so densely populated by diversity of NGOs that problems have arisen not merely of competition for the same clientele, but of some undermining the activities of others (Ayers, 1992).

Many NGOs place great emphasis on voluntarism. While such concepts “volunteer extension workers” have great intuitive appeal and reflect widely commended values, they are some times promoted at the expense of financial sustainable alternatives. This was evident in SIDA’s farm level forestry project in North Vietnam, for instance, where the scope for supporting an emerging private nursery sector in the provision of technical advice was ignored, and complex and largely voluntary advisory services at the village level were promoted instead (Okali *et al.*, 1994).

Because private extension is generally not a stand-alone activity, it is difficult to estimate overall expenditures on it or the returns to such investments (Schwartz, 1994).

NGO’s small size means that their projects rarely address the structural factors that underlie rural poverty. Small size, independence, and differences in philosophy also militate against learning from each other’s experience and against the creation of effective forums, whether at national or provincial levels. NGOs have limited capacities for agricultural technology development and dissemination and limited awareness of how to create effective demand-pull on government services (Farrington, 1997).

Farmer organizations, even though they are often both consumers and providers of information, are not well positioned as providers of extension because among other problems they lack the financial and human resources that are needed (Carney, 1998).

Van den Ban (1999) felt that NGOs had problems sustaining services that required external funding.

Mannambeth (2000) identified lack of financial support, political interference and non-cooperation from government side as the major problems affecting NGOs' activities.

There is a lack of recognition of voluntary efforts and inadequate resources in terms of both men and material. A majority of the voluntary organizations are not financially sound, nor do they have sources of recurring income (Sahu, 2000).

If farmers are unaware of the value of the information they receive and the benefits are not easy to observe, then it can be very difficult to establish a market price for the service (Hanson and Just, 2001).

Namboodiri and Shiyani (2001) pointed out the major weaknesses of the SHGs: limited scope for future growth in membership and the dominance of consumption loans; limiting the opportunity for income generating activities, and one of the major threats identified was the absence of legal status to SHGs.

Pandel and Thapa (2001) mentioned that non-governmental organizations had not been able to provide effective services due to close organizational structure. Although user groups had strong commitment and greater enthusiasm, they had not been able to take advantage of these qualities due to their weak technical capabilities.

Hanyani-Mlambo (2002) observed the different types of private extension service providers and identified the constraints associated with each type as follows:

- | | |
|--|---|
| (1) International and Private Research Centres | Donor fatigue and withdrawal of investments. |
| (2) Farmers' Associations | Donor fatigue and investment withdrawal (but not the Commercial Farmers' Union). |
| (3) NGO's and donor supported | Unstable socio-political environment not conducive to normal operations, donor fatigue and investment withdrawal, political pressure to extend programmes or projects beyond the available resources, programmes may be overwhelmed as economic decline and retrenchment lead more and more beneficiaries to seek involvement. Political pressure may force closures (e.g. NGOs accused of supporting opposition and banned from holding meetings in some areas). |
| (4) Private agrochemical input | Unfavourable socio-economic environment threatens operations and survival. |
| (5) Bat actors | Unstable socio-politico-economic environment. |

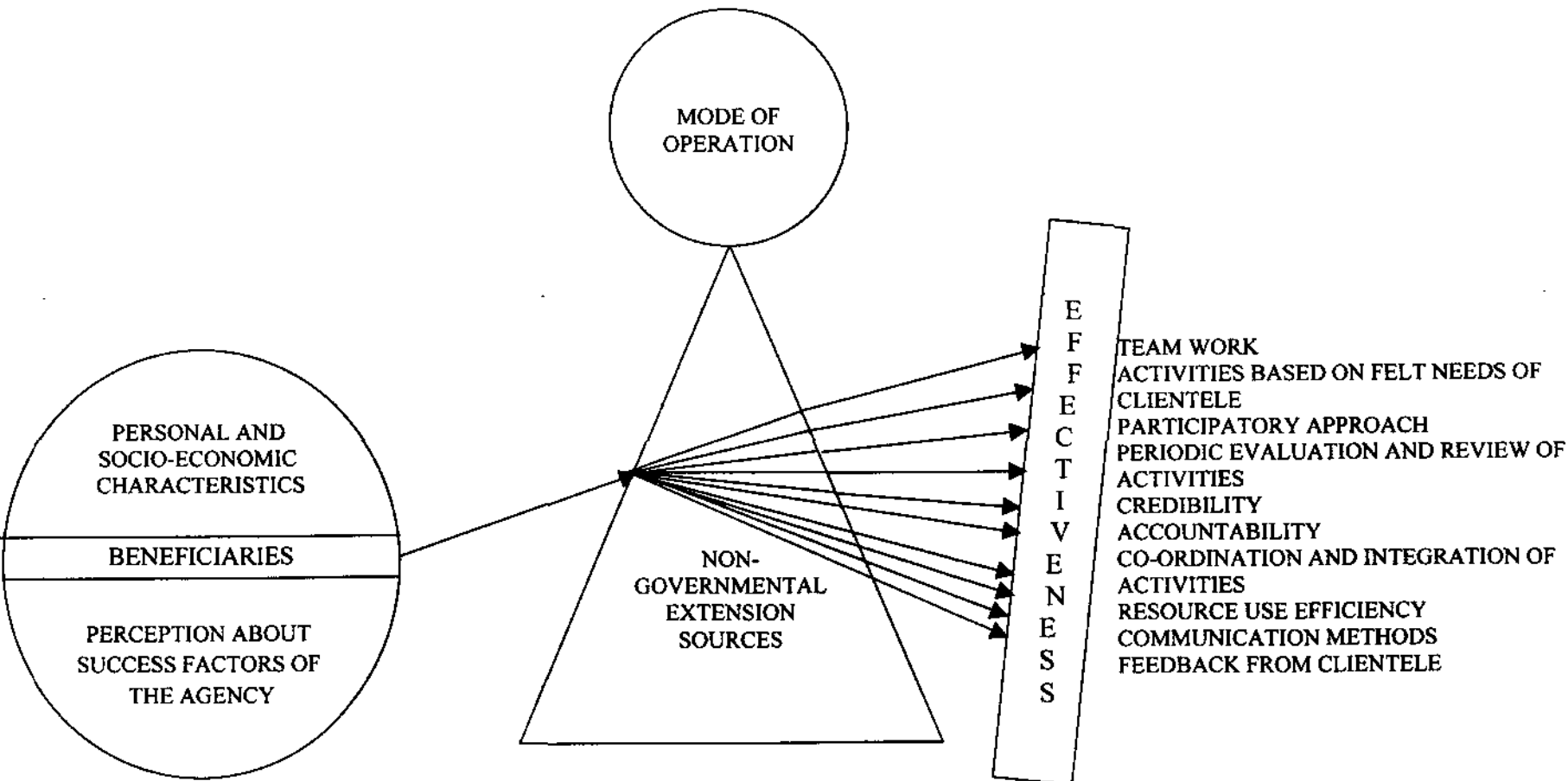


Fig. 1. Conceptual frame work for the study

Research Methodology

CHAPTER 3

RESEARCH METHODOLOGY

Research methodology is a way to systematically solve a research problem. It may be understood as a science of studying how research is done scientifically. It includes various aspects that are generally adopted by a researcher in studying a research problem along with the logic behind them. For any research, methodology forms the nerve centre. It is the methodology, which answers “how” aspects of the research. In this chapter, the methodology adopted for the study is presented under the following headings:

- 3.1 Research design
- 3.2 Locale of study
- 3.3 Sampling procedure
- 3.4 Selection, operationalization and measurement of variables/characteristics
- 3.5 Effectiveness
- 3.6 Scope for non-governmental extension services in future
- 3.7 Suggestions of clientele to improve non-governmental extension services
- 3.8 Data collection
- 3.9 Statistical tools employed

3.1 RESEARCH DESIGN

After analysis of available literature and keeping the objectives in view, more of qualitative and attitudinal variables were selected for the study. Most of the selected variables were of ex-post-facto in nature and the researcher had very little chance to control them. Hence an ex-post-facto research design was used for the present study.

3.2 LOCALE OF THE STUDY

In Kerala, a number of non-governmental extension agencies are functioning in different areas. They play a crucial role in rural development, and more specifically in agricultural development, thereby supplementing government efforts. Hence, the study was aimed throughout Kerala, concentrating on agencies selected based on the predominant roles being played by non-governmental extension agencies in agriculture development (Fig. 2).

3.3 SAMPLING PROCEDURE

3.3.1 Selection of non-governmental extension agencies

As a preliminary step, different types of non-governmental extension providing agencies operating in Kerala were enlisted through pilot study, discussion with different experts and after an elaborate review of literature. These non-governmental extension sources were scrutinized for the major roles played by them in agricultural development. In this context, role is operationalised as the different activities/programmes undertaken and the services rendered by the agency with a keen focus on sustainable agricultural development, thereby improving the living conditions of the beneficiaries or the end users. The identified non-governmental extension sources (types) were then classified based on the roles identified. For each role, one 'well-performing agency' with respect to that role was selected. The selection was based on the details obtained from the pilot study, discussion with experts and close examination of their objectives (collected from brochures). The existing popularity and the researcher's convenience were also taken into consideration for the selection.

3.3.2 Selection of beneficiary respondents

A beneficiary (client) for the present study was considered as any individual benefited by the agricultural programmes/services of the selected agencies during the past three years.



- ★ - Location of INFAM
- ★ - Location of START
- ★ - Location of ESAF
- ★ - Location of AVARD
- ★ - Location of Sevashram

- - Locations of beneficiaries of INFAM
- - Locations of beneficiaries of START
- - Locations of beneficiaries of ESAF
- - Locations of beneficiaries of AVARD
- - Locations of beneficiaries of Sevashram

Fig. 2. Locale of the study

A list of such beneficiaries was obtained from all the selected agencies and a sample of 30 beneficiaries covering different agricultural programmes was drawn from each agency following simple random sampling. Thus, through equal allocation method of stratified random sampling, a total of 150 beneficiary respondents were selected.

3.4 SELECTION, OPERATIONALIZATION AND MEASUREMENT OF VARIABLES/CHARACTERISTICS

Justifiable variables were selected after relevancy rating. Appropriate measurement techniques were used to quantify the variables based on literature. The procedure followed in the selection of variables, their operationalization and measurement are stated below.

3.4.1 Selection of variables/characteristics

3.4.1.1 *Selection of organization profile characteristics*

Keeping the objectives in view, after a thorough review of research work done in the past on various aspects of non-governmental extension and having discussion with the experts, 28 dimensions including one open-ended question were chosen to be included in the final schedule to study the organization profile (Appendix V). This was for the pursuit of the objective to study the mode of operation, highlighting the activity focus, approaches and methods, and the staffing pattern followed by the agencies.

3.4.1.2 *Selection of personal and socio-economic characteristics for beneficiary analysis*

Based on extensive review of relevant literature and discussion with experts, an exhaustive list of personal and socio-economic characteristics was prepared (Appendix I). To know the relevancy of each of the variable, they were subjected to judges' rating. 30 extension scientists were chosen as judges and the responses were obtained on a five-point continuum viz., 'most relevant', 'relevant', 'undecided', 'slightly relevant' and 'irrelevant'. The responses thus obtained were rated using frequency analysis to select the final variables. The selected variables with their frequencies are

presented in Appendix III. Those variables that emerged as most relevant in the relevancy rating procedure were:

1. Occupation
2. Family size
3. Area possessed
4. Educational status
5. Annual income
6. Economic motivation
7. Social participation
8. Extension orientation
9. Information source utilization
10. Innovativeness
11. Leadership ability
12. Product diversification and value addition

3.4.1.3 Identification of success indicators of the non-governmental extension agencies to analyse clientele's perception on them

An attempt was made in the present study to analyse clientele perception regarding the success indicators of the agencies.

Success indicators were operationally defined as those factors, which contributed to the successful functioning of the non-governmental extension agencies.

After exhaustive review of literature and consultation with experts, those variables which were found to have maximum probability of being included in the final interview schedule were listed down (Appendix II) and given for relevancy rating. The extension scientists as judges were asked to rate the relevancy of each variable on a five-point continuum: 'more relevant', 'relevant', 'undecided', 'slightly relevant' and 'irrelevant'. The final variables were selected using frequency ranking (Appendix IV) as

in the case of the selection of socio-economic characteristics. Thus, the following 10 success indicators were selected.

1. Team work
2. Activities based on felt needs of clientele
3. Participatory approach
4. Periodic evaluation and review of activities
5. Credibility
6. Accountability
7. Co-ordination and integration of activities
8. Resource use efficiency
9. Communication methods
10. Feedback from clientele

3.4.2 Operationalization and measurement of variables/characteristics

The selected 12 characteristics as the dimensions of personal and socio-economic profile of the beneficiaries were operationalized and measured as follows:

3.4.2.1 Occupation

Occupation was operationalized as the vocation from which the beneficiary derived major part of his/her income.

In the present study, occupation was measured using the scoring pattern followed by Sajin (2003) with slight modifications. The categorization of occupation of beneficiaries is shown below.

Table 1. Categorization of occupation of the beneficiaries

Sl. No.	Vocation	Code
1	Agriculture	2
2	Self-employment	1
3	Salaried/waged employment	1
4	No occupation	0

3.4.2.2 *Family size*

Family size referred to the total number of members in the family of the beneficiary. It gave an indication about the type of family, nuclear or joint.

This was measured by directly asking the beneficiaries the number of members in their family and the responses thus obtained were grouped under three categories as given below.

Table 2. Categorization of family size

Sl. No.	Category	Code
1	< 4	3
2	4 - 7	2
3	> 7	1

3.4.2.3 *Area possessed*

Area possessed was defined as the total area of land in hectares owned by the beneficiary, which was then categorized into wet land, garden land and non-agricultural land.

The scoring system used by Balu (1980) was adopted to quantify the area possessed, with slight modification.

Table 3. Scoring system to measure area possessed

Sl. No.	Category	Score
1	No land	0
2	≤ 0.4 ha	1
3	0.404 - 2 ha	2
4	2.004 - 4 ha	3
5	4.004 - 6 ha	4
6	6.004 - 8 ha	5
7	> 8 ha	6

3.4.2.4 *Educational status*

Educational status was operationally defined as the extent of formal education attained by the beneficiary.

This was measured by adopting the scoring system followed in the socio-economic status scale of Trivedi (1963) with slight modifications and is indicated below.

Table 4. Scoring procedure to measure educational status

Sl. No.	Category	Score
1	Illiterate	0
2	Can read only	1
3	Can read and write	2
4	Lower primary level	3
5	Upper primary level	4
6	High school level	5
7	Pre-degree or equivalent	6
8	Degree or equivalent	7
9	Post graduate degree and above	8

3.4.2.5 *Annual income*

Here, annual income referred to the total earnings of beneficiary and his/her family in a year from all sources, expressed in terms of rupees. Income from both on-farm and off-farm sources was considered. The on-farm sources included cultivation of different crops and allied enterprises like dairy, poultry and the like, while off-farm sources included government employment, other jobs, business, pension and such other vocations.

The measuring procedure used in the socio-economic scale of Venkataramaiah (1983) was used to quantify the annual income. The categorization followed was as shown below.

Table 5. Categorization of annual income of the beneficiaries

Sl. No.	Category	Code
1	Below 5000	1
2	5000 - 25,000	2
3	25,000 - 50,000	3
4	50,000 - 1 lakh	4
5	1 lakh and above	5

3.4.2.6 *Economic motivation*

Economic motivation was operationalized as the extent to which a beneficiary was oriented towards profit maximization and the relative value he/she placed on monetary gains.

In this study, economic motivation of the beneficiaries was measured using the scale developed by Supe (1969) with some modifications. The scale consists of seven items against a four point continuum measuring 'strongly agree', 'agree', 'disagree' and 'strongly disagree' with scores 4, 3, 2 and 1 for positive items, and 1, 2, 3 and 4 for negative items respectively. The scores on individual items were summed up to get the total score.

The maximum score that could be obtained on the variable was calculated, and based on this, the beneficiaries were grouped under three categories viz., high, medium and low. The modal value was computed for confirmation and the category into which the value fell was taken to indicate the level of economic motivation of the beneficiaries. The categorization of beneficiaries is as shown below.

Table 6. Categorization of beneficiaries according to their economic motivation

Sl. No.	Category	Score
1	High	> 18.66
2	Medium	9.33 - 18.66
3	Low	< 9.33

3.4.2.7 Social participation

Sadamate (1978) defined social participation of the respondent as participation in social institutions as a member or as an office bearer.

Social participation was operationally defined as the degree of involvement of beneficiaries in formal or informal social organizations in terms of membership, office holding and frequency of participation in meeting and other organizational activities.

The procedure followed by Lokhande (1974) was adopted for the measurement of social participation. The scoring procedure is as follows:

Table 7. Scoring procedure to measure social participation

Sl. No.	Category	Score
1	Membership in one organization	1
2	Membership in more than one organization	2
3	Office bearer in one organization	3
4	Office bearer in more than one organization	4
5	Distinctive features (Ward member, MLA, MP etc.)	5

Attendance to meetings either as a member or as an office bearer was considered important. Scores for attending 'regularly', 'occasionally', and 'never' were given the scores, 3, 2 and 1 respectively. To obtain the final score of a beneficiary for social participation, the score given as a member or office bearer was multiplied with the score given for attendance to meeting by virtue of his/her status as a member or office bearer and added up.

Based on the maximum score that could be obtained on the variable, the beneficiaries were categorized into three groups according to their social participation as indicated below.

Table 8. Categorization of beneficiaries according to their social participation

Sl. No.	Category	Score
1	High	> 22
2	Medium	11 - 22
3	Low	< 11

The modal value was computed and the category in which it fell indicated the degree of social participation of the beneficiaries.

3.4.2.8 *Extension orientation*

Extension orientation referred to the extent of contact a beneficiary had with different extension agencies and also his/her participation in various extension activities or programmes like meetings, seminars etc. organized by these agencies.

Bhaskaran (1979) measured extension orientation taking into account both extension contact and extension participation and the scoring patterns developed by him

were adopted. Here the responses for contact of a beneficiary with different extension personnel were measured as follows:

Table 9. Scoring procedure to measure extension contact

Response	Score
Often	3
Occasionally	2
Never	1

The total score was obtained by adding up the scores for different extension personnel.

The extension participation was measured based on the scores obtained by a beneficiary for his/her frequency of participation in various extension activities. The scores were assigned for the responses as follows:

Table 10. Scoring procedure to measure extension participation

Response	Score
Always	3
Sometimes	2
Never	1

The total score was obtained by adding up the scores for all extension activities.

The score for extension orientation for a beneficiary was arrived at by adding up the scores of extension contact and extension participation.

The scores obtained by the beneficiaries were classified into three categories keeping the maximum score that could be obtained on the variable. The category in

which the modal value fell was taken to represent the degree of extension orientation of the beneficiaries. The categorization of beneficiaries according to their extension orientation is shown below.

Table 11. Categorization of beneficiaries according to their extension orientation

Sl. No.	Category	Score
1	High	> 24
2	Medium	12 - 24
3	Low	< 12

3.4.2.9 Information source utilization

Information source utilization was operationally defined as the use of various sources of information by the beneficiary in order to get information on agricultural technology. Here the 'source', 'individual' and 'channel' were collectively used as "information sources", since for practical purposes there is no clear-cut demarcation that could be made between 'source' and 'channel'. Based on discussion with field-level functionaries, scientists and review of literature on information source utilization by farmers, various sources of information were identified and categorized under mass media sources, formal personal sources, informal personal sources, commercial sources and other sources.

The procedure adopted by Ramachandran (1992), Govind (1992) and Manoj (1998) was followed with slight modification. The beneficiaries were asked to indicate the frequency of use of these sources on a three-point continuum viz., 'regularly', 'occasionally' and 'never' with scores of 3, 2 and 1 respectively. For extent of information, a three point continuum viz., 'adequate', 'somewhat adequate' and 'inadequate' with scores of 3, 2 and 1 respectively were scored by the beneficiaries.

The score given for the frequency of utilization was multiplied with the score given for the extent of information, for all the sources and were added up to get the final

score. Based on the maximum score that could be obtained on the variable, the beneficiaries were divided into three groups on their utilization of various information sources. The group in which the modal value fell indicated their information source utilization behaviour.

Table 12. Categorization of beneficiaries according to their information source utilization

Sl. No.	Category	Score
1	High	> 126
2	Medium	63 - 126
3	Low	< 63

3.4.2.10 Innovativeness

Innovativeness was operationalized as the degree to which the beneficiary was relatively earlier in adopting new ideas.

The procedure developed by Singh (1977) and adopted by Selvanayagam (1986) and Mercykutty (1997) was used to quantify innovativeness of a beneficiary. The question "When will you prefer to adopt an improved practice in farming?" was asked and the responses were scored as shown below:

Table 13. Scoring procedure to measure innovativeness

Sl. No.	Response	Score
1	As soon as it is brought to my knowledge	3
2	After I have seen some other farmers using it successfully	2
3	Prefer to wait and take my own time	1

3.4.2.11 Leadership ability

Leadership ability was operationalized as the degree to which a beneficiary perceived himself/herself that he/she could initiate or motivate the action of other individuals and his/her ability to influence people to achieve desired goals.

The leadership ability was measured by a scale developed for the purpose. It consists of four items, two positive and two negative, against a four point continuum measuring 'strongly agree', 'agree', 'disagree' and 'strongly disagree' with scores 4, 3, 2 and 1 for positive items, and 1, 2, 3 and 4 for negative items respectively. The scores on individual items were summed up to get the final score on leadership ability.

Based on the maximum score that could be obtained on the variable, the beneficiaries were grouped into three categories as indicated below.

Table 14. Categorization of beneficiaries according to their leadership ability

Sl. No.	Category	Score
1	High	> 10.66
2	Medium	5.33 - 10.66
3	Low	< 5.33

Mode was used to support the above categorization and the category in which the modal value fell gave the degree of leadership ability of the beneficiaries.

3.4.2.12 Product diversification and value addition

Product diversification and value addition referred to the beneficiary's attitude towards them and the extent to which value addition was done by him/her and also the role played by the agency in assisting him/her in product diversification and value addition.

This variable was measured using an arbitrary scale developed for the study.

The items and the scoring pattern followed were as given below.

1. Do you think that diversification and value addition bring much difference in prices for your products?

Yes (2) / No (1)

2. Do you go for product diversification and value addition?

Yes (2) / No (1)

- i) If 'yes', please specify the name and number of value added products

Number : One / Two / Three / More than three

(1) (2) (3) (4)

Name :

- ii) If 'no', state reasons (lack of knowledge, huge investment, lack of facilities, lack of time, not interested, others, if any)

3. Does the agency help / support you in going for product diversification and value addition?

Yes (2) / No (1)

3.4.3 Operationalization and measurement of variables selected as success indicators of the agencies

The success indicators selected for the study were analyzed based on the clientele's perception regarding them.

3.4.3.1 *The concept of perception*

According to Crow and Crow (1956) perception is the meaningful sensation that assumes an important role in the life of an individual.

According to Attneave (1962) perception had to do with the input side of the organism, with short-term consequences of variations in stimulating conditions.

According to Blalock (1963) perception had the following characteristics:

- It is an individual matter. Thus there may be as many perceptions as there are individuals.
- It must be dealt within terms of what an individual actually experiences.
- It involves not only perceiving the stimuli but also interpreting and describing these stimuli in terms of that are meaningful to the individual.
- Various external and internal factors may influence both the interpretation of the stimulus and the response it is likely to evoke.
- It is a dynamic phenomenon that may be continually changing within an individual.

Theodorson and Theodorson (1970) defined perception as the selection, organization and interpretation by an individual of specific stimuli in situation according to prior learning, activities, interests and experience.

In this study, clientele's perception about success factors of the agency is operationalized as the meaningful sensation by beneficiaries on the given factors, regarded as contributing to the successful functioning of the agency.

Since this being a preliminary study on this very aspect, no standardized procedures were available to measure the variables. Hence, the selected success

parameters were measured using arbitrary scales developed for the same purpose. The items for the scales were prepared after an elaborate review of pertinent literature, consultation with experts and also based on researcher's own conviction.

3.4.3.2 Operationalization and measurement of success indicators

The procedures of operationalization and quantifications of the selected success indicators of the agencies are as detailed below.

3.4.3.2.1 Team work

Team work was operationalized as the joint action by a group of people, in which individual interests were subordinated to group unity and efficiency to achieve the shared goals.

Team work scale consists of five items against a four point continuum measuring 'strongly agree', 'agree', 'disagree' and 'strongly disagree' with scores 4, 3, 2 and 1 for positive items and 1, 2, 3 and 4 for negative items respectively. The final score on perception about team work of each beneficiary was obtained by summing up the scores on individual items.

3.4.3.2.2 Activities based on felt needs of clientele

Activities based on felt needs of clientele were operationally defined as the various programmes and projects undertaken by the agencies in accordance with the needs referred to them by the beneficiaries.

The procedure followed for measuring beneficiary's perception about activities based on their felt needs is as follows:

- a) Agency conduct target group surveys to identify their needs and problems before taking up any new program

Always / Usually / Sometimes / Rarely / Never

(5) (4) (3) (2) (1)

- b) How often do the programs the agency work with address problems identified by the beneficiaries?

Always / Usually / Sometimes / Rarely / Never

(5) (4) (3) (2) (1)

The scores on individual items were summed up to get the final score.

3.4.3.2.3 Participatory approach

Participatory approach was operationally defined as the approach followed by the agencies in designing and implementing programmes/projects by actively involving beneficiaries or end users in all stages to help ensure that the programmes/projects designed and being implemented meet their needs and are useful.

Participatory approach was measured by directly asking each beneficiary four forced-choice questions with five alternative responses to them, 'always', 'often', 'sometimes', 'rarely' and 'never' with scores 5, 4, 3, 2, and 1 respectively. The sum of scores on individual questions gave the final score.

3.4.3.2.4 Periodic evaluation and review of activities

Periodic evaluation and review of activities meant a set of organizational tools to determine if a program/project works according to schedule, to identify lacunae if any and to make necessary modifications at fixed intervals.

The scale developed for measuring this variable consists of three items against a five point continuum 'always', 'usually', 'sometimes', 'rarely' and 'never' with scores 5, 4, 3, 2 and 1 respectively. Scores on individual items were summed up to get the final score.

3.4.3.2.5 Credibility

Credibility was operationally defined as the trust worthiness of the agency among the beneficiaries.

Credibility was measured by putting up the beneficiaries with a set of three forced-choice questions and the responses were obtained on a four-point continuum measuring 'always', 'usually', 'sometimes' and 'rarely' with scores 4, 3, 2 and 1 respectively. Scores on individual items were added up to get the final score.

3.4.3.2.6 Accountability

In this study, accountability referred to the degree to which the organizational staff involved in agricultural development was vertically and horizontally responsible for the results of various activities undertaken by them.

Accountability measuring scale included an assortment of three closed items to which the beneficiaries were asked to respond based on four alternatives offered, 'strongly agree', 'agree', 'disagree' and 'strongly disagree' with scores 4, 3, 2 and 1 respectively. Adding up of scores on individual items gave the final score on perception about accountability for each beneficiary.

3.4.3.2.7 Co-ordination and integration of activities

Co-ordination and integration of activities connoted the vital function of working together of the separate parts of the organization as an integrated whole, in a harmonious manner to accomplish organizational goals.

The procedure used for measuring beneficiary's perception about co-ordination and integration of activities of agency is shown below:

- a. A special body is set up to facilitate the co-ordination and integration of activities

Yes (2) / No (1)

- b. Overlapping of various activities is a main problem faced by the agency

Strongly agree / agree / disagree / strongly disagree

(1) (2) (3) (4)

- c. Members at different levels/disciplines may have to involve in all activities according to the situation

Always / Usually / Sometimes / Rarely / Never

(1) (2) (3) (4) (5)

The final score on beneficiary's perception about co-ordination and integration of activities of the agencies was obtained by summing up the scores on individual items.

3.4.3.2.8 *Resource use efficiency*

Resource use efficiency was operationalized as the ability of the agency in making the best use of its resources (human and material) by minimizing waste of time and effort.

Resource use efficiency was measured using the procedure indicated below:

- a. Agency is able to mobilize its resources in a better way to get things done

Strongly agree / agree / disagree / strongly disagree

(4) (3) (2) (1)

- b. Agency is realizing maximum possible output from the incurred inputs

Strongly agree / agree / disagree / strongly disagree

(4) (3) (2) (1)

- c. Agency critically analyses allocation of its scarce resources for developmental activities

Always / Usually / Sometimes / Rarely / Never

(5) (4) (3) (2) (1)

The scores on individual items were summed up to get the total score for perception about resource use efficiency of each beneficiary.

3.4.3.2.9 *Communication methods*

Communication methods were operationalized as the different channels and methods used by the agencies to have contact with their beneficiaries or to inform them on various organizational activities.

Here, the responses for the usage of different communication media and methods by the agencies, of each beneficiary were measured as follows:

Table 15. Scoring procedure to measure communication methods

Response	Score
Always	3
Sometimes	2
Never	1

The total score was obtained by adding up the scores obtained for different media and methods.

3.4.3.2.10 *Feedback from clientele*

Feedback from clientele indicated the existence of a system or a regular procedure to get beneficiaries' opinions or reactions on various activities of the agencies.

The procedure used to measure this success indicator is shown below.

- a. Does your agency have a regular procedure for target members to give feedback on services and programs?

Yes (2) / No (1)

- b. How often do members get to express their opinions or impressions about the service / support / activities of the agency?

Regularly / Often / Sometimes / Rarely

(4) (3) (2) (1)

- c. Is negative feedback received well by the implementing officers?

Always / Usually / Sometimes / Rarely

(4) (3) (2) (1)

The total score was obtained by adding up the scores on individual items.

3.5 EFFECTIVENESS

The very objective of the study necessitated the selection of a dependent variable, effectiveness. It is conceptualized as the quality of the non-governmental extension agencies of being able to bring about the desired effect on their beneficiaries.

In an era of heightened concern for non-profit performance, results and accountability, more and more about organizational effectiveness is heard and hence, there is a need to ensure it. Non-profit organizational effectiveness is a social construction. Effectiveness is whatever significant stakeholder thinks it is, and there is no single objective reality, "out there" waiting to be observed. There occur multiple criteria by which to judge effectiveness and these criteria often exist independent of one another. Here, the effectiveness was judged based on clientele's perception regarding the various given success factors and it was measured using Effectiveness Index (EI) computed for each of the selected agencies.

3.5.1 Effectiveness Index (EI)

Effectiveness Index was calculated from an index, 'I', which was calculated for every selected beneficiary in all the chosen agencies. The mean rank scores obtained for each of the selected perception parameters through Kendall's 'w' Test were taken as weighing coefficients for computing 'I', which is of the form,

$$I = \rho_1 x_1 + \rho_2 x_2 + \dots + \rho_n x_n$$

or

$$I = \sum_{i=1}^n \rho_i x_i$$

Where,

I = computed index value for each beneficiary

ρ_i = mean rank score obtained for each of the perception parameters

x_i = score given for each perception parameter by the beneficiary

n = number of perception parameters

The mean index value was computed for each agency and it was taken to represent the EI. The higher the EI, the better the performance of the agency.

An Overall Effectiveness Index (OEI) was also computed based on overall mean scores of the 150 beneficiaries regarding their perception about the given success indicators of the agencies. It is assumed that an agency having an EI greater than the OEI may be regarded to perform well.

3.6 SCOPE FOR NON-GOVERNMENTAL EXTENSION SERVICES IN FUTURE

The scope of non-governmental extension services in future was assessed by posing an open-ended question before the beneficiaries as well as office bearers. The opinions obtained were then pooled and analyzed.

3.7 SUGGESTIONS OF THE CLIENTELE TO IMPROVE NON-GOVERNMENTAL EXTENSION SERVICES

Suggestions for improving the non-governmental extension services were collected from all the beneficiaries and were examined for the frequently expressed ones. Then they were prioritized and listed down.

3.8 DATA COLLECTION PROCEDURE

The data for the present study were collected using pre-tested structured interview schedules prepared for the purpose. Separate interview schedules (Part I and Part II) were used for agencies and beneficiaries respectively, and the interview schedule for beneficiaries was again divided into two parts; Part A – Personal and socio-economic characteristics of the client and Part B - Client's perception about success factors of the agency (Appendix V and VI). The schedules were first prepared in English and the schedule for beneficiaries was translated to Malayalam to make the data collection process easier (Appendix VII). Devout attention and utmost care were bestowed in finalizing the wording and formats of the schedules to eliminate mistakes and any element of ambiguity regarding the various items.

The data collection was done during April-June 2005. The respondents were personally interviewed by the researcher (Plates 1 and 2). The questions were put in a conversational manner and responses were transcribed in the schedule itself. In the case of responses that were not clear, rechecking was also done.



**The office-bearers of INFAM
overviewing its activities**



**A rendezvous with the President of
START**



**An outlook of ESAF activities with its
Executive Director**



**The researcher in discussion with the
staff members of AVARD**

**Plate 1. Researcher interviewing the office-bearers of the selected
non-governmental extension agencies**



Plate 2. Researcher interviewing the beneficiary respondents of the selected non-governmental extension agencies

3.9 STATISTICAL TOOLS EMPLOYED

The data collected were processed and analyzed in accordance with the objectives of the research problem. The various statistical tools used in the study are outlined below.

3.9.1 Kendall's coefficient of concordance

Kendall's coefficient of concordance was used to verify whether there is any agreement among beneficiaries on their perception regarding the selected success indicators of the agencies. Let R_i denotes the sum of ranks secured by i^{th} item ($i = 1, 2, 3, \dots, n$), then Kendall's coefficient of concordance is given by,

$$\omega = \frac{\sum_{i=1}^n R_i^2 - (\sum R_i)^2 / n}{1/12k^2n(n^2 - 1)}$$

Where,

w = Kendall's coefficient of concordance

n = number of items

k = number of beneficiaries

The computed value of ' w ' was tested for its significance by using $\chi^2 = k(n-1)w$ with $(n-1)$ degrees of freedom.

3.9.2 Discriminant functional analysis

3.9.2.1 *Multiple discriminant functional analysis*

Multiple discriminant functional analysis was employed to find out the major success indicators, which discriminated between the selected agencies.

3.9.2.2 *Simple discriminant functional analysis*

Simple discriminant functional analysis was used to find out the success indicators, which discriminated between the most effective and the least effective agencies.

3.9.3 **Path coefficient analysis**

Path coefficient analysis was employed to see whether it supported the discriminant function analysis. Therefore, direct effects of perception parameters on effectiveness of agencies only were taken into consideration.

The basic equation in path analysis is of the form,

$$r_{iy} = \sum r_{ij} p_{jy}$$

Where,

r_{iy} = correlation coefficient between dependent variable
and i^{th} independent variable

r_{ij} = correlation coefficient between i^{th} and j^{th}
independent variable

p_{jy} = p^{th} coefficient (direct effect) of j^{th} independent
variable on the dependent variable

3.9.4 **Principle component analysis**

Principle component analysis was done to rank order the personal and socio-economic characteristics of beneficiaries based on their consistency. The higher the rank, the more the variability associated with that characteristic among the beneficiaries.

3.9.5 Frequency, percentage and mode

In descriptive analysis of the raw data, to study the distribution of beneficiaries on their socio-economic characteristics, frequency and percentage were used.

Modal value was computed to ascertain the above distribution.

Besides this, other summary statistical tools like mean and standard deviation were used wherever necessary to analyse the data.

Statistical analysis was carried out using the SPSS computer software available at the College of Horticulture, Vellanikkara.

Results and Discussion

CHAPTER 4

RESULTS AND DISCUSSION

This chapter deals with the results obtained in this study and the discussion based on the results. Keeping the objectives in view, the findings as well as the discussions thereon are presented under the following heads:

- 4.1 Types of non-governmental extension agencies involved in providing extension in the state
- 4.2 Classification of the types of non-governmental extension sources according to their major contributions towards agricultural development in Kerala
- 4.3 Mode of operation of the selected agencies, highlighting activity focus, funding sources, geographical coverage, organizational set up, staffing details, approaches and methods followed, linkage with various agencies, nature of clientele, pattern of charging fee and problems
- 4.4 Agreement among beneficiaries of all the selected non-governmental extension agencies with regard to their perception about success factors of the agencies
- 4.5 Effectiveness of the selected agencies
- 4.6 Identification of success indicators of the non-governmental extension agencies
- 4.7 Status of an agency
- 4.8 Personal and socio-economic characteristics of beneficiary respondents
- 4.9 Scope for non-governmental extension services in future
- 4.10 Suggestions of the clientele to improve non-governmental extension services

4.1 TYPES OF NON-GOVERNMENTAL EXTENSION AGENCIES INVOLVED IN PROVIDING EXTENSION IN THE STATE

Kerala has a large and diverse private sector involved in its agricultural development. The role played by these non-governmental extension sources has significant impact on agriculture in Kerala.

After discussion with subject matter specialists and a thorough review of literature pertaining to non-governmental agricultural extension, the different types of non-governmental agricultural extension providers were listed out. This list was again subjected to discussion with experts for finding out the types more specific to Kerala situation, which resulted in the disclosure of the following ones:

1. Agricultural consultants/firms
2. Para technicians
3. Progressive farmers
4. Farmer's organizations/Co-operatives
5. Non-Governmental Organizations (NGOs)
6. Agri-business firms
7. Input dealers
8. Print and electronic media
9. Private sector banks
10. Self-Help Groups (SHGs)

4.2 CLASSIFICATION OF THE TYPES OF NON-GOVERNMENTAL EXTENSION SOURCES ACCORDING TO THEIR MAJOR CONTRIBUTIONS TOWARDS AGRICULTURE DEVELOPMENT IN KERALA

Table 16 unfolds one of the main objectives of the present research: to classify the different types of non-governmental agricultural extension sources according to their major contributions to agricultural development.

By direct enquiry with development departments, experts and other stakeholders in agriculture, networking and relying on secondary sources of data, and on the basis of pilot study, the various roles played by non-governmental extension agencies were identified. These roles were analyzed with special reference to their practicability and applicability in Kerala. Thus, five predominant roles were found being performed by the non-governmental extension agencies in Kerala (Fig. 3). They are:

1. **Advocacy:** Supporting and pleading for farmers' rights, causes and issues and building public support for such issues.
2. **Consultancy:** Project planning, implementation and evaluation for individual farmers or groups or organizations, which also includes information support.
3. **Infrastructure development:** Providing or arranging for facilities like transport, cold storage, store houses, machineries (rent and repair), processing and packaging.
4. **Input supply:** Seeds, seedlings, bio-control agents, fertilizers, pesticides and insecticides, herbicides, credit, labour and machinery.
5. **Marketing:** Advertising, promoting, procuring and, selling and buying of products/services.

For each role, one 'well-performing agency' with respect to that role was selected (Table 16).

Table 16. Classification of the types of non-governmental extension sources according to their major contributions towards agriculture development in Kerala

Sl. No.	Major contribution to agriculture development	Type	Agency selected for the study
1	Advocacy	Farmer organizations, NGOs, print media, electronic media	INFAM, Kanjirappalli, Kottayam District
2	Consultancy	Consultants/Firms, NGOs, private sector banks, agri-business firms mainly processing firms, progressive farmers, print media, electronic media	START, Mannuthy, Thrissur District
3	Infrastructure development	NGOs, private sector banks, farmer organizations, agri-business firms, mainly processing firms	ESAF, Mannuthy, Thrissur District
4	Input supply	NGOs, agri-business firms, input dealers, farmer organizations, private sector banks	AVARD, Chalakudy, Thrissur District
5	Marketing	NGOs, farmer organizations, agri-business firms, print media, electronic media	Sevashram, Angamaly, Ernakulam District

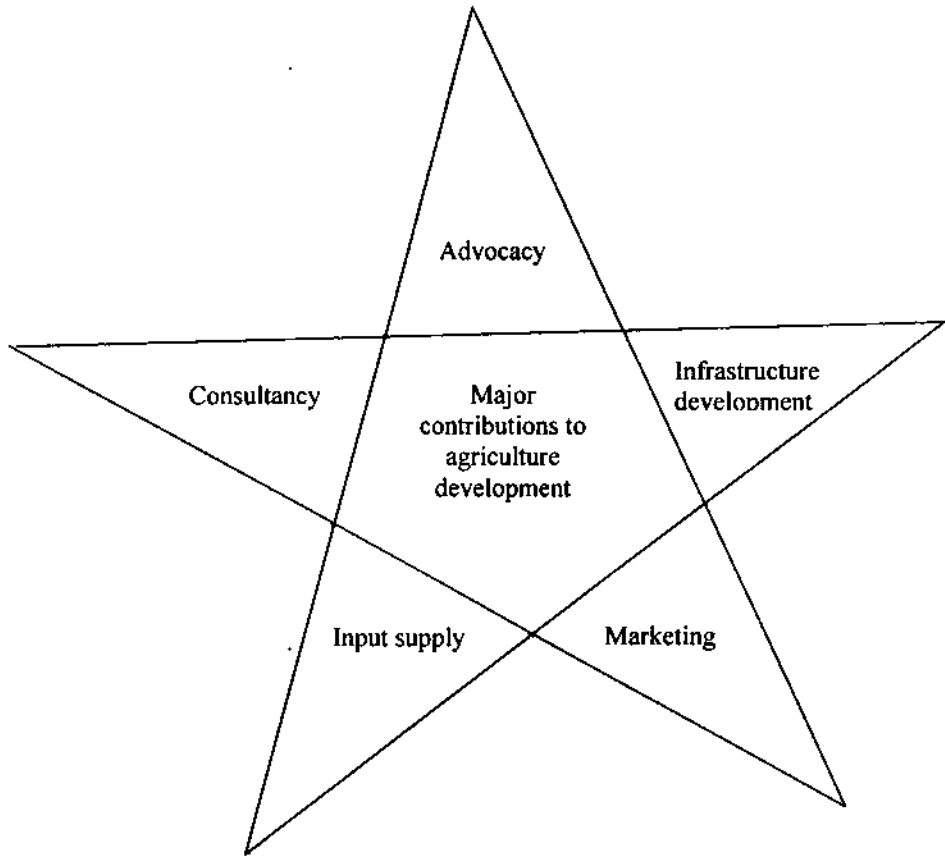


Fig. 3. Major contributions of non-governmental extension agencies to agriculture development in Kerala



Plate 3. The operational office of START at Nenmara



Plate 4. ESAF - A forum for social action



Plate 5. The main building of AVARD at Chalakudy



Plate 6. A front view of Sevashram headquarters at Angamaly

4.2.1 Advocacy

Non-governmental extension sources use different development approaches. They have successfully organized people to fight against injustice and exploitation. In the area of creating public opinion to tackle social problems and to bring about changes in the existing laws, voluntary organizations have much to be proud of (Philip, 1995).

Among the voluntary organizations, farmer organizations play a significant role in advocacy (Plate 7). They empower farmers to express demands. Role of farmer organizations is preparing the people for a change, which is basically an advocacy role viz., development education incorporating self-sustainable development philosophy, form public opinion about government policies or social issues, conscientise for environmental problem, adult literacy, nutrition, sanitation, health, appropriate technology and the like, thereby empowering the farmers to overcome psychological inhibitions and opposition of oppressors. Since the system is farmer-led, the initiative comes from farmers and hence they are more effective.

The print and audio-visual media gain popularity and attract the attention of the end users, when communications enlighten on the problems faced by the farmers and provide solutions to them (Plate 7). So they play the role of advocacy to some extent. The studies of Hyden (1983), Roling (1988), Chris and Nicola (1997), de Kool (2002), Hanyani-Mlambo (2002) and Mbozi (2002) are in support of the advocacy role of non-governmental extension agencies.

Voluntary Organizations (VOs) have to effectively play the advocacy role and make decisive policy interventions by mobilizing public opinion and popular support through imaginative and innovative programmes and projects and wise use of the media. Government may encourage the efforts of VOs in educating the beneficiaries/people regarding government policies, rules and regulations and their privileges and rights so that there can be better awakening among people.

4.2.2 Consultancy

In agriculture and veterinary fields, consultancy services are becoming popular and widely practiced. The individual or the company providing the technology is consulted for providing the extension/TOT package for establishing the in-house demonstrations or conducting on-farm trials scientifically (Plate 8). Technological credibility and mutuality help to establish such linkage.

The contribution of the consultants range from motivating producers to improve yields by using innovative technology; to working with farmers to understand the pressures they face in the local rural area, its environment and urban interests; to finding ways to satisfy consumer preferences; and to exploiting opportunities for new sources of on-farm and off-farm income. Consultancy increasingly delivers knowledge and information to farmers as agriculture's intellectual capital and that is central to the management of farmers (Slavik, 2003).

Now-a-days the daily newspapers, farm magazines and audio-visual media are reaching every nook and corner of rural areas. They are very useful and important sources for quick communication of technology to people in all areas. The dailies provide brief information and guidelines on agriculture and other related aspects through their weekly columns. The farm magazines provide detailed information on seasonal topics pertaining to agriculture, sericulture, dairy and livestock farming, poultry farming, fisheries, and such like every month. Private T.V. channels devote half an hour daily for agricultural programmes. They provide information on agriculture and allied matters, and highlight on various important current topics useful to the farmers.

Berdegue and Marchant (2002) reported on the agricultural advisory services provided by private consultancy firms in Chile, which included different types of technical and professional services like commercial, financial, farm management, post-harvest, value-addition and legal advice. Berdegue (1990), Bloome (1992), de Kool (2002), Chapman and Tripp (2003) and Pandya and Patel (2003) have mentioned about the consultancy role played by various non-governmental extension sources.

4.2.3 Infrastructure development

Dearth of proper infrastructure facilities is a major problem faced by farmers. Development of infrastructural support systems is the need of the hour if the masses are

to be assisted to make smooth adjustments with the fast changing scenario of the global village that is in the making. Since most of the farmers are having small and marginal land holdings, they are not able to set up facilities by their own and are forced to sell their produce at the existing rate, even though it is very low. Realizing this problem, non-governmental extension agencies now provide/arrange for infrastructural facilities like transport, storage house, cold storage, machinery (rent and repair), processing, value addition and packaging (Plate 9). The infrastructure development role of non-governmental extension agencies has been supported by Swanson *et al.* (1990), Saravanan and Resmy (2000), Feder *et al.* (2001), Berdegue and Marchant (2002), MANAGE (2002), Pandya and Patel (2002), Patel *et al.* (2003) and Jose (2004).

4.2.4 Input supply

Non-governmental extension system plays a crucial role in the dissemination of farm input technologies like pesticides, seeds, seedlings and grafts, fertilizers, farm machinery, labour, credit and veterinary services (Plate 10). The role of non-governmental extension agencies in the supply of input is supported by the studies of Schwartz (1994), Saravanan and Resmy (2000), Feder *et al.* (2001), Ghosh (2001), Alex *et al.* (2002b), Chapman and Tripp (2003), Pandya and Patel (2003), Patel *et al.* (2003) and Jose (2004).

4.2.5 Marketing

Marketing of food grains and commercial produce by the farmers is one of the weakest links in the production process. The farmer is neither getting the required input nor the remunerative price for the produce from the markets. The middlemen problem also exists. The helping hands of non-governmental extension at this juncture are of a great sort of relief for the farming community. The non-governmental extension agencies provide market support by procuring the farmers' produce or extending facilities for marketing thereby minimizing the middle men problem to a great extent (Plate 11). Swanson *et al.* (1990), Schwartz (1994), Saravanan and Resmy (2000), Hanyani-Mlambo (2002), Chapman and Tripp (2003), Pandya and Patel (2003), Patel *et al.* (2003) and Jose (2004) have mentioned the marketing role of non-governmental extension sources.

Print and audio-visual media give information on market rates of all important produces as well as make people aware of new products (chemicals, fertilizers, new

varieties and the like) in the market through advertisement, thereby promoting the sales/marketing. Soam (2001) indicated that institutional support like marketing could be very well handled by the private extension agencies.

From Table 16, it can be observed that the NGOs are coming in all classes and hence it can be inferred that NGOs perform all the five roles very actively.

NGOs are the non-profit organizations primarily set up to reflect the needs and requirements of the community they serve. They play an intermediary role between the people and the government and try to promote the welfare of a certain group of people.

The growth of NGOs has assumed gigantic proportions all over the world. Their importance in the development panorama is crucial today. The preference shown by many development countries to NGOs for developmental activities amply testifies this. Over the years, the role of NGOs in development has been very significant, particularly in the developing countries. In Kerala, they are found in almost all areas of human activity. NGOs are expected to play a critical role in all conceivable aspects of development, particularly agricultural development. People as well as policy makers alike attribute innumerable roles to NGOs and presume that NGO activity is a remedy to all problems in the society. They have taken up an array of roles: activists, environmental protectionists, strong advocates of human rights, consumer protectionists and the like. They take keen interest in providing income generating activities mainly through agriculture and allied activities. They promote agriculture by making people available all facilities like infrastructure, marketing, consultancy, input etc. This finding is in match with the finding of Suresh (1998) that majority of the NGOs provided multiple services and performed various roles simultaneously. This result has also got the support of findings of Indu (1997).

In the sphere of rural development in general and agriculture development in particular, the NGOs should be treated as an important part of the overall transfer of technology mechanism. They should be linked with existing research and extension system. Every effort should be made to enlist their co-operation in the agricultural development programmes by involving them directly in the transfer of technology programmes.

നെൽകർഷകരോടുള്ള അവഗണന അവസാനിപ്പിക്കണം: ഇൻഫാം

MALAYALA
MANORAMA,
MAY 11, 2005

കൊച്ചി: സംസ്ഥാനത്തെ നെൽ കർഷകരെ അവഗണിക്കുന്ന സർക്കാർ നയം തിരുത്തണമെന്ന് ഇൻഫാം ആവശ്യപ്പെട്ടു.
വിളവെടുപ്പ് കഴിഞ്ഞ് താസൂത്രണ ഇടയിൽ, നെല്ലി സംഭരിക്കുന്നതിനുള്ള നടപടികൾ എടുക്കേണ്ടിയിട്ടില്ല.

കിരോയ്ക്ക് 7.50 രൂപയ്ക്കു നെല്ലി സംഭരിച്ച് എഫ്.സി.ആക്കു നൽകിയാൽ എഫ്.സി.ആ, 5.00 രൂപ വില നൽകും.
ബാക്കിയുള്ള രണ്ടു രൂപ സർക്കാർ നൽകണം. ഇങ്ങനെ കിരോയ്ക്ക് കേവലം രണ്ടു രൂപ വരി

കും. 40,000 ഒണ്ണിന് എട്ടു കൊടി രൂപ മുടക്കാൻ സർക്കാർ തയ്യാറായാൽ നെൽകർഷകരുടെ പ്രശ്നങ്ങൾ പരിഹരിക്കപ്പെടുമെന്ന് ഇൻഫാം ഭാരതീയ ശ്രസ്തി ബഹു. എ.സി. മേജർജി പ്രസ്താവനയിൽ പറഞ്ഞു.

One more suicide in Wayanad; Infam pickets Collectorate

THE HINDU, JULY 23, 2005

By Our Staff Reporter

'Suicide march'

KALPETTA, JULY 22. One more debt-ridden farmer committed suicide by hanging at Attinilam in Meenangandi grama panchayat in Wayanad district today.

Erayakkattukuzhi Anandan (60), hailing from Mallampadi, is the eighth farmer to commit suicide this month on account of the inability to repay agricultural loans.

Apart from the 25 cents of land in his possession, he had taken land on lease at various places to cultivate crops. He had taken loans from banks and private moneylenders. He is survived by wife Annamma and two children.

According to official sources, 40 farmers had committed suicide in Wayanad this year following severe drought and debts. But various farmers' organisations have put the number at 80.

Meanwhile, hundreds of farmers under the auspices of the Indian Farmers Movement (Infam) picketed the Collectorate here today to highlight the farmers' plight. A 'suicide march' was taken out in the town on the occasion. As a symbolic protest, 79 farmers were laid as dead bodies and their funeral rites performed. Nearly 5,000 people participated in the picketing.

The Infam leaders, including Fr. Robin Vadakkumcherry, demanded the resignation of the Cabinet sub-committee comprising the Revenue Minister, K.M. Mani, the Agriculture Minister, K.R. Gouri, and the Finance Minister, K. Sankaranarayan, for its failure to address the problems of the debt-ridden farmers in the district. The panel had visited Wayanad last week to study the situation.

Fr. Vadakkumcherry told *The Hindu* that the three UDF MLAs from Wayanad, K.K. Ramachandran Master, N.D. Appachan and Radha Raghavan, would not be allowed to enter Wayanad. They had not seriously taken up the cause of the farmers in the Assembly.

Ministers leave for Delhi

Our Special Correspondent writes from Thiruvananthapuram:

A three-member Ministerial team from the State left for New Delhi this afternoon, armed with a memorandum seeking Rs. 3,565 crores as Central assistance to help the State's farm sector tide over its present difficulties. The team consists of Mr. Mani, Ms. Gouri and Mr. Sankaranarayanan.

Before boarding the flight, Mr. Mani said the State Government would be preparing a comprehensive package to revive the farm sector.

'Allow paddy farmers to grow any crop'

THE NEW INDIAN EXPRESS, JULY 24, 2005

EXPRESS NEWS SERVICE

Thrissur, July 23: Paddy farmers in the state should be permitted to cultivate the crops they prefer in the land owned by them, Fr Mathew Vadakkemury, national chairman of Indian Farmers Movement (INFAM), said on Saturday.

He said at a press conference here that the government should not impose restrictions on farmers saying that only a certain crop should be cultivated. Farmers should be allowed to cultivate the crops they prefer as paddy cultivation is scarcely generating gains.

It has become a question of survival for the agricultural communities, he said.

Farmers should also be permitted to choose their

Banana fest in New Delhi

Thrissur, July 23: INFAM will probe the possibilities of exporting banana-based products, Fr Vadakkemury has said. As part of this, a 100 farmers from Kerala will attend a banana fest, which will be held at Pragathi Maidan in New Delhi from August 4 to 6. ENS

own labourers. INFAM will protest against any official move to make it mandatory that only paddy should be cultivated in paddy fields.

"How can they survive. The labour costs are also oppressive. In Kuttanad, the labour charges for

moving a sack of rice from the field to the boat is Rs 25, and for applying fertilisers it is Rs 100," Vadakkemury said.

INFAM's stand comes at a time when organisations such as the CPM-backed Kerala State Karshaka Thozhilali Union have launched a state-wide agitation for the retention of paddy fields for paddy cultivation.

Meanwhile, INFAM is also organising a paddy farmers' protection meet in Thrissur on Monday with the aim to generate awareness on protecting paddy cultivation.

The meet will be held at the Animation Centre near St Thomas College.

Thrissur Archdiocese Auxiliary Bishop Mar Andrews Thazhath will inaugurate the meet.

Plate 7. Advocacy – INFAM standing up for farmers' rights, causes and issues



Plate 8. Consultancy - Rain water harvesting in consultation with START



Plate 9. Infrastructure development - A beneficiary with the grinder provided by ESAF



Plate 10. Input supply - Cashew grafts ready for sale at AVARD



Plate 11. Marketing - Sales counter at Sevashram

- 4.3 Mode of operation of the selected agencies highlighting geographical coverage, activity focus, funding sources, approaches and methods followed, organizational set up, staffing details, linkage with various agencies, nature of clientele, pattern of charging fee and problems faced by the agencies

The selected agencies (Table 16) were studied for their profile characteristics.

Table 17. Mode of operation of the selected agencies highlighting geographical coverage, activity focus, funding sources, approaches and methods followed, organizational set up, staffing details, linkage with various agencies, nature of clientele, pattern of charging fee and problems faced by the agencies

Sl. No.	Profile characteristics	Major contributions to agriculture development				
		Advocacy	Consultancy	Infrastructure development	Input supply	Marketing
1	Name	INFAM (Indian Farmers' Movement)	START (Society for Transfer of Agricultural and Rural Technology)	ESAF (Evangelical Social Action Forum)	AVARD (Apex Voluntary Agency for Rural Development)	Sevashram
2	Address	Central office, Changambuzha Nagar P.O., Kalamassery, Ernakulam -682033 Phone: 0484-2541288 E-mail: infam@sify.com	TC-13/725, Gandhinagar, Mannuthy P.O., Thrissur -680651 Phone: 0487-2374186 E-mail: start_agro@rediffmail.com	Post Box No.12, II floor, Hephzibah complex, Mannuthy P.O., Thrissur-680651 Phone: 0487-2371472, 2373813 E-mail: esaf@sanchanet.in Website: www.esafindia.org	AVARD Bhavan, Chalakudy P.O., Thrissur-680307 Phone: 0480-2701964, 2707964 E-mail: avar@vsnl.com	Mangattukara, Puliyanam P.O., Angamaly, Ernakulam-683522 Phone: 0484-2457133, 2457784, 2454782 E-mail: sevashram@sevashramindia.org Website: sevashram@sevashram.india.org
3	Year of establishment	2000	1995	1992	1986	1995
4	Registration No.	K 323/2000	490/1995	TCR 109/92	76/86	ER 131/95
5	Ownership pattern	Registered society	Registered society	Registered society	Registered society	Registered society
6	Mission	Welfare of farmers	Sustainable rural development	Sustainable holistic transformation of the poor and the marginalized for a just and fair society with a motto to alleviate poverty	Integrated development of rural areas in the entire India and realization of a just society based on love and fraternity	Building up a community of brotherhood based on his values through the holistic development of all those whom it is pledged to serve

7	Objectives	<ol style="list-style-type: none"> 1. To organize the farmers irrespective of caste, religion, political affiliation and to defend the interests of farmers 2. To educate the people to lead simple life by reducing their needs/expenses 3. To encourage the INFAM units to sell farmers' products and to establish the credit societies/ groups 4. To collect regional/ indigenous seed species and folklore of farming and sharing of these among the farmers 	<ol style="list-style-type: none"> 1. To provide agricultural engineering extension services 2. To focus on agricultural research 3. To formulate and execute projects 4. To act as facilitator of central and state government projects 	<ol style="list-style-type: none"> 1. To develop opportunities for self-employment 2. To encourage economic activities such as credit, thrift and use of common assets 3. To save people from exploitation 4. To bring the economically and socially backward people to the fore front 	<ol style="list-style-type: none"> 1. To strengthen the local institutes for their sustainability 2. To empower poor through collaboration with local self governments, other NGOs, civil societies etc. 3. To generate creative collaboration with development actors for initiating development interventions in the most deserving areas and sectors 4. To identify the most deserving/ marginalized areas/ sectors and undertake appropriate development activities 	<ol style="list-style-type: none"> 1. To evolve an alternate 'SANYASA', rooted in Indian culture by a group of people committed fully to the service of fellow human beings, belonging to different religions, sexes, walks of life and regions 2. To empower the marginalized unorganized masses to become aware of their rights and duties as citizens and contribute their share towards the building up of a just society drawing inspiration from the 'Grama Swaraj' of Gandhiji's dreams and the 'Kshema Rashtra' envisaged in the constitution of India, tapping locally available resources to the maximum 3. To engage in activities for the integrated human development (social, cultural, moral and economic) of the marginalized masses 4. To evolve a code of conduct for an alternate 'sanyasa' life-style, actualizing the ideal of a SUSTAINABLE LIFE COMMUNITY at the micro level so that it could be projected for emulation at the macro levels, in larger communities and societies, leading gradually to the formation of a number of such ashrams and eventually to the emergence of a truly, autonomous, secular and just polity
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		<p>5. To educate the youth about the importance of agriculture and to remind them the fact that without which the existence of mankind is impossible</p> <p>6. To popularize multi-crop cultivation with the help of governmental and non-governmental agencies</p> <p>7. To popularize natural food systems, traditional medicinal system, farming of medicinal herbs etc.</p> <p>8. To empower women through the formation of SHGs</p> <p>9. To uplift and foster agriculture related firms and impart necessary training</p>		<p>5. To inculcate equality and mutual trust</p>	<p>5. To undertake Action Research on selected developmental themes and issues</p> <p>6. To build up capacity of the AVARD team to perform the role of facilitators and researchers</p> <p>7. To promote decentralization process for good governance and local development</p> <p>8. To promote the 'AVARD' as a training centre/ resource centre</p>	<p>5. To assist the ordinary members and their families to build up and sustain an ideal 'sustainable life community' through developing their own potentialities, engaging themselves in agriculture and allied activities, and establishing relationships basal on love and justice with others</p> <p>6. To develop a farm having agriculture and allied activities conducted, using eco-friendly and sustainable methods as far as possible, at the premises of the sustainable life community itself, so that it could be used as a demonstration plot for establishing the feasibility of replicating such practices in other places, adapting them, at the same time, to suit to the tastes of those who dare to venture into them</p> <p>7. To inspire and motivate people belonging to the target group regardless of caste, creed and political affiliation to organize informal people's Micro Credit Co-operatives (MCC)</p> <p>8. To build up a net-work of MCCs that have a track record of dedicated service, rendered for the empowerment of the marginalized</p> <p>9. To enable the affiliated MCCs to tap locally available resources like credit from NABARD, SIDBI and RMK, loans from khadi commission and Board, grant-in-aid from CAPART, CSWB, DST, social department etc.</p>
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		<p>10. To acquire national and international patents for crops, seeds, medicinal herbs and its products</p> <p>11. To impact awareness about the scarcity of water and invention of new techniques to tackle the problem of water crisis</p> <p>12. To give necessary encouragement to farmers to boost the agricultural production</p> <p>13. To take necessary steps to get the products sold at just price</p> <p>14. To encourage biofarming and export of those products</p> <p>15. To establish networking of the markets to sell out the agricultural products</p> <p>16. To make the farmers aware of modern agricultural techniques</p>				<p>10. To conduct training programmes periodically for upgrading the skills of the office bearers of the affiliated MCCs, especially in the areas of leadership, house keeping, alternate health care systems, co-operative micro enterprises, eco-friendly farming, Panchayathi Raj Institutions, HRD Programmes etc.</p>
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		<p>17. To establish research centres for agricultural industrial development and disseminate the new knowledge among the farmers</p> <p>18. To give short term loans to the farmers who have become bankrupts</p> <p>19. To draw the attention of both the State and Central Governments to anti-farmers' policies and to pressurize them to amend those policies</p> <p>20. To conduct exhibitions, seminars, discussions etc. related to agriculture in and outside the country</p>				
8	Thrust/Focus areas	<ol style="list-style-type: none"> 1. Defend the interest of farmers 2. Production and Marketing 3. Education, Research and Training 4. Organic farming 	<ol style="list-style-type: none"> 1. Natural Resource Management 2. Watershed management 3. Water supply and Sanitation 4. Soil and Water Quality Assessment 5. Infrastructure development 	<ol style="list-style-type: none"> 1. Human Resource Development 2. Micro-enterprise Development 3. Community Health and Rehabilitation 4. Community Development 5. Natural Resource Management 6. Livelihood promotion 	<ol style="list-style-type: none"> 1. Employment, Marketing and Exhibition 2. Sanitation, Housing and Infrastructure Development 3. Village animation 4. HRD 5. Socio-Economic Development 6. Health and Environment 7. Research, Training and Documentation 	<ol style="list-style-type: none"> 1. HRD through skill development and conscience formation 2. NRM 3. Homestead (Micro) Self-employment 4. Sustainable Life Community 5. Micro Credit Co-operatives (MCCs) 6. Training 7. Development through partnerships between agency and target group 8. Advocacy

9	Geographical coverage	All Kerala	Kollam, Palakkad and Thrissur districts	Kerala - Thrissur, Palakkad, Idukki, Kottayam, Ernakulam and Kannur districts. Tamil Nadu - Kanyakumari Gujarat - Kutch Chattisgarh - Kanker, Mahasammund Maharashtra - Nagpur and Kachauvali	Six panchayats (Kodassery, Mattathur, Pariyaram, Athirappilly, Varantharappilly, Kodakara), Chalakudy Municipality and other project-based places	Thrissur, Ernakulam, Kottayam and Alappuzha districts
10	Activity focus	Staging strikes, agitations and suitable forms of protests against violation of farmers' rights, interests and for supporting their legitimate causes, e.g., 1. Launched a movement to boycott the pampolen and to popularize coconut oil for the preparation of foodstuffs. 2. Launched a march ('Karshaka Munnetta Yatra') from north of Kerala to south in response to the Government's attitude towards the subsidy issue on export of rubber 3. Joint farmer's movement across the country against the impact of the General Agreement on Tariff and Trade (GATT) and globalization 4. Urged the Government to take immediate steps to restrict the import of black pepper from Sri Lanka 5. Indefinite hunger strike	1. Watershed Development Programme through people participation 2. Agro-mechanical Technology for paddy cultivation in Kerala 3. Micro-level planning for sustainable management of land and water 4. Effect of Ground Water Table Fluctuation on Salt Water Intrusion along the Coastal belt of Malappuram District 5. Western Ghat Development Programme 6. Integrated Watershed Development Programme 7. Community Rain Water Harvesting 8. Model Watershed Development Programme under Rashtriya Samvikas Yojana, Government of India 9. Rural Water Supply and Sanitation Programme	I. Micro-enterprise Development Activities 1. Swasraya Sangam (Self Help Groups) 2. Micro Finance Programme (credit and savings) 3. Business/ Enterprise Development Services (business training, consultation, marketing and technical assistance) 4. Insurance 5. Production and Marketing 6. Design development 7. Training (poultry rearing, nursery field, micro credit, handicrafts, umbrella making, fruit processing, food processing, mushroom cultivation etc.) II. Natural Resource Management 1. Integrated Development Programme 2. Rural water and	I. Socio-economic Development Programmes 1. Agricultural Programmes a. Demonstration farms b. Irrigation projects c. Mulberry cultivation and sericulture d. Piggery scheme e. Calf Rearing Scheme f. Goat Rearing Scheme g. Dairy Scheme h. Poultry Scheme i. Apiculture j. Silk Reeling Training k. Food Processing Programme l. Kitchen and Herbal Garden m. Supply of planting materials n. Contour bunding o. Integrated Rural Poultry Project p. Cage system for Egg Production q. Horticulture and annual crops r. Participatory Technology Development (PTD) Programme 2. Save-a-Family Scheme 3. Small Savings Scheme 4. Credit Union Scheme 5. Thrift Incentive Scheme 6. Farmer's co-operatives 7. Lab-land Programme	1. Formation and promotion of Self Help Groups - 'Swadhyaya Sangams' 2. Production and distribution of a) home remedies b) honey c) planting materials d) quality seeds and seedlings e) pure, natural and fresh coconut oil, extracted from drier - dried copra, in bottles of 500 & 1000 ml f) goats, cows and month-old chicks g) home made organic products and organic manures and pest control devices h) squash, jam etc. 3. Vermicomposting 4. Preparation and marketing of low-cost nutritional diet mix called 'ojasyam' 5. Soap-making 6. Management of dairy units 7. Bee-hives 8. Micro milk collection and distribution centres 9. Kera kendras: 1) To assist marginalized and small farmers to draw maximum benefit from various developmental projects, launched from time to time by the Central and State Governments, various Commodity

	<p>in front of the Wyanad Collectorate on its demand for more relief measures for the district's drought devastated farmers</p> <p>6. Launched month-long caravan, 'Bandi Yatra' (Bullock Cart Rally) to sensitise the farmers of all the states of India on issues connected with the dumping of cheap inputs, introduction of GMOs and erosion of Land Reforms and launched Direct Action Programmes relating to globalization issues</p> <p>7. Launched agitation against the steps taken by State Government for fixing the land value and urged to formulate new methods for fixing it in a manner acceptable to the people</p> <p>8. Memorandum submitted to bring the Government's notice in reworking the Price Stabilization Fund Scheme after consultations with farmers' organizations so as to make it more farmer friendly</p> <p>9. Legislation to ban banana cultivation in paddy fields, formation of people's committees</p>	<p>10. Preparation of Micro-level Plans</p> <p>11. Watershed Development Programme under Hariyali and NWDPPRA</p> <p>12. Jananidhi</p> <p>13. Training (processing, tailoring, computer literacy, ward level training to local people, political leaders, farmers and other people representatives)</p>	<p>sanitation programme</p> <p>3. Community mobilization</p> <p>4. Medicinal plants conservation, cultivation and processing</p> <p>5. Environment protection</p> <p>III. Advocacy and Networking</p> <p>1) Seminars</p> <p>2) Public meetings</p> <p>3) Workshops</p> <p>4) Net working with like minded organizations</p> <p>5) Councils</p> <p>6) Small Group Discussions</p> <p>IV. Human Resource Development Activities</p> <p>1) Bethel Institute of Management and Entrepreneurship Development</p> <p>2) Training unit</p> <p>3) Women Development Scheme</p> <p>V. Disaster Management</p> <p>1) Relief Programmes for earthquakes, drought etc.</p> <p>2) Rehabilitation Programmes</p> <p>3) Livelihood promotion</p> <p>4) Providing shelter</p>	<p>II. Environmental programmes</p> <p>1) Malayora Samagra Vikasanam, Mukundapuram</p> <p>2) Prakriti Vibhava Paripalanam, Mukundapuram</p> <p>III. Social and Infrastructure Development Measures</p> <p>1) Construction of irrigation tanks</p> <p>2) Construction of lift irrigation</p> <p>3) Land for the landless</p> <p>4) Village Development</p> <p>a. Common well</p> <p>b. Bore well</p> <p>5) Sustainable Development of Kanjirappilly-Konnakuzhi Thodu Watershed</p> <p>6. Western Ghat Watershed Development Project</p> <p>IV. Vocational Training Programme</p> <p>1. Mulberry cultivation and sericulture</p> <p>2. Apiculture</p> <p>3. Silk reeling</p> <p>4. Food processing</p> <p>5. Bamboo mat weaving</p> <p>V. Human Resource Development Programmes</p> <p>1. Mahila Ganams</p> <p>2. Project for the formation and linkage of SHGs</p> <p>3. Mass media Communication Programme</p> <p>VI. Establishments</p> <p>1. Sericulture training centre</p> <p>2. Silkworm rearing house</p> <p>3. Silk reeling training centre</p> <p>4. AVARD certified agriculture nursery</p> <p>5. Honey processing unit</p>	<p>Development Boards, KAU, VFPC-K, NABARD, other financial institutions etc.</p> <p>2) To enable them to adopt organic farming methods, mixed, inter and multi-layer cropping patterns, integrated pest management systems etc.</p> <p>10. 'Swasraya Grams' promoted by Sevashram serve as hub for the coconut based activities like husk defibring, coir making, pith processing, geo-textile weaving, copra drying, oil extracting, developing value added coconut related products line</p> <p>11. Model farms for vanilla cultivation.</p> <p>12. Soil testing laboratories</p> <p>13. Trichoderma and Pseudomonas production units</p> <p>14. Kerasyam Scheme - giving coconut dryers to farmers through subsidies.</p> <p>15. Micro credit mobilization through SHGs.</p> <p>16. Watershed Development Project.</p> <p>17. Cow, goat and fish rearing</p> <p>18. 'Grahaiswarya' Programme</p> <ul style="list-style-type: none"> - waste water recycling - kitchen garden - azolla cultivation - poultry keeping - Swajaldhara etc. <p>19. Training</p> <p>20. Awareness Programmes</p> <p>21. Publication - eight page ¼ size magazine 'Sevashram' as a study material for the SHGs.</p>	
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	<p>to fight forest fires and procurement of coffee and pepper after fixing a floor price for these crops to save drought ravaged Wyanad</p> <p>10. Registered a company 'Infarm Agro Movement' with the aim of achieving farmers control over the determination of price of the agricultural products.</p> <p>11. Procurement and marketing of agricultural produce by forming crop specific societies of members (e.g. Infam Rice, INFAM Coffee and Coffee Grower's Societies, Nutmeg Grower's Society and Nutmeg Processing Units, Banana Processing Factory, INFAM Coconut Complex Company and Coconut Collection Depot, Farmer's shops/stalls for sale of rice, coconut oil, coffee, tea, banana, vegetables, honey, ghee, pickles, squash, bakery items, fodder, soaps etc.)</p> <p>12. Research and Training (e.g., Rubber U.D. tapping, mixed farming</p>			<p>6. Egger poultry rearing unit 7. Apex spices oil industry 8. Apex hatchery unit</p>	
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		<p>and model farming, biogas plant and biofarming, chicken farm research and collectivity etc.)</p> <p>13. District level legal cells to assist farmers who are in distress.</p> <p>14. INFAM products - coconut oil, coconut cake, desiccated coconut, INFAM rice, INFAM soap (Hello Beauty), INFAM coffee, INFAM tea, coconut milk, coconut cream and milk powder</p> <p>15. INFAM Publications</p> <p>a) Guidelines for Formation of INFAM Unit</p> <p>b) Farmers, Arise and Organise</p> <p>c) U.D. Tapping</p> <p>d) A family can Live with 20 cents of Land</p> <p>e) INFAM Self-sufficient Collectivity</p> <p>f) A Bank for Us</p> <p>g) One Plant Tapioca 200kg</p> <p>h) Chicken Farm in New Style</p> <p>i) Fish Farming</p> <p>j) Guide to Build Ferocement Tank</p>				
11	Funding sources	Operating through membership fee (Rs.50/-) and annual subscription fee (Rs.25/-), Government grants and subsidies	<ol style="list-style-type: none"> 1. Centre for Development Studies, Trivandrum 2. Netherland Government 3. Western Ghat Cell 4. Kerala Government 5. Government of India 	<ol style="list-style-type: none"> 1. Public and Private Sector Banks - NABARD, State Bank of Travancore, State Bank of India, Bank of Baroda, Small 	<ol style="list-style-type: none"> 1) Karl Kubel Stiftung, Germany 2) SDC, CapDeck 3) Inter Co-operation, Switzerland 4) S.L.F., Netherlands 5) Andheri Hilfe, West Germany 	<ol style="list-style-type: none"> 1) Public and Private Sector banks - State Bank of Travancore, State Bank of India, NABARD, Union Bank, Corporation Bank, Canara Bank, Dhanalakshmi Bank, etc. 2) CAPART, New Delhi

				<p>Industries Development Bank of India, Canara Bank etc.</p> <p>2. Geneva Global</p> <p>3. Path Canada</p> <p>4. Central Social Welfare Board, New Delhi</p>	<p>6) MIVA, Netherlands</p> <p>7) St. Francis Xavier Church, U.S.A.</p> <p>8) Kindermisison Work, Germany</p> <p>9) Mr. Tom Watkins, U.S.A.</p> <p>10) Mrs. & Mr. Huns Dictritt, Germany</p> <p>11) Central Social Welfare Board, New Delhi</p> <p>12) Department of Science and Technology, Government of India</p> <p>13) Central Silk Research and Training Institute, Bangalore</p> <p>14) Central Silk Board, Bangalore</p> <p>15) Ministry of HRD, New Delhi</p> <p>16) CAPART, New Delhi</p> <p>17) Caritas India, New Delhi</p> <p>18) Save-a-Family Plan, India</p> <p>19) CHAI, Secunderbad</p> <p>20) Indo-German Social Service Society, New Delhi</p> <p>21) Kerala Khadi and Village Industries Board</p> <p>22) National Sericulture Project, Palakkad</p> <p>23) NABARD, Trivandrum</p> <p>24) Tribal Development Department, Government of Kerala</p> <p>25) KRWSA, Trivandrum</p> <p>26) Western Ghat Cell, Trivandrum</p> <p>27) Kerala State Social Welfare Advisory Board, Trivandrum</p> <p>28) N.E.S. Blocks, Chalakudy and Kodakara</p> <p>29) Spices Board, Ernakulam</p>	<p>3) Subsidies given from Coconut Development Board, Spice Board and Coir Board</p>
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					30) Department of Animal Husbandry 31) KAU 32) Vanitha Polytechnic, Nedupuzha 33) District Panchayat, Thrissur 34) Yuva Parivarthanam, Emakulam 35) Social Action Forum, Irinjalakuda 36) Mercy Trust, Irinjalakuda	
12	Approach(s) followed for the implementation of activities	<ul style="list-style-type: none"> Participatory approach Organizing SHGs 	Participatory approach through SHGs/ community organisations	Participatory community based approach through promotion of SHGs	<ul style="list-style-type: none"> Participatory approach through promotion of people's organizations like Desom Development Societies, Mahila Samajams, Youth Clubs, Children's Club, Credit Unions, Mahila Ganams etc. Watershed based approach 	Participatory approach through formation of SHGs and Kerakendras
13	Methods adopted for the implementation of activities	Dharna, rallies, satyagraha, exhibitions, public meetings, conducting press meets, fairs, campaigns, trainings, workshops, seminars, publications etc.	Participatory Rural Appraisal (PRA), training etc.	Farm and home visits, motivational seminars, trainings, awareness classes, demonstration, exposure visits, campaigns, mass meetings, exhibitions etc.	Stakeholder analysis through PRA techniques, Action Research and Experimental Research, farm and home visit, farmer's call, demonstrations, group and mass meetings, small group training, awareness classes, study tour, exhibitions, skit, role plays, notice board etc.	Farmer's call, farm and home visit, meetings, seminars, classes, training, talent competitions, demonstrations, exhibitions, publication etc.
14	Organization-al set up	Managing committee ↓ General Assembly (Central Council) ↓ Regional Committee ↓ District Committee ↓ Panchayat Committee	Executive committee (11 members) ↓ President ↓ Secretary ↓ Vice-President ↓ Joint Secretary	General Body (45) ↓ Board of Directors (9) ↓ Executive Director ↓ Directors (Operations, Programme, Support services, North zone)	Board of Trustees Board of Management Board of Directors Executive Committee ↓ Executive Director ↓ Core Team Project Directors, Project Officers, Programme Directors,	Executive Committee ↓ President, Secretary, Treasurer ↓ Office Staff ↓ Field staff

		Ward Committee	<p>Treasurer ↓ General Body (42)</p>	<p>Assistant General Manager ↓ Departments (5) [Business Development Services, NRM, Sustainable Health, HRM, Advocacy and Networking and Supportive Departments (Finance and Administration, Vigilance and Audit)] ↓ Senior Managers ↓ Project Managers ↓ Area Managers ↓ Branch Managers ↓ Development Officers (Field staff) ↓ SHGs (President, Secretary, Treasurer and other members)</p>	<p>Accountants, Community Development Organizers ↓ Staff Promoters, office staff, field staff, organizers</p> <p>Departments</p> <p>Employment, Marketing and Exhibition; Sanitation, Housing and Infrastructure; Village animation; HRD; Socio-economic Development; Health and Environment; and, Research, Training and Documentation</p>	<p>SHGs President, Secretary, Treasurer and other members</p>
15	Staffing pattern	<p>Managing committee</p> <p>Chairman and Managing Trustee (1) ↓ General Secretary (1) ↓ Vice-Chairman (1) ↓ Secretaries (2) ↓ Treasurer (1)</p>	<p>Project</p> <p>Team leader (1) ↓ Senior Engineer (1) ↓ Accountant (1) ↓ Junior Engineers (4-5)</p>	<p>Office Staff - 40 Field staff - 60</p>	<p>1) Office staff - 9 [Administrator (1), Chief Accountant (1), Accountants (2), Cashier (2), Computer Operator (1), Receptionist (1), Attender (1)] 2. Field staff - 25 (Professional staff with post graduate/graduate degrees in Social Work, Agriculture, Engineering etc.), Medical Officer (1), Nurses (2),</p>	<p>1) Office staff - 9 [Administrator (Nirvahakan), Accountant, Office Assistant, Accounting, Computer and Clerical personnel, Trainers (Parisheelakar), Chief Coordinator ('Karthavyan'), Technician ('Soothradharan')] 2) Field staff - 30 [Co-ordinator ('Sangadakas'), Organizers ('Sevikas' and 'Sevakans'), Vehicle operators, Messengers, Protectors</p>

		<p>Central Council Founder Trustees (4) Elected Trustees (2) Nominated Trustees (1)</p> <p>↓</p> <p>Committees (Regional, District, Panchayat and Ward)</p> <p>President, Secretary, Treasurer and other Committee members</p>	<p>Community Development Supervisor (2)</p> <p>↓</p> <p>Community Facilitators (7-8)</p> <p>↓</p> <p>Beneficiary Groups (Samithies) President, Secretary, treasurer and other samithy members (10-15)</p>		<p>Pharmacist (1), Lab Technician (1), Counsellors(2) Field staff are mostly temporarily placed based on program/project.</p>	<p>('Samrakshakas'), House keepers, Home nurses ('Athura Priyas'), Manufacturers, Distributors and other associates] 3. Other workers and assistants - 12</p>
16	Tenure/Job condition of employees	Elected/Nominated	<p>Recruitment - advertisement and local contacts Selection - based on interview. Project staff except team leader, senior engineers and accountant, all are having temporary posts.</p>	<p>Recruitment - advertisement Selection - aptitude test, skill test (Accountant), interview and group discussion</p>	<p>Recruitment - call for through publications Selection - aptitude test, interview and group discussion</p>	<p>Gate hiring i.e., people who come forward voluntarily.</p>
17	Emolument of employees	-	Consolidated	<p>Pay scale - office staff Consolidated - field staff (based on project)</p>	<p>Pay scale, consolidated pay for some, based on programmes</p>	<p>Office staff - consolidated Field staff - commission basis</p>
18	Scope for promotion / criteria or promotion	-	-	<p>Number of completed years, target achievement, performance and qualification</p>	<p>Number of completed years, performance and qualification</p>	-
19	Additional incentives, if any	-	-	<p>Gifts during special occasions (Onam, Christmas etc.), commissions (field staff), special allowance (for staff in tribal, hilly areas etc.), vehicle provided,</p>	<p>One month salary given during Onam and Christmas months as bonus over the regular pay, health insurance for staff, vehicles provided to field staff, Provident Fund, gratuity, study tour, gift presented during</p>	<p>Medicare insurance, vehicle facilities provided for field staff, bonus given twice, yearly.</p>

				accident insurance, exposure visits and training given for efficient staff	Christmas, either 12 days leave in addition to sick and casual leave (12 days) or 2 months salary given over the regular salary for not taking the privilege leave of 12 days.	
20	Linkage with various agencies (in order of the extent of linkage)	1. Central and State Governments 2. Various political parties 3. Foreign Embassies	1. Central and State Governments 2. KAU 3. Central Soil Water Conservation, Kozhikode 4. Soil Conservation Research Centre, Ooty 5. Planning Board 6. Foreign Government agencies	1. Government Departments 2. SADHAN - New Delhi, INDNET, Trichy, ALAMED, New Delhi, Micro Credit Summit, Washington, CMED Network, Philippines, Grameen Global Network, Dhaka, EFFICOR, New Delhi, FWWB, Ahmedabad 3. KAU, Banks 4. National Minorities Development Corporation 5. Fair Trade Organization	1. Foreign funding agencies 2. Central Social Welfare Board, New Delhi 3. Government Departments - Tribal Development and Agriculture Departments 4. Western Ghat Cell 5. Panchayat Raj Institutions 6. KAU, Krishibhavan, Agronomic Research Station, Chalakudy 7. Bio-control Lab, Mannuthy 8. NGOs Organization (Karna Inter-corporation Project), ICCOA	1. NABARD and other banks 2. Spices Board, Coconut Development Board and Coir Board 3. Government Departments 4. Panchayat 5. KAU 6. VFPC-K 7. CAPART 8. District Industries Centre 9. BAMCO
21	No. of clients in Agricultural development programmes during the last 3 years	40,000	3,500	10,000	10,000	5,000
22	Nature of clientele	Membership is given to any individual who has completed minimum age of 18 and who is engaged in agriculture, animal husbandry or agriculture related activities with atleast 25 cents of land, irrespective of gender.	Watershed Development Projects - People coming within the natural boundary Other projects - demand based (those who are willing to bear their share, usually 10 per cent of the total cost)	Based on the following conditions <ul style="list-style-type: none"> • backward area • housing condition • drunkard in family • non-availability of drinking water and sanitary facilities • Only one earning member/family • annual income below Rs.24,000/- 	Notification given and application called for and the filled up forms are scrutinized based on selection criteria like annual income, no. of members in a family and such others, which vary according to projects. For PTD in banana, beneficiaries are supposed to have atleast 40 cents of land for planting 150-200 banana suckers	To be a member three out of the following conditions should exist <ul style="list-style-type: none"> • educationally backward • below poverty line • family with mentally retarded person • family with below 5 years old child/children • lack of proper sanitary and drinking water facilities • only one earning member in a family • even though two working, not sufficient.

				<ul style="list-style-type: none"> • illiterate members in family • land owned less than ½ acre • Scheduled Caste/ Scheduled Tribe • Women and children <p>To be a member, any four condition should be prevalent</p>		
23	Pattern of charging fee	-	Generally 7.5 per cent of total cost as Project Implementing Agency Administration Cost and also based on output (e.g. Rural Water supply)	<ul style="list-style-type: none"> • membership fee - Rs.10/member • marketing support - 20% commission • consultancy fees - depends on program • training - Rs.10/trainee • medical camp - Rs.2/member • loan - 1% interest 5% deposit money 3% processing charge 	<ul style="list-style-type: none"> • project planning classes, Community Development and Desom Development Organizers' classes - hour or day basis • counseling - fixed charge • livelihood programmes - 15% of programme fund • monitoring visits - 10-15-20% of total fund <p>Fee varies according to project</p>	<p>Mostly free of cost</p> <ul style="list-style-type: none"> • inputs supplied at low cost, less than the market rates • soil testing charged • chick vaccination - Re.1/chick
24	Problems	<ol style="list-style-type: none"> 1. Non-availability of sufficient government grants and subsidies 2. Political interference 3. Often over looked by public officials as technically ill-formed or short-sighted 4. Farmers won't turn up 5. their own on issues 6. Lack of full cooperation from members' side 	<ol style="list-style-type: none"> 1. Environmental vagaries usually delay the work (expectation of immediate result by beneficiaries) 2. Non-cooperation of temporary staff 	<ol style="list-style-type: none"> 1. No Government support 2. Non availability of trained staff 	<ol style="list-style-type: none"> 1. Difficulty in organizing and convincing people 2. Political interference 3. Awareness classes on government policies, people's rights etc. misconceived by Government agencies 	<ol style="list-style-type: none"> 1. Organizational ideas are misconstrued by many outsiders 2. Difficulty in mobilizing local material and human resources 3. Fiscal constraints

A bird's-eye view of Table 17 gives an idea about the mode of operation of all the selected agencies, highlighting the geographical coverage, activity focus, funding sources, approaches and methods followed, organizational structure, staffing details, linkage with various agencies, nature of clientele, pattern of charging fee, and problems.

Mode of operation influences the outcome of non-governmental efforts. This is supported by the study of Rath and Tiwari (2001).

4.3.1 Geographical coverage

All the agencies have got a wide geographic out reach of their activities and this adds to the developmental efforts of the Government. This statement is in accordance with the finding of Dhillon and Hansra (1995). These agencies operate through the local branches set up in their area of operation and this helps them in their smooth functioning and makes the beneficiaries very close to them. The close proximity and the regular contacts resulted out of this make them very sensitive to community need and help them to evolve location specific technology. This finding is in agreement with the reports of Indu (1997), Bhat (1999), Jasu (2001) and Nataraju *et al.* (2001).

4.3.2 Activity focus

It is evident from Table 17 that major activities of the agencies are focused on health and sanitation, education, research and training, NRM, cottage industries and vocational training, advocacy, community organization (formation of people's organizations or SHGs), HRD programmes, socio-economic development programmes, which include agricultural, and entrepreneurship development programmes, and social and infrastructure development measures. So it can be said that non-governmental extension agencies adopt a multi-functional approach, which arises from a deeper understanding of their clients (Fig. 4). Development to be integrated, has to be multi-sectoral (economic, social, cultural, political, ecological and ethical) and cross-dimensional (vertical and horizontal).

It is said that voluntary organizations act as 'creators', 'preservers' and 'destroyers' in rural areas. They create awareness among people, create livelihood and

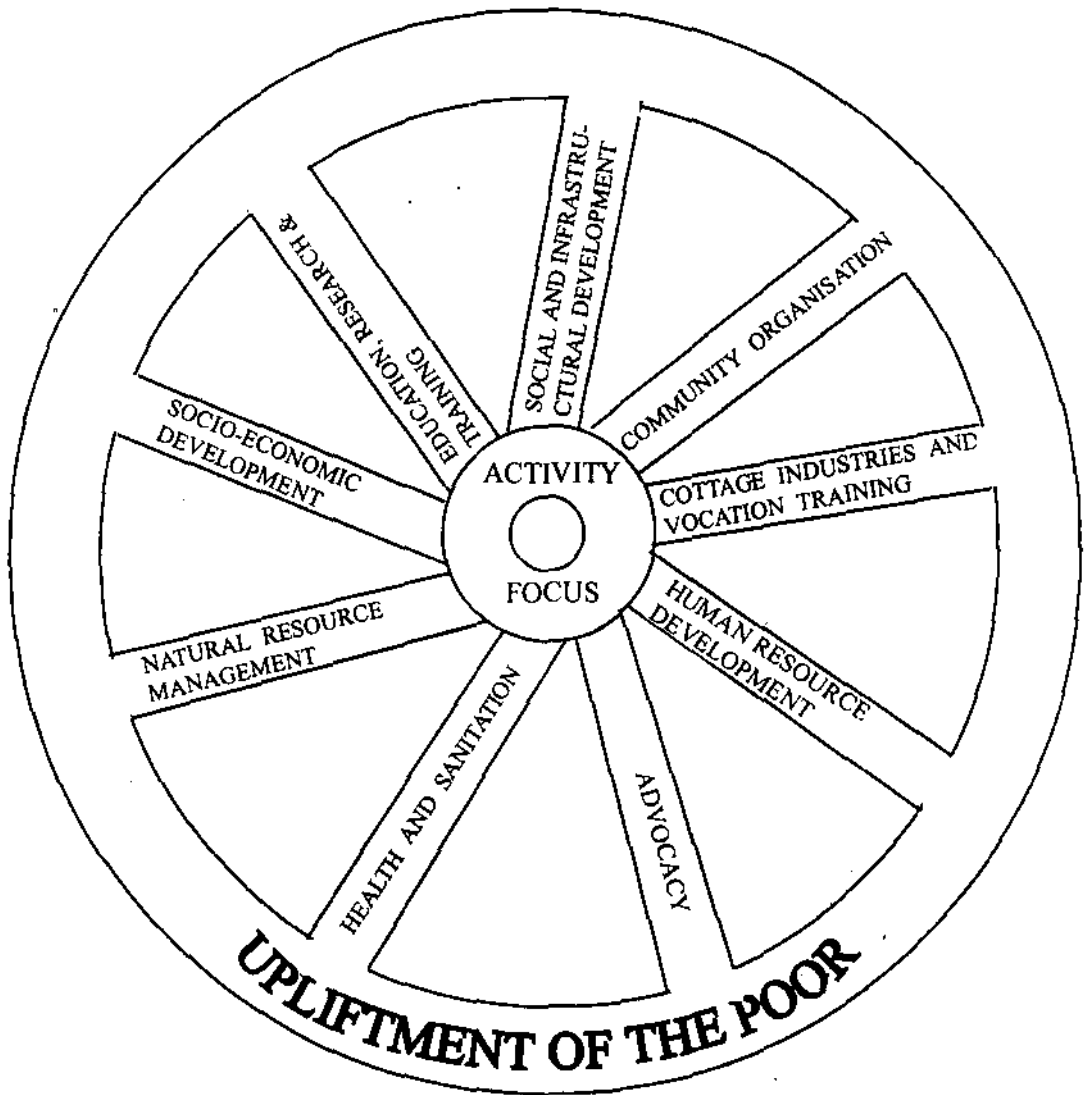


Fig. 4. Major activities/programmes of non-governmental extension agencies

opportunities for people with their co-operation, preserve what is needful to their environment, cultural base, appropriate technologies and scientific practices, and destroy the evils like alcoholism, superstitions and other social evils_(Anandharajkumar, 1995). The present finding is also in accordance with the study of Dhillon and Hansra (1995) that identified the constructive roles of voluntary organizations in the field of rural development.

4.3.3 Funding sources

Two out of five agencies receive external funds. They also mobilize funds from government schemes. The agency selected for 'marketing' role, raises funds locally through human resource development programmes and eco-friendly micro level community based projects, without accessing foreign money. In the case of the agency selected for 'advocacy' role, funds to meet organizational costs are mobilized through membership fees. Annual subscription fees are also levied in addition to membership fees. The agency selected for 'consultancy' role, mainly functions as a facilitating agency of Central/State Governmental programmes and hence the operating/implementing costs are shared by the Government (90%) and the target group (10%). Nominal service charges and voluntary donations also form sources of funds for the agencies. The finding of Sood (1999) that the non-governmental organizations have the ability to attract funds from diverse sources can be cited here to support the present finding. Diverse sources of funds attribute to successful functioning of the agencies. This is evident from the observation of Hanyani-Mlambo (2002).

4.3.4 Approaches and methods followed

It could be noted from Table 17 that major approach followed by the agencies is participatory approach by the promotion of people's organizations or SHGs. Religion, cast and political considerations are not seen in the group formation or in its activities even in such a volatile situation of 'political over consciousness' as in Kerala. Agencies firmly believe that participatory approach will enhance efficiency and ensure sustainability. The people's organization functions as forum where rural people come

together, discuss and debate over their needs and problems with the agency members, and plan and review various activities implemented in its area of operation for integrated development. Berdegue (1990) reported that NGOs in Chile were distinguished by the way their extension programmes placed a strong emphasis on the development of grass roots farmers' organizations through which different types of rural development projects were implemented. The report of Bajwa (2004) also supports the functioning of non-governmental agencies through SHGs.

In watershed development programmes, watershed based approach is followed. People coming within the natural boundary are organized into small groups and the programmes are implemented through these groups.

The different methods followed by the agencies for the implementation of activities include PRA (Participatory Rural Appraisal), AR (Action Research), exhibitions, demonstrations, seminars, training, publications and meetings (public and group).

4.3.5 Organizational structure

Organizational structure is the pattern of relationship among various components or parts of organization. This prescribes the relationship among various activities and positions. Since these positions are held by various persons, the structure is the relationships among people in the organization. It is the differentiation and integration of activities and authority, role and relationships in the organization.

Organizational structure of all the agencies is same as those commonly seen, with a Board of Directors at the apex, followed by Chief Executive/President/Chairman and the other supporting staff (office and field staff). Agency selected for the 'advocacy' role functions under different committees. It has got a central executive committee, and sub committees at district, panchayat and ward levels. The agencies perform their activities through various departments and this departmentation has facilitated smooth functioning of the agencies through proper coordination and integration of activities. The functional structure should have flexibility to accommodate changes. De and Sahu (2001)

reported that private organizations had more flexible functional structure. Also, Farrington (1997) mentioned that the majority of NGOs, were small and horizontally structured with short lines of communication and were therefore capable of responding flexibly and rapidly to client needs and to changing circumstances.

4.3.6 Staffing details

Staffing is the process of acquiring, developing, employing, appraising, remunerating and retaining people so that right type of people are available at right position and at right time in the organization. Human resources of an organization are considered the most vital assets because it is the people who make other resources moving.

It is evident from Table 17 that the agencies are fortunate enough to have a team of dedicated, qualified and experienced staff personnel. In the case of agency selected for 'advocacy' role, which is a farmer organization based on farmer membership, members are responsible for running the organization.

The quality and qualifications of staff contribute to the successful functioning of the agencies. The results of Adams (2000), Rivera *et al.* (2000), Jasu (2001), Hanyani-Mlambo (2002) and Standen (2003) support this fact.

Three out of five agencies, select their staff based on tests (Aptitude/Skill), interview and group discussion. The agency selected for 'marketing' role, appoints the individuals who come forward voluntarily with a missionary zeal. The posts are tenable in the case of the agency selected for 'advocacy'.

Emolument is consolidated / pay scale. Mostly, pay scale for the office staff and field staff are given consolidated payments. This also varies with the programmes.

As revealed by Table 17, scope for promotion is there in all the agencies, except two and is mainly based on the number of completed years, target achievement, performance and qualification.

Various needs of people serve as driving force for their behaviour. In an organization, managers try to govern the behaviour of people by providing suitable incentives. Incentives are the objects, which are supposed to satisfy needs and improve the work performance. Thus, it covers both financial and non-financial rewards.

A perusal of Table 17 indicates that incentives are given to staff in all the agencies, except the one selected for 'advocacy' role. Main incentives given are bonus, commissions, insurance, special allowances for staff in tribal/hilly areas and provision of vehicle. Schwartz (1994) and Feder *et al.* (2001) reported that private providers of extension had incentives to maintain close links with target groups. Incentives are, generally, linked to productivity. This statement is in agreement with the finding of Saravanan (1999b).

4.3.7 Linkage with various agencies

The agencies were prioritized based on the extent of linkage. For successful implementation of any programme, there must be planned strategy to have good linkages with the allied organizations. Institutional pluralism in extension development contributes to success to serve diverse target population. Keeping this in view, the agencies have established strong linkages with funding agencies, government agencies, universities, research institutes and other voluntary organizations in rural development. The actual network of participation with their linkages is exhibited in Fig. 5. Carney (1998) reported that Agro-technical Extension Centres (AEC's) in China linked national and regional information as well as accessed information from research institutes, universities and individuals.

With the active support of the organizations, the agencies find it easier to implement their programs resulting in a mutually beneficial relationship. Absence of linkage of any agency with any other agency leads to isolation, which in turn, leads to low production. The isolated agency also gets the criticism of not meeting the needs of the society. An agency having no linkage with any other agency will be in jeopardy for its own survival itself. Linkage with other agencies is a must for increased efficiency as

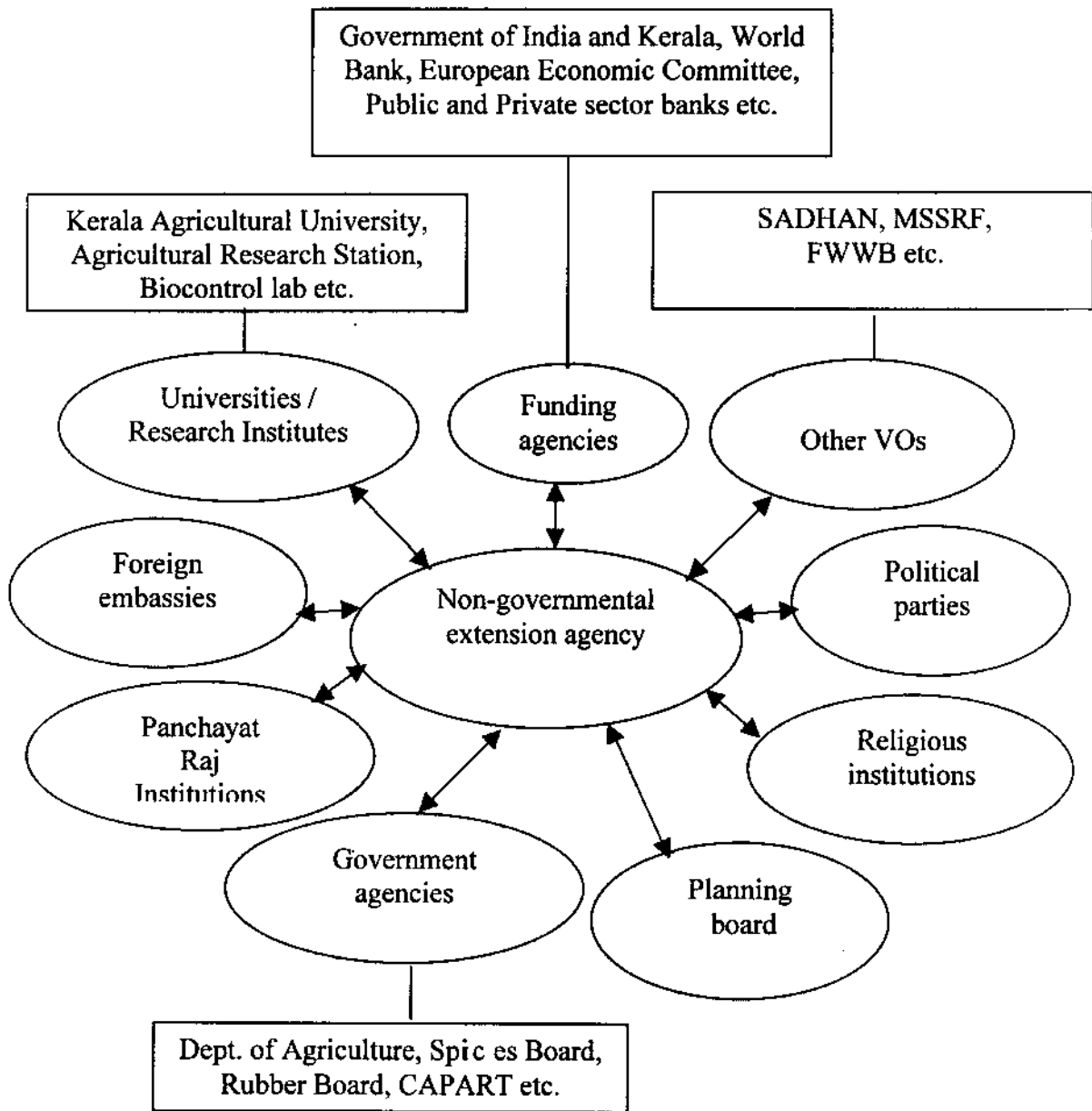


Fig. 5. Networking pattern of non-governmental extension agencies

every agency learns from other agencies by linkage. The impact of linkage with other agencies is reported by Harter and Haas (1992).

4.3.8 Nature of clientele

From the table it could be noticed that the nature of clientele differs among the agencies. It mainly depends upon the objectives of the agencies as well as the objectives of the programmes/projects being implemented. But, in general, non-governmental extension agencies look for economically and educationally backward people of the community. Khandekar (1998) reported that CORO (Committee of Resource Organizations), a Maharashtra based NGO played a great role in enhancing the quality of life of the downtrodden and deprived section of the society, especially the slum-dwellers.

4.3.9 Pattern of charging fee

Table 17 shows that the agencies charge fee for extension service that are of direct individual benefit to the clients but not on other services that are beneficial to the society as a whole. A survey conducted by Kalra and Virk (2001) on opinion of the Punjab farmers regarding privatization of agricultural extension services stated that majority of the farmers (80%) were ready to pay soil testing fee, ware houses fee (80%), 50 per cent of the farmers were in view of privatization of electricity department, provided regular power supply shall be ensured, regarding certified and quality seed, majority of the farmers (92%) found ready to pay its cost. It was true in consultancy services for raising new beneficial crops and its marketing (e.g., commercial floriculture, vegetable production and the like).

Hanchinal *et al.* (2000) based on a survey, reported that majority of the farmers were willing to pay for the technical services rendered in the area of seed production (89.92%) followed by irrigation technology (56.67%), flowers (56.67%), fruit crops (55%) and vegetables (52.08%).

In the case of fee for service modalities, farmers clearly determine the type of information that is of priority to them, and thus the impact of extension advice is the highest possible (Dinar and Keynan, 2001).

4.3.10 Problems

The major constraints experienced by the agencies are presented in Table 17. The constraints were ranked based on the severity with which they were felt and as expressed by the office bearers.

Table 17 highlights that lack of enough funds, political interference and negative attitude towards non-governmental extension agencies among the outsiders are the serious constraints faced by the agencies.

Non-governmental extension agencies were often overlooked by public officials as technically ill-formed or shot-sighted. Most of the time, these agencies have to work according to the policies of the ruling government or in favour of it, which often hinder their independent and free functioning. The finding of Mannambeth (2000) is supporting the present finding.

Lack of sufficient funds or government support is another main problem. Central/Stage Budget should critically analyse the allocation of funds for voluntary activities. This got the support of the findings of World Bank (1987), Carney (1998), Mannambeth (2000) and Sahu (2000).

Since most of the non-governmental extension agencies are run by religious missions, the people in general have discriminatory feelings. The complexes due to religion and caste differences act as barriers to the full acceptance and approval of the non-governmental extension agencies as their benefactors. This may pose as an obstacle for the agency members. The people may criticize and view the activities only through the narrow eyes of religion. Distrust among people about the motives and sincerity of the agency members in rural welfare creates problems for their effective operation. People often accuse that the non-governmental extension agencies and their activities are simply pretexts for getting foreign funds and aids for certain individuals or organizations. Non-governmental extension agency staff members see this negative stand as a serious limiting factor in their service.

4.4 AGREEMENT AMONG BENEFICIARIES OF ALL THE SELECTED NON-GOVERNMENTAL EXTENSION AGENCIES WITH REGARD TO THEIR PERCEPTION ABOUT SUCCESS FACTORS OF THE AGENCIES

The results of the data analysis using Kendall's 'w' test is shown in Table 18.

Table 18. Agreement among beneficiaries on their perception regarding success factors of the agencies

Variable No.	Variable	Mean rank	Kendall's coefficient of concordance (w)	Chi-square value	df	Asymptotic significance
1	Team work	9.53	0.805	1086.592	9	0.0001
2	Activities based on felt needs of clientele	2.64				
3	Participatory approach	9.44				
4	Periodic evaluation and review of activities	7.25				
5	Credibility	4.43				
6	Accountability	4.54				
7	Coordination and integration of activities	2.41				
8	Resource use efficiency	5.41				
9	Communication methods	6.73				
10	Feedback from clientele	2.61				

n = 150

It is evident from Table 18 that the chi-square value (1086.592) is much higher than coefficient of concordance (0.805), with an asymptotic significance of 0.0001. This ensures a high degree of concordance among the beneficiaries as regards the various perception parameters are concerned. Hence, the above mentioned perception parameters (variables) may be considered as the generally accepted indicators of success

of any agency. The above table also indirectly explains the agreement among judges on their relevancy rating of the selected success factors.

Considering the mean rank scores on the success indicators (variables), team work stands first (9.53) followed by participatory approach (9.44), periodic evaluation and review of activities (7.25), communication methods (6.73), resource use efficiency (5.41), accountability (4.54), credibility (4.43), activities based on felt needs of clientele (2.64), feedback from clientele (2.61) and coordination and integration of activities (2.41). This result shows that majority had perceived team work to be the most important factor contributing to the successful functioning of the agencies followed by others in the order given above.

Team work and participatory approach almost equally attribute to the success of the agencies concerning people's perception on them. In order to meet the challenges of dynamic environment, more and more organizations are replacing old hierarchies with teams of different types. A team is a group of people in the organization constituted for completing certain assignments. A team to be effective, it should contribute to the achievement of organizational objectives by performing the task assigned to it and providing satisfaction to its members. Standen (2003) mentioned that establishment of a team approach where each player respects and relies on each other to perform their agreed roles had contributed to the success of non-governmental extension agencies.

Participation has positive effects on the interaction with knowledge generation by combining indigenous knowledge with feedback into the agricultural knowledge system, and identifying and verifying application technology and technology generation needs for farming system. This result has got the support of the finding of Muir *et al.* (2001). Other perception parameters are also contributing to the good-performance of the agencies to a great extent.

4.5 EFFECTIVENESS OF THE SELECTED AGENCIES

Truly speaking, the concept and criteria of effectiveness are quite debatable points. Effectiveness is not a one-dimensional concept that can be measured and predicted from a set of clear-cut criteria (Prasad, 2003).

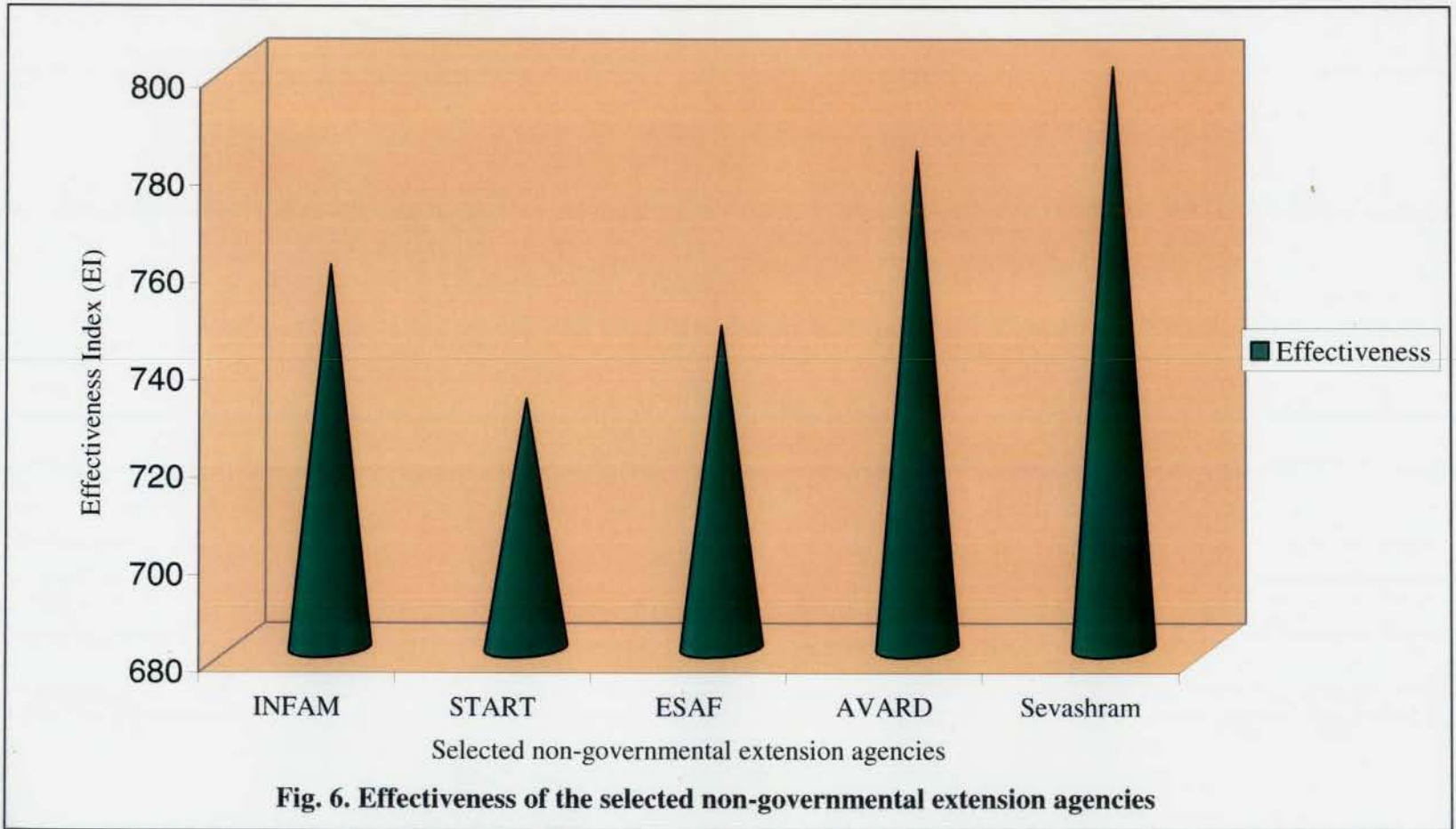
In the present study, effectiveness of the agencies was measured in terms of clientele's perception regarding the listed success factors of the agencies.

Table 19. Effectiveness of the selected agencies

Sl. No.	Non-governmental extension agency	Overall Effectiveness Index (OEI)	Effectiveness Index (EI)	Rank
1	Advocacy	727.71	758.626	III
2	Consultancy		731.287	V
3	Infrastructure		746.205	IV
4	Input supply		782.1577	II
5	Marketing		799.533	I

First of all, an Overall Effectiveness Index (OEI) was calculated by taking the overall mean of the 150 beneficiaries regarding their perception about the given success factors of the agencies. The OEI was obtained to be 727.71. From this it may be understood that an agency having an EI greater than the OEI may be regarded to perform well. The effectiveness indices obtained were 'advocacy' (758.626), 'consultancy' (731.287), 'infrastructure development' (746.205), 'input supply' (782.1577) and 'marketing' (799.533) (Fig. 6). It can be noticed that all the indices are greater than the OEI. So, all the agencies can be considered to be performing well, with the agency selected for 'marketing' role ranking first (Sevashram) and the agency selected for 'consultancy' role, the last.

Since all the agencies were found to be performing well, the difference in people's perception or the difference in performance of the agencies might have brought out the variation in effectiveness. As pointed out by Segall *et al.* (1966) perception is subjected to many influences. In particular, each individual's experiences combine in a complex fashion to determine his/her reaction to a given stimulus situation. The direct



experiences of the beneficiaries with the non-governmental extension agencies might have influenced their perception about success factors of the agencies.

Considering the most effective and the least effective agencies, their difference in performance/ approach (Fig.7) might have yielded the present result.

“There is no such thing as a better or even best extension approach . . .”
(Hoffmann, 1992).

A cursory view of the findings furnished in Table 17 reveals that agency selected for ‘marketing’ role is giving its prime focus on rural upliftment through the development of agriculture. It is taking up many innovative programmes/projects on agriculture and related matters. Beneficiaries have placed a great faith in it and find the agency to be reliable. This agency plays an active role in marketing, input supply, providing infrastructure facilities, consultancy, advocacy etc.

The agency has realized the importance of participatory approach in sustainable development of the community. It operates through forming SHGs. According to this agency, participatory approach helps beneficiaries in the following ways:

- To identify their own needs
- Prioritize them
- Plant out the programme to be launched
- Mobilize the required resources - money, materials and voluntary unskilled labour (sramdan)
- Implement the programme fixing responsibilities in a decentralized manner
- Supervise the implementation (monitoring)
- Assess the impact on completion (evaluation) and, then,
- Draw the maximum benefit.

Its experience has taught that the magic of participatory development works, though not all on a sudden. A lot of training and patient experimentation has to be incorporated in any genuine attempt at introducing this development strategy in places where traditional 'master-servant', 'employer-employee' relations have been prevailing for a long time. Those who assume leadership positions in this process should be satisfied with playing catalytic roles. What they could aspire to be is to become the facilitators, promoters or animators only. People have to develop on their steam and at their pace. True facilitators should go to the people, love them, live with them, learn from them and start with what they have.

This agency understands its role as a catalyst and a collaborator in people's development. It refuses to act as a paternal 'provider of charity', calling to mind Julius Nyerere's words: "... human dignity cannot be given to a man by the kindness of others. Indeed, it can be destroyed by kindness which emanates from an action of charity, for human dignity involves equality and freedom and relations of mutual respect".

It publishes an eight-page ¼ size magazine, which is registered with the Registrar of Newspapers of India (RNI), as a study material for the 'sanghams' (SHGs). It also maintains regular contact with the people through periodic group meetings, personal visits and telephone calls.

The 'swadhyaya sangams' operating under the auspices of this agency are spread over the four districts of Ernakulam, Thrissur, Alappuzha and Kottayam. The operational area of the agency is for the present, divided into four zones. Altogether, there are two provinces and eight zones. Each zone is again divided into five clusters (each comprising of five sangams on an average). In all, there are about 50 regions and 150 clusters. Each cluster has a 'samrakshaka' (protector) and each region has got a person called 'prachodaka' (a facilitator whom the members of sangams select from among themselves). The 'prachodakas' find out a person who is capable of giving them leadership, 'sevika' (coordinator). There are eight such 'sevikas' - one for each zone.

Then, there are the 'sanghadakas' (organizers) at the provincial level. 'Sangadakas' are the resident members of the agency. It is through 'sangadakas', 'sevikas' and 'prachodakas', that the agency has access to the sangams. Besides 'sangadakas', 'sevikas' and 'prachodakas', there are 'karmayogi' members, 'parisheelanarthis' (aspirants), 'parishilakas', 'nirvahakan', 'karthavyan' and office assistants at the agency and 'pracharakas' and 'prerakas' rendering service at the grass roots, in the swadhyaya network.

The agency follows strict monitoring and evaluation. The 'prachodakas', 'sevikas', 'parishodakas', 'karyadarsis', 'sangadakas' and 'karthavyans', together with the office staff and office bearers of the agency, gather together on the fourth Sunday of every month to evaluate that month's activities and plan out those of the next month. All the above mentioned personnel, except the 'prachodakas' and 'parishodakas' (sangam representatives), meet on every Monday for evaluation and planning. The 'Sarathi' (Chairperson), 'karyadarshi' (Secretary) and 'Khachangi' (treasurer) of every sangam, besides other interested members, participate in the regular monthly evaluation and planning sessions being held at the regional level in the first week of every month under the leadership of the 'prachodakas' of the region. Likewise, all the prachodakas come together under the leadership of 'sevikas' on a weekly basis.

The agency was observed to be more powerful in mobilizing its resources, both human and material. Trusting entirely in divine providence and raising funds locally through human resource development programmes and eco-friendly micro-level community based projects, without accessing foreign money, the members of this agency dedicate themselves to the cause of building up a community of love.

The effectiveness of this agency is in match with the characteristics specified for an effective agency by Kothari (1995).

In the case of the least effective agency, the agency selected for 'consultancy' role, it concentrates on consultancy alone. Mostly it plays the role of a facilitator or as a

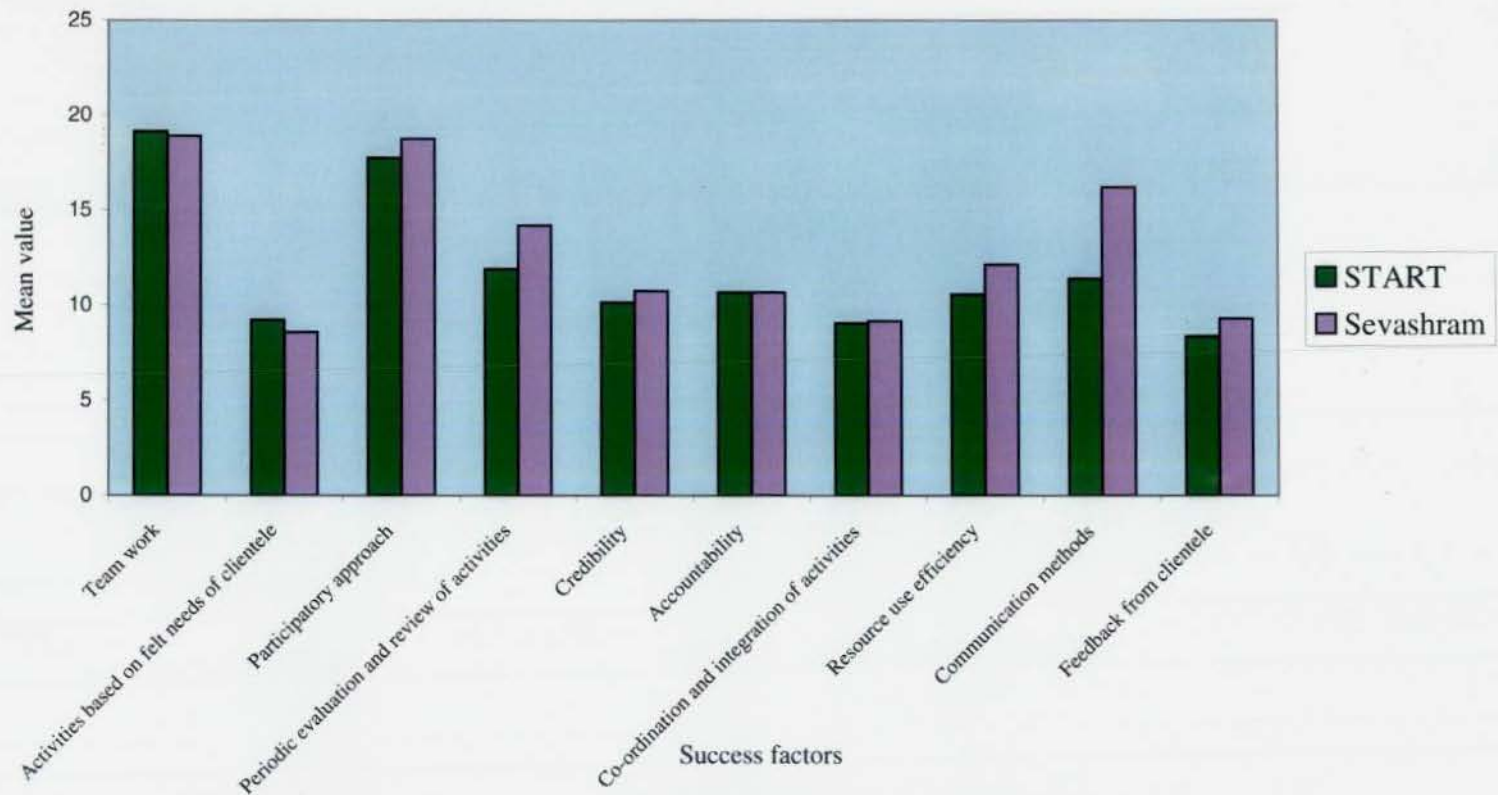


Fig. 7. Comparison between the most effective and the least effective agencies with respect to success factors

catalytic agent, for various Central/State Government projects and programmes. Therefore, the consultative extension linkages are short-term in nature and hence the role played by the agency usually remains unknown among most of the people. It is losing its identity and independence by becoming agents of government through grant-in-aid.

The programmes/projects are implemented through beneficiary associations. A couple of enthusiastic members of these associations are serving as liaison persons between the agency and beneficiaries and hence the contact of the agency with all its beneficiaries is very less. The target group meetings are also conducted rarely, only during critical times. The geographical area and the culture prevailing there can influence the effectiveness of the agencies. The people in one of the operational areas of this agency were found to be non-cooperative, mostly of conflicting nature. They were not much bothered about the limitations of the agency and what all they want was the immediate results/outcomes. This attitude of people might also have resulted in its diminished image. So the agency can take serious efforts in making people aware of the practical difficulties and encouraging their complete and active participation in programmes through conducting periodic target group meetings and occasional personal visits by both staff members and beneficiary members, with staff members taking the initiative.

4.6 IDENTIFICATION OF SUCCESS INDICATORS OF THE NON-GOVERNMENTAL EXTENSION AGENCIES

Identification of success indicators was one of the major objectives of the study.

4.6.1 Multiple discriminant function analysis

Table 19 showed that the agencies were comparatively good in their effectiveness. So multiple discriminant function analysis was done to discriminate among the selected agencies for identifying the factors that generally contribute to the success as

well as the effectiveness of non-governmental extension agencies, with respect to clientele's perception regarding the various given success factors.

Table 20. Results of multiple discriminant function analysis showing the important factors that make the non-governmental extension agencies effective

Variable No.	Variable	Discriminant function coefficient	Rank
2	Activities based on felt needs of clientele	-0.066	VI
3	Participatory approach	0.071	V
4	Periodic evaluation and review of activities	0.455	II
7	Coordination and integration of activities	0.178	III
8	Resource use efficiency	0.157	IV
9	Communication methods	0.900	I

A perusal of Table 20 reveals the important factors that are contributing to the effectiveness as well as the success of the non-governmental extension agencies. They are activities based on felt needs of clientele, participatory approach, periodic evaluation and review of activities, coordination and integration of activities, resource use efficiency and communication methods (Fig. 8).

Rank ordering of the success indicators based on obtained discriminant function coefficients showed that communication methods adopted by the agencies contributed maximum to the effectiveness, followed by periodic evaluation and review of activities, coordination and integration of activities, resource use efficiency, participatory approach and activities based on felt needs of clientele, which contributed only very less to the effectiveness of the agencies. View point of Indu (1997) can be quoted to support the present result.

Mean ranks obtained on success indicators through Kendall's 'w' test can also be used to support the present finding. There, team work was also included, on which the beneficiaries showed maximum agreement, with regard to their perception on success

factors of the agencies. But from the present result, it was excluded. This shows that team work is one of the widely accepted criteria, which marks the success of any agency. It is essential for any agency for its existence and it is not an optional one or does not have any substituting factor. So also, the factors like credibility, accountability etc., which are the generally known and commonly asserted success parameters of any agency.

4.6.2 Simple discriminant function analysis

Effectiveness indices (Table 19) showed that the agency selected for 'marketing' role has got high effectiveness. It may be regarded as the best performing agency among all the selected agencies. As all the selected agencies were comparatively good in their effectiveness, it became essential to find out the factors that make the agency the best one. So, simple discriminant function analysis was done, discriminating the best performing and the least performing agencies and this gave a more peruse result about the essential factors that are required for an agency to be effective and successful.

Table 21. Results of simple discriminant function analysis showing the essential factors required for an agency to be effective.

Best performing agency Vs. Least performing agency

Variable No.	Variable	Discriminant function coefficient	Rank
4	Periodic evaluation and review of activities	0.397	II
8	Resource use efficiency	0.326	III
9	Communication methods	0.895	I

As revealed by Table 21, the distinctive factors are periodic evaluation and review of activities, resource use efficiency and communication methods. Among these, the most important factor is communication method (0.895), followed by periodic evaluation and review of activities (0.397) and resource use efficiency (0.326) (Fig. 8).

Communication methods

It is an obvious fact that communication is such a vital part of human being that it contributes heavily to the success or failure of every human activity. Communication becomes a necessary element in human relationships by providing the foundation for human interaction. Communication, thus, may be regarded as basic to the functioning of an organization. In its absence, the organization would cease to exist.

Each act of communication has at least three phases - expression, interpretation and response. If the expression is not clear, the interpretation accurate and the response logical, one's effort to communicate will not succeed. As it is difficult to control how an audience shall interpret the message and respond to it, a powerful communication effort by the agencies must be constantly exerted. Depending on the number and location of the target audience, the time available for communication and according to the needs of situation, the agencies have to choose a particular method/channel or combination of methods/channels. Regular or more frequent contact with the beneficiaries is also as important as the selection of proper methods/channels. Campbell and Barker (1997) based on a comparative study made between the agricultural extension works carried out by the 'Department of Agriculture' and 'Ciba' (a private agricultural input firm in Pakistan) indicated that 'Ciba' out-performed to other by its extension advice and contact. Private input supply companies are potential providers of extension since they have regular contact with farmers and the existing 'network' required for extension provision (Crompton, 1997). Effective communication should consist of creating understanding, imparting knowledge and wisdom i.e., knowing something is knowledge and using it is wisdom. Private extension professional should always say right things at the right time, in the right ways, to the right people.

All the selected agencies strengthen their activities by making use of proper communication methods and also trying to reach the people regularly. Most of them use group meetings, personal visits and telephone communication (office calls) to have frequent contact with the target groups. Saravanan (1999a) reported that almost all consultancy agencies were widely using personal contacts and telephone communication.

The use of publications is limited to two agencies only, the agency selected for 'advocacy' role and the agency selected for 'marketing role'. The other agencies can also start using the mass communication methods like publications. They are extremely useful among the literate people. Even illiterate can make use of them with the help of literate members in their family. In a state like Kerala, where the literacy level is very high, publications will be more effective. Maredia *et al.* (2001) based on an evaluative study suggested that private extension services could be improved through program management, targeting and priority setting and choice of appropriate extension delivery methods (e.g., greater use of mass media). The view of Adam (2000) and French (2000) were also the same.

Periodic evaluation and review of activities

Periodic evaluation and review of activities are highly effective in promoting developmental activities (Plates 12 and 13). An agency can direct and control its own performance. For such a purpose, the agency, which has performance objectives and knows how well it is achieving them, should know 'where it stands' and 'where it is going' so that it can make necessary adjustments to achieve the desired results on its own.

In order to have bottom-up approach, beneficiary needs are to be taken into consideration and monitoring and evaluation must be taken care by the implementing organizations. The effectiveness of modern agriculture technology promotion programmes can be evaluated concurrently at the end of a year. The strong and weak points identified may be considered in revising the subsequent programme. As such, periodic evaluation and review of activities are necessary and are essential ingredients in sustained learning and improvement in situations.

Resource use efficiency

Efficiency in using resources is one of the most important qualities of an organization. Every organization should be able to mobilize its resources, human as well as physical resources, in a specified direction to achieve the organizational objectives, minimizing or avoiding the wastage of resources. Both technical and allocate efficiency,



Plate 12. Periodic meeting of staff members in progress



Plate 13. Weekly round up of beneficiaries

which are basically economic in nature are taken care of by the private extension agencies, resulting in cost minimization, profit maximization and optimal use of resources (Prasad, 2001). World Bank Group (2002) reported that producer organizations were more efficient in using their resources and skills.

Coordination and integration of activities

Coordination is an integration or synchronization of group effects in the organization to provide the proper amount, timing and quantity of execution so that their unified efforts lead to the achievement of the stated objective, namely the common purpose of the organization. It is required among organization units/subunits and among different individuals. Performance of various functions in an integrated way ensures fair degree of coordination among individuals and departments.

Proper coordination helps the management for effective performance and pulls all the functions and activities together so that each function and activity becomes complementary to each other and contributes positively to the performance of others. In its absence, human and physical resources cannot follow a specified direction and to that extent, organization efforts would go in waste. It brings satisfaction to the people in the organization. They derive satisfaction out of their performance in a better way because their efforts do not go waste. They try to see their own interests and those of the organization as the same. This ongoing process contributes to satisfaction of both individuals as well as organizational interests. It ensures the smooth execution of activities and efficient use of resources to bring the required quantity and quality of outputs. It also ensures that the various levels do not act out of accord with each other or with policies and objectives of the organization. The role of a committee is significant in achieving proper coordination and all the selected agencies have set up a special body to ensure proper coordination and integration of activities and that may be one of their reasons for effectiveness. Balasubramani *et al.* (2003) indicated that the public clientele would be better served through proper cooperation and coordination of programs.

Participatory approach

In all the charitable, improvement and development programmes supported by non-governmental extension activities, maximum participation of the target group has to be elicited. The steps involved in an exercise in participatory development are time consuming and patience testing. Paternalistic condescensions like dole-outs, subsidies and patronages will not on a long-term basis facilitate qualitative human development. Human partnerships become genuine and meaningful only when all concerned have equal opportunities to participate actively in the decision-making process, exercising their intellect and will, without fear or favour. It is not on the arrogant autonomy of individuals, but on the humble interdependence and collective human endeavour that a welfare state is to be painstakingly built up. The dignity of every individual and the uniqueness of every religion, language and life-style have to be safeguarded, at all costs, if piece and order have to prevail. Democracy and secularism flourish best in an atmosphere of liberty, justice, equality and fraternity. To promote these values enshrined in our constitution, participatory decentralized and transparent living and operational styles have to be adopted and practiced. Fundamentalistic attitudes and rigid mind-sets have to give way for mental flexibility and readiness to explore into the vast reservoir of the known and unknown realms of life. The advantages of participatory approach have been mentioned by Axinn (1988), Russel (1986) and Roling and Pretty (1997). Jasu (2001) noted that fundamentals of private extension system lay in its participatory approach. The findings of Scarborough *et al.* (1997), Veluswamy and Manoharan (1998), Mannambeth (2000), Byerlee and Echeverria (2002), Savran (2003) and Campos *et al.* (2004) also highlighted participatory approach as a success factor of the non-governmental extension.

Activities based on felt needs of clientele

Activities based on felt needs are important for any agency to stride over development. Private or non-governmental extension can only be effective if it answers to local needs. To achieve this aim a process of extensive consultation with the concerned

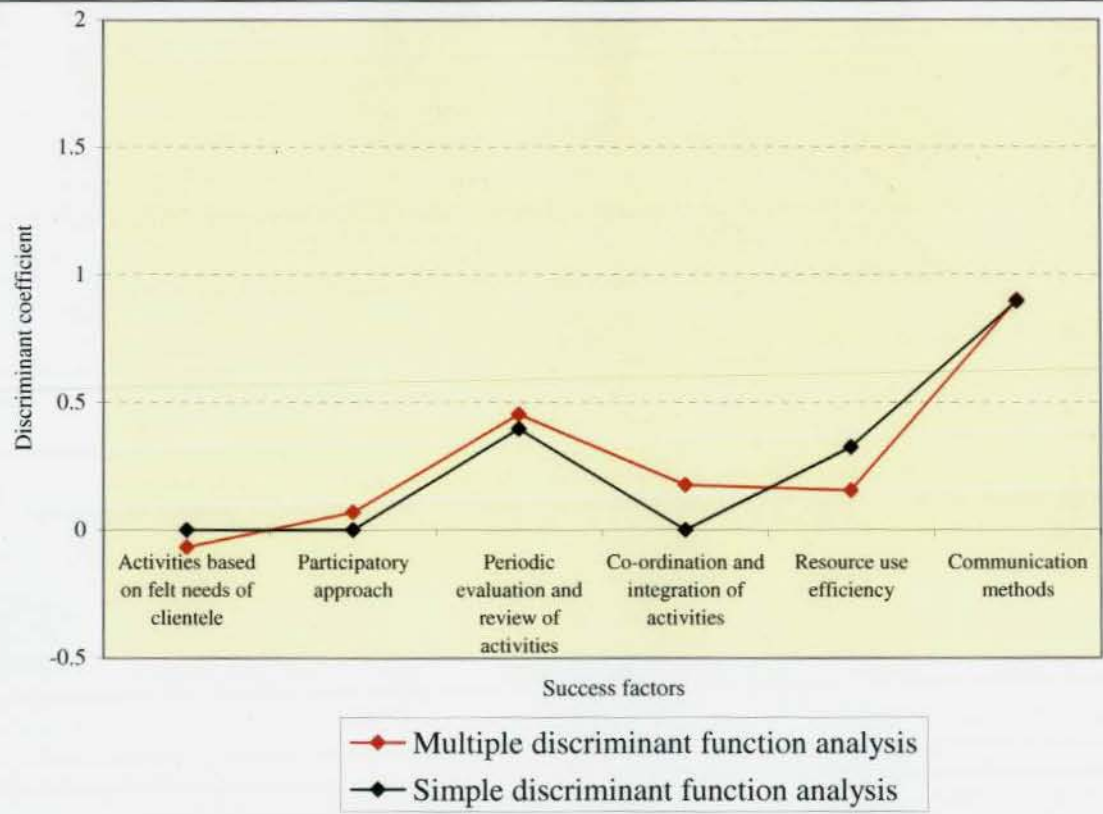


Fig. 8. Identification of success indicators of non-governmental extension agencies

target group is required. Before considering the plan for development that will have an impact on the lives of poor, it is necessary to do adequate preparatory works. The preparatory works include contacting the people, involving those who are to benefit in a consideration of what their needs are, collecting some basic data, assessing the needs of the people and securing community support base for the development initiative. It is very important that the plan is directed towards needs felt and expressed by people and which are of importance to them. Garforth (2002) revealed that provision of extension services tailored to suit the needs of the individual client was one of the reasons behind the successful functioning of the 'ADAS', a private company in England and Wales.

The best way to find what people want and what they see as possible solution to their problem is to approach them and ask them. It is also the way for creating awareness and willingness among people to take part in any action that follows. But in order to know what people want and what they feel as likely solution of their problem, it is necessary to establish first a common ground of understanding with the people through mutual respect, warm and cordial behaviour and impartial attitude. There is bound to be conflicting interest in the conflicting community. It requires skill, sincerity and undisputed integrity to being about unreserved commences in development particularly for the greater benefit of the farming community, whatever the difficulties, it is important to ensure steadfast community support for any development project.

4.6.3 Direct effects of success factors on the effectiveness of the selected agencies

Path analysis was further done to support the findings of multiple and simple discriminant function analysis. It was done based on the computed effectiveness indices (Table 19) to assess the influence of success factors on the effectiveness of the selected agencies. It also gave a post-hoc review of the perception parameters. Direct effects of success factors on effectiveness only were considered for the present study. Scales for

path coefficients were used to group the effects of success factors on effectiveness of the agencies.

Table 22. Scales for path coefficients

Value of direct or indirect effects	Rate / Scale
0.00 - 0.09	negligible
0.10 - 0.19	low
0.20 - 0.29	moderate
0.30 - 0.99	high
More than 1.00	very high

Table 23. Results of path analysis showing the direct effects of success factors on the effectiveness of the selected agencies

Variable No.	Variable	Direct effect	Rate/Scale
1	Team work	0.4079	high
2	Activities based on felt needs of clientele	-0.1374	low
3	Participatory approach	0.4604	high
4	Periodic evaluation and review of activities	0.2428	moderate
5	Credibility	0.2367	moderate
6	Accountability	0.2291	moderate
7	Coordination and integration of activities	0.1395	low
8	Resource use efficiency	0.2024	moderate
9	Communication methods	0.3238	high
10	Feedback from clientele	0.0814	negligible

Residual effect = 0.00001

A perusal of the table revealed that except for 'activities based on felt needs of clientele', all the other success parameters had got a direct positive effect on the effectiveness of the agencies.

Analysis of path coefficients showed that participatory approach, team work, and communication methods highly influenced the effectiveness of the agencies; periodic evaluation and review of activities, credibility, accountability and resource use efficiency moderately influenced the effectiveness of the agencies; coordination and integration of activities had a low effect on the effectiveness; and feedback from clientele had only a negligible effect on the effectiveness.

Activities based on felt needs of clientele had a direct negative influence on the effectiveness of the agencies. But the negative influence was low. This shows that even though the agencies rely much on participatory approach, they are not taking proper measures to assess the beneficiary needs for long drawn programmes. So target group survey should be conducted occasionally to identify the needs and to prioritise them. Based on these survey results, the agencies can frame or take up their development measures. The results of path analysis are in support of the findings of multiple and simple discriminant function analysis.

4.7 STATUS OF AN AGENCY

Based on simple discriminant function coefficients and mean value of the corresponding perception parameters, an equation for assessing the status of the agency was formulated and it was computed for both the best performing and the least performing agencies. The equation was of the form,

$$S = \sum_{i=1}^n C_i \bar{x}_i$$

where,

S = Status score of the agency

C_i = Simple discriminant function coefficient

\bar{x}_i = Mean value of corresponding perception parameters

n = number of perception parameters obtained through simple discriminant function analysis

The average of the two status scores was then taken to assess the status of any new agency with the assumption that an agency having an individual status score above the average score may be regarded as performing above or as good as the best performing agency and an individual status score below the average score may be regarded as performing only at par with the least performing agency or below it.

Table 24. Status of an agency

Sl. No.	Agency	Status score	Mean
1	Best performing (agency selected for marketing role)	24.091758	21.232109
2	Least performing (agency selected for consultancy role)	18.37246	

The mean status score (21.232109) can be taken as a base for assessing the status of any new agency that is taken up to be studied on this aspect. If the new agency is having an individual status score above the mean status score obtained, it may be regarded as a well-functioning agency and if the score is below the mean status score, it may be regarded as a poor-performing agency.

4.8 PERSONAL AND SOCIO-ECONOMIC CHARACTERISTICS OF THE BENEFICIARIES

4.8.1 Profile analysis of beneficiaries of the selected agencies

Table 25 depicts the profile of the beneficiary respondents of the study. The modal value of all the personal and socio-economic characteristics was computed to evaluate the socio-economic status of the beneficiaries. As certain socio-economic characteristics were drawn up from a complex set up, the beneficiary respondents were categorized into 'high', 'medium' and 'low' groups for their analysis on those characteristics.

It could be interpreted from the table that the majority are self-employed or having salaried/waged employment, family size is between four and seven, area possessed is less than one acre, educational status is high school level, annual income is between 25,000 and 50,000, economic motivation is high, social participation is low, extension orientation is medium, information source utilization is medium, innovativeness is low, leadership ability is high and product diversification and value addition are medium.

Table 25. Profile analysis of beneficiaries of the selected agencies

n = 150

Sl. No.	Variables	Category	Modal value
1	Occupation	-	1
2	Family size	-	2
3	Area	-	1
4	Educational status	-	5
5	Annual income	-	3
6	Economic motivation	High - 150 Medium - 0 Low - 0	22
7	Social participation	High - 2 Medium - 69 Low - 79	6
8	Extension orientation	High - 23 Medium - 127 Low - 0	21
9	Information source utilization	High - 6 Medium - 120 Low - 24	61
10	Innovativeness	-	1
11	Leadership ability	High - 91 Medium - 58 Low - 1	12
12	Product diversification and value addition	High - 52 Medium - 98 Low - 0	5

4.8.1.1 *Occupation*

Since the respondents were specified to be beneficiaries of agricultural programmes, it was not necessary that they need to be farmers. In the present study, agriculture was given a score of 'two', waged/salaried employment and self-employment, 'one' and for no occupation, 'zero' as already mentioned in chapter 3. From Table 25, it could be noted that majority of the beneficiaries were waged/salaried/self-employed. Since, majority are marginal landowners, agriculture as primary occupation is not viable for them. So many go for private employment or work as land labourers or seek some self-employment opportunities. Still there are others, with agriculture as their secondary/subsidiary occupation and private/government employed.

Now-a-days, non-governmental extension agencies are taking steps in developing micro-enterprises, especially farm-related enterprises, as they are more profitable, easy and suitable to rural conditions. The farm-related enterprises include bee keeping, backyard poultry farming, food processing, mushroom cultivation, nursery raising etc. They focus on value added extension systems like vocational trainings, which highlight the practical utility of what is learnt/taught by visualizing, internalizing and applying it in the form of skills, enhancing the beneficiaries' confidence and making the activities self-employment oriented. This has proven success and many beneficiaries have taken up self-employment. They are periodically updated to make them more competent in their fields.

4.8.1.2 *Family size*

Table shows that family size of majorities is from four to seven (2). So the family type can be either nuclear or joint. Increased family size makes people economically motivated. As government extension sources are shrinking, becoming less consistent and unreliable, many are approaching non-governmental extension agencies as they could get quality service at a reasonable cost.

A family size of more than seven is a clear indication of typical joint family system, and traditional nature of the family. In Kerala, majority of the modern families

are nuclear. So, the result shows that non-governmental extension sources focus on the modern population, rather the relatively progressive population who are liable to be more open to change, innovation and self-reliance.

4.8.1.3 Area possessed

It is observable from the table that majority of the beneficiary respondents are having small farm size. Majority of them were marginal landowners with area below one acre. This is a good indication that the benefits of the developmental efforts of non-governmental extension agencies, especially NGOs are reaching the real poor of the community, thus achieving one of the prime goals of rural development. This finding can be supported by the studies of Farrington and Biggs (1990), Narayanan (1991), Haan *et al.* (1995) and IFAD (2003). It is generally said that non-governmental extension mostly concentrates on big farmers and farmers growing commercial crops, and are not interested in small, marginal and resource poor farmers, as they are more profit-oriented. So, the present finding is in contrast to the results of World Bank (1986a), World Bank (1986b) and Wise (1988).

4.8.1.4 Educational status

Educational status was observed to be high among the beneficiaries. This can be made use of by non-governmental extension agencies by providing them with more educational programs. Beneficiaries can be encouraged to read more agricultural articles. For an ever-increasing literate population, smooth transfer of message can be easily and effectively achieved through print medium. Agencies can have their own periodicals, which should be circulated among the beneficiaries, free of cost or at a reasonable rate. Beneficiaries also can be motivated to write on their own - 'self help journalism', which is a successful bottom-up approach for easy TOT.

4.8.1.5 Annual income

Although most of the beneficiaries had waged/salaried employment or self-employment, there were of low/medium income groups. Majorities were private employed or land labourers. This means that non-governmental extension agencies are

working for the upliftment of poor. This result is in agreement with the studies of Garforth (1982), Ojha and Morin (2001), and Satish (2001). NGOs have been consistently working with rural poor to improve the quality of their lives. They have been successful in introducing several agro-based income-generating activities in rural areas (Hedge and Sohani, 1995).

4.8.1.6 *Economic motivation*

Table shows that all the beneficiaries are having high economic motivation. The turning up of people to the non-governmental extension agencies itself shows that the people are economically motivated. Also, the exposure to different possibilities and avenues for self-development experienced by them by being members of the agency would have increased their economic motivation. It is one quality that makes an individual strive for better means of livelihood and in due course improve his/her quality of life.

4.8.1.7 *Social participation*

Social participation was observed to be low among the beneficiaries. Higher social participation could give the beneficiaries more exposure and orientation towards different information, opportunities and technologies available. Majority of the beneficiary respondents were women and they were rather confined to the NGO activities only. Generally, there is a tendency for unemployed and under educated women to confine to their domestic environment and abstain from participation in any social organizations. So the result shows that the non-governmental extension agencies have correctly targeted a client group that lacks in exposure and yet can make a sizeable contribution to rural development, once enlightened.

4.8.1.8 *Extension orientation*

Extension orientation was observed to be medium among the beneficiaries. Beneficiaries were under the protective wings of the non-governmental extension agencies and were more active in the agency activities. This shows that people by

themselves won't initiate change. Some external forces should be there to effect change. Social mobilization measures will definitely improve the extension orientation.

4.8.1.9 *Information source utilization*

Table 25 shows that majority of the beneficiaries fall in the category of medium information source utilization. Informal personal sources, commercial sources and other sources like exhibitions, seminars, trainings etc. arranged by NGOs were the main sources of information sought by beneficiaries for getting agricultural information. A study by Gupta *et al.* (2003) on utilization of information by Indian farmers is in support of the present result. According to the above-mentioned study, personal resources appealed to have greater credibility to Indian farmers than other sources. Institutional sources were important at the earlier stage while non-institutional sources appeared to be more important at the later stage. Role of informal sources like local leader, friends, relatives and neighbours was very important in rural setting where people had easy access to such sources. Representatives of non-government organizations worked as formal source of information. In the present study, the role of progressive farmers was observed to be important. Singh (1986) reported that most of the Indian farmers considered progressive farmers and friends as reliable sources for agricultural information. Status of ownership of electronic media like television and radio was found to be higher, but their utilization was very low. Similar was the case with print media like newspapers and farm magazines. Channels telecast/broadcast agricultural programmes in the evening/morning and this timing were inconvenient for most of the farmers. So, telecasting/broadcasting may be done in the late evening.

Among the mass media sources, newspapers play a vital role in TOT. But very often press gets entangled in highlighting politics and related issues, so its most needed role in development communication goes unrealized. Besides politics and related issues, agricultural news should also be given equal importance. More of experiences stories, process and feature stories can be published. As the educational status was found to be good among the beneficiaries, the non-governmental extension agencies can encourage them to subscribe to some print media. Print media also have the advantages

of commonness and relative low-cost. Nanjappa *et al.* (1998) reported that newspaper was primarily a means of disseminating news and influencing the public on current events. It played an important role in the field of agricultural development. Newspaper had also a vital role in informing the reader farmers about new techniques in agriculture and helped interpreting agriculture to the rest of the society. So agencies can encourage their beneficiaries to subscribe to some newspapers and farm magazines or can establish library facilities for the beneficiaries. Those who do not afford to pay the subscription fee can avail the library facility. The need of the hour is realization and materialization of the significant role of information sources on bridging the gap between the 'information rich' and 'information poor'.

4.8.1.10 Innovativeness

Beneficiaries were observed to be having low innovativeness. Mannambeth (2000) had the similar observation.

While coming in contact with an innovation, a person tries to learn thoroughly about its attributes in order to judge whether they are favourable for his/her condition. Relative advantage, compatibility, complexity, trialability and observability are the important attributes of an innovation for person to decide whether an innovation is to be adopted (Rogers, 1983).

It could be observed that the beneficiaries strictly examined the above said characteristics of innovation before adopting a new technology. But in the present agricultural situation, where the commercial crops are given importance, farmers have to be more innovative. They should be motivated to take up risks with a positive attitude. Confirming to their own traditional practices won't give them better results. The main reason for low innovativeness is the ignorance on new technologies and methods. Hence the foremost thing to be done to make people innovative is to make them well aware about new technologies and guide them in a proper way.

4.8.1.11 Leadership ability

Leadership ability was observed to be high among the beneficiaries. But it could be noticed that their social participation was low. From this it can be concluded that the lack of motivation and lack of opportunities keep them off from exhibiting their

leadership abilities. Now-a-days, all non-governmental extension agencies are giving much emphasis on participatory approach, which ensures people's participation in all programmes implemented by the agencies, where beneficiaries or members of the target groups are leaders, and agencies play only a facilitator role. This approach has proven to be successful. All the advantages of the participatory approach in promoting and enhancing leadership abilities of beneficiaries should be fully utilized by the agencies.

4.8.1.12 Product diversification and value addition

Product diversification and value addition were observed to be medium among the beneficiaries. The main reason was the less quantity of produce due to the marginal holdings by majority of the beneficiaries. Lack of time, facilities and risk factor were also reasons for not going for product diversification and value addition by some of them.

Major value added products produced by the beneficiaries were rubber sheet, coconut oil, pickles, etc. Non-governmental extension agencies are playing important role in promoting product diversification and value addition by giving vocational trainings to the beneficiaries. The vocational trainings help farmers a lot in the value addition process and for some they provide self-employment opportunities. Today, the dream of the country in attaining self-sufficiency in food production is fulfilled. But, individual farmer has to meet his/her other growing needs by selling his/her marketable surplus. Value addition is a critical area to get good price for the produce of the farmers. Simple technologies are to be identified for each commodity to add to the value of the produce. In the event of surplus or glut in the market for the original produce, the farmer should be able to prepare value added products and sell in the market for a good price. Since lack of infrastructure facilities is one of the reasons for not going for product diversification and value addition, the agencies can provide them with suitable facilities on hire/rent/subsidy basis. The agencies can also assist them in marketing their produce by establishing linkages with good marketing firms, so that the beneficiaries can eliminate the other intervening factors like transport facilities, middle men problem etc.

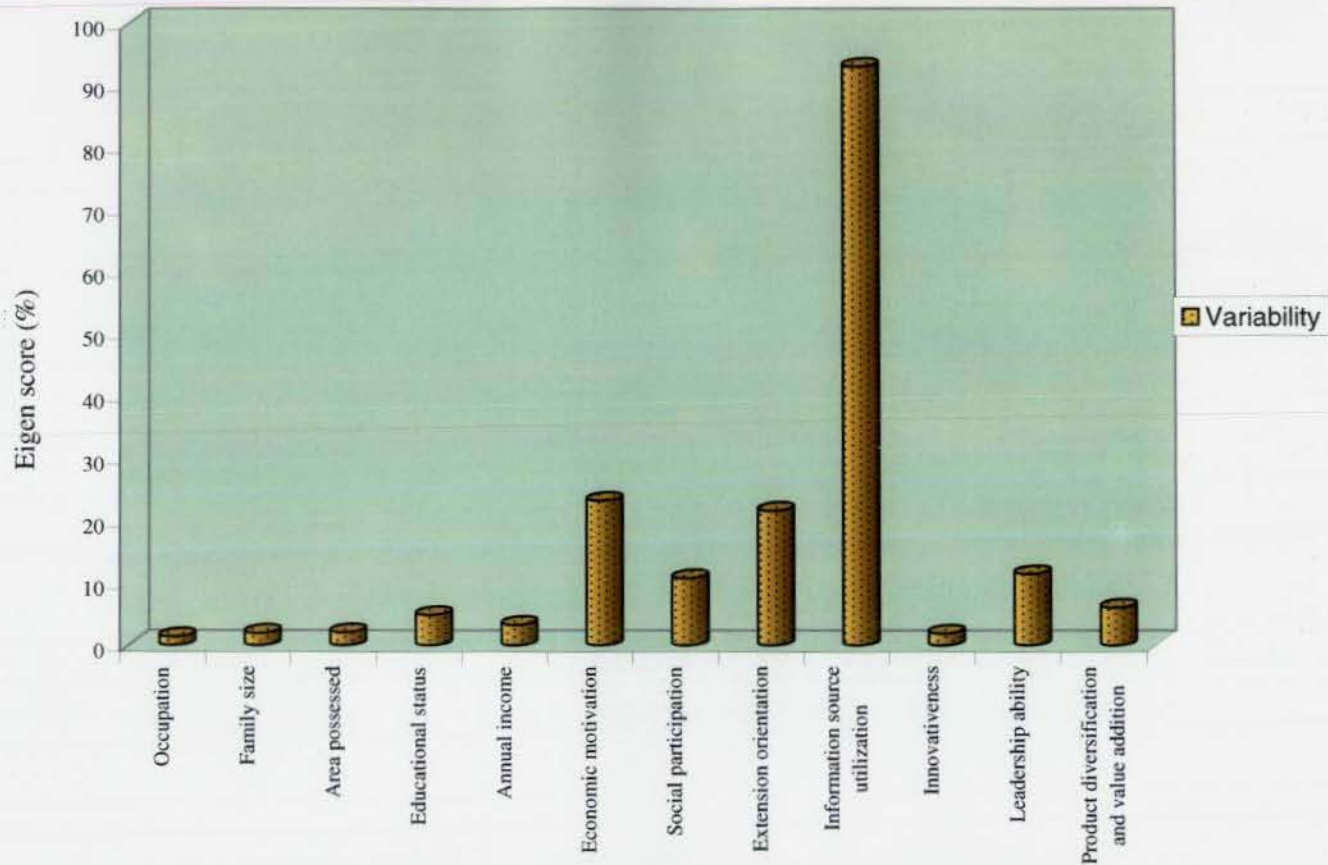
The agro-processing firms can arrange contractual agreements with farmers. These companies can encourage cultivation of crops required for value addition or processing. Farmers can be provided with latest technologies to increase productivity with buy-back arrangements. Product diversification and value addition are the new 'mantras' to be accepted with diligence for coping up with the cut-throat competitions and rat race all around.

4.8.2 Variability among beneficiaries on their personal and socio-economic characteristics

Principle component analysis was done to test the consistency of personal and socio-economic characteristics of the beneficiaries. 100 per cent variation could be noticed among the beneficiaries on their personal and socio-economic characteristics.

Table 26. Variability among beneficiaries on their personal and socio-economic characteristics

Sl. No.	Variable	Eigen score	Rank
1	Occupation	-0.01380	I
2	Family size	-0.01973	III
3	Area possessed	-0.02096	IV
4	Educational status	-0.04864	VI
5	Annual income	-0.03308	V
6	Economic motivation	-0.23268	XI
7	Social participation	-0.10796	VIII
8	Extension orientation	-0.21668	X
9	Information source utilization	-0.93033	XII
10	Innovativeness	-0.01929	II
11	Leadership ability	-0.11489	IX
12	Product diversification and value addition	-0.06070	VII



Personal and socio-economic characteristics

Fig. 9. Variability among beneficiaries on the personal and socio-economic characteristics

The consistency of socio-economic characteristics has been ranked based on the Eigen scores obtained i.e., the higher the rank, the lesser will be its variability among the beneficiaries. Table shows that information source utilization has got maximum variability among beneficiaries followed by economic motivation, extension orientation, leadership ability, social participation, product diversification and value addition, educational status, annual income, area possessed, family size, innovativeness and occupation (Fig. 9). These findings can be taken to support the findings of profile analysis of the beneficiary respondents.

4.9 SCOPE FOR NON-GOVERNMENTAL EXTENSION SERVICES IN FUTURE

The opinions on the scope for non-governmental extension services in future obtained by posing an open-ended question to the office-bearers and beneficiary respondents were pooled and analyzed, and those emerged as most important are given below.

Development means incremental progress. Progress in a social system may be initiated by external agency. Sustaining the progress as well as furthering the progress must commence through organized efforts within the social system. People in a rural social system generally lack the ability to steer the progress achieved. Therefore, external agencies while introducing change in a social system should facilitate its people to organize themselves around that change so that they have comparatively longer gratification. Experiences have shown that public extension system is incapable of achieving this. The public sector has been criticized for its low performance and capability (Sofranko *et al.*, 1988; Ahmad *et al.*, 2001). The reports of OECD (1989) and Rivera (1989) are also in match with the present finding. Also, the staff strength in governmental departments is awfully inadequate considering the enormous size of the client system. Public extension alone cannot be adequately addressed with the limited resources and wide ratio between farmers and extension workers (Sakuntalai *et al.*, 2003).

It has been proved that the top-down approach which the public extension agencies adopt tend to be much less effective than the participatory, beneficiary-centered approaches adopted by the non-governmental extension agencies. The public extension views technology transfer as a typical delivery mechanism, while the private extension service views it as an acquisition system, wherein the beneficiaries are empowered to take control of their own agenda. Shekara (2001b) was of the opinion that public extension services were supply driven rather than demand driven. The non-governmental extension system aims at helping the beneficiaries to own and operate their own extension services. With ownership and responsibility lying with clients, the basis for more demand-driven extension service is established. The study of Radhakrishnan and Karippai (2001) is in agreeable with this finding.

Earning the farmer's trust is crucial to successful technology transfer. A host of small, timely and regular steps can help build trust. These steps include being available on site, sharing and updating farm practices and being fair in dealing with the farmers. Extension agents should take care to make the farmers feel that they are there to stay and work with them. But in government departments, there is always demand from the government staff for better pay scales, promotions and facilities. The emphasis on work is reduced. Dedication and devotion have become ideals of the past. Researchers are often out of touch with farmers' problems. Research programmes tend to be designed and implemented in isolation without considering farmers' problems. Extension workers are poorly served by, or are ignorant of the output of research systems. It is obvious to the critical observer that much research, even when carried through to an apparently successful conclusion, is unlikely to have the expected impact on farmers' agricultural practices. There is fast deterioration in the services rendered by the government departments, with the increase in pay scales, 85 per cent of the budget is spent on salaries and there is very little amount to meet the expenditure on extension activities or to provide infrastructure. The reports of Huffman (1978) and Evenson (1986) support this statement.

Government department officials are sometimes not easy to reach by the people. People find it very difficult to get officials in time. They are bound by formal mode of action meekly. People feel that those who are in actual need of the services stay outside unreached by extension activities. There is a general complaint that extension staff are more inclined towards a few progressive farmers who are easily accessible for developmental activities. Moreover, public extension system involves lot of time consuming procedures. Facilities like subsidies are often not distributed in time. People are loosing faith in government. Government staff seem to be not accountable for their services and they more or less lack social responsibility and social commitment.

The Voluntary Organizations in rural areas or working in rural areas have the advantage of better knowledge of the area and its problems; felt needs of the local people. Being close to the people, it gains confidence and trust of the people. Non-governmental extension organizations have more flexible functional structure, which helps in better implementation of the programme. There exist strong linkages between other organizations, and also strong linkages between technology development and dissemination. Under these organizational structures, there is a tendency to quickly respond to client's needs. Efficiency of delivery channels and economic efficiency in services are high in non-governmental extension. High quality of services in terms of satisfying information needs of clientele, trained manpower, sustained finances and resource allocation, provision of an information mix, and choices available to beneficiaries make private extension more preferable to the people. Flexible functioning system, more freedom, decentralized works and motivational incentives make staff perform well and more dedicated to their jobs. With wide range of demands for agricultural technology in the changing scenario, there is growing recognition that public extension by itself, cannot meet the specific needs of various regions and different classes of farmers. Also, public extension has got its limitations like comparatively poor communication capacity, inadequate operating resources and financial sustainability, lack of farmer focus and feed back and inadequate technical capacity within the extension system. Now, government has realized the potential of non-governmental extension

agencies as effective change agents. Public organizations are facing severe financial constraints and are likely to withdraw from some areas, which could be served by private extension system, especially with regard to input supply, infrastructure development, technical and marketing services. Therefore, non-governmental extension services in the process of transfer of technology is found to be inescapable to provide an alternate and at the same time complimentary extension strategy.

Therefore, there is ample scope for the non- governmental sources in the coming years. An era where they will even partially replace public extension is foreseen. With many factors playing to their favour, the non-governmental agencies have the future safe in their hands, provided they never leave their focus from the deprived poor in the rural areas.

4.10 SUGGESTIONS OF THE CLIENTELE TO IMPROVE THE NON-GOVERNMENTAL EXTENSION SERVICES

Suggestions for improving the non-governmental extension services emanated from discussions with the clientele are given below:

- The attitude of the government towards non-governmental extension agencies should be encouraging and helpful for their healthy growth and all-round development
- The government should streamline and simplify the system of grant-in-aid to the non-governmental extension agencies
- The public and private extension both has got its own advantages. Therefore alliance between public and private extension is essential to enhance the prospects of technical effectiveness, cost sharing and cost recovery, thereby increasing the opportunities for collective bargaining and better impact of extension per unit of expenditure
- Nominal fee should be kept for private extension services
- Non-governmental extension agencies should focus more on infrastructure and marketing. Producer-oriented marketing system need to be promoted

- Non-governmental extension in the area of post- harvest technology and food processing has to be prioritized
- Non-governmental extension should ensure accountability of their services
- Non-governmental extension agencies should have proper and effective linkages with various stakeholders for effective delivery of extension services
- Technological and skill improvement of rural women, providing sustainable livelihood security to this vulnerable segment of society
- A well-defined approach to increase the quantity and stability of income of the small farmers and the landless labourers
- A strategy for bridging the prevailing gap between scientific know-how and field level do-how should be developed
- Develop pro-active approach while addressing the issue of farmers
- Contract farming through agreement between farmers and firms should be encouraged by non-governmental extension agencies. Farmers can grow crop in their fields and it can be procured by the firms, which will help farmers' get better return on their agricultural produce
- Site-specific technology development with active farmer participation to increase production and a clear-cut market strategy to tide over the crisis
- Non-governmental extension agencies should conduct more seminars and trainings for their beneficiaries.

Summary and Conclusion

CHAPTER 5

SUMMARY AND CONCLUSION

Non-governmental extension agencies play significant role in agricultural development in Kerala. The non-governmental sector is the motor of economic growth. This has provided domestic farming the much-needed breather. The increased use of private technology has brought higher yields and incomes, allowing farmers and consumers to reach higher levels of welfare. It gave further boost to the process of overall development of agricultural infrastructure and allied activities. Many additional qualities are attributed to the service of non-governmental extension agencies in comparison to Governmental efforts for agricultural development and are considered even better in the direction. It would be useful to analyse how far the non-governmental extension agencies of Kerala are effective in the transfer of technology, what their roles are, their mode of operation etc. to streamline better and appropriate agricultural development strategies and policies.

The present study was an attempt in this direction with the following specific objectives:

1. To collect and consolidate the different types of non-governmental extension sources involved in providing extension in the state.
2. To classify the non-governmental extension sources based on their involvement in agricultural development.
3. To analyze the activity focus, extension approaches followed and the mode of operation of the selected non-governmental extension agencies
4. To identify the success indicators of these non-governmental extension providers
5. To analyze the salient personal and socio-economic characteristics of the beneficiaries under different agricultural programmes implemented by the non-governmental extension providers
6. To appraise the suggestions of the beneficiaries in improving the non-governmental extension services

The study was conducted in Kerala state. The data collection was done during the months of April-June 2005. The different types of non-governmental extension providing agencies in Kerala were enlisted and scrutinized for the major role played by them in agricultural development. The identified non-governmental extension types were then classified based on these roles. For each role, one well-performing agency with respect to that role was selected and was analyzed for its activity focus, extension approaches and methods followed, staffing details etc.

A sample of 30 beneficiaries covering different agricultural programmes was drawn from each agency by random sampling procedure. Thus, through equal allocation method of stratified random sampling, a total of 150 beneficiary respondents were selected.

Based on extensive review of relevant literature and discussion with experts, exhaustive lists of socio-economic characteristics and probable success factors of the agencies were prepared and the variables relevant for the study were selected through judges' rating. The selected socio-economic characteristics were: 1) occupation 2) family size 3) area possessed 4) educational status 5) annual income 6) economic motivation 7) social participation 8) extension orientation 9) information source utilization 10) innovativeness 11) leadership ability 12) product diversification and value addition. Success factors chosen for analyzing clientele's perception on them were: 1) team work 2) activities based on felt needs of clientele 3) participatory approach 4) periodic evaluation and review of activities 5) credibility 6) accountability 7) co-ordination and integration of activities 8) resource use efficiency 9) communication methods 10) feedback from clientele.

Selected socio-economic characteristics of beneficiary respondents were measured with suitable instruments. Client's perception about success factors of the agency was measured using arbitrary scale developed for each of the success factor. Using structured and pre-tested interview schedules, data on agencies' mode of operation, clientele's socio-economic characteristics and their perception about success factors of

the agencies were collected. The data were analyzed and interpreted with the help of suitable statistical tools.

The findings drawn from the analysis are summarized below.

1. Types of non-governmental extension agencies involved in providing extension in the state are: (1) Agricultural consultants/firms (2) Para technicians (3) Progressive farmers (4) Farmer's organizations/Co-operatives (5) Non-Governmental Organizations (NGOs) (6) Agri-business firms (7) Input dealers (8) Print and electronic media (9) Private sector banks (10) Self-Help Groups (SHGs)
2. The major roles found being performed by the non-governmental extension agencies were: (1) Advocacy (2) Consultancy (3) Infrastructure development (4) Input supply (5) Marketing
3. Analysis of mode of operation revealed that
 - a. All the agencies have got a wide geographical outreach of their activities
 - b. Major activities carried out by the agencies are focused on health and sanitation, education, research and training, NRM, cottage industries and vocational training, advocacy, community organization (formation of people's organizations or SHGs), HRD programmes, socio-economic development programmes, which include agricultural, and entrepreneurship development programmes, and social and infrastructure development measures
 - c. Diverse sources of funds are attributing to the successful functioning of the agencies
 - d. Major approach followed by the agencies is participatory approach by the promotion of people's organizations or SHGs. The different methods adopted by the agencies for the implementation of activities include PRA, AR, exhibitions, demonstrations, seminars, training, publications, meetings etc.

- e. Organizational structure of all the agencies is same as those commonly seen, with a Board of Directors at the apex, followed by Chief Executive/President/Chairman and the other supporting staff (office and field staff)
 - f. The agencies are fortunate enough to have a team of dedicated, qualified and experienced staff personnel. Staff are selected based on test (aptitude/skill), interview and group discussion. Emolument of staff is either consolidated or pay scale. Scope for promotion is there for staff, mainly based on number of completed years, target achievement, performance and qualification, and the staff are provided with suitable incentives
 - g. The agencies have established strong linkages with funding agencies, government agencies, universities, research institutes and other voluntary organizations
 - h. The nature of clientele differs among the agencies with the objectives of the agencies as well as the objectives of the programmes/projects being implemented. But, in general, non-governmental extension agencies look for economically and educationally backward people of the community
 - i. The agencies charge fee for extension service that are of direct individual benefit to the clients but not on other services that are beneficial to the society as a whole
 - j. Lack of enough funds, political interference and negative attitude towards non-governmental extension agencies among the outsiders are the serious constraints faced by the agencies
4. Kendall's 'w' test showed a high degree of concordance among beneficiaries with respect to their perception about various success factors of the agencies. Considering the mean rank scores on the success indicators (variables), team work stands first (9.53) followed by participatory approach (9.44), periodic evaluation and review of activities (7.25), communication methods (6.73), resource use efficiency (5.41), accountability (4.54), credibility (4.43), activities based on felt

needs of clientele (2.64), feedback from clientele (2.61) and coordination and integration of activities (2.41)

5. Since the effectiveness indices obtained for all the agencies were higher than the overall effectiveness index, all the agencies could be considered to be performing well, with the agency selected for 'marketing' role, ranking first and the agency selected for 'consultancy' role, the last
6. The results of multiple discriminant function analysis revealed that communication methods adopted by the agencies (0.900) contributed maximum to the effectiveness followed by periodic evaluation and review of activities (0.455), coordination and integration of activities (0.178), resource use efficiency (0.157), participatory approach (0.071), and activities based on felt needs of clientele (-0.066)
7. The results of simple discriminant function analysis showed communication methods (0.895), periodic evaluation and review of activities (0.397) and resource use efficiency (0.326) as essential factors required for an agency to be effective
8. The results of path analysis further supported the results of multiple and simple discriminant function analysis. Analysis of path coefficients showed that participatory approach, team work, and communication methods highly influenced the effectiveness of the agencies; periodic evaluation and review of activities, credibility, accountability and resource use efficiency moderately influenced the effectiveness of the agencies; coordination and integration of activities had a low effect on the effectiveness; and feedback from clientele had only a negligible effect on the effectiveness. Activities based on felt needs of clientele had a direct negative influence on the effectiveness of the agencies, but the negative influence was observed to be very low
9. The mean status score (21.232109) was computed for assessing the status of any new agency that is to be taken up for studying on this particular aspect
10. Profile analysis of beneficiary respondents showed that the majority of them were self-employed or salaried/wage employed, family size was between four and

seven, area possessed was less than one acre, educational status was high school level, annual income was between 25,000 and 50,000, economic motivation was high, social participation was low, extension orientation was medium, information source utilization was medium, innovativeness was low, leadership ability was high and product diversification and value addition were medium

11. The results of principle component analysis indicated 100 per cent variation among beneficiaries on their socio-economic characteristics. Information source utilization got maximum variability among beneficiaries followed by economic motivation, extension orientation, leadership ability, social participation, product diversification and value addition, educational status, annual income, area possessed, family size, innovativeness and occupation
12. Regarding the scope for non-governmental extension services in future, both the staff and beneficiaries feel an ample scope for them in the coming years

In government departments, there is always demand from the government staff for better pay scales, promotions and facilities. The emphasis on work is reduced. Dedication and devotion have become ideals of the past. There is fast deterioration in the services rendered by the government departments, with the increase in pay scales. Government department officials are sometimes not easy to reach by the people. People feel that those who are in actual need of the services stay outside unreached by extension activities. There is a general complaint that extension staff are more inclined towards a few progressive farmers who are easily accessible for developmental activities. Moreover, public extension system involves lot of time consuming procedures and facilities like subsidies are often not distributed timely. People are losing faith in government. Government staff seem to be not accountable for their services and they more or less lack social responsibility and social commitment.

The Voluntary Organizations in rural areas or working in rural areas have the advantage of better knowledge of the area and its problems; felt needs of the local people. These organizations have more flexible functional structure, which helps in better implementation of the programme. Flexible functioning system, more freedom,

decentralized works and motivational incentives make staff perform well and more dedicated to their jobs. High quality of services in terms of satisfying information needs of clientele, trained manpower, sustained finances and resource allocation, provision of an information mix, and choices available to beneficiaries make private extension more preferable to the people.

Therefore, a bright future for non-governmental extension agencies is foreseen.

13. Suggestions of the clientele to improve the non-governmental extension services

Some of the important suggestions expressed by the clientele were:

- The attitude of the government towards non-governmental extension agencies should be encouraging and helpful for their healthy growth and all-round development
- The government should streamline and simplify the system of grant-in-aid to the non-governmental extension agencies
- The public and private extension both has got its own advantages. Therefore alliance between public and private extension is essential to enhance the prospects of technical effectiveness, cost sharing and cost recovery, thereby increasing the opportunities for collective bargaining and better impact of extension per unit of expenditure
- Non-governmental extension agencies should focus more on infrastructure and marketing
- Technological and skill improvement of rural women, providing sustainable livelihood security to this vulnerable segment of society
- A strategy for bridging the prevailing gap between scientific know-how and field level do-how should be developed

Suggestions for future research

- The present study was confined to Kerala state only. It is suggested that the study may be replicated in other states also

- Scope for the present investigation was restricted to the selected types of non-governmental extension agencies only and further studies may be taken up by including more or all types.
- Another area of possible study is comparison between governmental and non-governmental extension providing agencies
- In this study, the success indicators were analysed through clientele's perception on them. A more exhaustive analysis of success indicators can be done considering other criteria, which will help to verify the present result as well as bring out some unidentified success indicators
- In the present study, the constraints in the working of non-governmental extension agencies were sought through the staff members only. An in depth study of the constraints in working of non-governmental extension agencies will be helpful to suggest remedial measures for their better functioning

Conclusion

The provision of infrastructure and services is unthinkable today without private sector participation. Non-governmental extension agencies can show the path of development to the world. The advantage lies in their intimate relationship with people. In the light of their rich experience in dealing with people, non-governmental extension providers need to strive hard to effect changes in the policies of the government to bring real benefits to the people. This is the great role the non-governmental extension agencies can play in a fast changing society like ours.

Era of paternalism and direct help is replaced by self-reliance and empowerment. A non-governmental extension agency is nowadays not expected to deliver directly some benefits to people, but to motivate people, mobilize resources, initiate leadership, and participate in development programmes for self-reliance. It is only an enabler and as and when a society is made self-reliant, the role of non-governmental extension agency is shifted to another place where its service is required.

Non-governmental extension agencies have become more articulate, more knowledgeable, more experienced, and hopefully, more effective in development, particularly, agricultural development. They are expected to play a critical role in all conceivable aspects of development. They are shouldering more and more responsibilities in diverse fields. They could be the delivery arm-carrying out the actual field work in a manner responsive to the people's needs. Government also realized that there were lots of advantages to enrolling non-governmental extension sources in the development process. So the government should play the role of a facilitator by providing a conducive policy and regulatory framework. Public sector also has got a comparative advantage in disseminating location-specific, system based and sustainable technologies. Hence, a blend of governmental sector and non-governmental sector is essential to provide success.

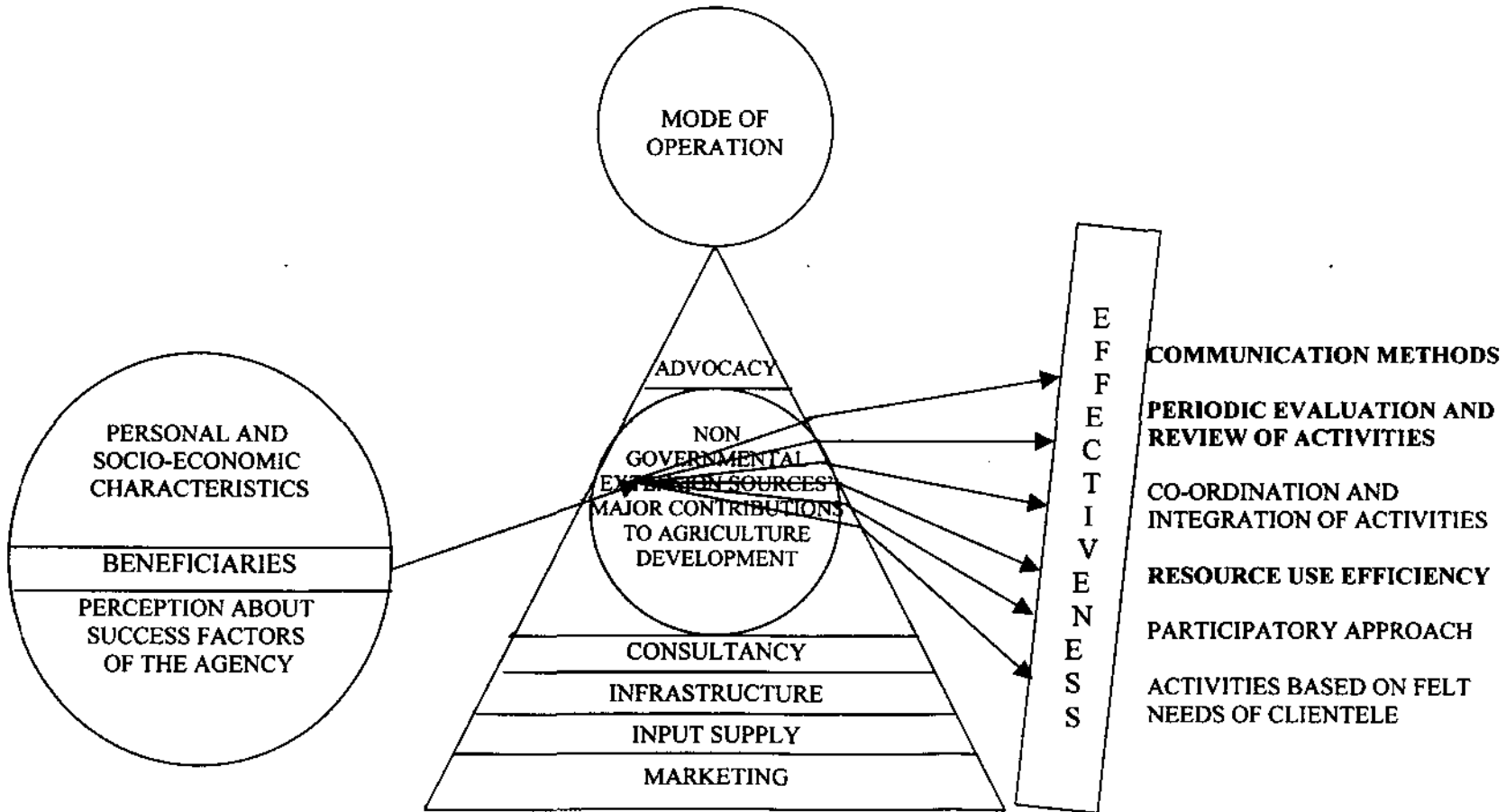


Fig. 10. Empirical frame work for the study

References

REFERENCES

- Adams, G. 2000. Extension advisory services in Central and Eastern Europe. *Human Resources in Agricultural and Rural Development* (eds. Bolliger, E. and Reinhard, P.). Elsevier Science Publishing Co. Inc., New York, pp. 8-21
- *Ahmad, M. 1999. A comparative analysis of the effectiveness of agricultural extension work by public and private sectors in Punjab, Pakistan. Ph.D. thesis, University of New England, Armidale, North South Wales.
- Ahmad, M., Davidson, A.P. and Ali, T. 2001. *Dilemmas of Agricultural Extension in Pakistan: Food for Thought*. Agricultural Research and Extension Network Paper No.116. Overseas Development Institute, London, 14 p.
- Akroyd, S. 2004. Public and private roles in the provision of rural services. *Agric. rural Dev.* 1(98): 4-6
- Albert, H. 2004. The future of agricultural services in Africa. *Agric. rural Dev.* 12(1): 6-9
- Alex, G., Byerlee, D., Collion, M.H. and Rivera, W.M. 2002a. *Extension and Rural Development: Converging Views on Institutional Approaches?* Agriculture and Rural Development Discussion Paper No.4. The World Bank, Washington DC, 31 p.
- Alex, G., Zijp, W. and Byerlee, D. 2002b. *Rural Extension and Advisory Services- New Directions*. Rural Development Strategy Background Paper No.9. Agricultural and Rural Development Department, The World Bank, Washington DC [Online]. Available: <http://www.worldbank.org/wbi/sdruralpoverty/agextension1/Materials/additional/Rurale-xtension.pdf>. [12 May 2005].
- Amanor, K. and Farrington, J. 1991. NGOs and agricultural technology development. *Agricultural Extension: Worldwide Institutional Evolution and Forces for Change* (eds. Rivera, W.M. and Gustafson, D.J.). Elsevier Science Publishing Co. Inc., Amsterdam, pp. 294-306

- Ameur, C. 1994. *Agricultural Extension: A Step beyond the Next Step*. World Bank Technical Paper No.247, The World Bank, Washington DC, 47 p.
- Anandharajkumar, P. 1995. Voluntary organizations in rural development: A constructive approach. *Kurukshetra* 18(5): 14-16
- Anderson, J.R. and Feder, G. 2003. *Rural Extension Services*. Policy Research Working Paper No.2976. The World Bank, Washington DC [On-line]. Available: http://www.econ.worldbank.org/files/24374_wps2976.pdf. [15 Sept. 2004].
- Ansari, M.N. and Singh, A.K. 2002. Prospects of privatization in agricultural extension services. *Agric. Today* 5(3): 31-35
- Antholt, C.H. 1994. *Getting Ready for the Twenty-First Century: Technical Change and Institutional Modernization in Agriculture*. World Bank Technical Paper No.217. Asia Technical Department Series, The World Bank, Washington DC [On-line]. Available: <http://www.fao.org/docrep/W7314E/w7314eOe.htm>. [26 Sept. 2004].
- Ashry, E.M.T., Duda, A.M. and Van, S.J. 1999. Future perspectives on agricultural drainage. *Agricultural Drainage* (ed. Skaggs, R.W.). American Society of Agronomy, Madison, pp. 1285-1298
- *Attneave, F. 1962. Perception and related area. *Psychology – A Study of a Science* (ed. Koch, S.). McGraw Hill Book Co. Inc., New York.
- Axinn, G.H. 1988. *Guide on Alternative Extension Approaches*. Food and Agricultural Organization, Rome [On-line]. Available: <http://www.fao.org/docrep/u8955e/u8955eOp.htm>. [25 Sept. 2004].
- Axinn, G.H. 1997. Challenges to agricultural extension in the twenty first century. *Farmer Led Extension: Concepts and Practices* (eds. Scarborough, V., Killough, S., Johnson, D.A. and Farrington, J.). Intermediate Technology Publications, London, pp. 59-76

- *Axinn, G.H. and Thorat, S. 1972. *Modernising World Agriculture: A Comparative Study of Agricultural Extension Education Systems*. Praeger, New York.
- Ayers, A.J. 1992. *Conflicts or Complementarities? The State and NGOs in the Colonization Zones of San Julian and Berlin, Eastern Bolivia*. Agricultural Research and Extension Network paper No.37. Overseas Development Institute, London, 23 p.
- Bajwa, R. 2004. *Agricultural Extension and the Role of Private Sector in Pakistan* [Online]. Available: <http://www.regional.org.au/au/cs/htm>. [5 July 2004].
- Balasubramani, N., Chandrakandan, K. and Swathilekshmi, P.S. 2003. Strengthening research – extension functions with effective private and public partnership in agriculture sector. International Conference on Agricultural Policies and Strategies for Profitable Farming: Field Realities, Needed Reforms and Interventions, 5-7 December 2003. Indian Council of Agricultural Research, New Delhi. *Abstract: 73-74*
- *Balu, S.R.A. 1980. A study on the impact of integrated dry land agricultural development project on coconut growers. M.Sc. (Ag.) thesis, Tamil Nadu Agricultural University, Coimbatore.
- Barr, A.V.D. 1993. Studying agricultural knowledge and information systems for improving agricultural extension. *Indian J. Ext. Educ.* 29(1/2): 15-50
- Batra, G. and Mahmood, S. 2003. *Direct support to Private Firms: Evidence on Effectiveness*. World Bank Policy Research Working Paper No.3170. The World Bank, Washington DC, 24 p.
- Baxter, M., Harrison, J.Q. and Benor, D. 1984. *Agricultural Extension: The Training and Visit System*. The World Bank, Washington DC, 85 p.
- Bebbington, A.J. 1991. Farmers' organization in Ecuador: Contributions to farmer first research and development. *Gate Keeper Ser.* 26(4): 10-12

Berdegue, J.A. 1990. *NGOs and Farmers' Organizations in Research and Extension in Chile*. Agricultural Administration, Research and Extension Network Paper No.19. Overseas Development Institute, London, 17 p.

Berdegue, J.A. 2001. Co-operating to complete Associative Peasant Business firms in Chile. Ph.D. thesis, Wageningen Agricultural University, The Netherlands, 265 p.

Berdegue, J.A. and Marchant, C. 2002. Chile: The evolution of the agricultural advisory service for small farmers: 1978-2000. *Contracting for Agricultural Extension: International Case Studies and Emerging Practices* (eds. Rivera, W.M. and Zijp, W.). CABI Publishing, Washington, D. C., pp. 21-28

Beyer, W.A. 1989. *Participatory Technology Development in Ecologically-Oriented Agriculture: Some Approaches and Tools*. Agricultural Administration, Research and Extension Network Paper No.7. Overseas Development Institute, London, 63 p.

*Bhaskaran, C. 1979. A critical analysis of the interpersonnel communicational behaviour of small and other farmers in a less progressive and more progressive village in Kanyakumari district of Tamil Nadu. Ph.D. thesis, University of Agricultural Sciences, Bangalore.

Bhat, G.S. 1999. Rural entrepreneurship and NGOs. *Kurukshetra* 48(2): 15-18

Bichmann, W. 2004. Private sector service providers even for the poor? *Agric. rural Dev.* 97(1): 10-13

Bingen, J., Serrano, A. and Howard, J. 2003. Linking farmers to markets: Different approaches to human capital development. *Fd. Policy* 28 (4): 405 – 419

*Blalock, T.C. 1963. State legislatives perception of North Carolina Cooperative Agricultural Extension Service. Ph.D. thesis, University of Wisconsin, Madison.

- Bloome, P.D. 1992. *Seeking a Mature Relationship with Agriculture* [On-line]. Available: <http://www.joe.org/joe/1992spring/tp1.html>. [14 Feb. 2004].
- Bloome, P.D. 1993. *Privatization Lessons for US Extension from New Zealand and Tasmania* [On-line]. Available: <http://www.joe.org/joe/1993april/a1.html>. [2 Dec. 2004].
- Buckland, J. and Graham, P. 1990. *The Mennonite Central Committee's Experience in Agricultural Research and Extension in Bangladesh*. Agricultural Research and Extension Network Paper No.17. Overseas Development Institute, London, 47 p.
- Byerlee, D. and Echeverria, R. (eds.). 2002. The evolution of public research systems in developing countries: Facing new challenges. *Agricultural Research in an Era of Privatization*. CABI Publishing, U.K., pp. 19-34
- Campbell, D.A. and Barker, S.C. 1997. Selecting appropriate content and methods in programme delivery. *Improving Agricultural Extension: A Reference Manual* (eds. Swanson, B.E., Bentz, R.P. and Sofranko, A.J.). Food and Agricultural Organization, Rome, pp. 67-72
- Campos, N.F., Khan, F.U. and Tessoroff, J.E. 2004. From substitution to complementarity: Some econometric evidence on the evolving NGO state relationship in Pakistan. *J. Dev. Areas* 37(2): 49-72
- Carney, D. 1998. *Changing Public and Private Roles in Agricultural Service Provision*. Overseas Development Institute, London, 90 p.
- Cary, J.W. 1993. Changing foundations for government support of agricultural extension in economically developed countries. *Sociologia Ruralis* 33(3&4): 334-345
- Cary, J.W. 1998. Issues in public and private technology transfer: The cases of Australia and New Zealand. *Privatization of Information and Agricultural Industrialization* (ed. Wolf, S.A.). CRC Press, Boca Raton, pp.185-203

- *Cary, J.W. and Wilkinson, R.L. 1992. The provision of government extension services to the Victorian farming community. School of Agriculture and Forestry, University of Melbourne, Parkville.
- Chamala, S. and Shingi, P.M. 1997. Establishing and strengthening farmer organizations. *Improving Agricultural Extension: A Reference Manual* (eds. Swanson, B.E., Bentz, R.P. and Sofranko, A.J.). Food and Agricultural Organization, Rome, pp. 190-200
- Chambers, R. and Toulmin, C. 1992. Farmers first: Achieving sustainable dry land development in Africa. *Rural Households in Emerging Societies: Technology and Change in Sub-Saharan Africa* (eds. Maryaret, A.S. and Hunt, D.). Oxford Berg Publishers, New York, pp. 158-160
- Chandrakandan, K. 2003. National Agricultural Extension Policy (NAEP): Issues and prospects. International Conference on Agricultural Policies and Strategies for Profitable Farming: Field Realities, Needed Reforms and Interventions, 5-7 December 2003. Indian Council of Agricultural Research, New Delhi. *Abstract*: 22-34
- Chandrakandan, K. and Karthikeyan, C. 2001. Private extension in India: Issues and options. *Private Extension in India: Myths, Realities, Apprehensions and Approaches* (ed. Shekara, C.P.). National Institute of Agricultural Extension Management (MANAGE), Hyderabad, pp. 26-31
- Chapman, R. and Tripp, R. 2003. *Changing Incentives for Agricultural Extension- A Review of Privatized Extension in Practice*. Agricultural Research and Extension Network Paper No.132. Overseas Development Institute, London, 14 p.
- Charles, B.B. 1987. Limits to privatization. *Eur. econ. Rev.* 31: 346-51
- Charles, E. and Shepherd, A.V.V. 2001. *Contract Farming: Partnerships for Growth*. FAO Agricultural Services Bulletin 145. Food and Agricultural Organization, Rome, 153 p.

- Chathukulam, J. 2003. Poverty reduction through social capital formation: The case of women's self-help group in Kerala. *Man Dev.* 25 (2): 67-90
- Chavai, A.M., Sadaphal, S.S., Nirban, A.J. and Sawant, G.K. 2003. Perception of Farmers Interest Groups (FIGs) of National Agricultural Technology project about private extension services: A micro study in Ahmednagar district of Maharashtra. *MANAGE Ext. Res. Rev.* 4(2): 61-69
- Chris, G. and Nicola, H. 1997. Extension experiences in agriculture and natural resources management in the 1980s and 1990s. *Farmer Led Extension: Concepts and Practices* (eds. Scarborough, V., Killough, S., Johnson, D.A. and Farrington, J.). Intermediate Technology Publications, London, pp. 24-35
- Collion, M.H. 2002. Introduction to revitalization within public sector services. *Extension Reform for Rural Development: Case Studies of International Initiatives* (eds. Rivera, W.M. and Alex, G.). The World Bank, Washington DC, pp. 121-126
- Copestake, J.G. 1990. *The Scope for Collaboration between Government and Private Voluntary Organization in Agricultural Technology Development – The Case of Zimbabwe*. Agricultural Administration, Research and Extension Network Paper No.20. Overseas Development Institute, London, 41 p.
- Coutts, J.A. 1995. Agricultural extension policy as a framework for change. *Eur. J. agric. Educ. Ext.* 2(1): 17-28
- Cristovao, A., Alves, F. and Koehnen, T. 2002. Portugal: Contracting for IPM extension by the Association for Viticultural Development in the Douro Valley. *Contracting for Agricultural Extension: International Case studies and Emerging Practices* (eds. Rivera, W.M. and Zijp, W.). CABI Publishing, Washington DC, pp. 115-126
- Crompton, J. 1997. *Managing Applied Research: Experiences from a Post-harvest Pest Control Project in Ghana*. Agricultural Administration, Research and Extension Network Paper No.74a. Overseas Development Institute, London [On-line]. Available: http://www.odi.org.uk/agren/abstracts/agab_7077.htm/#74. [2 June 2004].

- *Crow, L.D. and Crow, A. 1956. *Understanding Our Behavior*. Alfred Kempt, New York.
- Currle, J., Hoffmann, V. and Kidd, A. 2002. Federal Republic of Germany: Contracting for agricultural extension in Thuringia. *Contracting for Agricultural Extension: International Case Studies and Emerging Practices* (eds. Rivera, W.M. and Zijp, W.). CABI Publishing, Washington DC, pp. 37-44
- Dakhore, K.M. and Deshmukh, K.A. 2003. Encouraging private extension services: Need of the day. International Conference on Agricultural Policies and Strategies for Profitable Farming: Field Realities, Needed Reforms and Interventions, 5-7 December 2003. Indian Council of Agricultural Research, New Delhi. *Abstract: 77*
- Dasgupta, R. 2001. An informal journey through self-help groups. *Indian J. agric. Econ.* 56(3): 370-386
- Davidson, A.P., Ahmad, M. and Ali, T. 2001. *Dilemmas of Agricultural Extension in Pakistan: Food for Thought*. Agricultural Research and Extension Network Paper No.116. Overseas Development Institute, London, 14 p.
- De, H.K. and Sahu, B.B. 2001. Privatizing fisheries extension- Policy implications. *Private Extension in India: Myths, Realities, Apprehensions and Approaches* (ed. Shekara, C.P.). National Institute of Agricultural Extension Management (MANAGE), Hyderabad, India, pp. 53-59
- de Kool, S.A.M. 2002. UNFFE: Exploring new alliances in agricultural extension. *LEISA India* 4(2): 26-27
- Devara, R. 2001. Indian agriculture: Its global approach. *Ashwaththa* 1(1): 38-40
- Dhillon, D.S. and Hansra, B.S. 1995. Role of voluntary organizations in rural development. *Kurukshetra* 18(5): 10-13

- Dinar, A. 1996. Extension commercialization: How much to charge for extension services. *Am. J. agric. Econ.* 78(1): 1-12
- Dinar, A. and Keynan, G. 2001. Economics of paid extension: Lesson from experience in Nicaragua. *Am. J. agric. Econ.* 83(3): 769-776
- Echeverria, R. 2003. Twenty years of reforming extension in Latin America: Are we there yet? *Paper Presented at the Regional Workshop on Operationalizing Reforms in Agricultural Extension in South Asia, 6-8 May, 2003* [On-line]. Available: [http://www.worldbank.org/wbi/sdruralpoverty/ag_extension1/Materials/Plenary/Latin America country paper.pdf](http://www.worldbank.org/wbi/sdruralpoverty/ag_extension1/Materials/Plenary/Latin%20America%20country%20paper.pdf). [6 Nov. 2004].
- Estrada, R.D., Holmann, F. and Posada, R. 2002. Farmer and industry funding of agricultural research in Colombia. *Agricultural Research in an Era of Privatization* (eds. Byerlee, D. and Echeverria, R.). CABI Publishing, UK, pp. 67-80
- Evenson, R.E. 1986. The economics of extension. *Investing in Rural Extension: Strategies and Goals* (ed. Jones, G.E.). Elsevier, New York, pp. 65-91
- Farrington, J. 1994. *Public sector agricultural extension: Is there life after structural adjustment?* Natural Resource Perspectives No.2. Overseas Development Institute, London [On-line]. Available: http://www.odi.org.uk/nrp/odi_agri2.html. [5 July 2004].
- Farrington, J. 1997. The role of non-governmental organizations in extension. *Manual on Agricultural Extension*. Third edition. Food and Agricultural Organization, Rome [On-line]. Available: <http://www.fao.org/docrep/W5830e/w58303eOo.html>. [28 Dec. 2004].
- Farrington, J., Bebbington, A.J., Wellard, K. and Lewis, D. (eds.). 1993. *Reluctant Partners? Non-Governmental Organizations, the State, and Sustainable Agricultural Development*. Routledge, London, 256 p.

- Farrington, J. and Biggs, S.D. 1990. NGOs, agricultural technology and the rural poor. *Fd. Policy* 15 (6): 479-491
- Feder, G., Willett, A. and Zijp, W. 1999. *Agricultural Extension: Generic Challenges and Some Ingredients for Solutions*. Policy Research Working Paper No.2129. The World Bank, Washington DC, 38 p.
- Feder, G., Willett, A. and Zijp, W. 2001. Agricultural extension: Generic challenges and some ingredients for solutions. *Knowledge Generation and Technical Change: Institutional Innovation in Agriculture* (eds. Wolf, S. and Zilberman, D.). Kluwer, Boston, pp. 313-356
- Fieldman, S. 2003. Paradoxes of institutionalization: The depoliticization of Bangladeshi NGOs. *Dev. Pract.* 13(1): 5-26
- FAO (Food and Agricultural Organization). 2001a. *Agricultural Extension, Rural Development and the Food Security* [On-line]. Available: <http://www.Fao.org/DOC.REP/006/Y5061E/y5061e06.htm-35k>. [2 May 2004].
- FAO (Food and Agricultural Organization). 2001b. *FAO Spotlight: Agribusiness and Small Farmers* [On- line]. Available: www.fao.org/ag/megazine/01075sp.htm. [5 July 2004].
- French, H. 2000. *Vanishing Borders: Protecting the Planet in the Age of Globalization*. W.W. Norton and Co. Inc., New York, 257 p.
- Fulton, A., Fulton, D., Tabart, T., Ball, P., Champion, S., Weatherley, J. and Heinjus, D. 2003. *Report on Agricultural Extension, Learning and Change*. Project No.RDP-1A. Rural Industries Research and Development Corporation, Australia, 78 p.
- Garforth, C. 1982. Reaching the rural poor: A review of extension strategies and methods. *Progress in Rural Extension and Community Development* (eds. Jones, G.E. and Rolls, M.J.). Vol. I. John Wiley and Sons Ltd., New York, pp. 43-69

- Garforth, C. 1997. Principles and methods in farmer-to-farmer extension. *Farmer Led Extension: Concepts and Practices* (eds. Scarborough, V., Killough, S., Johnson, D.A. and Farrington, J.). Intermediate Technology Publications, London, pp. 37-51
- *Garforth, C. 2002. ADAS and the privatization of advisory services in England and Wales. *Workshop Papers on Extension and Rural Development: A Convergence of Views on Institutional Approaches? 12-14 November, 2002*. International and Food Policy Research Institute, Washington DC.
- Garforth, C., Angell, B., Archer, J. and Green, K. 2003. *Improving Farmers' Access to Advice on Land Management: Lessons from Case Studies in Developed Countries*. Agricultural Research and Extension Network Paper No.125. Overseas Development Institute, London, 24 p.
- Gautam, M. 2002. *Agricultural Extension: The Kenya experience - An Impact Evaluation*. Report No.20744. Operations Evaluation Department, The World Bank, Washington DC, 94 p [On-line]. Available: http://www.wds.worldbank.org/servlet/WDS_1BankServlet?pcont=details&eid=000094946_00080705302026-24k. [2 Jan. 2005].
- Ghosh, S. 2001 Privatization of agricultural extension services in Indian context. *Agric. Ext. Rev.* 13 (5): 29-30
- Gilbert, E. 1990. *NGO-Government Links in Seed Production: The Experience of the Gambia*. Agricultural Administration, Research and Extension Network Paper No.12. Overseas Development Institute, London, 53 p.
- Gill, D.S. 1991. Economic returns to expenditures on agricultural extension system. *J. Ext. Systems* 7: 44-61
- Gisselquist, D., Nash, J. and Pray, C. 2002. Deregulating the transfer of agricultural technology: Lessons from Bangladesh, India, Turkey and Zimbabwe. *The Wld. Bank Res. Obs.* 17: 237-265

- Gogte, A. 1998. Eco-development of upper catchments in the Western Ghats. *Ashwattha* 1(3): 26-28
- Govind, S. 1992. Integrated Pest Management in rice - Achievement and opportunities. Ph.D. thesis, Tamil Nadu Agricultural University, Coimbatore, 167 p.
- Gowda, M.J.C. 2001. Micro level opportunities and challenges for privatization of agricultural extension. *Private Extension in India: Myths, Realities, Apprehensions and Approaches* (ed. Shekara, C.P.). National Institute of Agricultural Extension Management (MANAGE), Hyderabad, pp. 18-25
- Gros, J.G. 1994. Of cattle, farmers, veterinarians and the World Bank: The political economy of veterinary services privatization in Cameroon. *Public Admin. Dev.* 14(1): 37-51
- GTZ (*Deutsche Gesellschaft für Technische Zusammenarbeit*). 2001. *Services for Rural Development* [On-line]. Available: <http://www.gtz.de/agriservice/english/topics/reform/topics1c1f.htm>. [2 Jan. 2004].
- Gupta S.P., Amardeep, A.S. and Vir, K. 2003. Utilization of information sources by farmers under different production systems in Uttaranchal and Uttar Pradesh. *MANAGE Ext. Res. Rev.* 4 (2): 70-85
- Gurumoorthy, T.R. 2000. Self-Help Groups empower rural women. *Kurukshetra* 48(5): 36-39
- Gustafson, D. J. 1991. The challenge of connecting priorities to performance: One state's response to the forces for change in U.S. extension. *Agricultural Extension: Worldwide Institutional Innovation and Forces for change* (eds. Rivera, W.M. and Gustafson, D.J.). Elsevier, Amsterdam, pp. 131-144
- Haan, C.D., Wilson, R.T., Ehui, S. and Mack, S. 1995. Development support and livestock services. *Proceedings of the Joint FAO-ILRI Round Table on Livestock Development Strategies for Low Income Countries, 27 February – 2*

March, 1995 (eds. Wilson, R.T. and Ehui, S.). International Livestock Research Institute, Addis Ababa, Ethiopia, pp. 23-27

- *Hanchinal, S.N., Sundaraswamy, B. and Ansari, M.R. 2000. Attitudes and preferences of farmers towards privatization of extension service. *National Seminar on Private Extension: Approaches and Challenges in the Millennium, 28-29 July 2000*. National Institute of Agricultural Extension Management (MANAGE), Hyderabad.
- Hanson, J. and Just, E. 2001. The potential for transition to paid extension: Some guiding principles. *Am. J. agric. Econ.* 38: 777-784
- Hanyani-Mlambo, B.T. 2002. *Strengthening the Pluralistic Agricultural Extension System: A Zimbabwean Case Study*. Food and Agricultural Organization, Rome, 36 p.
- Harter, D. and Hass, G. 1992. Commercialization of British extension system, promise or promise path. *J. Ext. Systems* 8(2): 37-44
- Hartwich, F., Blank, D. and Oppen, M.V. 2004. *Private Sector Perceptions of Public Agricultural Research: A Case Study on Costa Rica*. ISNAR Briefing Paper 67 [On-line]. Available: <http://www/isnar.cgiar.org/index1.htm>. [9 June 2004].
- Haug, R. 1991. Public-private co-operation: Farmer-led research/extension circles in Norway. *Agricultural Extension: Worldwide Institutional Innovation and Forces for Change* (eds. Rivera, W.M. and Gustafson, D.J.). Elsevier, Amsterdam, pp. 116-129
- Haug, R. 1999. Some leading issues in international agricultural extension: A literature review. *The J. agric. Educ. Ext.* 5(4): 264-274
- Hedge, N.G. and Sohani, G.G. 1995. Role of NGOs in sericulture development. *Indian Silk* 33(9): 4-6

- Hercus, J.M. 1991. The commercialization of government agricultural extension services in New Zealand. *Agricultural Extension: Worldwide Institutional Evolution and Forces for Change* (eds. Rivera, W.M. and Gustafson, D.J.). Elsevier, Amsterdam, pp. 36-49
- *Hoffmann, V. (ed.). 1992. *Beratungsanstze: Von der Uniform zum Massanzug. Beratung als Lebenshilfe*. Margraf, Weikersheim, pp. 271-276
- Holloway, G.J. and Ehui S.K. 2001. Demand, supply and willingness - to - pay for extension services in an emerging market setting. *Am. J. agric. Econ.* 83(3): 764-768
- Huffman, W.E. 1978. Assessing returns to agricultural extension. *Am. J. agric. Econ.* 60(5): 967-975
- Hunt, J. and Nalini, K. 2001. Path ways to empowerment? Reflections on microfinance and transformation in gender relations in South Asia. *Gender Dev.* 9 (1): 42-52.
- Hyden, G. 1983. *Shortcuts to Progress: African Development, Management in Perspective*. University of California Press, Berkeley, 191 p.
- IFAD (International Fund for Agricultural Development). 2003. *Microfinance for Marginal and Small Farmers Project* [On-line]. Available: <http://www.ifad.org/operations/projects/regions/PI/des/BD.htm>. [5 May 2005].
- Indu, B. 1997. Role of non-governmental organizations in transfer of technology for rural development: A case study in Thrissur district. M.Sc. (Ag.) thesis, Kerala Agricultural University, Vellanikkara, 108 p.
- Jaffee, S. and Srivastava, J. 1994. The roles of the private and public sectors in enhancing the performance of seed systems. *The Wld. Bank Res. Obs.* 9(1): 97-117
- Jasu, A.K. 2001. Extension approaches, strengths and weakness of private extension services - Experiences of Ramakrishna Math. *Private Extension: Indian*

Experiences (ed. Shekara, C.P.). National Institute of Agricultural Extension Management (MANAGE), Hyderabad, pp. 137-149

Jegadeesan, M. 2001. Privatization of agricultural extension services: An analysis. M.Sc. (Ag.) thesis, Tamil Nadu Agricultural University, Coimbatore, 115 p.

Jose, A.I. 2004. Private extension and cyber extension in India. *Supportive Reading Material for Training on IT Enabled Services in Agriculture, 17-21 August, 2004* (ed. George, A.). Central Training Institute, Mannuthy, Kerala, pp. 1-7

Judd, M.A., Boyce, J.K., and Evenson, R. 1986. Investing in agricultural supply: The determinants of agricultural research and extension investment. *Econ. Dev. cult. Change* 35 (1):77-111

Kaimowitz, D. 1991. The evolution of links between research and extension in developing countries. *Agricultural extension: Worldwide Institutional Innovation and Forces for Change* (eds. Rivera, W.M. and Gustafson, D.J.). Elsevier, Amsterdam, pp. 101-112

Kalra, R.K. and Virk, G.S. 2001. Privatization of agricultural extension services in Punjab: An experiment. *Private Extension: Indian Experiences* (ed. Shekara, C.P.). National Institute of Agricultural Extension Management (MANAGE), Hyderabad, pp. 46-55

Kanji, N., Braga, C. and Mitullah, W. 2002. *Promoting Land Rights in Africa: How Do NGOs Make a Difference?* International Institute for Environment and Development, London, 50 p.

Kelly, V., Adesina, A.A. and Gordon, A. 2003. Expanding access to agricultural inputs in Africa: A review of recent market development experience. *Fd. Policy* 28(4): 379-404

Khandekar, S. 1998. Educating the masses: A CORO endeavor. *Ashwattha* 1(4): 23-25

- Kidd, A., Lamers, J., Ficarelli, P. and Hoffmann, V. 2000. Privatizing agricultural extension: Caveat emptor. *J. rural stud.* 16: 95-102
- Kimmins, F. 2003. *Supply of Agricultural Information in Uganda* [On-line]. Available: http://www.cepa.co.uk/projects_agr.htm. [5 Nov. 2004].
- Kohl, B. 1991. *Protected Horticultural Systems in the Bolivian Andes: A Case Study of NGOs and Inappropriate Technology*. Agricultural Research and Extension Network Paper No.29. Overseas Development Institute, London, 30 p.
- Kothari, S. 1995. Role of voluntary agencies in India's development. *Man Dev.* 16(3): 50-22
- Krishna, A. 2005. Old private banks: Role in post reforms era. *The Hindu Survey of Indian Industry 2005* (ed. Ravi, N.). Kasturi and Kasturi Sons Ltd., Chennai, pp. 73-76
- Kumar, A.P. 1995. Voluntary organization in rural development: A constructive approach. *Kurukshetra* 18(5): 14-16
- Kumar, V. 1993. Limitations of voluntary efforts in rural development. *Kurukshetra* 15(3): 25-27
- Kumar, S.M., Balasubramani, N., Padma, S.R. and Padma, C. 2003a. Partially privatized and pluralistic extension system for effective delivery of agricultural extension services in India. International Conference on Agricultural Policies and Strategies for Profitable Farming: Field Realities, Needed Reforms and Interventions, 5-7 December 2003. Indian Council of Agricultural Research, New Delhi. *Abstract*: 70-71
- *Lees, J.W. 1990. *More than Accountability: Evaluating Agricultural Extension Programmes*. The Rural Development Centre, University of New England, North South Wales.

- LeGouis, M. 1991. Alternative Financing of Agricultural Extension: Recent Trends and implications for the future. *Agricultural Extension: Worldwide Institutional Evolution and Forces for Change* (eds. Rivera, W.M. and Gustafson, D.J.). Elsevier, London, pp. 51-62
- Leonard, D.K. 1985. African practice and the theory of user fees. *Agric. Admin.* 18(3): 137-158
- Linder, R.K. 1993. Privatizing the production of knowledge: Promise and pitfalls for agricultural research and extension. *Aust. J. agric. Econ.* 37(3): 205-225
- *Lokhande, M.R. 1974. Socio-psychological factors associated with farm credit-behaviour of Delhi farmers. Ph.D. thesis, Indian Agricultural Research Institute, New Delhi.
- Loolaid, U. 2002. Estonia: The role of contracting for private agricultural advisory services. *Contracting for Agricultural Extension: International Case Studies and Emerging Practices* (eds. Rivera, W.M. and Zijp, W.). CABI Publishing, Washington DC, pp. 29-36
- Lovelock, C., Vandermerive, S. and Lewis, B. 1999. *Services Marketing: A European Perspective*. Prentice-Hall, USA, 291 p.
- Maalouf, W.D., Adhikarya, R. and Contado, T. 1991. Extension coverage and resource problems: The need for public-private co-operation. *Agricultural Extension: Worldwide Institutional Evolution and Forces for Change* (eds. Rivera, W.M. and Gustafson, D.J.). Elsevier Science, Amsterdam, pp. 64-72
- MacGarry, B., Wellard, K., and Copestake, J.G. 1993. Silveira house promoting the use of hybrid seed. *Non-Governmental Organizations and the State in Africa: Rethinking Role in Sustainable Agricultural Development* (eds. Wellard, K. and Copestake, J.G.) Routledge, London, pp. 50-66
- Malik, R.P.S. 2002. *Flow of Credit to Small and Marginal Farmers in Haryana*. Agricultural Economics Research Centre, New Delhi, 133 p.

- Malik, S.P. 1995. NGOs as catalyst of rural development. *Kurukshetra* 18(5): 23-25
- MANAGE (National Institute of Agricultural Extension Management). 2002. *Better Farming by every Farmer* [On-line]. Available: [http://www.agriclinics.net/agripreneur/agripreneur1\[2002\].pdf](http://www.agriclinics.net/agripreneur/agripreneur1[2002].pdf). [4 May 2004].
- Mannembeth, J. 2000. Role of non-governmental organizations (NGOs) in empowerment of farmers. M.Sc. (Ag.) thesis, Kerala Agricultural University, Vellayani, 104 p.
- Manoj, M. 1998. Gaps in the adoption of plant protection practices by commercial vegetable growers of Thrissur district. M.Sc. (Ag.) thesis, Kerala Agricultural University, Thrissur, 93 p.
- Maredia, M., Byerlee, D. and Anderson, J.R. 2001. *Ex-post Evaluation of Economic Impacts of Agricultural Research Programs: A Tour of Good Practice* [On-line]. Available: <http://www.cgiar.org/tac/spia/maredia.pdf>. [4 Nov. 2004].
- Marsh, S.P. and Pannell, D. 1997. Agricultural extension in Australia: The changing roles of public and private sector providers. *Agricultural Extension- A Decade of Change*. The Short Report No.66. Rural Industries Research and Development Corporation [On-line]. Available: <http://www.rirdc.gov.au/pub/shortreps/sr66.htm>. [4 Nov. 2004].
- Mbozi, P. 2002. Groundup: Facilitating networking and sharing in sub-Saharan Africa. *LEISA India* 4(2): 20-22
- Menon, T.G.K. 1993. Involvement of Non-governmental Organizations in transfer of technology. *Agric. Ext. Rev.* 5(2): 28-31
- Mercykutty, M.J. 1997. Analysis of transfer of technology with respect to biofertilizers. M.Sc. (Ag.) thesis, Kerala Agricultural University, Thrissur, 100 p.
- Mruthunjaya, G.S. and Chauhan, S. 2003. Crop diversification in Indian agriculture: Silent revolution towards agribusiness. *Agric. Situ. India* 60(5): 289-296

- Muir, J.P., Hilton, B. and Rao, S.C. 2001. Sustainable technology modification, testing and transfer: The role of non-governmental organizations. *Proceedings of the International Symposium on Sustainability in Agricultural Systems, 20-22 October, 1998* (eds. Payne, W.A. and Keeney, D.R.). American Society of Agronomy, Madison, pp. 69-81
- Mukherjee, K.K. 1979. Voluntary organizations in rural development. *Voluntary Action* 14(2): 3-6
- Mullen, J.D., Vernon, D. and Fishpool, K.I. 2000. Agricultural extension policy in Australia: Public funding and market failure. *Aust. J. agric. Resour. Econ.* 44(4): 629-645
- Mustafa, U., Mir, M.A., and Hashmi, A.A. 1999. Sustaining economic development by reforming basic institutions through community participation. *Pakist. Dev. Rev.* 38(4): 1233-1246
- Mustafa, S., Rahman, S. and Sattar, G. 1993. Bangladesh Rural Advancement Committee (BRAC): Backyard poultry and landless irrigators programmes. *NGOs and the State in Asia: Rethinking Roles in Sustainable Agricultural Development* (eds. Farrington, J. and Lewis, D). Routledge, London, pp. 281-296
- Nagel, U.J. 1997. Alternative approaches to organizing extension. *Improving Agricultural Extension: A Reference Manual* (eds. Swanson, B.E., Bentz, R.P. and Sofranko, A.J.). Food and Agricultural Organization, Rome, pp. 11-29
- Namboodiri, N.V. and Shiyani, R.L. 2001. Potential role of self-help groups in rural financial deepening. *Indian J. agric. Econ.* 56(3): 401-409
- Nanjappa, D., Ganapathy, K.R. and Yogananda, H.G. 1998. Utility of agricultural information by the newspaper reader farmers of Bangalore district, their preferences, options and suggestions. *J. Ext. Educ.* 9(1): 1919-1924
- Narain, S. and Singh, A.K. 2004. Private extension in India - A SWOT analysis. *Agric. Today* 7(4): 38-39

- Narayanan, A. 1991. Enhancing farmers' income through extension for agricultural marketing. *Agricultural Extension: World Wide Institutional Evolution and Forces for Change* (eds. Rivera, W.M. and Gustafson, D.J.). Elsevier, London, pp. 151-162
- Nataraju, M.S., Lakshminarayan, M.T. and Nagaraj, K.H. 2001. Role of non-governmental organizations in the new millennium - Case studies. *Private extension: Indian Experiences* (ed. Shekara, C.P.). National Institute of Agricultural Extension Management (MANAGE), Hyderabad, pp. 150-156
- OECD. 1989. *Survey on Effects and Consequences of Different Forms of Funding Agricultural Services*. OECD Doc. AGR/REE 89. Organization of Economic Cooperation and Development, Paris, 7 p.
- Oestmann, S. and Dymond, A.C. 2001. *Telecentres- Experiences, Lessons and Trends* [On-line]. Available: <http://www.col.org/telecentres/chapter%2001.pdf>. [9 May 2005].
- Ojha, G.P. 2001. Partnership in agricultural extension. *Socioecon.* 25(2): 41-42
- Ojha, G.P. and Morin, S.R. 2001. *Partnership in Agricultural Extension: Lessons from Chitwan (Nepal)*. Agricultural Research and Extension Network Paper No.114. Overseas Development Institute, London, 11 p.
- Okali, C., Sumberg, J. and Farrington, J. 1994. *Farmer Participatory Research: Rhetoric and Reality*. Intermediate Technology Publications, London, 159 p.
- Padma, C., Padma, S.R., Kumar, S.M. and Balasubramani, N. 2003. NGOs – An opt agency for pluralistic extension approach. International Conference on Agricultural Policies and Strategies for Profitable Farming: Field Realities, Needed Reforms and Interventions, 5-7 December 2003. Indian Council of Agricultural Research, New Delhi. *Abstract*: 106
- Padmakumar, K.P. 2005. Old private banks: Strengths in mass banking. *The Hindu Survey of Indian Industry 2005*. Kasturi and Kasturi Sons Ltd., Chennai, pp. 63-65

- Pal, S. and Saxena, R. 2003. Agricultural research and development reforms in India: Policy and institutional imperatives. *Institutional Change in Indian Agriculture* (eds. Pal, S., Mruthyunjaya, P., Joshi, P.K. and Saxena, R.). National Centre for Agricultural Economics and Policy Research, New Delhi, pp. 181-203
- Pandel, G.S. and Thapa, G.B. 2001. Local organizational capability for land management: A SWOT analysis of organizations in the hills of Nepal. *Asia Pacif. J. rural Dev.* 11(2): 15-34
- Pandya, R.D. 1998. Need of appropriate extension strategies. *Kisan Wld.* 25(7): 47-48
- Pandya, R.D. and Patel, R.B. 2003. Privatization of animal husbandry services in the changing scenario- A case study. International Conference on Agricultural Policies and Strategies for Profitable Farming: Field Realities, Needed Reforms and Interventions, 5-7 December 2003. Indian Council of Agricultural Research, New Delhi. *Abstract:* 75
- Pant, K. 2000. Swarnajayanti Gram Swarajgar Yojana. *Ashwattha* 3(1-3): 1-6
- Parasuraman, A. and Zinkhan, G.M. 2002. Marketing to and serving customers through the internet: An overview and research agenda. *J. Acad. Market. Sci.* 30(4): 286-295
- Patel, A.A. and Patel, D.D. 2003. ICT tools to support extension systems. International Conference on Agricultural Policies and Strategies for Profitable Farming: Field Realities, Needed Reforms and Interventions, 5-7 December 2003. Indian Council of Agricultural Research, New Delhi. *Abstract:* 123
- Patel, V.T., Prajapati, M.R. and Joshi, K.M. 2003. Privatization of agricultural extension services – Need of the day. International Conference on Agricultural Policies and Strategies for Profitable Farming: Field Realities, Needed Reforms and Interventions, 5-7 December 2003. Indian Council of Agricultural Research, New Delhi. *Abstract:* 74-75

- Pazvakavambwa, S. 1994. Agricultural extension. *Zimbabwe's Agricultural Revolution* (eds. Rukuni, M. and Eicher, C.). University of Zimbabwe Publications, Zimbabwe, pp. 104-113
- Perumal, G. 2001. Models for private and public extension co-operation. *Private extension in India: Myths, realities, apprehensions and approaches* (ed. Shekara, C.P.). National institute of agricultural extension management (MANAGE), Hyderabad, India, pp. 72-80
- Pesche, D. 2004. Farmer organizations in Mali. *Agric. Today* 7(4): 21-23
- Philip, M. 1995. Management of voluntary organizations: An overview. *Kurukshetra* 15(3): 25-27
- Prasad, L.M. 2003. *Principles and Practice of Management*. Third edition. Sultan Chand and Sons Educational Publishers, New Delhi, 783 p.
- Prasad, R.M. 2001. Private extension system-Options and issues. *Private Extension in India: Myths, Realities, Apprehensions and Approaches* (ed. Shekara, C.P.). National Institute of Agricultural Extension Management (MANAGE), Hyderabad, pp. 39-44
- Prasad, K.T. and Khan, S.M. 2001. Privatization of extension services- International experiences and its relevance in Indian context. *Private Extension in India: Myths, Realities, Apprehensions and Approaches* (ed. Shekara, C.P.). National Institute of Agricultural Extension Management (MANAGE), Hyderabad, pp. 135-153
- Pray, C. and Echeverria, R. 1990. Private sector agricultural research and technology transfer links in developing countries. *Making the Link: Agricultural Research and Technology Transfer in Developing Countries* (ed. Kaimowitz, D.). Westview Press, London, pp. 197-226
- Pretty, J.N. and Volouhe, S.D. 1997. Using rapid or participatory rural appraisal. *Improving Agricultural Extension: A Reference Manual* (eds. Swanson, B.E.,

- Bentz, R.P. and Sofranko, A.J.). Food and Agricultural Organization, Rome, pp. 197-204
- Prinsley, R., Dore, J., Marks, N., McGukian, N. and Thompson, P. 1994. *The Role of Private Sector in Extension*. Occasional Working Paper No.94. Rural Industries Research and Development Corporation, Australia, 86 p.
- Proost, J. and Duijsings, P. 2002. The Netherlands: Going Dutch in extension, 10 years of experiences with privatized extension. *Contracting For Agricultural Extension: International Case Studies and Emerging Practices* (eds. Rivera, W.M. and Zijp, W). CABI Publishing, Washington, D.C., pp. 45-52
- Radhakrishnan, D. and Karippai, R.S. 2001. The role of newspaper in transfer of agricultural technologies. *Private Extension: Indian Experiences* (ed. Shekara, C.P.). National Institute of Agricultural Extension Management (MANAGE), Hyderabad, pp. 120-126
- Ramachandran, C. 1992. Impact of rice minikit trials on the adoption behaviour of farmers. M.Sc. (Ag.) thesis, Kerala Agricultural University, Thrissur, 88 p.
- Rao, N.V. 2001. Agricultural extension through newspapers, agricultural journals and T. V. channels. *Private extension: Indian Experiences* (ed. Shekara, C.P.). National Institute of Agricultural Extension Management (MANAGE), Hyderabad, pp. 113-119
- Rao, P.P., Hall, A.J. and Bantilan, M.C.S. 2003. Dynamics of utilization, markets, trade and coalitions: Sorghum and millets in Asia. *Proceedings of the Expert Meeting on Alternative Uses of Sorghum and Pearl Millet in Asia, 1-4 July, 2003* (ed. Hall, A.J.). International Crop Research Institute for Semi Arid and Tropics (ICRISAT), Patancheru, Hyderabad, pp. 93-112
- Rao, Y.V. 2000. TRYSEM through NGOs: A study. *Kurukshetra* 48(9): 22-26
- Rath, R. and Tiwari, R. 2001. Privatization of extension service. *Agric. Ext. Rev.* 13(3): 30-32

- Reddy, M.N. and Singh, V. 2004. New dimensions of agricultural extension: Forging partnership. *MANAGE Ext. Res. Rev.* 5(1): 1-9
- Rivera, W.M. 1989. An overview of agricultural extension systems. *Technology System for Small Farmers: Issues and Options* (ed. Kesseba, A.M.). Elsevier Science Publishing Co. Inc., New York, pp. 93-117
- Rivera, W.M. 1991. Agricultural extension worldwide: A critical turning point. *Agricultural Extension: Worldwide Institutional Evolution and Forces for Change* (eds. Rivera, W.M. and Gustafson, D.J.). Elsevier Science, Amsterdam, pp. 1-18
- Rivera, W.M. 1996a. Agricultural extension in transition worldwide: Structural, financial and managerial strategies for improving agricultural extension. *Public Admin. Dev.* 16: 151-161
- Rivera, W.M. 1996b. Lessons on agricultural extension: In global perspectives. *J. Ext. Systems* 1(12): 54
- Rivera, W.M., Amator, K. and Farrington, J. 1991. NGOs and agricultural technology development. *Agricultural Extension: Worldwide Institutional Evolution and Forces for Change* (eds. Rivera, W.M. and Gustafson, D.J.). Elsevier Science Publishing Co. Inc., New York, pp. 243-256
- Rivera, W.M. and Cary, J.W. 1997. Privatizing agricultural extension. *Improving Agricultural Extension: A reference Manual* (eds. Swanson, B.E., Bentz, R.P. and Sofranko, A.J.). Food and Agricultural Organization, Rome [On -line]. Available: <http://www.fao.org/dcrep/w5830E/Oo.htm>. [5 Nov. 2004].
- Rivera, W.M. and Haug, R. 1991. Public-private co-operation: Farmer-led research/extension circles in Norway. *Agricultural Extension: Worldwide Institutional Evolution and Forces for Change* (eds. Rivera, W.M. and Gustafson, D.J.). Elsevier Science Publishing Co. Inc., New York, pp. 73-81

- Rivera, W.M., Quamar, M.K. and Crowder, L.V. 2001. *Agricultural and Rural Extension Worldwide: Options for Institutional Reform in the Developing Countries* [On-line]. Available: <http://www.comminit.com/redirect.cgi?r=ftp://ftp.fao.org/docrep/fao/004/y2709e/2709e.pdf>. [6 Nov. 2004].
- Rivera, W.M. and Wilson, M. 1991. Reducing the costs of public extension services: Initiatives in Latin America. *Agricultural Extension: Worldwide Institutional Evolution and Forces for Change* (eds. Rivera, W.M. and Gustafson, D.J.). Elsevier Science Publishing Co. Inc., New York, pp. 20-34
- *Rivera, W.M., Zijp, W. and Alex, G. 2000. *Contracting for Extension: Review of Emerging Practice*. AKIS Good Practice Note. The World Bank, Washington DC.
- Robert, L.G. 1985. Contract growing of flue-cured tobacco in Jamaica. *Successful Agribusiness Management* (ed. Freivalds, J.). Gower Press, Vermont, USA, pp. 182-188
- *Rogers, E.M. 1983. *Diffusion of Innovations*. Third edition. The Free Press, New York.
- *Rogers, W.L. 1987. The private sector: Its extension systems and public/private coordination. *Agricultural Extension Worldwide: Issues, Practices and Emerging Priorities* (eds. Rivera, W.M. and Schram, S.G.). Croom Helms, London.
- *Roling, N. 1988. *Extension Science: Information Systems in Agricultural Development*. Cambridge University Press, Cambridge.
- Roling, N. 1995. What to think about extension? A comparison of three models of extension practice. *AERDD Bulletin* (ed. Salamna, N). ICRA Montpellier Office, World Bank Publications, Washington DC [On-line]. Available: [http://www.018.worldbank.org/ESSD/susint.nsf/fc16c92201c5f19a85256ab4000e0b6/1f777fec31f89404a852569d800780b87/\\$FILE/Extension.pdf](http://www.018.worldbank.org/ESSD/susint.nsf/fc16c92201c5f19a85256ab4000e0b6/1f777fec31f89404a852569d800780b87/$FILE/Extension.pdf). [12 Sept. 2004].

- Roling, N. and Pretty, J.N. 1997. Extension's role in sustainable agricultural development. *Improving Agricultural Extension: A Reference Manual*. (eds. Swanson, B.E., Bentz, R.P. and Sofranko, A.J.). Food and Agricultural Organization, Rome, pp. 166-179
- Roth, G. 1987. *The Private Provision of Public Services*. The World Bank, Washington DC, 49 p.
- *Roy, S. 2003. Livestock extension services by milk producers' co-operatives: Indian experience. *Paper Prepared for AgREN Electronic Discussion on Privatized Extension, 10-21 March, 2003* (eds. Chapman, R. and Tripp, R.). Overseas Development Institute, London.
- Russel, J.F.A. 1986. Extension strategies involving local groups and their participation, and the role of this approach in facilitating local development. *Investing in Rural Extension: Strategies and Goals* (ed. Gywn, E.J.). Elsevier, London, pp. 112-121
- Sadamate, V.V. 1978. A study of tribal farming system and technological gaps. Ph.D. thesis, Indian Agricultural Research Institute, New Delhi, 137 p.
- Sahu, G.K. 2000. Voluntary organizations for rural development. *Kurukshetra* 48(9): 19-21
- Sajin, P.T. 2003. AoA under WTO arrangements in spice sector in Kerala: A stakeholder analysis. M.Sc. (Ag.) thesis, Kerala Agricultural University, Thrissur, 82 p.
- Sakuntalai, A., Ganesan, R. and Venkatapirabu, J. 2003. Innovative approaches for effective functions of public and private extension system - A critical analysis. International Conference on Agricultural Policies and Strategies for Profitable Farming: Field Realities, Needed Reforms and Interventions, 5-7 December 2003. Indian Council of Agricultural Research, New Delhi. *Abstract*: 84-85
- Saravanan, R. 1999a. *Public, Private and NGOs Extension in India: New Institutional Pluralism for Agricultural Knowledge Delivery* [On-line]. Available: www.regional.org.au/au/cs/2001/poster/4/6/210_saravananr.htm. [12 June 2005].

- *Saravanan, R. 1999b. A study on privatization of agricultural extension service. M.Sc. (Ag.) thesis, University of Agricultural Sciences, Bangalore.
- Saravanan, R. and Gouda, N.S.S. 1999. Development of scale to measure attitude towards privatization of agricultural extension service. *Trop. agric. Res.* 11: 190-198
- Saravanan, R. and Gouda, N.S.S. 2003. Contract farming: Where we gain and lose? *MANAGE Ext. Res. Rev.* 4(1): 10-20
- *Saravanan, R. and Resmy, C. 2000. Role of public and private extension in the new millennium. *National Seminar on Private Extension: Approaches and Challenges in the Millennium, 28-29 July, 2000.* National Institute of Agricultural Extension Management (MANAGE), Hyderabad.
- Saravanan, R., Shivalinge, N.S. and Gowda, N.K. 2001. Privatization of agricultural extension service: An innovative approach to developing countries. *Agric. Ext. Rev.* 13(3): 7-9
- Satish, P. 2001. Some issues in the formation of self-help groups. *Indian J. agric. Econ.* 56(3): 410-418
- Satish, S. and Vardhan, T.J.P.S. 1993. Action for world solidarity and the red-headed hairy caterpillar. *NGOs and the State in Asia: Rethinking Roles in Sustainable Agricultural Development* (eds. Farrington, J. and Lewis, D.) Routledge, London, pp. 171-183
- Savas, E.S. 1987. *Privatization: The Key to Better Government.* Chatham House Publishers, New Jersey, 320 p.
- Savran, F. 2003. An effective approach reaching to resource poor farmers: NGOs. *J. Faculty Agric.* 40(1): 135-140
- Scarborough, V., Killough, S., Johnson, D.A. and Farrington, J. 1997. *Farmer-led Extension.* Intermediate Technology Publications, London, 228 p.

- Schwartz, L.A. 1994. *The Role of the Private Sector in Agricultural Extension: Economic Analysis and Case Studies*. Agricultural Administration, Research and Extension Network Paper No.48, Overseas Development Institute, London, 21 p [On-line]. Available: <http://www.rimisp.cl/agren03/documentos/agren48.pdf>. [5 May 2005].
- Seibel, H.D. and Shyam, K. 2002. SHG banking: A financial technology for very poor micro-entrepreneurs. *Savings Dev.* 26 (2): 133-150
- *Segall, M., Campbell, D. and Herskovitz, M. 1966. The influence of culture on visual perception. *Indiana Polis. Ind.*, Bobbs-Merill.
- *Selvanayagam, M. 1986. Techno-cultural profile on dryland farming. M.Sc. (Ag.) thesis, Tamil Nadu Agricultural University, Coimbatore.
- Shah, A.C. 2001. *In The Hands of the People: An Indian Case of Watershed Development*. International Institute for Environment and Development, London, 78 p.
- Sharma, S.K. 2000. Development: Changing role of government, non-government organizations and corporates. *Ashwattha* 3(4): 19-21
- Shekara, C.P. (ed.). 2001a. Private extension: Indian way. *Private extension: Indian Experiences*. National Institute of Agricultural Extension Management (MANAGE), Hyderabad, pp. 1-31
- Shekara, C.P. (ed.). 2001b. Private Extension in India: Myths, Realities, Apprehensions and Approaches. *Private Extension in India: Myths, Realities, Apprehensions and Approaches*. National Institute of Agricultural Extension Management (MANAGE), Hyderabad, India, pp. 1-17
- Shekara, C.P. 2001c. *Status of Private Extension in India* [On-line]. Available: www.manage.gov.in/pvtext/status.htm. [3 Jan. 2005].

- Shekara, C.P. and Charyulu, A. 2002. *Agriculture to Agripreneurship: Success Stories of Agripreneurs*. National Institute of Agriculture Extension Management, Hyderabad, India, 57 p.
- Sherin, K.J., Karippai, R.S. and George, A. 2001. Change agency effectiveness in self-help group formation by NGOs. *Private Extension: Indian Experiences*. (ed. Shekara, C.P.). National Institute of Agricultural Extension Management (MANAGE), Hyderabad, pp. 157-160
- Shetty, K.K. 1994. NGOs in sericulture problems and prospects. *Indian Silk* 33(6): 32-34
- *Singh, K. 1977. A study of neo-marginal farmers' situation and socio-economic impact of new agricultural technology. Ph.D. thesis, Indian Agricultural Research Institute, New Delhi.
- *Singh, N. 1986. Content analysis of agricultural programme broadcast by AIR, Rampur. M.Sc. (Ag.) thesis, G.B. Pant University of Agriculture & Technology, Pant Nagar.
- Singh, N. 2002. Multinational corporations and agriculture development: A study of contract farming in the Indian Punjab. *J. int. Dev.* 14: 181-194
- Singh, M. and Chahota, R. 2002. Technology transfer in agriculture. *Agric. Today* 5(9): 49-52
- Singh, A.K. and Narain, S. 2003. Role of private extension system in dissemination of technologies. *Frm Sci. J.* 12(2): 186-187
- Slavik, M. 2003. Information, consultancy and change in agriculture: A review of the scene from the Czech Republic. *J. Ext. Systems* 19(2): 89-100
- Soam, S.K. 2001. A case study of extension services for organic farming in UK: Options for private extension in India. *Private extension: Indian Experiences* (ed. Shekara, C.P.). National Institute of Agricultural Extension Management (MANAGE), Hyderabad, pp. 211-221

- Sofranko, A.J., Khan, A. and Morgan, G. 1988. Insights into farmer extension contacts: Evidence from Pakistan. *Agric. Admin. Ext.* 30(4): 293-307
- Sood, A. 1999. NGOs: An alternative for development of backward areas. *Ashwattha* 2 (2): 23-26
- Sotomayor, O. 1991. *GIA and the New Chilean Public Sector: The Dilemmas of Successful NGO Influence over the State*. Agricultural Research and Extension Network Paper No.30. Overseas Development Institute, London, 25 p.
- Standen, R. 2003. *Private Extension - Are We Moving Forward?* [On-line]. Available: <http://www.apen.org.au> [12 June 2004].
- Stringfellow, R., Coulter, J., Lucey, T., Mckone, C. and Hussain, A. 1997. *Improving the Access of Small Holders to Agricultural Services in Sub-Saharan Africa: Farmer Co-Operation and the Role of the Donor Community*. Natural Resource Perspectives No.20. Overseas Development Institute, London, 47 p.
- Sulaiman, R.V. 2003a. *Agriculture Extension: Involvement of Private Sector*. Occasional Paper 29. National Bank for Agriculture and Rural Development, Mumbai, 82 p.
- Sulaiman, R.V. 2003b. *Private Extension in India: Recent Initiatives*. Agricultural Research and Extension Network Newsletter No.47. Overseas Development Institute, London, 11 p.
- Sulaiman, R.V. and Gadewar, A.U. 1994. Privatization of extension services - Implications in the Indian Context. *J. rural Recons.* 27(2): 19-23
- Sulaiman, R.V. and Hall, A.J. 2002. Beyond technology dissemination: Reinventing agricultural extension. *Outl. Agric.* 31(4): 225-233

- *Sulaiman, R.V. and Sadamate, V.V. 2000. *Privatising Agricultural Extension in India*. Policy Paper No.10. National Centre for Agricultural Economics and Policy Research, New Delhi.
- *Supe, S.V. 1969. Factors related to different rationality decision making among farmers in Buldana district. Ph.D. thesis, Indian Agricultural Research Institute, New Delhi.
- Suresh, K.A. 1998. Role of non-governmental organizations in development. *Kurukshetra* 47(1): 56-59
- Suryana, A. and Erwidodo, S. 1996. *Agricultural Policy Reforms in Indonesia: Accelerating Growth with Equity* [On-Line]. Available: <http://www.agnet.org./library/article/eb434.html>. [12 June 2004].
- Sushama, K.N.P. and Parvathy, S. 2000. PASSS an example of unity. *Kurukshetra* 47(1): 27-28
- *Suthinarakom, W. and Trimong, K.P. 2003. A reflection on non-formal education: Concept and practice of Thai non-governmental organizations in sustainable agricultural development. *Proceedings of 41st Annual Conference on Plants and Agricultural Extension and Communication, 3-7 February, 2003*. Kasetsart University, Bangkok, pp. 561-572
- Swanson, B.E., Bentz, R.P. and Sofranko, A.J. (eds.). 1997. *Improving Agricultural Extension: A Reference Manual*. Food and Agricultural Organization, Rome, 220 p.
- Swanson, B.E., Farner, B.J. and Bahal, R. 1990. The current status of agricultural extension worldwide. *Report of the Global Consultation on Agricultural Extension* (ed. Bahal, R.). Food and Agricultural Organization, Rome, pp. 43-76
- *Theodorson, G.A. and Theodorson, A.G. 1970. *A Modern Dictionary of Sociology*. Methuen and Co. Ltd., London.

- Thysen, I. 2000. Agriculture in the information society. *J. agric. Engng. Res.* 76(3): 297-303
- *Titapiwatanakun, B. 2001. Lessons learned from commodity –base diversification with particular emphasis on small producers and exports and on poverty reduction. *Regional Workshop on Commodity Export Diversification and Poverty Reduction in South and South-east Asia, 3-5 April, 2001*. United Nations Economic and Social Commission of Asia and the Pacific, Bangkok.
- Tobar, J.A.G. 2003. *New Approaches to Technology Transfer in Lac: Capitalizing On Market Opportunities and Information Technologies* [On-line]. Available: <http://www.wbi018.worldbank.org/LAC/LACInfoClient.nsf/o/d554dee67ald067F852567ed006efeaf?OpenDocument-18K>. [14 Feb. 2005].
- Tribhuwan, R.D. 1999. Basing income generation programmes on traditional art. *Ashwattha* 2 (3): 29-32
- Trivedi, G. 1963. Measurement analysis of socio-economic status in rural families. Ph.D. thesis, Indian Agricultural Research Institute, New Delhi, 113 p.
- Tulachan, P.M. and Hokkonen, M.J. 2002. *Community Empowerment in Livestock Resource Planning: A Suggested Participatory Policy Frame Work*. International Centre for Integrated Mountain Development, Nepal, 100 p.
- Tulachan, P.M., Shrestha, H.L., Brook, R. 1995. Commercializing agriculture in the hills of Nepal. *Proceedings of the International Conference on Harvest and Post-harvest Technologies for Fresh Fruits and Vegetables, 20-24 February, 1995*. (eds. Kushwaha L. and Serwatowski, R.). Agricultural Technical Institute, Mexico, pp. 89-92
- Umali, D.L., Feder, G. and Haan, D.C. 1994. Animal health services: Finding the balance between public and private delivery. *The Wid. Bank Res. Obs.* 9(1): 71-96
- Umali, D.L. and Schwartz, L. 1994. *Public and Private Agricultural Extension: Beyond Traditional Frontiers*. World Bank Discussion Paper No.236. The World Bank, Washington DC, 82 p.

- Vanclay, F. and Lawrence, G. 1995. *The Environmental Imperative: Eco-Social Concerns for Australian Agriculture*. Central Queensland University Press, Australia, 204 p.
- Van den Ban, A.W. 1999. Agricultural Development: Opportunities and threats for farmers and implications for extension organizations. *J. agric. Educ. Ext.* 6 (3): 145-156
- Van den Ban, A.W. 2000. *Different Ways of Financing Agricultural Extension*. Agricultural Research and Extension Network Paper No.106. Overseas Development Institute, London, 25 p.
- Van den Ban, A.W. and Hawkins, H.S. 1996. *Agricultural Extension*. Second Edition. Blackwell Science Ltd., USA, 291 p.
- Vasimalai, M. 1993. Professional Assistance for Development Action (PRADAN): An NGO demystifies and scales down technology. *NGOs and the State in Asia: Rethinking Roles in Sustainable Agricultural Development* (eds. Farrington, J. and Lewis, D.). Routledge, London, pp. 298-311
- Veluswamy, R. and Manoharan, M. 1998. Extent of participation of beneficiaries in the activities on NGO. *J. Ext. Educ.* 9(1): 1912-1914
- Vengatesan, D. and Govind, S.D. 2003. Usefulness of the training programmes as perceived by women SHG members. International Conference on Agricultural Policies and Strategies for Profitable Farming: Field Realities, Needed Reforms and Interventions, 5-7 December 2003. Indian Council of Agricultural Research, New Delhi. *Abstract: 97*
- Vengatesan, D., Govind, S.D. and Kalidasan, T. 2003. Experiences of private extension organization in agriculture. International Conference on Agricultural Policies and Strategies for Profitable Farming: Field Realities, Needed Reforms and Interventions, 5-7 December 2003. Indian Council of Agricultural Research, New Delhi. *Abstract: 72*

- *Venkataramaiah, P. 1983. Development of socio-economic scale for farmers families in North Karnataka. Ph.D. thesis, University of Agricultural Sciences, Dharwad.
- Vinayagam, S.S., Dupare, B.U. and Dharmendra, L. 2003. Approaches for strengthening the public-private extension system. International Conference on Agricultural Policies and Strategies for Profitable Farming: Field Realities, Needed Reforms and Interventions, 5-7 December 2003. Indian Council of Agricultural Research, New Delhi. *Abstract: 73*
- Watson, H.R. and Laquihon, W.A. 1993. The Mindanao Baptist Rural Life Center's Sloping Agricultural Land Technology (SALT) research and extension in the Philippines. *NGOs and the State in Asia: Rethinking Roles in Sustainable Agricultural Development* (eds. Farrington, J. and Lewis, D.). Routledge, London, pp. 312-324
- Wilson, M. 1991. Reducing the costs of public extension services: Initiatives in Latin America. *Agricultural Extension: Worldwide Institutional Evolution and Forces for Change* (eds. Rivera, W.M. and Gustafson, D.J.). Elsevier, Amsterdam, pp. 13-21
- Wise, J.K. 1988. Animal health expenditures by livestock producers. *J. Am. Vet. Med. Ass.* 2: 236-238
- World Bank. 1986a. *Central African Republic National Live stock Project*. Staff Appraisal Report 5909-CA. The World Bank, Washington DC [On-line]. Available: <http://www.ifad.org/operations/cof/cofout1.asp?cofname=WB-ID-77k>. [4 July 2005].
- World Bank. 1986b. *Kenya Animal Health Services Project*. Staff Appraisal Report 6367-KE. The World Bank, Washington DC [On-line]. Available: http://www.ifad.org/Irkm/region/pf/ke_188.htm. [4 July 2005].
- World Bank. 1987. *China: The Livestock Sector*. World Bank Publications, Washington, D.C., 195 p.

World Bank Group. 2002. *Rejuvenating Agricultural Extension through Partnership* [Online]. Available: <http://www.zLichtenberg@worldbank.org>. [9 Sept. 2004].

Wyner, G. 2000. Learn an earn through testing on the internet. *Market. Res.* 12(3): 37-38

Zeller, M., Sharma, M. and Meyer, R. 2002. Credit constraints and loan demand in rural Bangladesh. *The Triangle of Microfinance: Financial Sustainability, Out-reach and Impact* (ed. Zeller, M). John Hopkins University Press, USA, pp. 96-116

Zijp, W. 1998. Promoting pluralism. *The J. agric. Educ. Ext.* 5(1): 31-38

* Original not seen

Appendices

**KERALA AGRICULTURAL UNIVERSITY
COLLEGE OF HORTICULTURE
DEPARTMENT OF AGRICULTURAL EXTENSION**

Dr. M. Jayasree Krishnankutty
Assistant Professor

Dear Sir/Madam

Ms. Simi George is undertaking a study titled “**Non-Governmental Sources of Agricultural Extension in Kerala: Status and Potential**” as part of fulfillment of her PG programme under my guidance. Identification of success indicators of non-governmental extension service providers and analysis of personal and socio-economic characteristics of their clientele are two of the objectives of this study. In this context, she has identified certain variables.

Considering your rich experience and expertise, you have been identified as a judge for rating the relevancy of the given list of variables for inclusion in the final interview schedule. You may please indicate your opinion about the relevancy of each variable under the appropriate columns.

I am aware that you have a busy schedule. Yet, I hope that you will kindly spare sometime for us. Your kind response would greatly help us in conducting this study.

Thanking you,

Vellanikkara

Yours sincerely



(Dr. M. Jayasree Krishnankutty)

APPENDIX - I

PERSONAL AND SOCIO-ECONOMIC CHARACTERISTICS OF CLIENTELE

Kindly rate your response in the following continuum based on each variable's relevancy:-

MR- Most relevant

SR – Slightly irrelevant

R – Relevant

IR - Irrelevant

UD – Undecided

Sl. No.	VARIABLE	MR	R	UD	SR	IR
1	Age					
2	Educational status					
3	Occupation					
4	Family size					
5	Family participation					
6	Annual income					
7	Sources of income					
8	Farming experience					
9	Area possessed					
10	Area under different crops					
11	Economic motivation					
12	Self-interest					
13	Innovativeness					
14	Initiative					
15	Value orientation					
16	Risk orientation					
17	Scientific orientation					
18	Extension orientation					
19	Management orientation					
20	Rational orientation					
21	Technical orientation					
22	Credit orientation					
23	Credit worthiness					
24	Social participation					
25	Cosmopolitaness					
26	Information seeking behaviour					
27	Information source utilization					
28	Social recognition					
29	Profitability of enterprise					
30	Resource utilization					

31	Achievement motivation					
32	Decision making ability					
33	Trainings undergone					
34	Self-reliance					
35	Level of aspiration					
36	Empowerment					
37	Affiliation motive					
38	Progressiveness-traditionalism					
39	Personal-localite exposure					
40	Fatalism and scientism					
41	Self-confidence					
42	Vocational diversification					
43	Material possession					
44	Marketing behaviour					
45	Product diversification and value addition					
46	Leadership ability					
47	Personal efficacy					
48	Perseverance					
49	Creativity					
50	Self-motivation					
51	Distance between agency and client's house					
52	Knowledge about modern technologies					
53	Others if any					

APPENDIX - II

SUCCESS FACTORS OF NON-GOVERNMENTAL EXTENSION AGENCIES

Success indicators are operationally defined as those factors, which contribute to the successful functioning of the non-governmental agencies. After exhaustive review of literature and consultation with experts, following variables have been identified as having probability to be included in the final interview schedule. Kindly rate your response in the following continuum based on each variable's relevancy.

MR – Most relevant

SR – Slightly irrelevant

R – Relevant

IR - Irrelevant

UD - Undecided

Sl. No.	VARIABLE	MR	R	UD	SR	IR
1	Social commitment					
2	Responsible service					
3	Compatibility					
4	Credibility					
5	Systematic approach					
6	Informal approach					
7	Participatory approach					
8	Political interference					
9	Manpower planning					
10	Size of the agency					
11	Recruitment and tenure conditions					
12	Infrastructure facilities					
13	Planning of activities					
14	Clarity of objectives and activities among agency members					
15	Periodic meetings					
16	Team work					
17	Information sharing					
18	Joint decision making					
19	Efficient resource allocation					
20	Co-ordination and integration of activities					
21	Activities based on felt needs of clientele					
22	Feedback from clientele					
23	Prioritization of activities to be taken up					
24	Periodic evaluation and review of activities					
25	Highly decentralized activities					
26	Accountability					
27	Role clarity					
28	Communication methods					
29	Interagency linkage					
30	Educational status and experience of the director/Chief Executive/Chairman/Others					

31	Managerial effectiveness					
32	Technical orientation					
33	Timely availability of funds					
34	Sufficiency of funds					
35	Resource use efficiency					
36	Time boundedness					
37	Flexibility of work hours					
38	Mode of performance appraisal of staff					
39	Span of management					
40	Working environment					
41	Relationship between agency and clientele					
42	Free from bureaucracy					
43	Loyalty					
44	Sincerity					
45	Social outlook					
46	Others if any					

Signature:

Name:

APPENDIX - III

SELECTION OF PERSONAL AND SOCIO-ECONOMIC CHARACTERISTICS OF CLIENTELE

Sl. No.	Variable	Frequency
1	Age	19
2	Educational status	22*
3	Occupation	20*
4	Family size	20*
5	Family participation	18
6	Annual income	21*
7	Sources of income	19
8	Farming experience	7
9	Area possessed	21*
10	Area under different crops	19
11	Economic motivation	21*
12	Self-interest	19
13	Innovativeness	20*
14	Initiative	18
15	Value orientation	19
16	Risk orientation	19
17	Scientific orientation	18
18	Extension orientation	21*
19	Management orientation	20
20	Rational orientation	20
21	Technical orientation	15
22	Credit orientation	20
23	Credit worthiness	20
24	Social participation	23*
25	Cosmopolitaness	19
26	Information seeking behaviour	14
27	Information source utilization	21*
28	Social recognition	18
29	Profitability of enterprise	17
30	Resource utilization	17
31	Achievement motivation	20

32	Decision making ability	17
33	Trainings undergone	17
34	Self-reliance	18
35	Level of aspiration	19
36	Empowerment	13
37	Affiliation motive	10
38	Progressiveness-traditionalism	12
39	Personal-localite exposure	11
40	Fatalism and scientism	18
41	Self-confidence	18
42	Vocational diversification	10
43	Material possession	19
44	Marketing behaviour	19
45	Product diversification and value addition	22*
46	Leadership ability	21*
47	Personal efficacy	18
48	Perseverance	19
49	Creativity	15
50	Self-motivation	14
51	Distance between agency and client's house	16
52	Knowledge about modern technologies	18

* Selected personal and socio-economic characteristics

APPENDIX - IV

SELECTION OF SUCCESS FACTORS OF NON-GOVERNMENTAL EXTENSION AGENCIES

Sl. No.	Variable	Frequency
1	Social commitment	19
2	Responsible service	18
3	Compatibility	18
4	Credibility	22*
5	Systematic approach	16
6	Informal approach	18
7	Participatory approach	24*
8	Political interference	19
9	Manpower planning	19
10	Size of the agency	8
11	Recruitment and tenure conditions	14
12	Infrastructure facilities	18
13	Planning of activities	19
14	Clarity of objectives and activities among agency members	19
15	Periodic meetings	18*
16	Team work	26*
17	Information sharing	18
18	Joint decision making	19
19	Efficient resource allocation	19
20	Co-ordination and integration of activities	22*
21	Activities based on felt needs of clientele	24*
22	Feedback from clientele	20*
23	Prioritization of activities to be taken up	18
24	Periodic evaluation and review of activities	23*
25	Highly decentralized activities	18
26	Accountability	22*
27	Role clarity	19
28	Communication methods	21*
29	Interagency linkage	17
30	Educational status and experience of the director/Chief Executive/Chairman/Others	14
31	Managerial effectiveness	17

32	Technical orientation	19
33	Timely availability of funds	19
34	Sufficiency of funds	19
35	Resource use efficiency	21
36	Time boundedness	17
37	Flexibility of work hours	12
38	Mode of performance appraisal of staff	17
39	Span of management	15
40	Working environment	18
41	Relationship between agency and clientele	19
42	Free from bureaucracy	17
43	Loyalty	18
44	Sincerity	19
45	Social outlook	19

* Selected success factors

APPENDIX – V

Non- Governmental Sources of Agricultural Extension in Kerala: Status and Potential

INTERVIEW SCHEDULE

PART I

No. :
Category :

1. Name of the agency :
2. Official address :
(including contact number and e-mail ID)
3. Headquarters (if a local branch) :
4. Year of establishment :
5. Year of registration :
6. Legal status :
7. Ownership pattern : Individual ownership / Trust /
Partnership / Share holders /
Registered society / Others
8. Name of the Director / Chief Executive /
Chairman / Others :
 - i) Sex : Male / Female

ii) Qualification :

iii) Advanced training, if any :

a) Name of the training programme :

b) Duration :

9. Motivating factors to start / lead the agency:

10. Mission of the agency:

11. Objectives:

12. Thrust / Focus areas:

13. Geographical coverage (Location):

14. Major activities carried out in last 5 years:
(including ongoing activities)

Protect / Programme

Funding source

15. Approaches and methods followed for the implementation of activities:

16. Organizational set up:

17. Staffing pattern:

18. Tenure / Job conditions of employees:

19. Emolument of employees : Consolidated / Pay scale /
Wage / Rate per hour /
Any other (specify)

20. Scope for promotion /
Criteria for promotion : No. of completed years /
Target achievement /
Performance / Any other
(specify)

21. Additional incentives, if any : Bonus / Commissions /
Insurance / Over time
allowance / Special
allowances / Vehicle / Any
other

22. Linkage with various agencies:
(rank them in order of the extent of linkage)

23. Total number of clients :

Number of clients in agricultural
developmental programmes during
the last 3 years :

24. Nature of clientele :

25. Services rendered : Free of cost / Charging fees

If charging fees, specify the
pattern of charging :

26. Success indicators:
(rank them in order of their contribution
to success)

27. Problems/Constraints:
(rank them in order of their severity)

28. In your opinion, what is the scope for non- governmental extension
services in future? (Specify with reasons)

APPENDIX – VI

Non- Governmental Sources of Agricultural Extension in Kerala: Status and Potential

INTERVIEW SCHEDULE

Respondent No.
Type of agency
Date

Part 11

A. Personal and Socio-economic Characteristics of Client

1. Name of the respondent and address :

2. Name of the agency in which the respondent is beneficiary :

3. Occupation :

4. Family size (No. of members) :

5. Area possessed (in hectares)

Wet land	Garden land	Non-agricultural land	Total

6. Educational status:

Sl. No.	Category	Response
1	Illiterate	
2	Can read only	
3	Can read and write	
4	Lower primary level	
5	Upper primary level	
6	High school level	
7	Pre-degree or equivalent	
8	Degree or equivalent	
9	Post graduate degree and above	

7. Annual income:

8. Economic motivation:

Sl. No.	Statement	*SA	A	DA	SDA
1	A farmer should work towards larger yield and economic profit				
2	The most successful farmer is the one who makes more profit				
3	A farmer should grow cash crops to increase monetary profits in comparison to growing of food crops for home consumption				
4	It is difficult for the farmers' children to make good start unless he provides them with economic assistance				
5	A farmer should try any new farming idea which may earn him more money				
6	A farmer must earn his living but the most important thing in life cannot be defined in economic terms				
7	Integrated / Mixed farming gives more benefit when compared to crop agriculture alone				

(*SA – Strongly agree; A – Agree; DS – Disagree; SDA – Strongly disagree)

9. Social participation:

a. Membership in organization: -

Sl. No.	Category	Response
1	Membership in one organization	
2	Membership in more than one organization	
3	Office bearer in one organization	
4	Office bearer in more than one organization	
5	Distinctive features (Ward member, MLA, MP etc.)	

b. Frequency of attending meetings: -

Sl. No.	Category	Response
1	Regularly attend meetings	
2	Occasionally attend meetings	
3	Never attend any meeting	

10. Extension orientation:**a. Extension contact**

Sl. No.	Extension personnel	Frequency of contact		
		Often	Occasionally	Never
1	Agricultural Assistants			
2	Agricultural Officers			
3	University scientists			
4	Assistant Director of Agriculture			
5	Non-governmental extension personnel (specify)			

b. Extension participation

Sl. No.	Activity	Frequency of participation		
		Always	Sometimes	Never
1	Meetings			
2	Seminars			
3	Exhibitions			
4	Demonstrations			
5	Farmers' day			
6	Film shows			
7	Trainings			

11. Information source utilization:

Information source	Frequency			Extent of information		
	Regularly	Occasionally	Never	Adequate	Somewhat adequate	Inadequate
A. Mass media sources						
Radio						
Television						
Newspapers and farm publications						
Research journals						
B. Formal personal sources						
Agricultural Assistants						
University scientists						

C. Informal personal sources						
Friends and relatives						
Fellow farmers						
Progressive farmers						
Local leaders						
D. Commercial sources						
Fertilizer dealers						
Pesticide dealers						
Bank personnel						
Other non-governmental service providers (specify)						
Co-operative officials						
E. Other sources						
Exhibitions/Melas						
Group meetings						
Training						
Demonstrations						
Seminar						

12. Innovativeness:

When will you prefer to adopt an improved practice in farming?

- a. As soon as it is brought to my knowledge
- b. After I have seen other farmers tried it successfully in their farms
- c. I prefer to wait and take my own time

13. Leadership ability:

Sl. No.	Statement	*SA	A	DA	SDA
1	I am a good leader when a task needs to be done				
2	I am inclined to keep quiet when out in a social group				
3	I can get people to work for me				
4	I prefer not to take the lead in group activities				

(*SA – Strongly agree; A – Agree; DS – Disagree; SDA – Strongly disagree)

14. Product diversification and value addition:

- 1) Do you think that diversification and value addition bring much difference in prices for your products? (Yes / No)

- 2) Do you go for product diversification and value addition? (Yes / No)
 - i. If 'yes', please specify the name and number of value added products
Number : 1 / 2 / 3 / >3
Name :

 - ii. If 'no', state reasons (lack of knowledge, huge investment, lack of facilities, lack of time, not interested, others, if any)

- 3) Does the agency help / support you in going for product diversification and value addition? (Yes / No)

B. Client's Perception about Success Factors of the Agency: -

1. Team work:

- a. When a major task is to be achieved, we generally split into small groups and each group will carry out its assigned task
(Strongly agree, Agree, Disagree, Strongly disagree)

- b. I usually do my work and do not have much idea regarding what others are doing
(Strongly agree, Agree, Disagree, Strongly disagree)

- c. We work as groups and every member gets an equal share of the benefits
(Strongly agree, Agree, Disagree, Strongly disagree)

- d. Individuals are not important in our organization and we work through groups
(Strongly agree, Agree, Disagree, Strongly disagree)

- e. We do not generally resort to group work because that will only adversely affect individual performance and benefits to individuals
(Strongly agree, Agree, Disagree, Strongly disagree)

2. Activities based on felt needs of clientele:

- a. Agency conduct target group surveys to identify their needs and problems before taking up any new program (Always, Usually, Sometimes, Rarely, Never)
- b. How often do the programs the agency work with address problems identified by the beneficiaries? (Always, Usually, Sometimes, Rarely, Never)

3. Participatory approach:

- a) How often has your agency tried to identify the strengths as well as the weakness of the community it serves? (Always, Often, Sometimes, Rarely, Never)
- b) How often does your agency consult its target members before new programs are introduced? (Always, Often, Sometimes, Rarely, Never)
- c) Does the agency ensure participation of its target members in programs from their starting to end?
(Always, Often, Sometimes, Rarely, Never)
- d) How often does your agency conduct a meeting of its target population?
(Always, Often, Sometimes, Rarely, Never)

4. Periodic evaluation and review of activities:

- a) The agency is committed to periodic evaluation and reporting on the effectiveness of its activities for the target groups
(Always, Usually, Sometimes, Rarely, Never)
- b) Periodic meetings of staff as well as beneficiaries are conducted to examine the progress of any activity (Always, Usually, Sometimes, Rarely, Never)
- c) The agency uses feedback from the community to make decisions on the programs
(Always, Usually, Sometimes, Rarely, Never)

5. Credibility:

- a. Do you rely on your agency's advice and guidance for decision-making?
(Always, Usually, Some times, Rarely)
- b. Can you trust your agency to come to people's help in times of need?
(Always, Usually, Some times, Rarely)
- c. How often do you consult the agency for any information support or service?
(Always, Usually, Some times, Rarely)

6. Accountability:

- a. Staff members are mutually responsible for conducting agricultural / developmental activities
(Strongly agree, Agree, Disagree, Strongly disagree)

- b. Staff members are accountable for proper execution of tasks meant for specific target groups (Strongly agree, Agree, Disagree, Strongly disagree)
- c. Each staff member is answerable for the under achievement or non achievement of work assigned to him/her (Strongly agree, Agree, Disagree, Strongly disagree)

7. Co-ordination and integration of activities:

- a. A special body is set up to facilitate the co-ordination and integration of activities (Yes, No)
- b. Overlapping of various activities is a main problem faced by the agency (Strongly agree, Agree, Disagree, Strongly disagree)
- c. Members at different levels / disciplines may have to involve in all activities according to the situation (Always, Usually, Sometimes, Rarely, Never)

8. Resource use efficiency:

- a. Agency is able to mobilize its resources in a better way to get things done (Strongly agree, Agree, Disagree, Strongly disagree)
- b. Agency is realizing maximum possible output from the incurred inputs (Strongly agree, Agree, Disagree, Strongly disagree)
- c. Agency critically analyses allocation of its scarce resources for developmental activities (Always, Usually, Sometimes, Rarely, Never)

9. Communication methods:

Methods	Usage		
	Always	Sometimes	Never
Publications			
Radio			
Television			
Group meetings			
Mail			
Personal visits			
Office calls			

10. Feedback from clientele:

- a. Does your agency have a regular procedure for target members to give feedback on services and programs? (Yes / No)
- b. How often do members get to express their opinions or impressions about the service / support/ activities of the agency?
(Regularly, Often, Sometimes, Rarely)
- c. Is negative feedback received well by the implementing officers?
(Always, Usually, Sometimes, Rarely)

11. In your opinion, what is the scope for non- governmental extension services in future? (Specify with reasons)

12. Suggestions to improve non-governmental extension services:

APPENDIX - VII

ചോദ്യാവലി

A. ഗവൺമെന്റിനുള്ള വിജ്ഞാന വ്യാപന ഏജൻസി അംഗങ്ങളുടെ വിശദവിവരങ്ങൾ

1) പേര് :

2) മേൽവിലാസം :

3) അംഗമായിട്ടുള്ള ഏജൻസിയുടെ പേര് :

4) തൊഴിൽ

5) കുടുംബത്തിലെ അംഗസംഖ്യ :

6) സ്ഥലവിസ്തൃതി (ഏക്കറിൽ അഥവാ സെന്റിൽ):

പാടം	പറമ്പ്	കാർഷികേതര ഉപയോഗത്തിലുള്ള ഭൂമി	മൊത്തം

7) വിദ്യാഭ്യാസ നിലവാരം (‘✓’ മാർക്കിടുക)

- 1) നിരക്ഷരൻ
- 2) വായിക്കാൻ മാത്രം
- 3) വായിക്കാനും എഴുതുവാനും
- 4) ലോവർ പ്രൈമറി വിദ്യാഭ്യാസം
- 5) അപ്പർ പ്രൈമറി വിദ്യാഭ്യാസം
- 6) ഹൈസ്കൂൾ വിദ്യാഭ്യാസം
- 7) പ്രീഡിഗ്രി അല്ലെങ്കിൽ തത്തുല്യമായ യോഗ്യത
- 8) ബിരുദം അല്ലെങ്കിൽ തത്തുല്യമായ യോഗ്യത
- 9) ബിരുദാനന്തര ബിരുദമോ അതിനും മുകളിലേയ്ക്ക്

8) പാഠകൾക്കുവേണ്ടി

9) താഴെ കൊടുത്തിരിക്കുന്ന ഓരോ പാഠകത്തിനും മൂന്നു മധ്യമ കാലഘട്ടങ്ങളിൽ പാഠകർക്കുവേണ്ടി തയ്യാറാക്കേണ്ടിയിരിക്കുന്ന പാഠകങ്ങൾക്കുവേണ്ടി

ക്രമ നമ്പർ	പാഠകം	മധ്യമ കാലഘട്ടം	മധ്യമ കാലഘട്ടം	മധ്യമ കാലഘട്ടം	മധ്യമ കാലഘട്ടം
1	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത
2	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത
3	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത
4	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത
5	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത
6	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത
7	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത	മുൻകരുതലില്ലാത്ത

10) താഴെ കാണിക്കുന്ന വിവരങ്ങൾ ഉപയോഗിച്ച് താഴെ പറയുന്ന ചോദ്യങ്ങൾക്ക് മറുപടി നൽകുക:

- 1) ഒരു സംസ്ഥാനത്തിൽ ജനസംഖ്യ 1000000 ആണ്.
- 2) ജനസംഖ്യ 1000000 ആണ്.
- 3) ഒരു സംസ്ഥാനത്തിൽ ജനസംഖ്യ 1000000 ആണ്.
- 4) ജനസംഖ്യ 1000000 ആണ്.
- 5) വിവിധ സംസ്ഥാനങ്ങളിൽ ജനസംഖ്യ 1000000 ആണ്.

b) മിറ്റിങ്ങുകളിൽ പങ്കെടുക്കുന്ന വിവരം:

- 1) പതിവായി മിറ്റിങ്ങുകളിൽ പങ്കെടുക്കും.
- 2) വല്ലപ്പോഴും മാത്രം.
- 3) ഒരിക്കലും പങ്കെടുക്കാറില്ല.

11)a) വിജ്ഞാത വ്യാപന (എക്സ്പ്ലോഷൻ) ഏജൻറുകളുമായിട്ടുള്ള സമ്പർക്കം (✓ മാർക്കിടുക).

ക്രമ നമ്പർ	വിജ്ഞാത വ്യാപന (എക്സ്പ്ലോഷൻ) ഏജൻറ്	കൂടക്കൂടെ	ചിലപ്പോഴൊക്കെ	ഒരിക്കലുമില്ല
1	ക്വേഷി അസിസ്റ്റന്റ്			
2	ക്വേഷി ഓഫീസർ			
3	സർവ്വകലാശാല ശാസ്ത്രജ്ഞർ			
4	ക്വേഷി അസിസ്റ്റന്റ് ഡയറക്ടർ			
5	ഗവൺമെന്ററിയർ (പ്രൈവറ്റ്) വിജ്ഞാത വ്യാപന (എക്സ്പ്ലോഷൻ) ഏജൻറുമാർ (എൻ.ജി.ഒ മുതലായവർ)			

b) വിജ്ഞാത വ്യാപന (എക്സ്പ്ലോഷൻ) പ്രവർത്തനങ്ങളിൽ പങ്കെടുക്കുന്ന വിവരം ('✓' മാർക്കിടുക).

ക്രമ നമ്പർ	പ്രവർത്തനം	പതിവായി	ചിലപ്പോഴൊക്കെ	ഒരിക്കലുമില്ല
1	മിറ്റിങ്ങുകൾ			
2	സെമിനാറുകൾ			
3	പ്രദർശനങ്ങൾ (എക്സിബിഷൻ)			
4	ഡെമോൺസ്ട്രേഷനുകൾ			
5	ഫാർമേഴ്സ് ഡേ			
6	സിനിമ പ്രദർശനങ്ങൾ			
7	പരിശീലന പരിപാടികൾ (ടെയിനിംഗുകൾ)			

12) കൃഷിയെക്കുറിച്ചുള്ള വിവരങ്ങൾ നൽകുന്ന ശ്രോതസ്സുകളാണ് താഴെ കൊടുത്തിട്ടുള്ളത്. ഓരോ ശ്രോതസ്സിനും, അതിന്റെ ഉപയോഗക്രമവും വിവരങ്ങളുടെ പര്യാപ്തതയും അതായത് കോളങ്ങളിൽ (✓) മാർക്ക് ചെയ്യുക.

ക്രമ നമ്പർ	ശ്രോതസ്സ്	ഉപയോഗക്രമം			പര്യാപ്തത		
		പതിവായി	വല്ലപ്പോഴും	ഒരിക്കലുമില്ല	ആവശ്യത്തിന്	ഒരു വിധം ആവശ്യത്തിന്	ആവശ്യത്തിനില്ല
A)	1) റേഡിയോ						
	2) ടി.വി						
	3) പത്രമാസികകൾ						
	4) ഗവേഷണ പ്രസിദ്ധീകരണങ്ങൾ						
B)	1) കൃഷി അസിസ്റ്റന്റ്						
	2) കൃഷി ഓഫീസർ						
	3) സർവ്വകലാശാല ശാസ്ത്രജ്ഞർ						

C)	1) സുഹൃത്തുക്കളും ബന്ധുക്കളും					
	2) മറ്റ് കർഷകർ					
	3) പുതുക്യൂബിതീതികൾ അപ്പപ്പോൾ പരീക്ഷിക്കുന്ന കർഷകർ (പ്രോഗ്രസീവ് ഫാർമേഴ്സ്)					
	4) നാട്ടുപ്രമാണികൾ					
D)	1) വളം ഡീലർമാർ					
	2) കീടനാശിനി/ കളനാശിനി ഡീലർമാർ					
	3) ബാങ്ക് ഉദ്യോഗസ്ഥർ					
	4) മറ്റ് തവണമെൻറിയര ഏജൻറുമാർ (എൻ.ജി.ഒ മുതലായവർ)					
	5) കോഓപ്പറേറ്റീവ്/ സഹകരണ സംഘടന ഉദ്യോഗസ്ഥർ					
E)	1) പ്രവർത്തനങ്ങൾ, മേളകൾ					
	2) ഗ്രൂപ്പ് മീറ്റിങ്ങുകൾ					
	3) പരീശീലന പരിപാടികൾ (ട്രെയിനിംഗ്)					
	4) ഡെമോൺസ്ട്രേഷനുകൾ (Demonstrations)					
	5) സെമിനാറുകൾ					

12) എപ്പോഴാണ് ഒരു പുതിയ കൃഷി തീരെയോ അറിവോ പരീക്ഷിക്കാൻ അല്ലെങ്കിൽ പ്രയോഗിക്കാൻ താങ്കൾ തയ്യാറാകുന്നത്?

- a) അവയെക്കുറിച്ചുള്ള വിവരങ്ങൾ ലഭിച്ച ഉടൻ തന്നെ.
- b) മറ്റ് കർഷകർ അവ വിജയകരമായി പരീക്ഷിച്ചത് കണ്ടതിന് ശേഷം.
- c) വേണ്ടത്ര നിരീക്ഷിച്ച് എനിക്ക് ബോദ്ധ്യമായതിന് ശേഷം മാത്രം.

14) താഴെ കൊടുത്തിട്ടുള്ള വാചകങ്ങൾക്ക്, താങ്കൾക്ക് അനുയോജ്യമായ കോളത്തിൽ '✓' മാർക്കിടുക.

ക്രമ നമ്പർ	വാചകം	ഏറ്റവും ശരിയാണ്	പൊതുവെ ശരിയാണ്	ചിലപ്പോഴൊക്കെ ശരിയാണ്	ഒട്ടും ശരിയല്ല
1	ഏത് പ്രവർത്തനങ്ങൾക്കും വേണ്ട തീരീയിൽ നേതൃത്വം കൊടുക്കാൻ എനിക്ക് കഴിയും				
2	മറ്റുള്ളവരുടെ മദ്ധ്യത്തിൽ അധികം സംസാരിക്കാൻ ഞാൻ ഇഷ്ടപ്പെടാറില്ല.				
3	മറ്റുള്ളവരെ ബോദ്ധ്യപ്പെടുത്തി ഉദ്ദേശിച്ച തീരീയിൽ കാര്യങ്ങൾ ചെയ്യിക്കാൻ എനിക്ക് കഴിയും				
4	കൂട്ടമായി ചെയ്യേണ്ടി വരുന്ന പ്രവർത്തനങ്ങൾക്ക് നേതൃത്വം വഹിക്കാൻ ഞാൻ അധികം തുനിയാറില്ല.				

d) വ്യക്തികൾ തനിയെയുള്ള പ്രവർത്തനങ്ങളേക്കാൾ, ഗ്രൂപ്പുകളായിട്ടുള്ള പ്രവർത്തനങ്ങൾക്കാണ് ഞങ്ങൾ കൂടുതൽ പ്രാധാന്യം നൽകുന്നത്.

വളരെ ശരിയാണ്/ശരിയാണ്/ശരിയല്ല/ഒട്ടും ശരിയല്ല

e) ഞങ്ങൾ ഗ്രൂപ്പുകളിലായി അധികം പ്രവർത്തിക്കാറില്ല. കാരണം, അത് വ്യക്തികളേയും അവർക്ക് ലഭിക്കാവുന്ന ആനുകൂല്യങ്ങളേയും സാരമായി ബാധിക്കും.

വളരെ ശരിയാണ്/ശരിയാണ്/ശരിയല്ല/ഒട്ടും ശരിയല്ല

2)a) സർവ്വേ വഴി അംഗങ്ങളുടെ ആവശ്യങ്ങളും പ്രശ്നങ്ങളും വിലയിരുത്തുവാൻ ഏജൻസി ശ്രമിക്കാറുണ്ടോ?

എപ്പോഴും/പലപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി/ഒരിക്കലുമില്ല

b) ഇപ്രകാരം വിലയിരുത്തിയിട്ടുള്ള ആവശ്യങ്ങൾക്കും, പ്രശ്നങ്ങൾക്കും മുൻഗണന നൽകിക്കൊണ്ട് ഏജൻസി പദ്ധതികൾ രൂപീകരിക്കാറുണ്ടോ?

എപ്പോഴും/പലപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി/ഒരിക്കലുമില്ല

3)a) അംഗങ്ങളുടെ കഴിവുകളും ദൗർബല്യങ്ങളും കണ്ടെത്തുവാൻ ഏജൻസി ശ്രമിക്കാറുണ്ടോ?

എപ്പോഴും/പലപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി/ഒരിക്കലുമില്ല

b) പുതിയ പദ്ധതികളും പരിപാടികളും ആവിഷ്കരിക്കുന്നതിന് മുൻപായി അവയെക്കുറിച്ചുള്ള അംഗങ്ങളുടെ അഭിപ്രായങ്ങളും, നിർദ്ദേശങ്ങളും ഏജൻസി ആരായാറുണ്ടോ?

എപ്പോഴും/പലപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി/ഒരിക്കലുമില്ല

c) പദ്ധതി ആവിഷ്കരിക്കുന്നത് മുതൽ അതിന്റെ അവസാനം വരെ, എല്ലാ ഘട്ടങ്ങളിലും അംഗങ്ങളുടെ പങ്കാളിത്തം ഏജൻസി ഉറപ്പ് വരുത്താറുണ്ടോ?

എപ്പോഴും/പലപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി/ഒരിക്കലുമില്ല

d) അംഗങ്ങളുടെ മീറ്റിംഗുകൾ ഏജൻസി എത്രത്തോളം നടത്താറുണ്ട്?

എപ്പോഴും/കൂടെക്കൂടെ/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി/ഒരിക്കലുമില്ല

4)a) സമയാസമയങ്ങളിൽ പ്രവർത്തനങ്ങളെ വിലയിരുത്തി അവയെ കുറിച്ചുള്ള വിവരങ്ങൾ അംഗങ്ങളെ അറിയിക്കുവാൻ ഏജൻസി ശ്രമിക്കാറുണ്ട്.

എപ്പോഴും/മിക്കപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി/ഒരിക്കലുമില്ല

b) നിശ്ചിത കാലയളവിൽ ജീവനക്കാരുടെയും അംഗങ്ങളുടെയും മീറ്റിംഗുകൾ നടത്തി പദ്ധതികളുടെ പുരോഗതി ഏജൻസി വിശകലനം ചെയ്യാറുണ്ട്?

എപ്പോഴും/മിക്കപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി/ഒരിക്കലുമില്ല

c) പദ്ധതികളെ കുറിച്ചുള്ള അംഗങ്ങളുടെയും അഭിപ്രായങ്ങളും, നിർദ്ദേശങ്ങളും സ്വീകരിച്ച്, അവയ്ക്ക് അനുസൃതമായി, മാറ്റങ്ങൾ വരുത്തുവാൻ ഏജൻസി തയ്യാറാകാറുണ്ട്?

എപ്പോഴും/പലപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി/ഒരിക്കലുമില്ല

5)a) തീരുമാനങ്ങളെടുക്കുന്നതിന് ഏജൻസിയുടെ ഉപദേശങ്ങളേയും മാർഗ്ഗനിർദ്ദേശങ്ങളേയും താകൾ ആശ്രയിക്കാറുണ്ടോ?

എപ്പോഴും/പലപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി

b) അംഗങ്ങളുടേതായ ഏതൊരാൾക്കുമുള്ളതും ഏജൻസി പിന്തുണയും സഹായവും നൽകാറുണ്ട്?

എപ്പോഴും/പലപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി

c) വിവരങ്ങൾക്കും സഹായങ്ങൾക്കുമായി താകൾ എന്തെന്തൊളം ഏജൻസിയെ സമീപിക്കാറുണ്ട്?

എപ്പോഴും/പലപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി

6)a) കാർഷിക/പുരോഗമനപ്രവർത്തനങ്ങളിൽ ജീവനക്കാർക്ക് തുല്യമായ ഉത്തരവാദിത്വമാണുള്ളത്

വളരെ ശരിയാണ്/ശരിയാണ്/ശരിയല്ല/ഒട്ടും ശരിയല്ല

b) പദ്ധതികളുടെ ശരിയായ നിർവ്വഹണത്തിന് ജീവനക്കാർ ഉത്തരവാദികളാണ്

വളരെ ശരിയാണ്/ശരിയാണ്/ശരിയല്ല/ഒട്ടും ശരിയല്ല

c) പദ്ധതികളുടെ പരാജയങ്ങൾക്കും അവയിൽ ഉണ്ടാകുന്ന പാളിച്ചകൾക്കും ജീവനക്കാർ ഉത്തരം പറയേണ്ടതുണ്ട്

വളരെ ശരിയാണ്/ശരിയാണ്/ശരിയല്ല/ഒട്ടും ശരിയല്ല

7)a) പ്രവർത്തനങ്ങളുടെ ഏകോപനത്തിനും സമന്വയത്തിനുമായി ഒരു പ്രത്യേക സംവിധാനം ഏജൻസി രൂപീകരിച്ചിട്ടുണ്ട്.

ഉണ്ട്/ഇല്ല

b) പല പദ്ധതികളുടെയും നടത്തിപ്പ് കൂടിക്കലർന്ന് വരുന്നത് ഏജൻസി നേരിടുന്ന ഒരു മുഖ്യപ്രശ്നമാണ്.

വളരെ ശരിയാണ്/ശരിയാണ്/ശരിയല്ല/ഒട്ടും ശരിയല്ല

c) സാഹചര്യമനുസരിച്ച്, പല തലങ്ങളിലും വിഭാഗങ്ങളിലുമുള്ള ജീവനക്കാർക്ക് എല്ലാ പരിപാടികളിലും ഏർപ്പെടേണ്ടതായി വരാറുണ്ട്

എപ്പോഴും/പലപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി/ഒരിക്കലുമില്ല

8)a) സാധനസമ്പത്തുകൾ (റിസോഴ്സ്) ശരിയായ രീതിയിൽ കൈകാര്യം ചെയ്യാൻ ഏജൻസിക്ക് കഴിയുന്നുണ്ട്.

വളരെ ശരിയാണ്/ശരിയാണ്/ശരിയല്ല/ഒട്ടും ശരിയല്ല

b) ഏജൻസിയുടെ ആളും അർദ്ധവുമായിട്ടുള്ള മുതൽമുടക്കിന് പരമാവധി ഫലം ലഭിക്കാറുണ്ട്.

വളരെ ശരിയാണ്/ശരിയാണ്/ശരിയല്ല/ഒട്ടും ശരിയല്ല

c) ങ്കർഷണമായിട്ടുള്ള സാധനസമ്പത്തുകൾ (റിസോഴ്സ്) ഏജൻസി സൂപ്പർമായി വിശകലനം ചെയ്തിട്ട് മാത്രമേ ഓരോ പദ്ധതിക്കുമായി നീക്കി വെയ്ക്കാറുള്ളൂ.

എപ്പോഴും/പലപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി/ഒരിക്കലുമില്ല

9) സന്ദേശങ്ങൾ അറിയിക്കുന്നതിനായിട്ടുള്ള മാർഗ്ഗങ്ങളാണ് താഴെ കൊടുത്തിട്ടുള്ളത്. അവയിൽ താങ്കളുടെ ഏജൻസി ഉപയോഗിക്കുന്ന മാർഗ്ഗങ്ങൾക്ക് നേരെ അവയുടെ ഉപയോഗക്രമം അതായത് കോളങ്ങളിൽ '✓' മാർക്ക് ചെയ്യുക.

ക്രമ നമ്പർ	മാർഗ്ഗം	ഉപയോഗക്രമം		
		സ്ഥിരമായി	ചിലപ്പോഴൊക്കെ	ഒരിക്കലുമില്ല
1	പ്രസിദ്ധീകരണങ്ങൾ			
2	റേഡിയോ			
3	ടി.വി.			
4	ഗ്രൂപ്പ് മീറ്റിങ്ങുകൾ			
5	ഏജൻസികൾ			
6	നേരിട്ട് വന്നിട്ടുള്ള അറിയിപ്പ് (പേഴ്സണൽ വിസിറ്റ്)			
7	ടെലിഫോൺ			

10) a) പദ്ധതികളെക്കുറിച്ചുള്ള അംഗങ്ങളുടെ നിർദ്ദേശങ്ങൾ അറിയാൻ ഏജൻസിക്ക് സ്ഥിരമായ ഒരു സംവിധാനം ഉണ്ടോ?

ഉണ്ട്/ഇല്ല

b) പദ്ധതികളെയും സേവനങ്ങളെയും കുറിച്ചുള്ള അംഗങ്ങളുടെ കാഴ്ചപ്പാടുകളും, നിർദ്ദേശങ്ങളും, അഭിപ്രായങ്ങളും പ്രകടമാക്കാൻ അവസരം ലഭിക്കാറുണ്ടോ?

എപ്പോഴും/മിക്കപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി

c) പദ്ധതി നടത്തിപ്പിൽ ഏർപ്പെട്ടിട്ടുള്ള ജീവനക്കാർ അംഗങ്ങളുടെ വിമർശനങ്ങൾ നല്ല രീതിയിൽ എടുക്കാറുണ്ടോ?

എപ്പോഴും/മിക്കപ്പോഴും/ചിലപ്പോഴൊക്കെ/വളരെ ചുരുക്കമായി

11) ഗവൺമെന്റിൽ വിജ്ഞാന വ്യാപന (എക്സ്റ്റൻഷൻ) സേവനങ്ങൾക്കായി പ്രവർത്തിക്കുന്ന ഏജൻസികളുടെ ഭാവിയിലുണ്ടായിട്ടുള്ള താങ്കളുടെ അഭിപ്രായങ്ങൾ എന്താണ്? (വിശദമാക്കുക)

12) മേൽപറഞ്ഞ ഏജൻസികളുടെ സേവനങ്ങൾ മെച്ചപ്പെടുത്തുന്നതിന് താങ്കളുടെ നിർദ്ദേശങ്ങൾ എന്തെല്ലാമാണ്?

NON-GOVERNMENTAL SOURCES OF AGRICULTURAL EXTENSION IN KERALA : STATUS AND POTENTIAL

By

SIMI GEORGE

ABSTRACT OF THE THESIS

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ABSTRACT

The study entitled "Non-governmental sources of agricultural extension in Kerala: Status and potential" was undertaken to "collect and consolidate the different types of non-governmental extension sources involved in providing extension in the state; to classify the non-governmental extension sources based on their involvement in agricultural development; to analyse the activity focus, extension approaches followed and the mode of operation of the selected non-governmental extension agencies; to identify the success indicators of these non-governmental extension providers; and to analyse the salient personal and socio-economic characteristics of the beneficiaries under different agricultural programmes implemented by the non-governmental extension providers and to appraise the suggestions of the beneficiaries in improving the non-governmental extension services".

The study was carried out in five non-governmental extension agencies of Kerala, selected based on the predominant roles being performed by them, identified by the researcher. A sample of 30 beneficiaries covering different agricultural programmes was drawn from each agency following simple random sampling, thus making the total sample size 150. The personal and socio-economic characteristics of the beneficiary respondents as well as the probable success factors of the non-governmental extension agencies were selected through judges rating. The selected variables were measured using suitable procedures. Data were collected through pre-tested interview schedules and were analyzed and interpreted using appropriate statistical tools.

Types of non-governmental extension agencies identified are: (1) Agricultural consultants/firms (2) Para technicians (3) Progressive farmers (4) Farmer's organizations/Co-operatives (5) Non-Governmental Organizations (NGOs) (6) Agri-business firms (7) Input dealers (8) Print and electronic media (9) Private sector banks (10) Self-Help Groups (SHGs). The major roles found being performed by the non-governmental extension agencies are: (1) Advocacy (2) Consultancy (3) Infrastructure

development (4) Input supply (5) Marketing. Mode of operation is influencing the outcome of non-governmental efforts.

A high degree of concordance among beneficiaries regarding their perception about various success factors of the agencies was noticed. All the selected agencies were comparatively good in their effectiveness and the general factors found to be contributing to their effectiveness and success were communication methods, periodic evaluation and review of activities, co-ordination and integration of activities, resource use efficiency, participatory approach, and activities based on felt needs of clientele. Taking into account the effectiveness index computed for every selected agency, the agency selected for 'marketing' role came first and the agency selected for 'consultancy' role, the last. The factors that distinguished between the most effective and the least effective agencies were communication methods, periodic evaluation and review of activities and resource use efficiency. The mean status score was computed for assessing the status of any new agency that is to be taken up for studying on this particular aspect.

Beneficiary respondents were analysed based on their socio-economic characteristics and 100 per cent variation could be noticed among them on their socio-economic characteristics.

Regarding the scope for non-governmental extension services in future, both the staff and beneficiaries feel an ample scope for them in the coming years. Suggestions to improve the non-governmental extension services were collected after discussing with the beneficiary respondents.

The study draws attention to the emergent need of effective utilization of the experiences and services of non-governmental extension agencies for rural development, particularly for agricultural development.