

AGRARIAN RESEARCH AND TRAINING INSTITUTE

Research And Training Activities

- a glance at the past and thoughts for the future -

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RESEARCH & TRAINING ACTIVITIES OF
THE AGRARIAN RESEARCH & TRAINING INSTITUTE

- A GLANCE AT THE PAST & THOUGHTS FOR THE FUTURE -

Introduction

The need for a separate institution specialising in research and related activities in the socio-economic sphere of the agrarian sector in Sri Lanka was satisfied when the Agrarian Research and Training Institute was established in association with UNDP/FAO in February, 1972. The Agrarian Research and Training Institute is an autonomous body corporate administered by a Board of Governors whose Chairman is the Secretary of the Ministry of Agricultural Development and Research. The other members of the Board of Governors represent the Ministries of Planning, Irrigation, Plantation Industries, Trade, Education and Labour and the Central Bank and the University. The Director of Agriculture, the Director of ARTI, Land Commissioner, Commissioner of Agrarian Services, Director of Irrigation, Commissioner of Cooperative Development and Director of Rural Development are ex-officio members of the Board of Governors. The chief executive of the Institute is the Director. The FAO/UNDP collaboration ended in 1976 and the Institute today is a complete national responsibility. The creation of this Institute filled a void in research and training in the agricultural sector which until then was confined mainly to research and extension aimed at improving the production technology of crops and livestock.

The Institute was established with a research staff of 2 FAO Advisors and 3 Research and Training Officers. By 1975, this number increased to 7 FAO consultants and 17 R&TOO and when the UNDP/FAO project ended in 1976 the number of R&TOO had increased to 22. The present cadre is 30. In this process of expansion the areas of attention which were originally restricted to a few key disciplines have been enlarged to give a wider coverage. The research capacity has been further enhanced by providing training at the post graduate level to R&TOO. Needless to say that this growth of research personnel has resulted in a corresponding expansion of administrative and other supporting service personnel, together with physical resources. In fact, the culmination of working conditions in an aesthetically appealing environment with attendant facilities as at present, was earned over a period of time having had its beginnings in a small rented house in 1971.

The primary concern of the ARTI is with the development of the small farm community with an emphasis on socio-economic aspects.

In pursuance of *this objective* of the ARTI, its research centres on providing solutions to critical problems in peasant agriculture. Another salient characteristic of our research programmes is the emphasis placed on interdisciplinary approach in the conduct of the studies. This is in recognition of the fact that most problems relating to development of the poorer segment of the agrarian economy are conditioned by a host of factors. It is within this framework that most studies were undertaken.

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Looking back at our past contributions to research and training it is observed that from a modest beginning we have gradually evolved to a state where we now handle projects that are varied and are of diverse interests. In this presentation an attempt is made to highlight the major features of this evolution of ARTI activities and provide a base for thoughts regarding the potential utilisation of the ARTI resources. As in any evaluation research the assessment of the development process of the activities of the ARTI too needs to be judged in terms of the milieu that operated at each point of time.

Research Activities

In the research studies undertaken during the early phase of the Institute, considerable stress was placed on fact finding-descriptive studies. Such studies though not specifically aimed at finding solutions to problems were expected to provide much needed basic information as well as a firm data base for hypothesising subsequent research problems. Two major attempts made in this regard resulted in the publication of an *Agrarian Situation Study* covering 5 major paddy districts in 1972 and the *Socio Economic Survey of the Beminiwatte APC Area* in 1974. In fact the first study led to the publication of a comparative analysis of the paddy growing conditions in Sri Lanka and also a paper outlining some policy recommendations. Given the resources available to the Institute at that time, this work was considered to be timely and commendable.

The second study provided the baseline information for further programmes in the then newly adopted field laboratory of the ARTI at Beminiwatte in Kegalle district. This data, in addition served to reflect typical problems associated with farming in the small holders sector of the mid-country wet zone.

A series of studies on *cost of production of paddy* had its beginning during this period. These studies were conceived of by the ARTI as a means of filling a critical gap in information relating to the development programmes in the paddy sector. Until then, systematic studies on this aspect reflecting a variety of production conditions, were lacking except for a national study conducted by the Central Bank in 1969. The studies were continued through Yala 1972 and Maha 1972/73 and revived again in Maha 1976/77. The latest study titled "*Profitability and Resource Characteristics of Paddy Farming*" embraces a wider concept than mere 'Cost of Production', thereby adding a further dimension to the analysis and upgrading its quality. These studies seem to have had a high utility value both among researchers and planners. In fact, the Maha 1976/77 study was used extensively as a data base for decision making in reviewing the Guaranteed Price of paddy.

Adding to the studies on cost of production a research investigation aimed at ascertaining the profitability of growing alternative crops in paddy fields during Yala was conducted during Yala 1973. Recognising the importance of expanding the *production of non-rice cereals and pulses* another major study was initiated by the ARTI towards the end of 1976. This study was mainly designed to investigate the production, marketing and processing of these grains in order to identify the bottlenecks to increase output. This was a joint study with the Department of Agriculture.

The assignment to the ARTI to conduct an indepth inquiry on *factors influencing the cultivation of other field crops in Mahaweli H area* is another venture in the area of field crops. This was initiated in 1978 at the request of the Mahaweli Development Board for seeking a solution for one of their implementation problems. A study on somewhat similar lines has been initiated with a view to identify the causes for the *ineffectiveness in most lift irrigation schemes*. This was the sequel to a request from the Ministry of Irrigation during the latter part of 1978.

As an Institute response to the rising concern of the undesirable effects of chena cultivation a study titled "*Rainfed Farming in the Dry Zone of Sri Lanka*" was initiated in two village clusters in the North Central Province in the years 1975 - 77. This study examined the implications of evolving a settled system of rainfed farming in areas where traditional rainfed farming is practiced. Chena which had traditionally been an appendage of paddy cultivation was seen to emerge as a dominant form of agricultural activity in these areas. The recent trend towards commercialisation of chena has resulted in a replacement of traditional crops by high value cash crops, substantial investment of capital and labour resources, and an increase in the average size of chena holdings. The expansion of the chena economy has led to a diversion of resources from paddy to chena, curtailment of livestock production activities and more significantly, to ecological imbalances. The study highlights the urgency of a plan to rationalise land use patterns in these areas.

In pursuance of this study area, and also accommodating a request from the Department of Agriculture, the Institute undertook *an appraisal of Kurundankulama Dry Farming Scheme* in 1976. The study highlighted problems associated with settled arable farming under rainfed conditions, and indicated the scope for integration of animal husbandry with crop production under such a farming system.

On realising the paucity of a suitable data base for decisions regarding the *expansion of cotton production* envisaged in the future, ARTI on its own initiative started an economic study on this subject. Data collection was begun in the latter part of 1978, and the study is almost complete.

From the initial stages of research in this Institute the study of marketing agricultural produce constituted an area of intense interest. The study on "*Vegetable Production and Marketing*" was initiated in 1972 at the request of the Department of Marketing and was the first of such studies. The study coverage involved empirical information on production cost structure, marketing margins, and prices and the findings highlighted the lack of flow of price information to the growers. Other marketing studies undertaken included "*Some Aspects of Paddy and Rice Marketing in Sri Lanka*" in 1975, "*The Production and Marketing of Banana in Beminiwatte*" in 1976, "*The Citronella Industry in the Hambantota District*" in 1976. The first of these was initiated at the instance of the Paddy Marketing Board and the last on the request of the Ministry of Agriculture. The Banana Marketing study emanated from the Socio-Economic Survey of Beminiwatte which was intended to surface problems hindering the development of the area. Another study related to commodity marketing is "*The State and the Cinnamon Industry*" completed in 1978.

Currently the Institute's interest on research in the area of marketing, centres on two farm products, namely vegetables and eggs, and agro-chemicals, a major farm input. *The study of vegetables* attempts to identify and examine the trends and seasonal variations and ascertain the factors influencing the supply and demand, as well as the marketing efficiency. This investigation is an outcome of a suggestion of the Department of Marketing Development. The study on the *distribution of agro-chemicals* seeks to examine broadly the marketing structure, farm conduct and industry performance. This as well as the *egg marketing study* originated from within the Institute.

Arising from the need to assess the role and functions of both old and the newly created rural institutions in promoting people's participation in development, the Institute undertook a study of *Agricultural Productivity Committees and Cultivation Committees*. It examines the extent to which these institutions carry out activities consistent with the objectives of the Agricultural Productivity Law and also assess the extent of awareness by farmers of the objectives and functions of these institutions. Another study in this area was on the *Role of Rural Organisations in Rural Development* concerning 4 important organisations - Multi-Purpose Cooperative Society, APC/CC, the Village Council and the Rural Development Society conducted in 1977 at the instance of the Asian Centre for Development Administration (ACDA). A series of three studies on the role of local groups in rural development were undertaken by the Institute and at present the study in collaboration with the FAO on the *Participation of the Rural Weak in Development Through Rural Organisations* is in progress.

The importance of institutional credit for farmer inputs and other vital needs of the rural community was felt by the Institute as far back as 1974. A study concerned with small farmer credit conducted in two Grama Sevaka Divisions of the ARTI field laboratory in Beminiwatte was the first study in this direction. Another study on socio-economic factors of rural indebtedness was also conducted in 1974 on a special project area in the dry zone. This study examines the patterns of income and expenditure with particular reference to indebtedness of rural farmers and their general attitude with regard to the repayment of loans.

Agricultural extension as an area of research has received considerable attention in the Institute. The first study on *Agricultural Extension, Communication and Training* was conducted in the coconut area of Colombo district in 1975. This examines the impact of the various extension, communication and training methods used by extension workers in promoting agricultural production. It also investigates the functional relationship that exists between farmers, extension workers and officers of various rural institutions in the area. The second study concerns the *effectiveness of agricultural extension methodology* such as interpersonal contacts, demonstrations, field days, farmer training classes, printed reference material and the use of mass media like radio. The education and training needs of agricultural extension personnel was the subject of another study. This was particularly useful to extension workers and teachers in agriculture.

On considerations of the potential role of the female community in development in rural farming areas, the Institute in collaboration with the Department of Agriculture embarked on a study on *Income*

Generating Activities for Farm Women. The study findings seemed to be most useful and relevant in the current context as it evinced a great deal of interest.

As a primary attempt at understanding the dynamics of low cost technology as traditionally practiced in the country, the Institute has now undertaken a study on bullock carts as a viable means of transportation. The study specifically examines the types of materials transported, costs of transport, income from operation of bullock carts and facilities available for construction and repair of carts.

In an action cum research programme, the Institute experimented on the concept of *"Group Production"* in Beminiwatte field laboratory area in 1975. This concept promotes cooperative efforts among farmers while preserving individual ownership rights. Based on experiences of this exercise the programme was extended to other areas. This study demonstrated the ease with which institutional services could be effectively channelled to farmers when they are organised in groups.

As a means of studying a vital aspect of the rural employment situation, the ARTI in 1978 embarked on a major research study on *"Socio-Economic Conditions of Agricultural Labour"*. This study funded by the International Development Research Centre (IDRC) of Canada, seeks to ascertain the extent of agricultural labour and analyse the factors contributing to the emergence of this category of labour. An investigation on migration of agricultural labour initiated early this year forms another important study area concerning rural employment. It is hoped that the findings of this study would be available for use before the end of the year.

As a consequence of the far reaching changes in the agrarian sector witnessed in the '70s the ARTI was responsive to the need for carrying out research investigations on agrarian reforms. As the initial step in this direction, a study on the new forms of agricultural settlements - youth settlement schemes, DDC agricultural projects, Samupakara Gammanas, Samupakara Janawasas - was undertaken in 1973. The major objective of this study was to suggest ways of developing the new settlements. Simultaneously, a literature review on land settlements in Sri Lanka from 1840 to 1975 was undertaken by the Institute. This study was done with a view to highlight the major features of the history of land settlement in the country.

As a great deal of interest was evinced by the State in development of land vested in the Land Reform Commission, the ARTI embarked on a study in the coconut area. The specific geographic area selected for this purpose was considered to be ideally suited for such a study in view of its under-utilisation at the time of investigation and its exceedingly high potential use capabilities. The findings of this study had their applicability in many spheres of activity and created interest among a varied class of people ranging from policy makers and planters to the general public. The report examined the possibilities of increasing productivity of these lands concerned and emphasised the need to integrate the estates and the surrounding villages as a means of developing the rural community.

Two studies titled "Policies and Implementation of Land Reform in Sri Lanka" prepared for the Asian and Pacific Development and Administration Centre (APDAC) conference on land reform in 1978, and "Agrarian Reform and Rural Development in Sri Lanka" prepared as a country review paper for the FAO World Conference on Land Reform and Rural Development in 1979 also constitute other investigations of this Institute on land reform. These studies examine the different approaches adopted to land reform by governments to rectify problems affecting the agrarian structure and recommend a range of directions along which future implementation strategies on more equity oriented and participatory lines.

The Institute embarked on a study in 1978 titled "The Settlement and Development of Small Holdings Alienated Under the Land Reform Programmes of the Seventies". This study examines the procedures adopted in alienation of lands, the choice of recipients in terms of their socio-economic status and orientations, the viability of allotments, and the quality of life of settlers.

The utilisation of research capabilities of the ARTI was given a new dimension with the entrusting of evaluation studies on major irrigation investments in agriculture. The first of such instances relates to the Irrigation Modernization Project which was undertaken in response to a request from the Ministry of Irrigation on a suggestion of the World Bank. It seeks to assess the impact of a project primarily aimed at modernization of irrigation systems in five major tanks in the dry zone of Sri Lanka. This is a long term study, the scope of which covers agronomic, economic as well as social conditions prevalent in the schemes. The second major evaluation study contracted in 1978 by the Irrigation Ministry at the instance of the World Bank relates to the Mahaweli Development Project - Area H. The area covered consists of 40,300 acres in H4 and H5 areas in the Kala Oya basin. A bench mark survey to assess the conditions prior to irrigation changes on farming and related socio-economic conditions has been completed and the report is awaiting preparation. The Ministry of Plan Implementation with the concurrence of the World Bank has also made a request to this Institute to evaluate the impact of the Integrated Rural Development Programme in Kurunegala district. This investigation which would cover a detailed evaluation and a continuous monitoring of a wide range of investment activities envisaged in the development programme is scheduled to commence during the second half of 1979.

The need for a reliable data base for the formulation and execution of development programmes in the agricultural sector had been felt. In recognition of this fact, a start was made in 1978 to collect appropriate data on an islandwise basis through a *National Agrarian Sample Survey*. This Survey is being conducted on a pilot basis commencing from Yala 1978 and is continuing through Maha 1978/79 in close collaboration with the Department of Census and Statistics, Department of Agriculture and the Central Bank. In this survey an effort has been made to obtain information on both an agro-ecological sector as well as an administrative district basis. Based on the experience of the pilot survey, the Institute hopes to conduct this survey on a continuous basis to provide upto date information.

Training Activities

Training forms an integral part of the Institute's activities, the main aim being to disseminate research information and also to share the experience gained from research with others concerned.

With this in view, the ARTI on its own engaged in conducting seminars, workshops and discussion sessions on varied topics relevant to its area of interest. In addition, it also collaborates with other organisations with similar interests by either conducting seminars and training sessions jointly with them or by providing resource personnel in specialised fields.

The Institute's training activities were formally initiated with the course on *Agrarian Structure and Development* to mark its incorporation and inauguration in 1972. Staff level officers from the Departments under the Ministry of Agriculture and Lands participated in this five day seminar. The faculty included the Heads of Departments under the Ministries concerned and two guest lecturers from FAO and ILO. A similar group of officials at the policy making level gathered under the sponsorship of the ARTI at a seminar held again in February 1977 to discuss the *research and training activities* conducted until then so as to indicate directions for its future activities. The present seminar is a further extension of this idea aimed at enlisting the views of policy makers at the highest level. The thinking behind these seminars is to evaluate the Institute's performance in research and training and seek the opinions of those to whom its research would be most useful.

Among the different types of seminars conducted so far those on Methodology as well as on specific topics were held specifically to enhance our research capabilities. In this regard the seminar on *Social Science Methodology* was held by the Institute in 1974 while another was jointly held on *Agricultural Statistics* with the Department of Mathematics, Colombo Campus, University of Sri Lanka in 1977. Some of the topics that drew our special attention resulted in the following seminars, "*Colloquium on Agricultural Credit*" in 1974, "*Problems of Water Management*" in 1974, "*New Settlement Schemes*" in 1975, "*Performance of Rural Organisations*" in 1977.

Seminars and conferences were also held under the joint sponsorship of ARTI and international agencies. The first of such seminars was one on the "*Social and Economic Consequences of the Improved Seeds*" held in 1973 in association with the Institute of Development Studies in Sussex. Participants at this seminar represented different countries in the South East Asian Region and the seminar was of one month's duration.

"*Problems of Small Holders in Areas of Traditional Rainfed Farming*" was the theme of a field workshop and seminar conducted in 1974 in collaboration with FAO/UNDP's Asian Regional Project on Agrarian Reform and Rural Development (ACARRD). FAO/SIDA in collaboration with the government of Sri Lanka held a conference on "*Integrated Rural Development*" in 1975. The most recent workshop with international cooperation related to group farming titled "*Marketing Programme in Asia*" was held in 1978 with collaboration of FAO/ESCAP.

On a few occasions the ARTI has provided resource personnel for internationally sponsored seminars. One such seminar was on *Agricultural Research Management* organised by the Post Graduate Institute of Agriculture, University of Sri Lanka supported by the South East Asian Region Centre for Graduate Study and Research in Agriculture (SEARCA) in 1976.

The Institute has from its inception provided resource personnel in specialised fields for training courses of other government agencies. The last such contribution from a team of the Institute staff was the provision of a module on *Social Science Research Methodology* in a training course for staff members of the Management Services Division of the Ministry of Public Administration conducted in January 1979.

In the direction of fulfilling the need for training State officers involved in development activities, ARTI collaborated with the Department of Geography, Colombo Campus in conducting a *Post Graduate Diploma course in Land Settlement and Development* in both 1976/77 and 1977/78.

The researchers of the ARTI have formed a *study group* which holds seminars to promote discussion on topics of current interest. Guest speakers are frequently invited to address meetings. Research proposals in their formative stages are also discussed at meetings of the study group. Invitations to participate at these meetings are extended to researchers and others from outside the ARTI who have interests in the specific topic under discussion.

A priority area of training where the Institute has actively involved itself over the years is the fulfilment of training needs of *field officers* at *district* and *sub-district* levels. In collaboration with the relevant institutions, training courses in the form of workshops or lecture/discussions and field visits were conducted during 1973/77 for varied groups. They included the members of Cultivation Committees (CC) and Agricultural Productivity Committees (APC), KVSS, Agricultural Instructors, Managers of the APC branches of the Bank of Ceylon, DAEOO and Assistant Directors of Rural Institutions and Agricultural Productivity Laws Division. The Institute also catered to the training needs of State sponsored estate management bodies such as Janawasas. Training for Janawasa Managers was held in 1974 and 1976.

As an integral part of the *action-cum-research programmes* relating to *group production, highland development, home gardens, etc.*, launched within the Beminiwatte field laboratory, the Institute conducted several training programmes between 1974 and 1977. The training groups comprised of APC and CC members, KVSS and farmers who participated in the action programme.

With a view to highlight problems faced by the farmers as well as the officials in implementing development programmes and effect a closer dialogue between the two groups, a series of *farmers' seminars* on a regional basis was held during the years 1975-76. The first of such seminars was held in *Jaffna* in 1975 followed by another in *Galle* in the same year and thereafter in *Batticaloa* and

ending with the final one in *Kandy* 1976. In the context of recent changes in the agrarian sector the Institute has felt that it is opportune to revive these seminars to cater more to the decentralised system of administration. It intends to initiate a new series of farmer seminars beginning with Kurunegala district.

The Institute performs a valuable service by *providing information on development activities* to a wide clientele of policy makers, public officials, students and farmers. Information in the fields of development activity extracted from scientific journals and other publications are disseminated by the Institute through its "*Synopsis and Reproduction Series*".

News relating to policies, programmes and activities of the State are given coverage in the *ARTI News Letter* which is distributed quarterly within the country, as well as to several international agencies. Two quarterly journals the *Govi Janathawa* in Sinhala and the *Kana Nalam* in Tamil which cater to the needs of farmers and students in particular are published by the Institute.

A Data Bank with emphasis on information related to the agrarian sector has already been instituted at the ARTI. It is envisaged that this would form the nucleus of a **fully fledged National Information Centre** on agrarian development to be housed at ARTI in the future.