EDUCATION AND TRAINING OF AGRICULTURAL EXTENSION PERSONNEL IN SRI LANKA

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Research Study Series No 18

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Agrarian Research and Training Institute
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PREFACE

The Department of Agriculture and its extension staff have played a crucial role in the agricultural development of Sri Lanka. Recent technological improvements combined with efforts at agricultural diversification have made new demands on the extension staff. The knowledge and experience of extension personnel would ultimately determine the effectiveness of their performance as change-agents of agricultural and rural development. While part of this knowledge and experience has been acquired through formal education a substantial learning process takes place through on-the-job training. In order to meet the changing demands of agriculture in this country, the Department of Agriculture provides from time to time in-service training to its extension personnel besides providing formal vocational education in agricultural schools. In-service training is undertaken both at the central and district levels. In order to evaluate the form and content of both formal and in-service training programmes, the Department of Agriculture requested this Institute to undertake an evaluation of the training facilities now available to the extension staff.

Even while this study was being done, the Department of Agriculture based on existing knowledge, was contemplating to introduce certain changes in curricula and content of education in both the central and district level training institutions.

This study essentially meant for use by the Department of Agriculture staff, examines the vocational agricultural education system now in vogue with particular reference to the needs of the extension personnel and reviews the facilities available in the in-service training institutions. Suggestions for improvement are made on the basis of the findings of the study as well as the discussions had with the Department of Agriculture personnel. It may be that some of the suggestions contained in this document are inapplicable or that steps have already been taken to revise the syllabuses and curricula in keeping with the changing needs. However, it is hoped that in a limited way, this document would serve to highlight some of the issues related to training of extension personnel in Sri Lanka.

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Our thanks are also due to the Heads and staff members of the School of Agriculture, the three In-Service Training Institutes, the practical farm schools at Ambepussa and Walpita for furnishing us valuable information required for the study. We greatly appreciate the co-operation extended by the District Agricultural Extension Officers, the Agricultural Instructors and Krushikarma Viyapthi Sevakas by responding to our questionnaires sent to them.

We are grateful to the Director, Agrarian Research and Training Institute and the former Chief Adviser and our other Research colleagues for the advice and encouragement given at all the stages of the study.

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OBJECTIVES AND METHODOLOGY

1. *Introduction*

District Agricultural Extension Officers (DAEOs), Agricultural Instructors (AIs), and Krushikarma Viyapthi Sevakas (KVSs), comprise the field staff of the Extension Service of the Department of Agriculture. The DAEOs work at district level and are responsible for the overall Agricultural Extension Programme. In some districts the DAEOs are assisted by additional DAEOs. There are also headquarters AIs and a few subject matter specialist officers. The DAEOs are either university graduates in Agriculture or diploma holders of the School of Agriculture with considerable years of field experience.

Agricultural Instructors (AIs), work at the divisional level, and are required to follow a two-year course of general agriculture at the Sri Lanka School of Agriculture. Most KVSs have had a one year course at a Practical Farm School and work at village level.

The Department of Agriculture has three In-Service Training Institutes, located at Gannoruwa, Bindunuwewa and Maha Illuppallama, to provide the staff with practical training in agriculture and rural development. In addition, the Department conducts various training programmes at the district level for AIs and KVSs, to equip them with the knowledge and skills relevant to specific problems and situations in areas where they serve.

In order to meet the changing needs of the agricultural and agrarian sector of the country, the curricula of the School of Agriculture and the Practical Farm Schools, as well as the programmes of the In-Service Training Institutes have been periodically amended.

Recent changes in the agrarian situation in the country, the need to increase agricultural productivity through the more efficient utilisation of resources and the probiems of integrated rural development, however, call for a type of training that would enable extension personnel to perform their duties more efficiently.

The present study of the Education and Training of Agricultural Extension Personnel in Sri Lanka, which was undertaken in collaboration with the Department of Agriculture, has the following objectives:

i. to ascertain the educational and training needs of agricultural extension personnel working at district, divisional and village levels;

ii. to review the curricula of the School of Agriculture and Practical Farm Schools, in terms of the needs and requirements of the extension personnel and to suggest modifications to the syllabuses to meet their needs;

iii. to review the training programmes provided at the In-Service Training Institutes and also the training being carried out at the district level.

iv. to suggest certain guidelines for the professional development of extension personnel as well as the staff of the School of Agriculture, the Practical Farm Schools and the In-Service Training Institutes.

1.2. *Research Methodology*

The methodology was discussed with officers of the Department of Agriculture, and it was agreed that the study would be done on a country-wide basis and be conducted through questionnaires, as well as interviews and discussions with the officers concerned.

1.2.1. A questionnaire was mailed to the following extension personnel:

i. *District Agricultural Extension Officers (DAEOs)* -

All the 22 DAEOs were included in the study.

ii. *Agricultural Instructors (AIs)* -

At the time the study was conducted, there were 392 AIs working in the twenty-two districts. A random sample of 101 (25%), was selected.

iii. *Krushikarma Viyapthi Sevakas (KVSs)* -

Out of 1,354, a random sample of 349 (25%) was selected.

1.2.2. There are at present two levels of schools available to students interested in a career in agriculture, rural development, agri-business, farming and related professions:

i. The Sri Lanka School of Agriculture - which offers a two-year diploma course in general agriculture, is open to both boys and girls, age 17-25, with passes in at least six subjects at the GCE 'O' level examination, including Sinhala or Tamil language and three science subjects. The media of instruction are Sinhala and Tamil. The School's annual intake is 150 students, 60 of whom are of the rank of KVSs, drawn mainly from the Department of Agriculture for the purpose of up-grading their qualifications. The balance 90 students are selected from an average of 4,000 who annually apply for admission.

ii. Practical Farm Schools - offer a one year course of agricultural training for both boys and girls, age 17-24, with passes in six subjects at the GCE 'O' level. Applications for admission are called annually and preliminary selection is done by the DAEOs of the respective districts. The final selection is done at the Head Office of the Department of Agriculture. There are eight such schools managed by the Department of Agriculture. Six of these schools are for boys and two for girls. The location of these schools are:

Practical Farm Schools for Boys		*Medium of Instruction*
Pelwehera	..	Sinhala
Ambepussa	..	Sinhala
Wariyapola	..	Sinhala
Bibile	..	Sinhala
Kilinochchi	..	Tamil
Vavuniya	..	Tamil

Practical Farm School for Girls		*Medium of Instruction*
Walpita	..	Sinhala
Tinnaveli	..	Tamil

Since the curricula as well as the facilities at these schools are somewhat similar, it was decided to select two schools, the Farm School at Ambepussa for boys, and the Walpita Farm School for girls for this study.

Although at present there are no actual employment records of past students of these institutes, it could be assumed that the majority of them work in Government Departments, Statutory Boards and Corporations, and private organisations in the agricultural sector. Some may have taken up farming as a vocation.

1.2.3. There are three In-Service Training Institutes to provide refresher courses for extension personnel involved in agriculture and rural development. The In-Service Training Institute at Gannoruwa was established in 1967, and has residential facilities for 100 trainees. It caters to thirteen districts in the wet and intermediate zones and is mainly involved in providing training in rice production. It also serves the staff of the whole Island in extension training. Training courses in other crops like pulses and cereals have also been included in the programme. The In-Service Training Institute at Maha Illuppallama concentrates on the training needs of the dry zone districts, primarily on paddy and subsidiary food crops. Limited training in extension methodology is also provided. All Tamil officers attend training at this Institute.

The Bindunuwewa Training Institute was established in 1972, and provides training in horticulture. It has accommodation for 40 trainees.

Chapter 2

EDUCATION AND TRAINING OF DISTRICT AGRICULTURAL EXTENSION OFFICERS, AGRICULTURAL INSTRUCTORS AND KRUSHIKARMA VIYAPTHI SEVAKAS

2.1. *Characteristics of Personnel*

2.1.1. *District Agricultural Extension Officers (DAEOs)*

Of the 22 DAEOs working in the country, 20 responded to the questionnaire. Ten of them have been in the service as DAEOs up to 5 years. Eight had 5 - 10 years of service, while two had served for over 10 years. However, all officers prior to their appointments at DAEOs had served in different capacities in the Department of Agriculture. The majority (13) had worked as Agricultural Instructors (AIs), for an average of 15 years, while some of them had functioned as Project Managers and Farm Managers for a considerable number of years.

Of the DAEOs, 15 are holders of a two-year diploma and the remaining are graduates. Fourteen officers have had specialised non-degree training. Most of this was overseas training for periods up to six months and was mainly in agricultural extension, paddy production, animal husbandry, farm management, seed improvement and seed production.

2.1.2. *Agricultural Instructors (AIs)*

Of the AIs selected for the study, the majority (80 out of 84), had undergone the two-year diploma course at the School of Agriculture, 56% passing out before 1965, and 44% thereafter. As over 50% of those had formal training before 1965, it would be necessary to organise a systematic programme of training to familiarise them with the latest developments in agriculture and rural development.

Of the 80 respondents with the two-year diploma in agriculture, 34% had followed the specialised courses at the School of Agriculture. The subjects of specialisation were: agronomy, horticulture, farm machinery, paddy cultivation, home economics and plant protection. It is seen that a substantial proportion of AIs in service today have followed the specialised course which is viewed by the respondents as not altogether relevant to the task they are called upon to perform.

Of the respondents 25% had over 10 years, 45% had between 5 and 10 years, while 30% had less than 5 years of service. 44% had served in such capacities as Krushikarma Viyapthi Sevakas, Food Production Overseers, Soil Conservation Assistants, Agricultural Conductors, Field Assistants, Agricultural Supervisors, Foremen and Agricultural Demonstrators before their appointment as AIs. Of those who served in other capacities, 80% stated that their past experience was useful to them, while the remaining felt it was not so.

2.1.2. *Krushikarma Viyapthi Sevakas (KVSs)*

Of the 349 KVSs, 317 responded to the questionnaire. The majority of the respondents (86%), were past students of the Practical Farm Schools, while 13% had followed the two year diploma course at the School of Agriculture and the remaining had no basic education in agriculture. Fourteen per cent had less than five years of service, one-third from 5-10 years and the remaining 52% had over 10 years of service. The need for providing training opportunities to over half of the KVSs is imperative, in order to up-grade their knowledge obtained in schools.

2.2. *Training Opportunities for District Agricultural Extension Officers (DAEOs)*

In spite of the training provided to DAEOs, 16 of the 20 officers expressed their preference for further training, especially in agricultural extension and in working with rural adults. A lesser number have expressed the need for training in farm management, administration and management, cropping systems and the new trends in the agrarian reforms.

With regard to training opportunities available to DAEOs in the form of seminars, training courses, workshops and conferences, the study revealed that only 13 officers have had the opportunity to participate in these programmes which have ranged from 1-3 days and dealt with such subjects as working of rural institutions, water management and irrigation, field crops and climatology. All officers considered these courses very useful. The remaining officers said they had no opportunities to participate.

2.3. *Views of the DAEOs and AIs on the Curriculum of the School of Agriculture*

The majority of the DAEOs felt that agricultural extension, communication and rural adult education, farm management and agricultural economics, should have received much greater emphasis in the diploma course of the School of Agriculture. Technical subjects which needed emphasis were animal husbandry, horticulture and subsidiary food crops. It was also suggested that training should deal with the practical aspects of agriculture, as well as extension. The subjects identified by the AIs as useful and should have been studied in-depth at the School of Agriculture are set out in Table 1.

Table 1 *Subjects Mentioned by AIs Requiring Detailed Study*
N = 84

Subject	Subjects Useful		Subjects that should have been dealt with in-depth	
	No.	Percentage	No.	Percentage
Agronomy	38	45	24	29
Paddy Cultivation ..	42	50	27	32
Principles of Agriculture	48	57	34	40
Horticulture ,, ..	38	45	17	20
Plant Protection ..	51	61	45	54
Animal Husbandry ..	45	54	36	43
Farm Machinery.. ..	26	31	23	28
Subsidiary Food Crops ..	20	24	19	23
Chemistry	16	19	12	14

The subjects which AIs felt should have been dealt with in greater detail at the School of Agriculture were the same subjects which they felt were useful to them in performing their duties. Agronomy, paddy cultivation and horticulture, although described as useful, were not identified by a substantial number of respondents as subjects that should have been dealt with in detail. Animal husbandry and plant protection were mentioned by the largest proportion of the respondents as the two subjects that should have been dealt with in detail at the schools.

The subjects which were not taught at the School, but which AIs felt should have been included, were: extension methodology (32%), farm management (18%), the work of the rural institutions (11%), administration and management (10%), psychology (8%), sociology (8%), agricultural economics (8%), and principles of rural adult education (8%).

Commenting on the type of instruction given at the School of Agriculture, 62% of the respondents thought it well-balanced, 29% considered it theoretical, while the remaining felt that it was practical.

The study revealed that 80% preferred the general course, while 20% preferred the specialised one. The general course was preferred as it was felt to be more suitable to the task performed by them. Of the 80 AIs in the study who had undergone the two year diploma course in the School of Agriculture, 34% had followed the specialised course.

2.4. *Views of the DAEOs and KVSs on the curriculum of the Practical Farm Schools*

The various subjects suggested by DAEOs which need greater emphasis at the Practical Farm Schools were: agricultural extension, farm management, agricultural economics, work of rural institutions, animal husbandry, subsidiary food crops, paddy production, horticulture, plant protection and farm machinery.

Of the subjects taught at the Practical Farm Schools, those identified as useful by the KVSs, as well as those that were identified as subjects that should have been dealt in-depth at the Practical Farm Schools are given in Table 2.

Table 2. *Subjects identified by KVSs as useful in their work and also those which should have been dealt with in-depth at the Practical Farm Schools*

N = 317

Subject	Subjects Useful		Subjects that should have been dealt with in-depth	
	No.	Percentage	No.	Percentage
Agronomy	132	42	104	33
Paddy Cultivation ..	166	52	132	43
Principles of Agriculture	68	21	58	18
Horticulture	160	50	79	25
Plant Protection ..	131	41	127	40
Animal Husbandry ..	235	74	139	44
Farm Management ..	73	23	56	18
Subsidiary Food Crops..	102	32	81	26
Home Economics ..	36	11	-	-
Vegetables	34	11	-	-
Agricultural Cooperatives	19	6	-	-
Bee-keeping	11	3	-	-

In obtaining the views of the respondents on the subjects that should have been dealt with in-depth in their schooling, it was observed that they were the same subjects mentioned earlier by the respondents as being useful. However, animal husbandry, paddy cultivation and plant protection were the three subjects identified by the majority of respondents as subjects that needed greater emphasis. Of the subjects that were not provided at the school, but felt by the respondents as being important to them in their work, were farm machinery (13%), extension education (12%), minor export crops (7%), the work of rural institutions (6%), farm management (3%), and Agricultural co-operatives (3%).

On the adequacy of the practical training, the DAEOs suggested that the training provided at the Practical Farm Schools should be more field oriented. This view was shared by 42% of the KVSs.

2.5 *In-Service Training*

At the three In-Service Training Institutes operated and managed by the Department of Agriculture, training on various subjects are offered to AIs and KVSs. Trainees for such Institutional Training are selected on the basis of one or more of the following criteria: providing opportunities to those who had not received institutional training for a longer period; catering to the needs of the district extension programmes, providing training facilities to every officer at least once a year.

The majority of the DAEOs felt that the staff of the In-Service Training Institutes had adequate knowledge of the training needs of AIs, and KVSs, which was obtained through their visits to the district, discussions and more recently through questionnaires. The suggestions and comments of the DAEOs for improvements of the Training given by the In-Service Training Institutes are that training should be more practical and problem oriented; more training is needed on leadership, extension and communication and changes in the agrarian situation. They also suggested more training for Agricultural Officers, Bank Managers, and other officers concerned with the working of rural institutions. It was also stated that more trainers in various technical subjects should be available.

Eight DAEOs said they received prior consultation on subjects of training offered by these In-Service Training Institutions. The study has revealed that AIs and KVSs do make requests to DAEOs for their need for training in various subjects and such requests were received by 13 DAEOs.

Of the AIs selected for the study, 89% had attended In-Service Training during the last two years, while the remaining had not attended such courses in the same period. Preoccupation with field work and personal problems were the main reasons for non-attendance. As for the number of courses, 49% of the respondents had attended 3-5 courses during the past two years, 32% attended 1-2 courses and 8% attended more than five In-Service training courses during the same period. It is evident that sufficient training opportunities are being made available for Agricultural Instructors.

87% and 10% of the respondents viewed In-Service Training courses as, "useful" and "somewhat useful", respectively, while only 3% felt they were not so useful.

On AIs suggestions for improvements of In-Service Training, the study revealed that 43% suggested more emphasis to be given to practical aspects. 18% stated that new knowledge should be imparted, 15% indicated that trainers should be specialised in different subject areas and they should be more familiar with field conditions. 13% mentioned that the duration of the training courses should be lengthened, while 12% suggested that field trips should be included in the training.

In regard to the extent of usefulness of In-Service training in relation to subjects relevant to their task, 55% of the AIs ranked cultural practices of various crops, 30% ranked extension methods and communication, 15% placed extension philosophy and adult education, and 5% ranked 'recent changes in agrarian sector' in the first place, but none ranked 'working of institutions' in first or second place as is shown in Table 3.

Table 3. AIs ranking in order of usefulness of the In-Service training in relation to subjects relevant to their work

Subjects	Ranking According to Usefulness:											
	Rank 1		Rank 2		Rank 3		Rank 4		Rank 5		Total	percentage
	No.	%	No.	%	No.	%	No.	%	No.	%		
Cultural Practices of various crops	41	55	19	25	11	15	03	04	01	01	75	100
Extension methods & communi-cation	23	30	22	29	23	31	05	07	02	03	75	100
Extension Philosophy & Adult Education	11	15	28	37	25	33	05	07	06	08	75	100
Working of Institutions	0	0	0	0	05	07	27	36	43	57	75	100
New changes in agrarian sector	04	05	08	11	09	12	34	45	20	27	75	100

Specifying the subjects they would most prefer included in their In-Service Training, 49% indicated, extension methods, 36% animal husbandry, 34% and 32% specified paddy cultivation and plant protection respectively. With the exception of extension methods, the subjects identified by AIs were similar to those subjects specified as being useful and also needed greater emphasis at the School of Agriculture. The other subjects identified were vegetable production (27%), subsidiary food crops (27%), horticulture (18%), farm machinery (14%) and rural institutions (11%).

73% of KVSs have attended In-Service Training courses during the past two years. As for the number of courses, 55% have attended 1-2 courses, 13%, 3-4 courses and 3% up to 5 courses. By far the majority (96%), stated that this training was useful. Ninety-one KVSs were nominated but could not attend the training courses because of personal reasons or occupation with their work.

76% of the KVSs stated that they preferred the training to be held at In-Service Training Institutes and the remaining expressed their preference for the training in the Districts. As less than one-third of the KVSs who were nominated to attend In-Service Training could not do so, it may be good to have more of the training organised at District Level, especially as this arrangement was preferred by one-fourth of the KVSs.

In regard to the improvement of training at the In-Service Training Institutes, 34% felt that the training period should be longer, covering up to two weeks, 29% felt that training should be more practical, while 21% expressed their desire that the training should be provided more often (the present arrangement is that KVSs will have the opportunity to attend one training course a year). The other suggestions made were, the awarding of certificates and conducting examinations, training to be relevant to problems in the districts, inclusion of field trips and tours as part of the training, involvement of specialised officers to conduct the training, and trainers to be more familiar with problems of the district.

In estimating training, in terms of its relevancy to the work of KVSs, Table 4, shows that 48% of the respondents ranked cultural practices of different crops, 25% placed extension methodology and communication, while 19% and 15% ranked new changes in the agrarian sector, extension philosophy and adult education in first place. The Table also shows that none of the KVSs ranked as number one the working of institutions which was ranked number five by 58%.

Table 4. *KVSs ranking in order of usefulness of the In-Service training in relation to subjects relevant to their work*

Subjects	Ranking According to Usefulness: Rank 1 No.	%	Rank 2 No.	%	Rank 3 No.	%	Rank 4 No.	%	Rank 5 No.	%	Total	percentage
Cultural Practices of various crops	134	48	82	29	38	14	20	07	04	01	278	100
Extension methods & communi-cation	65	25	71	28	77	30	31	12	11	04	255	100
Extension Philosophy & Adult Education	39	15	58	22	64	25	72	28	26	10	259	100
Working of Institutions	0	0	15	06	32	13	53	22	138	58	238	100
New changes in agrarian sector	49	19	49	19	48	19	60	24	46	18	252	100

2.6. *District Training*

Training for AIs and KVSs in the districts was usually for a day or part of a day, and was conducted by the DAEOs and/or by the headquarter AIs and subject matter AIs. The majority of such courses dealt with, paddy production, plant protection, horticulture, subsidiary food crops, cropping systems, sugar cane, tobacco, minor export crops and bee-keeping. A lesser number of courses was conducted in the field of extension methodology and working of rural institutions. The study indicated that about half of both AIs and KVSs attended these training courses.

In district level training, the following matters mentioned by DAEOs need to be considered: making available funds, and facilities such as, stationery, classroom equipment, etc; lessening the pressure of work on the DAEOs and headquarter AIs and subject matter AIs to enable them to devote more time to training and also to motivate trainees.

The majority of DAEOs felt that AIs and KVSs should be given more training at the District Level on the following subjects: extension methodology and communication, plant protection, marketing, harvesting and storage, animal husbandry and vegetable production.

The majority of the respondents expressed their satisfaction with the training.

53% of the AIs and 65% of the KVSs stated that the training courses were conducted at the district training centres. As for requests made by AIs for district training, it was found that 75% had shown interest, while 25% had not made requests for such training. The study also showed that a little over half (53%) of AIs who had made requests for training courses, stated that such requests were met all the time, while 22% said that they were met most of the time.

Regarding AI's preference for the place of In-Service Training, the study revealed that 77% preferred training to be held at In-Service Training Institutes, while 23% preferred the Districts.

2.7. *AIs and KVSs anticipation of problems and their competency to deal with them*

25% and 22% of the AIs and KVSs respectively stated that the problems they faced while at work were the same as anticipated; 44% and 58% indicated that problems were somewhat different, while the remaining 30% and 20% described the problems as quite different to what they anticipated.

99% of AIs and 97% of KVSs stated that they were either fully or fairly competent to deal with technical problems when they assumed duties as Field Extension Officers. However with regard to socio-economic problems of rural areas, a slightly smaller proportion of respondents (75% of AIs and 83% of KVSs), stated that they were either fully or partly competent to deal with them.

Table 5 *Distribution of respondents by their competency to deal with technical, social and economic problems of the rural people*

	Technical problems				Social and Economic problems			
	AIs		KVSs		AIs		KVss	
	No.	%	No.	%	No.	%	No.	%
Competent	43	51	113	37	18	21	63	21
Fairly competent	40	48	184	60	45	54	188	62
Not competent ..	01	01	09	03	21	25	51	17
T o t a l	84	100	306	100	84	100	302	100

The task of the extension worker when viewed in a broader perspective is a process of increasing agricultural productivity through the prudent allocation of capital and labour resources of farmers. This is very much related to farmer decisions and choices which in turn are conditioned by the various social and economic problems. Thus an extension worker's understanding of the social and economic problems of the farmer is imperative.

Regarding apprenticeship training the study revealed that 79% of the AIs stated that newly recruited extension officers should work under an experienced officer for a certain period of time, while 21% viewed that such an apprenticeship was not so important. Of the former category 76% stated that they need a period of apprenticeship to get fully oriented to field work, 32% to gain experience in administration, 11% to get a training in financial matters and 2% to gain confidence.

Chapter 3

VOCATIONAL AGRICULTURAL EDUCATION

3.1. *School of Agriculture*

3.1.1 *Curriculum*

From the inception of the school, up to 1966, a general syllabus in Agriculture, including subjects in Principles of Agriculture, Crop Husbandry, Botany, Agricultural Chemistry, Agricultural Engineering, and Animal Husbandry, was followed. However, in 1966, courses were introduced in order that students could specialise according to their interest in subjects like Horticulture, Animal Husbandry, Agricultural Engineering, Home Science, etc. In 1972, the general agricultural course was re-introduced and the present curriculum is as follows:

First Year

Subjects	Theory hours per week	Practicals hours per week	Total hours per week
Agricultural Chemistry	2	2	4
Agricultural Botany	2	2	4
Agricultural Economics & Field Experiments	2	-	2
Agricultural Engineering I	2	2	4
Crop Husbandry I	2	4	6
Animal Husbandry I	2	4	6
Horticulture I	2	2	4
Workshop I or Home Science I	-	4	4
Total	14	20	34

Second Year

Plant Protection	2	2	4
Farm Management	2	-	2
Extension Education	2	-	2
Agricultural Engineering II	2	2	4
Crop Husbandry II	2	4	6
Animal Husbandry II	2	4	6
Horticulture II	2	2	4
Workshop II or Home Science II	-	4	4
Total	14	18	32

3.1.2 *Educational Facilities*

The school maintains and operates a large multi-crop and animal husbandry farm, to offer practical training to students. However, inadequate machinery and equipment limits the opportunity for students to take an active part in practical training. Likewise, poor transport facilities available at the school, make it difficult for the school

to arrange field visits and tours for students to places of agricultural interest. The training provided to the students is more of a theoretical nature, while the practical training is mainly in the form of demonstrations carried out at the school's farm.

It was also found that there is no continuous and systematic flow of information on new technologies in agriculture and rural development to be used by teachers as teaching material. There is no established channel of communication with the research division of the Department of Agriculture and other institutes conducting research in agriculture and related disciplines. Teachers get the information they need mostly through personal contact.

It was also found that the opportunities for teachers to get acquainted with field situations and problems are very limited and at present there is no established channel of communication between the various field officers of the Department of Agriculture and the school. Any contact or relationship is usually on an informal basis. Further, the extent of communication between neighbouring farming communities was found to be rather limited. Any information that filtered down from the school to neighbouring farms was through labourers who work in the school farm.

3.1.3. *Teaching Staff*

All the lecturers at the school are graduates in agriculture, while the Principal has had a post-graduate training. Teachers are allocated different subjects although only a few of them have had specialisation. However, they make personal efforts to obtain more information and enhance their knowledge on the particular subject assigned to them. It was also found that teachers need guidance in training methodology and related disciplines in order that their function as educators may be enhanced.

3.2 *Practical Farm Schools*

3.2.1. *Curriculum*

The main subjects included in the curriculum of the practical farm school are, Agronomy (General Agriculture), Animal Husbandry, Horticulture, Farm Machinery and Plant Protection. However, the types of crops included depend on the agro-climatic zones the schools cater for. The school at Ambepussa, deals with crops related to the wet zone districts; in the farm school for girls, Home Economics, is included in the curriculum in addition to Agronomy, Animal Husbandry, Horticulture and Bee-keeping. The subject Home Economics includes, Child care, Cookery, Nutrition and Food Preservation, Needlework, Handicraft, Hygiene and Physiology. More emphasis is given to the practical aspects of each subject. An examination is held at the end of the year by Departmental Officers and students are graded. The issue of formal certificates by the Department was discontinued in 1968.

3.2.2. *Educational Facilities*

More facilities for training are needed in both institutions, particularly hostel facilities for trainees, transport, accommodation for staff, library facilities and stationery.

The two institutions concerned are not well equipped with training aids. There is little in the way of teaching material, except for the "Newsletter" issued by the Department of Agriculture. A formal channel of communication with the Research Division to keep the trainers abreast of new development is also very necessary.

5.2.3. *Teaching Staff*

Agricultural Instructors constitute the staff of the Practical Farm School for boys. The Practical Farm School at Ambepussa has only one Agricultural Instructor as a farm school officer, to manage the whole school, while the girls Farm School has a Principal and Lecturers, for the various subjects. All staff members are diploma holders from the School of Agriculture. The staff at the Practical Farm School at Walpita consists of a Principal and 13 lecturers. The staff at both institutions has had no special training as trainers.

The grade of "Principal" and "Lecturers" at the Practical Farm Schools, have limited promotional prospects. Even with regard to the Farm Schools for boys, the Farm School officers (who are AIs), do not get the allowance that the officers in the ranges enjoy.

Chapter 4

IN-SERVICE TRAINING INSTITUTES

4.1. *Staffing*

The three institutes are headed by Agricultural officers who are graduates in Agriculture and one with post-graduate qualification, while the remaining staff are graduates of the School of Agriculture. All the trainers involved in training in Rice Production, have undergone short training courses in Rice Production at the International Rice Research Institute, while most of the others have had local and overseas training in the relevant technical subjects, such as, Vegetable Production and Cultivation of Subsidiary Crops.

4.2. *Facilities Available*

The three In-Service Training Institutes at Gannoruwa, Bindunuwewa and Maha Illuppallama, are provided with farms of 12, 43, and 8 acres, respectively. All are well equipped with the necessary machinery and equipment. With regard to training aids, the Institutes at Gannoruwa and Bindunuwewa are better equipped than the other, and on the whole the training facilities are satisfactory.

Hostel facilities are available at the three institutions. The catering facilities at Maha Illuppallama and Bindunuwewa were found to be inadequate.

All three institutes are provided with basic transport facilities. However, they are not adequate to provide field trips and tours to all trainees.

4.3. *Trainees*

Trainees are mainly AIs and KVSs of the Department of Agriculture. Although in theory selection is on a rota basis, it was observed that in practice some officers attended the training classes repeatedly, while others did not have an opportunity to attend at all. The possible reasons for this are:

(a) there is no definite criteria or method of selection of trainees;

(b) the better officers are needed more in the districts and could not be released;

(c) a reluctance of some extension workers to leave their homes to attend training courses.

4.4. *Subjects of Training*

Usually the courses are decided by the institutes as few requests for training in particular subjects are received by the institutes.

4.5. *Teaching Material*

Trainers have to depend on what they already know. There is at present no systematic channel of communication between the Institute, the Research Division of the Department of Agriculture, and other relevant Research Institutes, for the provision of information to the training staff. However, there is some contact between the Institute's staff and those of the research stations when research specialists are involved in training courses conducted by the Institutes and when visits to research stations are arranged as part of the training.

The limited collections of books and periodicals in the Libraries of the Institutes do not contain many local publications which are readily available. The Institutes are well equipped with the necessary audio-visual aid equipment. In this respect the Institutes at Gannoruwa and Bindunuwewa are better equipped. The majority of the training staff has expressed their concern over the lack of up-to-date information on the work that is being carried out at the districts. They expressed the need for making more field visits. However, due to pressure of work and lack of facilities, this has not been possible.

4.6. *Evaluation Follow-Up*

Trainees are tested both before and at the end of the course, to measure the effectiveness of the training. However, no follow-up in the field is carried out by the institutes to ascertain the practical results from the training. Reasons for lack of follow-up by the staff are:

i. lack of awareness of follow-up methods;

ii. being over-burdened with work;

iii. lack of transport facilities;

iv. being doubtful of support from the districts.

4.7. *Staff Development*

i. Greater pressure is being placed on the staff to provide training not only on technical subject matters, but also on other social and economic disciplines related to agriculture and rural development, an area where the staff felt their knowledge very inadequate.

ii. Previously the bulk of trainees came from the cadres of AIs and KVSs. However, recently requests for training have been received from rural institutions, other departments, schools as well as farmers. To provide adequate training for those latter groups requires a diversification of knowledge of the trainers.

iii. Staff suffer from lack of availability of information to keep them abreast of new technologies.

iv. Trainers do not have clear ideas on the job description and tasks performed by many of the prospective trainees.

v. With the exception of the Agricultural Officers in-charge of the Institutes, all trainers are at AI level. Consequently, opportunities for the training of officers of higher grades might be limited.

4.8. *Working conditions of the Staff*

Officers transferred as trainers to the Institutes do not like to stay long, but, would prefer to get transferred out as soon as they can. Thus, the turnover of staff is about two a year. The reasons for this as identified by the staff are:

i. Possibilities for promotion at the institute are limited. The next higher grade to an AI is that of an Agricultural Officer. However, there is only one provision for an Agricultural Officer and that is held by the Officer in-charge of the Institute.

ii. Staff members have to maintain long hours, sometimes 10-12 hours a day with no additional remuneration.

iii. Trainers are not entitled to commuted travelling allowances, loans to purchase vehicles, motor cycles, etc., which are enjoyed by other AIs working at the district.

4.9. *Training Activities*

The institutes have very active training programmes. Data obtained from the institutes relative to number and type of trainees, for the cultivation year 1974/75 is shown in Table 6.

Table 6 *Summary of Training Activities for the three institutes for the cultivation year 1974/75*

Trainees	Gannoruwa		Bindunuwewa		Maha Illuppallama	
	No.	%	No.	%	No.	%
AIs	1,307	8.0	102	1.7	342	1.9
KVSs	1,307	8.0	187	3.1	555	3.0
DAEOs and other AOs	145	0.9	-	-	-	-
Farm School students	82	0.5	17	0.3	1,015	5.6
Others *	13,819	83.0	5,729	94.9	16,329	89.5
Total	16,660	100.0	6,035	100.0	18,241	100.0

*Includes farmers, members of rural institutions, government officials who attend training and groups of school children who make short visits to these institutions

Chapter 5

CONCLUSIONS AND RECOMMENDATIONS

5.1. *Education of Extension Workers in Sri Lanka*

5.1.1. Agricultural Vocational Education provided to extension workers through the Sri Lanka School of Agriculture and the Practical Farm Schools, emphasises the technology of agriculture. The recent changes, however, in the agrarian situation in the country as well as the idea of achieving agricultural productivity through integrated rural development are placing new demands on extension workers, which their education has not fully equipped them to meet. The recent thinking on integrated rural development, the enactment of the Agricultural Productivity Law and the Agricultural Lands Law, the take-over of Sterling company estates, under the land reform programme, the establishment of various land settlement schemes, the pressure of providing alternatives for unemployed rural youth, the need for creating agro-based industries utilising indigenous material and the ever present emphasis on increasing agricultural productivity to meet the country's needs for food, have high lighted the need to re-orient agricultural vocational education in Sri Lanka on the following basis:

i. Provide students with teacher learner experience which emphasises the social and economic problems of rural people as well as technical know-how relevant to increasing agricultural productivity. Such education should be able to cater to the needs of extension workers, as well as members of rural institutions, co-operatives, rural credit agencies and those concerned with marketing, agri-business and farming;

ii. Although such an education will provide the base for a well qualified generalist in the area of rural development, In-Service Training as well as other types of training should be able to fill the gaps and to mould those individuals to meet the requirements and demands of various intermediate and village level jobs in the field of agriculture and rural development;

iii. The envisaged agricultural education should strike a balance between the theoretical and practical;

iv. To enhance the quality of education by establishing an organised relationship with the surrounding community. This relationship should serve the following objectives:

   (a) diffuse knowledge and technology to the community and assist in its agricultural and rural development;

   (b) provide students with the opportunity to see problems in the actual setting and to participate in finding solutions to these problems. Each school might adopt a village in the area as a field laboratory and progressively expand the area by bringing in other villages.

5.1.2. *Staff Development*

i. The successful implementation of the curriculum and other related conceptual changes require well qualified staff members. The present academic qualifications of the staff of the School of Agriculture is very satisfactory, but a certain amount of specialisation is required which may be provided through post-graduate studies or continuous training and refresher courses. Of extreme importance is that all teachers should have a knowledge in theory and principles of education and educational methods. This could be achieved through training opportunities available in the country.

It might be necessary in future to upgrade the academic qualifications of the staff of the Practical Farm Schools to the level of the university degree. Staff members of the Practical Farm Schools also require additional training in the basic principles of education and training methods.

ii. It is of prime importance for the professional development of the staff, that they should keep abreast of the new technologies and developments in agriculture and rural development. Research findings in these fields should be made available to the schools.

iii. To facilitate practical training, it is suggested that the School of Agriculture should have on its staff a number of trainers of agricultural instructor level, to guide practical training, field visits and also to assist in the establishment of a cohesive relationship between the school and the community. Such an arrangement will provide teachers with free time for classroom preparation and library reading.

5.1.3. *Teaching Material*

The need for adequate and up-to-date teaching material by staff members cannot be over emphasised. Efforts should be directed towards the production of necessary publications needed for use by the staff members. Such information is readily available in various institutions and organisations in the country and could be periodically enhanced through current research findings carried out in the country. Students should also be provided with reference material at every course in order that this may be used later as resource material.

5.1.4. *Facilities*

Facilities at the Sri Lanka School of Agriculture and the Practical Farm Schools, need to be improved. Libraries should be very well equipped with current local publications. Although visual-aids are available at the Sri Lanka School of Agriculture, educational materials are out-dated and they need replacement. The School of Agriculture, or the In-Service Training Institutes, should be able to produce visual-aids to be used by the School as well as for distribution to the Practical Farm Schools.

5.2. *In-Service Training of Extension Workers in Sri Lanka*

The underlying concept of In-Service training is to keep workers abreast and up-to-date of the new knowledge and technologies as well as to acquire experiences and skills relevant to their tasks. Experience has shown that through well programmed and organised In-Service training,

extension workers can achieve a certain degree of proficiency in their work filling any gaps of deficiencies they might have had from their academic training. Due to the change in technologies, the shifting of national policy emphasis and the needs and requirements of the clientale, In-Service training becomes vitally important for the professional development of extension workers. In-Service Training would be meaningful only if it is practical and forms an integral part of on-going agricultural and rural development programmes. Also it must fulfil the needs of extension workers by filling existing gaps in knowledge and experience.

5.2.1. *Institutional In-Service Training*

i. At present the three In-Service Training Institutes are providing a very valuable assistance to extension workers and various officers in the field of agriculture as well as farmers and other interested groups or individuals. However, institutes should place a greater emphasis on providing training to extension personnel. It is also necessary that a system should be developed by which In-Service Training Institutes can provide greater assistance and guidance for the professional development of the extension field staff. It is suggested that an officer be appointed in each district to:

(a) provide a link between the training institutes and the field staff in the district;

(b) provide follow-up and evaluation of the trainees after their training and keep the training institutions informed of the results;

(c) assist in the organisation and management of in-service training courses carried out at the district level;

(d) serve as extension and training subject matter specialists at the district level;

(e) assist extension workers in the district in the organisation and management of farmer training classes conducted in the district.

These officers could be provided with training in the development and organisation of training courses and communication methods through In-Service Training Institutes in collaboration with the University of Sri Lanka and other training institutes in the country.

ii. Agricultural research stations should provide valuable opportunities for short-term training for extension workers and selected farmers. A training officer at the main research stations would be needed to:

(a) provide a link with the DAEO for arranging training courses, tours and visits of extension workers and selected farmers;

(b) keep the staff of the School of Agriculture, Practical Farm Schools and In-Service Training Institutes well informed of the research findings at the station and establish a functional link between the staff of the research station and extension workers in the district.

iii. In terms of the numbers and to some extent basic academic qualifications, the three institutes are adequately staffed. However.

a certain amount of specialisation is necessary. Opportunities should be made available for staff to be trained in subjects like, Rural Sociology, Agricultural Extension, Communication and Farm Management in addition to subject matter areas that are relevant to their work. At present, only the In-Service Training Institute at Gannoruwa, provides training in extension and communication. This training should be provided in the other two training institutes as well. There is also a need for their training in the theory and principles of education and teaching methods in order that they can impart knowledge and experience to trainees in a very effective manner.

iv. *Training Programmes*

In-Service Training Institutes should cater to the specific needs and problems of extension workers operating in the respective areas. Therefore, programmes and courses planned by these institutes should to a great extent reflect these requirements. This could be clearly facilitated by the information provided by the training officer in the district or districts in the area.

As for the selection of trainees (AIs and KVSs), the DAEOs should establish a system by which prospective trainees are given the opportunity of attending training courses according to needs of the work as well as to improve their general performance.

In regard to training opportunities for DAEOs and Agricultural Officers it is suggested that In-Service Training Institutes take the initiative in organising seminars, conferences and workshops on specific areas of concern and interest. This could be done in collaboration with the University of Sri Lanka and relevant research and training institutes in the country.

v. *Teaching Material and Facilities*

Trainers should have available to them the findings of research in the field of agriculture and rural development and these training institutions should be on the regular mailing list of all organisations conducting agricultural and socio-economic research.

There appears to be a need for an established channel of communication between research stations and educational and training institutions. This will call for making available to extension personnel and staff of these institutions, periodical publications of research findings. The presently available publications, namely the "Tropical Agriculturalist", caters mainly to the Agricultural Scientist, while the "Newsletter" is primarily designed for the use of KVSs. Thus the need for a middle level or intermediate level publication of research findings becomes urgent to satisfy the needs of middle level extension personnel, staff members of the In-Service Training Institutes, the School of Agriculture, the Practical Farm Schools, and interested personnel of other departments and institutions.

vi. The three institutions have adequate visual-aid equipment but the material they use should be renewed periodically.

Adequate accommodation and recreational facilities should be made available to the trainees.

5.2.2. *District Level Training*

The training of extension personnel at the district level has many advantages. Besides the low cost of operation, it provides an opportunity for the trainees to discuss and find alternative solutions to problems that are specific to their district and/or to an Agricultural Productivity Committee (APC). It also provides an opportunity for personnel of the same district with similar problems to exchange ideas and experiences, which they can make use of in their range. Such training is usually of short duration, half a day to one or two days, depending on the subject.

i. Though district level training does not require an elaborate organisation, it does require the involvement of the district staff for the training of AIs and KVSs. DAEOs and the district subject matter specialists should be able to devote part of their time to training and view such an activity as an integral part of their function. Further, AIs at the APC level should also be able to provide training for KVSs.

ii. Although the majority of the training courses conducted in the districts are mainly concerned with technical subjects, training courses, seminars and workshops should also be organised on aspects relating to the work of rural institutions and their role and relationship to agricultural extension. Such activities will bring extension workers and those of other rural institutions closer to each other and promote better working relationships.

iii. One of the main reasons that have prevented DAEOs, from holding as many training courses as they would like to have is the lack of facilities. Such facilities are now being provided at the District Training Centres. Effective district training could also be achieved without elaborate facilities provided it is done at a practical level, say in a farmer's field and conducted in a rather informal manner in one of the rooms at the district office and/or at the agricultural service centre.

iv. Like all other training activities, district level training is most effective when it is provided as an integral component of an on-going agricultural and rural development programme. Extension workers should be encouraged to have work plans for implementation in their ranges. From such plans the specific needs for training of extension workers could be identified and consequently provided for. Further, these plans will also assist extension workers in the organisation of various farmer training activities.