Evaluation of Crop Insurance Scheme in Sri Lanka

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FOREWORD

Agriculture has always been a high risk business. A person can use the best seed, chemicals and management practices, but the weather can still destroy his crops. Farmers everywhere are exposed to the vagaries of the weather, outbreaks of pests and diseases, other natural hazards and unexpected price fluctuation. Therefore, any crop loss or damage adversely affects the socio-economic order of the rural areas.

Agricultural Insurance is one of the strategies to cushion the effects of crop damages in case of certain risks. To stabilize farmers' income by indemnifying the farmers in instance of substantial crop losses due to natural hazards, to boost the risk averse farmers to adopt improved technologies which can lead to increased production and more efficient use of resources and to reduce the risk for credit agencies, by rendering the farmers more credit worthy for the purpose of crop loans, are the main objectives of the crop insurance scheme.

In this context, the study on the "Evaluation of crop Insurance Scheme in Sri Lanka" is timely and relevant. This study mainly focuses on the paddy insurance scheme which is being conducted by the Agricultural and Agrarian Insurance Board (AAIB). It attempts to evaluate the present performance, problems and future prospects of the paddy insurance scheme of the AAIB.

This study also reveals the farmers' problems, awareness and suggestions, towards the crop insurance scheme and the differences and similarities of the public and private sector paddy insurance schemes. Furthermore, the study shows that the AAIB lags behind in the achievement of the objectives for which it was set up. Both, the AAIB and private sector have insured only 2% of the total cultivated paddy lands in the *maha* 2004/2005. About 99% of the insured farmers joined the crop insurance scheme to obtain on bank loan all they did not join the crop insurance programme to cushion the effects of a risk of crop damage. It was observed that the agricultural insurance is not a demand driven policy.

I hope that the findings of this study would help for policy formulation and planning for development of the crop insurance scheme in Sri Lanka.

V.K. Nanayakkara
Director
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ABBREVIATION

AIB	-	Agricultural Insurance Board
AAIB	-	Agricultural and Agrarian Insurance Board
CICL	-	Ceylinco Insurance Company Limited
G M	-	General Manager
CIS	-	Crop Insurance Scheme
LNR	-	Loss Notification Register
IPR	-	Indemnity Payment Register
IDA	-	International Development Agency

EXECUTIVE SUMMARY

Agriculture involves relatively a higher degree of risks and uncertainty. In addition to the unexpected price fluctuations, risks arising from weather disturbances, outbreaks of pests and diseases and other natural hazards plague the farming community in Sri Lanka, the poorest segment of the economy. Over 75% of the farmers own less than one hectare of land the only capital they have from which they derive their income only in two seasons per year. Therefore, any crop loss or damage adversely affects the socio-economic order of the rural areas. The small farmers in Sri Lanka have come up against a plethora of problems and risks due to vagaries of nature and other setbacks and the need to protect the farmers from attendant risks received the active attention of the successive Governments in the recent years. Sri Lanka is the first country barring Japan in South East Asia to provide agricultural insurance to the farmers who suffer crop damages as a result of floods, droughts, pestilences, diseases or damage by wild animals.

Agriculture insurance is one of the strategies to cushion the effects of crop damages in case of certain risks. To stabilize farmers' income by indemnifying the farmers in instance of substantial crop losses due to natural hazards, to boost the risk averse farmers to adopt improved technologies which can lead to increased production and more efficient use of resources and, to reduce the risk for credit agencies, by rendering the farmers more credit worthy for the purpose of crop loans, are the main objectives of the crop insurance scheme.

Benefits of crop insurance have been explained well in theory. Agriculture insurance could contribute significantly to increase productivity in peasant agriculture when conceived of as an integrated fact of a well-rounded agricultural programme. Benefits of crop insurance extend to the whole community. Widespread crop failures, immediately affect the rural community whose income is mainly derived from farming. Depressed agricultural incomes drop in turn lead to a drop in demand for goods produced in other sectors. Farm income with a certain degree of assurance through insurance has a stabilizing effect on the entire economy.

Sri Lanka's agricultural insurance scheme got under way in the 1958 *maha* season; only on a pilot project covering approximately 26,000 acres of paddy in five districts. By 1974, nearly 16% of the total area cultivated with paddy was covered by insurance in both seasons. The Crop Insurance Board in Sri Lanka was established in 1974 under the Parliamentary Act No. 27 of 1973 to operate a comprehensive agricultural crop insurance scheme (CIS) for the benefits of farmers in respect of rice, other field crops and livestock. Since 1974, the agricultural insurance scheme has been in operation under the consolidated fund of the government and also under self-finance schemes. It was brought within a broader framework by the Agricultural and Agrarian Insurance Board Act No. 20 of 1999 which came in to effect from August 16, 1999 with a view to running the scheme on a self-finance basis.

Although the agricultural insurance scheme has been in operation for over four decades, farmer participation in this scheme is far from satisfactory. Area under crop

insurance was only about one percent of the total paddy lands in 2005. A comparison of the insurance coverage for each season with the acreage cultivated indicates a low ratio of insurance (Annual Report of AAIB, 2001). Despite the declining trend in the insured extent of paddy over the years, the government attempts to promote crop insurance by injecting more investments to develop the agricultural sector. In view of this, the Agricultural Insurance Act was amended in 1999 making provisions for the private sector involvement in crop insurance. Nevertheless, this involvement has not reached the desired level. Up to now only the Ceylinco Insurance Company Limited (CICL) has entered the field. Reasons for low farmer participation deserve a study because the government has developed the institutional mechanism and the private sector too is now involved. Benefits of crop insurance have been explained well in the theory. Increased investment, stabilized farm income, increased production and reduced government expenditure are the major advantages of crop insurance. It appears that there is a discrepancy in theoretical explanation and the practical application of crop insurance. The present performance, the problems and the future prospects of the crop (paddy) insurance scheme form the major objective of this study. Limitations of the present crop insurance scheme implemented by the Agricultural and Agrarian Insurance Board (AAIB), its performance and the organizational structure of the AAIB, and the farmers' awareness of and the interest in the crop insurance scheme, fall within the purview of the study. The nature of farmer participation and the differences and similarities of the public and private sector agricultural insurance schemes are also explained with measures to improve the existing paddy insurance schemes.

The study mainly focused on the paddy insurance scheme. Therefore, the major paddy producing districts such as Anuradhapura, Polonnaruwa, Kurunegala and Hambantota were selected for the primary data collection. The Multistage Random Sampling Technique was used for sample selection. In terms of the AAIB database (2003/2004 *maha*), the top three Agrarian Service Centres (ASC) in each district were selected depending on the highest number of farmers with insurance policies. The questionnaire survey was carried out to collect data and information from both insurance holders. The sample of farmers who insured their lands in major paddy producing districts was selected by using the secondary data of the AAIB for the 2005 *yala* season. The survey was conducted from January to April, 2006. Secondary data were obtained from the AAIB, the Ceylinco Insurance Company Limited, the Annual Reports of Central Bank and published literature.

The study found that, Sri Lanka crop insurance scheme (paddy insurance) initially saw an increasing trend which dropped drastically later, reaching about less than one percent by 2004/2005 *maha* season under the AAIB. However, the area insured by the CICL was comparatively larger. But, the total area insured under both schemes (AAIB and CICL) was at a very low level. The farmers had lost confidence in the crop insurance scheme and their voluntary participation dropped drastically due to the inadequacy of indemnities, and delay in indemnity payments. Transparency in loss assessments and indemnity payments is questionable. The underestimation of crop losses too, causes dissatisfaction among the farmers. However, the paddy insurance scheme has failed to realize the stated objective of stabilizing farm income or

indemnifying farm losses to an adequate degree. About 99 percent of the insured farmers joined the crop insurance scheme to obtain a bank loan. The farmers' awareness of the benefits of this crop insurance scheme is not up to the mark and they have a poor opinion of its operation. Inadequate communication between the farmers and the insurance officers and the cumbersome application procedure also had negative effects. The AAIB failed in its obligation mainly due to the paucity of funds. The administration expenses overrun the costs involved in indemnity payments in the crop insurance scheme. Malpractices in the operation of the scheme in respect of remittance of premium collections, claims, loss assessment and indemnity payments have impeded the viability of the crop insurance scheme.

The AAIB with its meager financial resources does not provide insurance cover for high-risk areas, a situation which goes against the main objective of the AAIB. Crop insurance scheme is risk oriented and commercially not viable. State intervention coupled with the coordination of relevant departments and banks directly involved in the agrarian enables the scheme to be run as a welfare service to the rural farming community or it could be linked directly, with credit as a crop credit insurance scheme. However, the scheme needs restructuring to compete with the private sector insurance program.

The study recommends that, the AAIB should have a more efficient mechanism for the immediate supervision and assessment of crop damage and payments of indemnity, on time to ensure a successful crop insurance scheme. To overcome the delay, the payment of indemnity can better be decentralized through the AAIB's existing branch office network over the island and there is also need for well-trained personnel in the estimation of crop losses.

The insurance coverage of the scheme needs to be increased to at least two thirds of the cost of cultivation and intermittent revisions are necessary depending on the changes in cost of production. Identifying extension activities to create awareness among the farmers about the agricultural insurance scheme is a must. Crop insurance must be made a compulsory component in the disbursement of loans by the government and the private sector banks, and linked state with the state fertilizer subsidy program. A re-insurance system must also be in place.

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CHAPTER ONE

Introduction

1.1 Background

Agriculture has always been a risky venture. The unexpected price fluctuations apart, the farmers face the risks arising from weather disturbances, pest and disease outbreaks and other natural hazards. The farming community in Sri Lanka is the poorest segment of the economy and more than 75% of the farmers own less than one hectare of land. Their mainstay in farming, which offers them only a meagre income and in case of paddy it is limited to only two seasons per year. Therefore, any crop loss or damage adversely affects the socio-economic condition in the rural areas. Small farmers in Sri Lanka have always faced problems of uncertainty, and risks due to climatic and other factors and the need to protect the farmers from attendant risks received the active attention of the Governments in recent years. Sri Lanka became the first country outside Japan in South East Asia to adopt agricultural insurance for crop losses following floods, droughts, pestilences, diseases or damage by wild animals.

Crop insurance, a form of risk management in farming has the following objectives:

- To stabilize farmers' income by reducing adverse effects resulting from substantial crop losses due to natural hazards, i.e.; to protect farmers from financial disasters arising from crop failure
- To encourage risk averse, the farmers to adopt improved technologies which can lead to increased production and more efficient use of resources and;
- To reduce the risk for credit agencies, so as to help farmers having better credit rating for the purpose of crop loans, which can result in an increased flow of credit to the farmers.

Benefits of crop insurance have been explained well in theory. Agriculture insurance could contribute significantly to increase productivity in peasant agriculture when conceived of as an integrated fact of a well-rounded agricultural programme. Benefits of crop insurance extend to the whole community. When there are immediate effects of widespread crop failure, it affects the rural community whose income is mainly derived from agricultural fields. Depressed agricultural incomes mean a sudden decrease in demand for goods produced in the other sectors. Farm income stabilized through insurance have a stabilizing effect on the entire economy. Insurance gives the farmers greater confidence in venturing upon new and improved farming practices and in making greater investments in agriculture to improve crop yields and increase agricultural production (P.K.Ray, 1967).

Sri Lanka's agricultural insurance scheme was initiated in the 1958 *maha* season, on a pilot project basis with approximately 26,000 acres of paddy in five districts. By 1974, nearly 16 percent of the total area cultivated with paddy had come under insurance in both seasons (Sandaratne, N, 1974). Later by 1985, the scheme was expanded to other crops like green gram, cowpea, chilli, soya bean and even livestock, especially cattle and poultry.

The Crop Insurance Board was established under the Parliamentary Act No. 27 of 1973 to operate a comprehensive agricultural insurance scheme for the benefit of the farmers in respect of rice, other field crops and livestock. Since 1974, the scheme has been funded with finances from the government consolidated fund and also under self-finance schemes. It was brought within a broader framework by the Agricultural and Agrarian Insurance Board Act No 20 of 1999 which came into effect from August 16, 1999 with a view to establishing the scheme on a self financing basis.

The main objectives of the Board are launching an insurance scheme and a social security benefit scheme covering the farming and the fisheries sectors and providing old age benefits through principal activities such as granting pensions and social, security benefits for the farmers and the fishermen, to achieve the desired goal of bettering the farm and farm life, ensuring their effective participation in the overall national production and the enhancement of their lifestyles.

1.2 The Research Problem

The agricultural insurance scheme has been in operation for over four decades, but the farmer participation has sunk to a very low level. Area under crop insurance was only 2.8 percent of the total paddy extents in 2002. A comparison of the insurance coverage for each season with the acreage cultivated indicated that the ratio of insurance was at very low ebb (Annual Report of AAIB, 2001), leading to a huge gap between the target and the achievement of the Board every year. A declining trend in the insured extent of paddy has emerged over the time (Annual Report of Central Bank of Sri Lanka, 2002). Despite this setback, the governments concern to promote crop insurance remains unabated in an attempt to develop the agricultural sector. In view of this, the Agricultural Insurance Act was amended in 1999 allowing the private sector involvement in crop insurance. Nevertheless, only the Ceylinco Insurance Company Limited had entered the sphere of crop insurance.

Reasons for low farmer participation, despite the available state institutional mechanism and the private sector intervention need probing. Benefits of crop insurance such as increased investment, stabilized farm income, increased production and reduced government expenditure have been accepted well in theory. But, this appears to be a discrepancy between the theory and the practical application, supported by the low level of participation. This difference needs to be studied. Does the entire paddy farming community evince an interest in insurance, is there any particular segment among them who prefer insurance, do large scale operators go for insurance are some of the posers which deserve an in-depth inquiry in any attempt to revamp the paddy insurance scheme in Sri Lanka.

1.3 Objectives of the Study

Specific Research Objective:

- To study the present performance, problems and the future prospects of the crop (paddy) insurance scheme

Other Objectives:

i. To study the problems and limitations of the present crop insurance scheme implemented by the Agricultural and Agrarian Insurance Board (AAIB)
ii. To study the present performance and organizational structure of the AAIB
iii. To probe the farmers' awareness of and interest in the crop insurance scheme
iv. To identify types of farmers insured under the crop insurance scheme and their reasons for insurance.
v. To describe the differences and similarities of the public and private sector agricultural insurance schemes
vi. To suggest measures to improve the existing insurance schemes for paddy

1.4 Research Methodology

1.4.1 Study Area

The study mainly focussed on the paddy insurance scheme. Therefore, the major paddy producing districts such as Anuradhapura, Polonnaruwa, Kurunegala and Hambantota were selected for primary data collection.

1.4.2 Sample Size

The Multistage Random Sampling Technique was used for sample selection. First, the districts were selected as mentioned above. Then, according to the AAIB database (2003/2004 *maha*), the top three Agrarian Service Centres (ASC) in each district were selected in terms of the highest number of farmers with insurance policies. The target population under the AAIB were 1,011 insured farmers and the sample was selected as a 20% of the target population in each district. Under the Ceylinco Insurance Company Limited, the target population was 465 insured farmers and the sample size was 20% of the targeted population. At last, the number of insured farmers, who represent a particular ASC division, is decided in prorating to the number of insured farmers of the ASC divisions. The sample was selected by using simple random sampling technique.

Table 1.1: Selected ASCs' and the Sample Farmers

Study Area	AAIB		Ceylinco	
	Total No of farmers	Sample size	Total No of farmers	Sample size
Anuradhapura ASCs'				
Medawachchiya	108	22		
Pemaduwa	85	17	56	11
Nochchiyagama	85	17		
Kurunegala ASCs				
Ganewatta	58	11		
Ibbagamuwa	34	7	45	9
Werawella	25	5		
Polonnaruwa ASCs				
Manampitiya	141	28		
Sevagama	104	21	164	33
Hingurakgoda	80	16		
Hambantota ASCs				
Ambalantota	92	18		
Lunama	89	18	200	40
Yodakandiya	110	22		
Total	1,011	202	465	93

1.4.3 Method of Data Collection

1.4.3.1 Primary Data

The questionnaire survey was carried out to collect data and information from both insurance holders. The sample of farmers who insured their lands in major paddy producing districts were selected by using the secondary data of the AAIB relating to the 2005 *yala* season. The questionnaire was developed by the research team and pre-tested in the field before the sample survey started. The survey was conducted from January to April, 2006.

1.4.3.2 Secondary Data

Secondary data were obtained from the AAIB, the CICL, the Annual Reports of Central Bank of Sri Lanka and published literature.

1.4.3.3 Key Informant Interviews

The research team visited the AAIB and the CICL and interviewed senior officials as well as field officers to understand the present performance and the operation of the

insurance scheme and to achieve a clear and broad understanding of the agricultural insurance scheme in Sri Lanka.

Type of Respondents

- Officers of the AAIB and the CICL
- Divisional Officers
- Assistant Directors of the AAIB district office
- General Managers of farmer companies
- Chairmen of farmer organisations
- Agricultural Research and Production Assistants

1.4.4 Data Analysis

The Statistical and Data Processing Division of the HARTI completed the inputting of the data into computer for processing and made the analysis in terms of the broader guidelines given by the research team. Descriptive statistics such as range, average, percentage, and some ratios have been calculated and the tabular analysis has been applied to ascertain the relationship between the two variables concerned.

1.5 Limitations

- Due to the unfavourable security situation in Ampara district, field survey was abandoned.
- As the AAIB does not maintain a proper computerized database, it was difficult to collect the secondary data

1.6 Organization of the Report

This report is structured into ten chapters. The present chapter describes the background, the research problem and the methodology of the study. The chapter two, deals with the risk management in agriculture, importance of the agricultural insurance scheme and the historical background of agricultural insurance scheme and policies in Sri Lanka. Chapter three is pre-occupied with an overview of the operation and the organizational structure of the AAIB and the chapter four is devoted to examining the agricultural insurance scheme operated by the private sector (CICL). Chapter five analyses the performance of the paddy insurance scheme of the AAIB, and chapter six brings into review, the other insurance schemes of the AAIB. The farmer participation in the paddy insurance scheme is discussed in the chapter seven. Chapter eight presents a comparison of the paddy insurance schemes operated by the AAIB and the private sector (CICL). An analysis of the problems faced by the relevant participants in the paddy insurance scheme and suggestions to solving or minimising the problems is detailed in chapter nine. Chapter ten brings on the conclusions and recommendations for policy and planning.

CHAPTER TWO

Importance of the Crop Insurance Schemes and Policies Affecting the Agricultural Insurance Scheme

2.1 Risks and Risk Management in Agriculture

"In all its aspects and relationships, agriculture is subject to a considerable element of uncertainty. As a business enterprise, that is, as a system of production, distribution and exchange, it is susceptible to all social and economic uncertainties, which any other similar enterprise, such as mining or industry, is called upon to face. Again as a mode of living, it has to reckon with all the personal uncertainties arising from death or impairment of health of farmers through sickness and accident and also from the inability of agricultural labourers to see or effectively employ their labour power. On top of all these, agriculture is especially susceptible to the physical uncertainties of nature since it requires, as a distinguished from most other major forms of business enterprises, extensive, direct and continuous contact with the forces of nature" (Ray, P.K.).

Agriculture involves a relatively higher degree of risks and uncertainty than other economic pursuits, on account of the impact of the natural factors such as weather conditions on the level of output. Another influential factor is the long production cycle there is relatively a long time period between the production decision and harvesting marketing of the product.

Broadly, agricultural risks can be decomposed into output risks and the price risks. Natural hazards cause output risks and economic uncertainty results in price risk. In reality a farmer faces risks of a diverse nature.

Natural hazards are of three broad categories:

i. Weather related phenomena such as drought or moisture stress, flood or excess moisture etc. impacting adversely on crop yield or cause losses to the exciting farm stocks.
ii. Widespread plant diseases
iii. Pest and insect attacks resulting in variability of farm production.

Adverse weather conditions can create a debacle at any stage from land preparation to the final harvest. Vagaries of nature can sometimes be calamitous and widespread. Ashan, S.M. 1982, states that a majority of the farmers are seldom able to bear such risks, especially when very large losses occur, resulting in a serious decline in the demand for non-farm products by farmers.

The Sri Lankan rural farmer with his low savings and high indebtedness not only come up against serious at times of calamities, but a setback also confronts the problem of financing his next cultivation. Therefore, it is imperative for the state to provide some kind of relief assistance to ensure that they till their soil.

2.2 The Need for Crop Insurance Schemes

Agricultural insurance is one of the strategies to tackle the problem of risks in farming. The poor paddy farmer in the country is caught in the vicious cycle of poverty, limited resources, and low inputs for production and limited output. Notwithstanding the assured supply of some of the inputs like water, the farmer cannot obviate the risks emerging from the vicissitudes of nature. Floods, drought, crop diseases and pest attacks are the menaces the farmer fear most. For almost all the farmers operating at a marginal level, the capital they inject into their enterprise is hard-earned money. More often than not, this money is raised through loans from banks and private moneylenders. Hence, they cannot afford to experience crop loss since this would leave them paralysed for the next cropping season. The poor farmer, thus, becomes entrenched in dire poverty and want. He has no other recourse but to avail of agricultural insurance which seeks to create a stabilizing effect on farm income (Ekanayake, C.M., 1990).

Agricultural insurance could reduce the risk disincentive in using capital inputs, provide collateral for credit and stabilize the finances of credit agencies at times of widespread crop damage. It could stabilize incomes and purchasing power for a significant proportion of the population and decrease the liability of the community for assistance at times of crop failure.

An agricultural insurance programme also has something to offer to institutional credit programs. Even at times of crop failure, it enables the credit institution to recover its loans and to have sufficient liquidity for further credit operations. Agricultural insurance itself could be offered as collateral for loans. Insurance coverage can also encourage better utilization of land and irrigation water. In the absence of insurance, the farmers who depend on irrigation water may postpone the cultivation till water levels come up to unnecessarily high levels, resulting in water waste by evaporation and seepage. Where a scheme of agricultural insurance is available, the farmers may more easily be persuaded to stagger their cultivation cycle and thus make better use of labour, farm machinery and draft animals (Sandarathna N, 1968). Also, lands with high-risk probability could also be brought under cultivation by spreading such risks over time by an insurance scheme.

In principal, the crop insurance solves two of the major problems of rural development in poor countries; the reluctance of low-income farmers to invest in new technology and the chronic financial debility of the financial institutions that lend to them. If farmers are able to insure themselves against those risks to their income over which they have no control, new technology will offer them an increase in expected income without a corresponding increase in risk and thus enhance their incentive to invest in

green revolution technology such as fertiliser, new seeds and irrigation (Lele, 1975 and Binswanger and Sillers, 1983).

However, the provision of crop insurance is a useful and significant aspect of a comprehensive and integrated policy for increasing agricultural productivity.

2.3 Historical Background of Agricultural Insurance Scheme and Policies in Sri Lanka

Sri Lanka was the first developing country in Asia to have launched an 'all-risk' insurance of the paddy crop on a limited experimental scale with Food and Agriculture Organization (FAO) assistance (Ray, K.,1981). In 1956, the Sri Lankan government recognized agricultural insurance as a mechanism to increase agricultural productivity and to offer relief and protection to the socially and economically beleaguered segment of the population. During the same year, the country sought the assistance of the FAO in the preparation of the operational framework of an agro-insurance scheme. The first experimental crop insurance scheme (CIS) in Sri Lanka was introduced in 1958 for rice cultivation. This scheme covered about 28,000 acres of paddy in selected areas of six districts and was administered by the Department of Agrarian Services.

Progress of agricultural insurance in Sri Lanka can be traced back to the following periods:

1958/59 to 1960/61

This scheme was implemented on an administrative basis and it covered six different districts to study the problems in each region for a period of 4 years in order to gain knowledge and to test the farmers' reaction. The administration of the crop insurance scheme was carried out by the Commissioner of Agrarian Services with the assistance and co-operation of other departments whose activities had a bearing on or relevance to the cultivation of paddy.

This pilot project which commenced in 1958/59 covered 28,000 acres in six districts, which was approximately 3% of the total physical extent of land cultivable with paddy and this operated for 3 years.

Under this pilot scheme, the collection of premium was in principle, to be after the harvest in order to make it less onerous for the farmers.

Crop Insurance Act No. 13 of 1961

This Crop Insurance Act passed by the Parliament provided the necessary legal framework for the operation of a regular CIS, which commenced from 1961/62 *maha* season. This Act provided the necessary legislative authority for the operation of a crop insurance scheme, which could be considered as the second phase of development.

The Act vested the minister in charge with authority to specify and expand the areas of operation of the scheme where deemed feasible. The insurance of paddy crop was made compulsory in the area specified by the Minister under the Act, and hence all persons having interest in paddy cultivation within such areas were automatically insured under the scheme.

1962/63 to 1972

The Crop Insurance Act No. 13 of 1961 became operative and the area under insurance gradually increased to around 200,000 acres. This operated until 1973.

1973 to 1983

The third phase of development of agricultural insurance began with the repeal of the Crop Insurance Act No. 13 of 1960 and the enactment of the Agricultural Insurance Law No. 27 of 1973, which took effect in April 1974. The agricultural insurance scheme was subjected to various experimental changes in administration.

The Agricultural Insurance Law No. 27 of 1973

In 1973, the Act No. 13 of 1961 was replaced by the Agricultural Insurance Law No. 27 of 1973 which came into operation in April 1974, making provisions for a more comprehensive and compulsory scheme.

The objectives of Act No. 27 are as follows:

i. To operate a comprehensive agricultural insurance scheme for the benefit of paddy crop farmers;
ii. To undertake research studies necessary for the promotion and development of agricultural insurance.

This scheme was to be implemented in 3 stages as follows:

i. Insurance of the paddy crop in the country;
ii. Insurance of livestock and selected subsidiary food crops;
iii. Insurance of non-traditional food crops.

The scheme was partly subsidised by the Government, which funded the administrative costs.

The Act provides for compulsory insurance of the paddy crop and any person having an interest in the paddy crop in any area coming under the purview of the Act is deemed to have entered into a contract of insurance with the Board against the loss of such crop.

The enactment of the new law effected the following major changes:

a) It established an autonomous body called the Agricultural Insurance Board (AIB) to administer and operate the agricultural insurance system in Sri Lanka.
b) An insurance scheme embracing the entire country was introduced.
c) The law provided for compulsory insurance of paddy crop and granted authority to the AIB for the prosecution of defaulting farmers.
d) The premium had to be paid in advance during a payment period fixed for the season by the AIB.
e) The law provided for expansion of the scheme where voluntary insurance of specified crops and species of livestock to be undertaken.
f) An agricultural insurance fund was established to manage the financial operations of the scheme.

1983 to 1987

The next phase of the scheme began in 1983, with certain important policy changes and operational changes. The main policy changes effected in respect of paddy insurance are appended.

a) An interest-free, long- term government loan of Rs.50 million was obtained to build up a readily accessible loss reserve to meet any deficit between premia collection and indemnity payable. This grant was invested to generate interest, which was utilized to meet the deficit.
b) Curtailing producers' indemnity payment like 'prorating' was abolished both at individual level and area-wise group level.
c) Indemnity payments were expedited to reach the farmers in time before the next season's cultivation.
d) The paddy insurance rules and regulations were revised to entertain genuine claims relaxing some rigid technical conditions and requirements.
e) An incentive for non-claimants was provided by way of free insurance after five seasons of continuous no-claim period.

The Agricultural and Agrarian Insurance Act No. 20 of 1999

Agricultural Insurance Board (AIB), which functioned with fairness from the government consolidated fund since its inception in 1974 was brought within a broader framework by the Agricultural and Agrarian Insurance Board Act. No 20 of 1999 which came into effect from August 16, 1999 with a view to establishing the scheme on a self-finance basis.

The new Act made the following provisions:

a) To broaden the scope of the AIB and establish the Agricultural and Agrarian Insurance Board (AAIB) to provide insurance for agricultural and horticultural crops and medicinal plants, livestock, fisheries and forestry, agricultural equipment and implements, the storage and preservation of agricultural and

horticultural produce and produces of medicinal plants and fisheries and forest produces.

b) To provide medicinal benefits and social security schemes for agriculturists; and
c) To repeal the Agricultural Insurance Law No. 27 of 1973, thereby permitting private insurers to undertake crop insurance

All powers and duties conferred or imposed on the Agricultural Insurance Board established by the Agricultural Insurance Law, No. 27 of 1973, by the Farmers Pension and Social Security Benefit Scheme Act No. 12 of 1987, the Fishermans Pension and Social Securities Benefit Scheme Act, No. 23 of 1990 were repealed.

With the implementation of the new scheme, the activities hitherto handled by the Agricultural Insurance Board (AIB) were transferred to the newly established Agricultural and Agrarian Insurance Board (AAIB). Since the monopoly of the AIB in respect of agricultural insurance was eliminated by the new Act, other insurance companies involved in the sector have the opportunity to pursue agricultural insurance.

CHAPTER THREE

Operation and Organizational Structure of the Agricultural and Agrarian Insurance Board (AAIB)

3.1 Introduction

The Agricultural Insurance Board (AIB) was established in 1973 to extend a comprehensive insurance coverage for paddy and subsidiary food crop cultivation and livestock farming in the country. As the insurance business was a monopoly of the government at that time, the AIB was given the sole authority of providing agricultural insurance in respect of paddy cultivation by making it mandatory for a farmer engaged in paddy cultivation to obtain insurance cover from the AIB. With regard to other crops and livestock farming, the farmers were permitted to obtain insurance cover on a voluntary basis.

Over the years, the AIB provided insurance cover for paddy cultivation but since the premia collected fell short of the requirements for the indemnity payments, a substantial sum of money had to be provided by the Treasury to the AIB to meet the deficit. This shortage of funds restricted to a larger extent, the expansion of the services of the AIB. Consequently, the AIB's commitment for payment of indemnities had to be compatible with the resources available, thereby rendering the insurance coverage inadequate for the insured farmers to meet their actual crop losses.

With the implementation of the Agricultural and Agrarian Insurance Act from 16th August 1999, the activities hitherto handled by the Agricultural Insurance Board (AIB) were transferred to the newly established Agricultural and Agrarian Insurance Board (AAIB). Attributing a wider definition to the term 'agriculturists' under this new Act, the services performed by the Board as well as the range of its clients were increased and expanded. Provisions were also made under the new Act to implement insurance schemes, both for the farmers and the fishermen and insurance in respect of all crops including plantation crops which were not under the purview of this Board till then.

The farmers' and fishermens pension and social security benefit schemes have been instrumental in registering a noteworthy development in the farming and fishing communities facilitating the participation of their communities in achieving a sustainable socio-economic development.

It is further stated that the basic objectives of the pension and social security benefit schemes are to liberate the farmers and fishermen, who form the majority in the country, from subsistence level, to make them non dependent on state subsidies and to promote the saving habits among them in the context of a self sufficient socio-

economic development strategy. Eventually, motivating the beneficiaries towards export orientation is also contemplated.

When the Government of Sri Lanka terminated the Treasury grant to the AIB from 1998, the Board had to map out its plans to become financially viable. The AIB derives its revenue from the premium collection. Expenses are incurred for insurance operations, indemnity payments and administrative functions.

3.1.1 Vision of AAIB

The agricultural insurance scheme seeks to cushion the negative effects of the risk factors in the farming industry and offer social security benefits to the stakeholders so that they could become partners of progress in the endeavour to realise suitable development in the domestic farming and the fisheries sectors.

3.1.2 Mission of AAIB

- To minimize the risk factors and insure the farm gate income through its implementation of the agricultural insurance scheme;
- To ensure the security of the farmer community through the implementation of social security benefit schemes;
- To lead the institute towards a financially self-reliant status.

3.1.3 Objectives of AAIB

- To establish and operate a comprehensive insurance scheme for the benefit of agriculturists covering paddy and plantation crops, fisheries, livestock and forestry with a view to indemnifying losses due to natural hazards and other specified conditions;
- To establish and operate an insurance scheme for the benefit of agriculturists in respect of agricultural equipment, implements and other movable and immovable property of agriculturists;
- To establish and operate an insurance scheme for the benefit of agriculturists in respect of storage and preservation of agricultural and horticultural produces and the production of medicinal plants and fisheries and forest produces;
- To establish and operate a medical benefit and social security scheme for the benefit of agriculturists;
- To establish and operate a pension and social security benefit scheme for the farmers;
- To establish and operate a pension and social security benefit scheme for the fishermen.

3.1.4 Goals (for next 6 years – up to 2010)

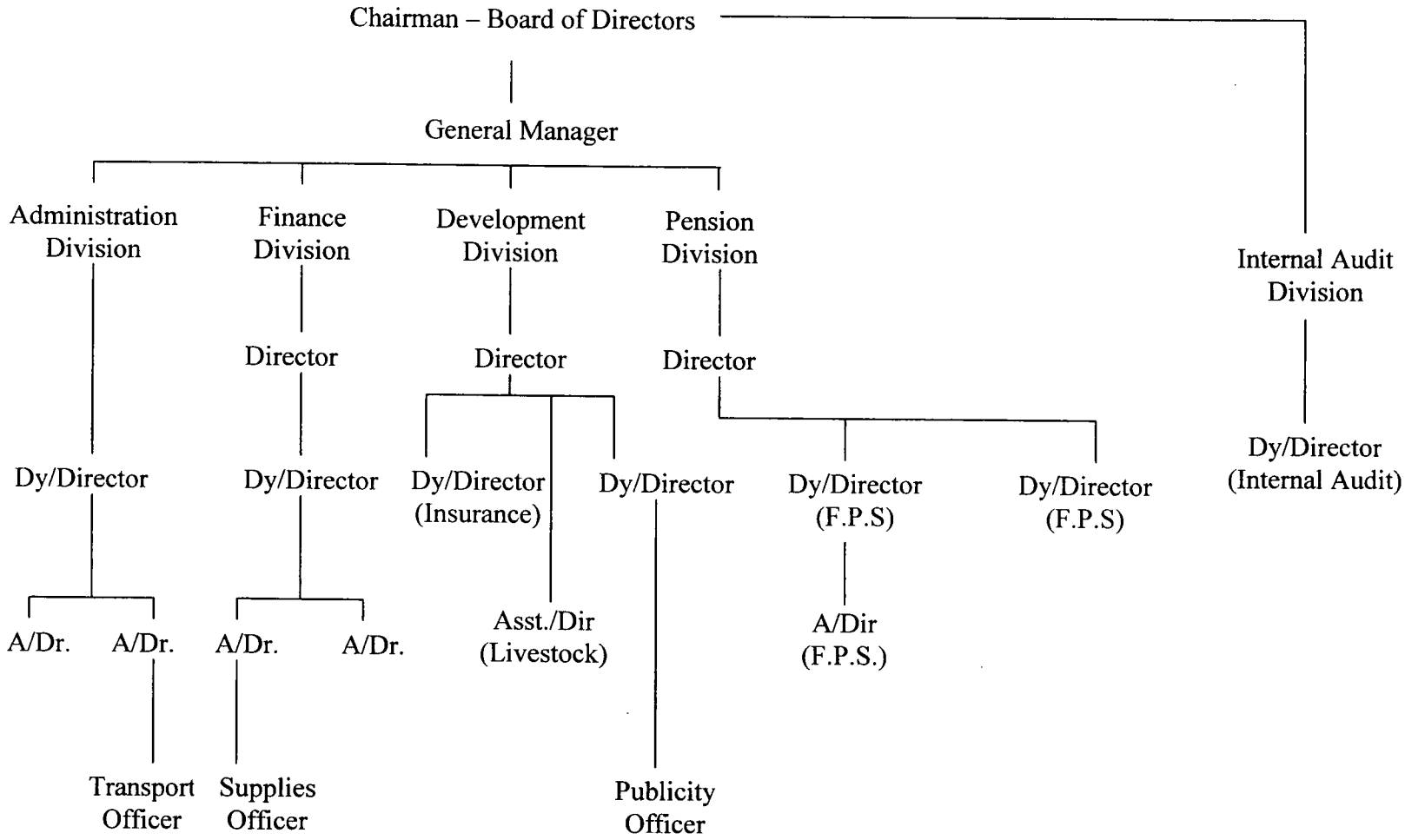
i. To cover more than 10% of the total paddy lands under the paddy insurance scheme;
ii. To insure 10,500 acres of export agricultural crops;

iii. To cover 500 acres of subsidiary food crops under the subsidiary crops insurance scheme;
iv. To cover 9,400 acres of plantation crops under the plantation crop insurance scheme for tea small holdings, coconut and cashew;
v. To cover 20,600 floricultural plants under that insurance scheme;
vi. To cover 1,000 acres of potato under that insurance scheme;
vii. To insure 500 paddy stores in order to assure higher prices for paddy;
viii. To insure 8,600 cattle and 8,500 goats under the livestock insurance scheme;
ix. To enrol 17,000 farmers for 'Suvasetha' health insurance scheme;
x. To enrol 388,000 farmers for the farmer pension scheme and to increase that up to 1,150,000 in the forthcoming 6 years;
xi. To enrol a total of 69,000 fishermen for the fishermens' pension scheme;
xii. To increase the efficiency of the administration to achieve the objectives of the AAIB.

3.2 Organizational Structure and Administration of AAIB

The Agricultural Insurance Board (AIB) was established by virtue of Act. No. 27 of 1973 and with the implementation of the Agrarian and Agricultural Insurance Act No. 20 of 1999, the activities of the AIB were transferred to the Agricultural and Agrarian Insurance Board (AAIB). The AIB was established under the Ministry of Agricultural Development and Research in 1973 and now it operates under the Ministry of Agriculture, Irrigation and Mahaweli Development. A Board of Directors governs this body with a Chairman as the head and the Chairman is appointed by the Minister.

Figure 3.1: Organizational Structure of the AAIB



There are 5 divisions at the AAIB and 4 divisions are under the control of the General Manager, who is the chief executive officer.

The Board's activities are divided into the following areas:

a) Insurance Operations
b) Livestock Operations
c) Actuarial and Research
d) Farmer's Pension and Social Security Benefit
e) Publicity and Training
f) Finance
g) Administration
h) Internal Audit

With its head office in Colombo, the AAIB has 25 district offices and 5 sub-offices. At each district office and sub-offices, agricultural insurance operation is handled by the Assistant Directors and there are 26 such Assistant Directors. Some Assistant Directors are responsible to manage more than one district office or sub-office. The Development Officers and the Field Officers assist the Assistant Director at each district level. There are 44 Development Officers and 72 Field Officers attached to district level offices (Annex 1). Total number of approved cadre of the institute is 457. There are 299 permanent employees and 117 employees on casual or contractual basis.

At the head office the Board of Directors deal with policy formulation and changes. The respective divisional heads at the head office prepare the relevant operational procedures based on those policies and issue instructions to the district staff accordingly. The divisional heads, in turn, supervise and monitor the progress of implementation of such procedural instructions.

The following components comprise the field – level operations:

a) Formulation of the schedule of activities;
b) Collection of premium from the farmers;
c) Notification of loss;
d) Assessment of loss;
e) Payment of indemnities;
f) Handling of appeals from the insured farmers on decisions regarding indemnity payments.

3.3 Types of Agricultural Insurance Schemes

The operation of a regular Crop Insurance Scheme (CIS) commenced from 1961/62 *maha* season for paddy as a pilot project. After 1974, it was expanded to include other crops and 10 years later the AIB introduced a field CIS in 1984. In the beginning, the scheme extended coverage to crops such as chilli, green gram, soya bean, cowpea and

sugarcane. The field crop insurance scheme was there after extended to many other crops including vegetables, onion, pineapple, passion fruit, betel and coconut. The insurance scheme for livestock got underway in 1974. In 1987, the AIB launched the farmer pension and social security benefit scheme, which was extended to the fisheries sector in 1990.

The AAIB presently offers insurance for following commodities;

i. Paddy
ii. Other crops -maize, kurakkan, cowpea, soya bean
iii. Chilli
iv. Sugarcane
v. Big onion
vi. Nicotine
vii. Beetle
viii. Fruits – pineapple, mango, papaw, passion fruit, lime, rambutan
ix. Banana
x. Cashew
xi. Coconut
xii. Potato
xiii. Floricultural produces
xiv. Paddy storage
xv. Protected agriculture
xvi. Livestock
    - Cattle Insurance – milk cows, milk buffaloes, stud bulls, stud buffaloes, draught cattle and buffaloes used for draught and ploughing
    - Goat Insurance
    - Sheep Insurance
    - Poultry Insurance
xvii. Medical benefit insurance scheme ('Suvasetha' health insurance scheme)
xviii. Pension and social security benefit schemes
    - Farmer pension scheme
    - Fisherman pension scheme

3.4 Operation of the Paddy Insurance Scheme

It was found that about 15% of the total extent of paddy cultivation is destroyed in each season in Sri Lanka, ensuring a substantial loss of farming income. The situation warrants a course of action like insurance to tide over the debacle. Achieving self-sufficiency in rice has since been a prime concern of the successive governments. Since the country's independence, continuous efforts have been made to increase the production both in quantity and quality. In reaching this goal, motivation of the farmers to use high yielding varieties of paddy, state of the art farm technology and improved cultivation methods is imperative. However, the cost of production with such innovations is higher than in the case of farming the traditional low yielding

varieties. Consequently the farmers have to make a higher investment in cultivation. Hence, the government in principle accepted the establishment of an insurance scheme for paddy to protect the farmer and motivate him for a higher investment in cultivation.

Under the CIS, for paddy insurance covers the following natural hazards resulting in total or partial loss of yields (In agriculture, except in the case of a natural calamity, an event of 100% crop damage is infrequent. In most areas the damages are partial).

i. Flood
ii. Drought
iii. Excess water
iv. Lack of water
v. Plant diseases
vi. Pest damages
vii. Damages by wild animals

Period of insurance:

From planting upto the date of the harvest of the crop

3.4.1 Premium/Insurance Coverage

The insurance coverage and premium vary depending on the risk level and the land class in a particular area. There are 3 levels of risks; low risks, medium risks and high risks. Land can be classified as under major irrigation, minor irrigation and rain fed.

The Agricultural Service Centre (ASC) areas are classified according to 3 risk levels based on an evaluation of the past insurance experience. The premium rate of low risk has been calculated as 5% of the coverage, medium risk as 7.5% of the coverage and high risk as 10% of the coverage.

The insurance coverage is based on the cost of cultivation under each land class. It is offered in respect of a particular paddy parcel within a given ASC area depending on the land class to which that paddy parcel belongs and the risk level of that ASC area.

The currently operative coverage-premium structure is given below.

Table 3.1: Insurance Coverage and Premium for Paddy under Different Irrigation Systems and Risk Levels (Normal Scheme)

Land Class	Low Risk 5%		Medium Risk 7.5%		High Risk 10%	
	Coverage per Acre (Rs.)	Premium per Acre (Rs.)	Coverage per Acre (Rs.)	Premium per Acre (Rs.)	Coverage per Acre (Rs.)	Premium per Acre (Rs.)
Major Irrigation	6,000 4,400	300 220	3,600 2,600	270 195	2,400 1,700	240 170
Minor Irrigation	5,000 3,700	250 185	3,000 2,200	225 165	2,000 1,400	200 140
Rain fed	4,000 2,800	200 140	2,300 1,600	175 120	1,500 1,000	150 100

Source: AAIB

Premium Collection:

Premium collection is done by two parties and the collections are remitted to the AAIB head office:

a) Cultivation officers collect the premia in cash from the direct insured; and
b) Banks collect the premia from the loan takers either in cash or by offering the coverage as a component of the loan.

Most of the Banks insist on insurance as a pre-requisite for issuing a crop loan, hence making insurance mandatory for crop loans.

Table 3.2: Insurance Coverage and Premium for Paddy under Special Seed Paddy Project

Land class	Coverage per Acre (Rs.)	Premium per Acre (Rs.)
Major	15,000 - 10,000	750 - 500
Minor	12,000 - 8,000	600 - 400
Rain fed	8,000 - 5,000	480 - 300

Source: AAIB

In addition, there are special coverage and premium rates for paddy under the major irrigation schemes. Under this scheme, insurance coverage ranges between Rs.10,000/= to 15,000/= per acre and premium rates vary between Rs.500/= to Rs.750/= per acre.

3.4.2 Insurance Operation Calendar

An insurance operation calendar is prepared for the ASC area by the relevant authorities in consultation with the officials at the meeting of every season. This

calendar should include recommended varieties of paddy and its duration, last date of sowing or transplanting, last date of payment of premium and last date of loss notification.

3.4.3 Loss Notification

In case of damage to the insured field due to insurable causes such damages should be notified by the farmers, personally within 14 days of occurrence. When the farmer is unable to do so, he should hand over or post a letter to an insurance agent, reporting the loss. The letter should include all the information of the crop cultivation concerned.

The date of damage to the crop should be within the time period specified for the particular paddy variety. Damage due to negligence, is not compensated for. When a crop loss occurs due to damage by an insect or due to a crop disease, it has to be certified by an Agricultural Instructor of that area and documentary evidence to that effect should be forwarded with other relevant documents.

A loss notification register (LNR) is maintained at the ASC office and Mahaweli office. The insured should register his claim in the LNR.

3.4.4 Loss Assessment

A loss assessment team comprising the following three members will inspect all insured and damaged fields.

i. Agricultural Research and Production Assistant of the Agrarian Service Centre/Bank field officer
ii. Loss assessing officer of the AAIB
iii. A member of the farmer organization (farmer representation)

The losses in respect of paddy fields so notified in the LNR are assessed within 2 weeks before harvest. The yield assessment will be based on an eye-estimation of the yield of the damaged crops.

3.4.5 Basis of Indemnification

a) Initial stage losses
Losses occurring within one month of sowing and after such loss if re-sowing of the paddy field for the same season are possible during the specified period of sowing, such fields are indemnified on the basis of cost of seed paddy per acre re sown. That is 2 bu/acre.

b) First stage losses
Losses occurring within one month of sowing and after such loss if re-sowing of the paddy parcel for the same season is not possible, such losses are classified as

'first stage losses'. These losses are indemnified on the basis of 60% of the insured coverage less 20% operative excess.

c) Second stage losses
Losses occurring after one month of sowing until flowering are called second stage losses which are indemnified on the basis of 80% of the insured coverage less 20% operative excess.

d) Final stage losses
Losses occurring after flowering up to harvesting of the crop are called final stage losses, which are, indemnified on the basis of 100% of the insured coverage less 20% operative excess.

Operative excess: The *operative excess* is the first quantum of loss percentage, which is not indemnified and has to be borne by the insured.

3.4.6 Processing of Indemnities

After loss assessment, the indemnity payable for each claim is computed in the LNR at the district office of the AIB. The perfected LNRs are then submitted to the Actuarial and Research Division where indemnities are processed as to the legality of claims and computations done by the district office. The payable claims are then approved by the Actuarial and Research Director to effect payment.

The loss percentage and indemnities are calculated as follows;

$$\text{Total loss percentage} = \frac{\text{(Standard Yield-Assessed Yield)}}{\text{Standard Yield}} \times 100$$

$$\text{Insurable loss percentage} = \text{Total loss Percentage} - \text{Percentage of loss due to un-insurable causes}$$

$$\text{Loss Index} = \text{Insured coverage} \times (\text{Insurable loss \%} - \text{Operative excess}) \times \text{Index for stage of loss}$$

Loss index is a value read directly from a table of loss indices.

Table 3.3: Table of Loss Indices (for Insurance Coverage of Rs. 6,000/=)

Stage of loss / Loss %	Initial stage	Second stage	Final stage
0-20.0	0	0	0
20.1-27.5	180	240	300
27.5-32.5	360	480	600
32.6-37.5	540	720	900
37.6-42.5	720	960	1,200
42.6-47.5	900	1,200	1,500
47.5-52.5	1,080	1,440	1,800

Source: AAIB

Indemnity index = Loss Index X Insured cultivated extent X Ownership percentage

Ownership percentage depends on the ownership status as follows:

Landlord = 25%
Owner cultivator = 100%
Tenant cultivator = 75%

3.4.7 Payment of Indemnities

The indemnities payable to the insured in a particular ASC area are sent to that ASC by a cheque along with the Indemnity Payment Register (IPR). In the case of loan takers, their indemnities are sent to the banks to set off against their crop loans.

3.4.8 Appeals

If an insured is not satisfied with the decision in respect of his claim, he can appeal to the Board, within 30 days of such notification.

3.5 Other Insurance Schemes

3.5.1 Subsidiary Crop Insurance Scheme

After 10 years of experience with paddy insurance, the AIB introduced a field CIS in 1984, initially covering crops such as chilli, green gram, soya bean, cowpea and sugarcane.

3.5.2 Other Crops Insurance Scheme

Banana, cashew, sugarcane, potato and fruits are the other crops, which the AAIB, has insured against drought, wind, damage by wild animals, pests and diseases, flood, fire, and excess water.

3.5.3 Insurance Schemes for Export Crops

The export crop insurance scheme was implemented by the AAIB in collaboration with the Department of Agriculture in 2002. Pepper, coffee, cocoa, cinnamon, and areca nut are the main export crops insured by the AAIB.

3.5.4 Insurance Schemes for Decorative Flowers and Plants

Following flowers and plants come under insurance:

i. Anthurium
ii. Orchid
iii. Decorative plants
iv. Polytonal

3.5.5 Livestock Insurance Scheme

In an effort to give a boost to the dairy cattle industry, the livestock insurance scheme was launched in the latter part of 1975 to provide insurance cover to cattle imported by Sri Lanka under a loan scheme from the International Development Association of the World Bank.

The following category of animals are covered under the scheme

i. Cattle Insurance
ii. Imported cattle breeds
iii. Goat Insurance
iv. Sheep Insurance
v. Heifer Insurance
vi. Poultry Insurance

3.5.5.1 Pre-requisites for Insuring Animals

- Proposed animals should be in good health
- Animals should have been vaccinated against the diseases
- All insured animals should be suitably identified by one way of the following:
    i. Ear tag
    ii. Branding
    iii. Tattooing
- Stray animals cannot be insured

3.5.5.2 Reasons for Claiming Insurance Coverage

- Death due to an accident
- Death due to disease
- Total disablement

3.5.5.3 Premium Rates and Insurance Coverage

Premium Rates:

If the insurance coverage of:

i. Cattle is less than Rs.15,000/-, the premium rate is 3.5%
ii. Cattle is more than Rs.15,000/-, the premium is 4%
iii. Goat is Rs.5,000/- or less, the premium rate is 4%
iv. Goat is Rs.5,000/- to 7,500/-, the premium rate is 5%
v. If the insurance coverage of sheep is Rs.5,000/-, the premium rate is 4%

Table 3.4: Categories of Animals that Insurance Coverage can be obtained, Age Limit and the Maximum Insurance Coverage

Category	Age Limit (Years)	Insurance Coverage (Rs.)
Milk Cows	2-12	25,000
Milk Buffaloes	4-14	25,000
Stud Bulls	2- 3	25,000
Stud Buffaloes	3	25,000
Draught Cattle	3-12	25,000
Buffaloes used for draught and ploughing	3-12	25,000
Milk Cows	2-12	25,000
Milk Buffaloes	4-14	25,000
Hybrid Goat	1- 6	10,000
Ordinary Goat	1- 6	20,000
Sheep	1- 6	5,000
Chicks	1 day to 7 weeks	150 for each chick

Source: AAIB

3.5.5.4 Amount of Discount

If animals are insured as groups, a discount will be given.

Table 3.5: Discounts According to the Group of Animals

No. of Animals	Discount Percentage
First Group 11-25	10
Second Group 26-50	15
Third Group 50	20

Source: AAIB

3.5.5.5 Awards of Bonus

- In order to be entitled to the bonus programme, animals should be insured continuously for a 5 year period with no compensation claimed.
- Farmers who pay premium for 5 years continuously can get a 25% of the total premium as a bonus.

3.5.5.6 Payment of Indemnity

- In case of the death of an animal due to an accident or a disease, indemnity payment will be 90% of the insured sum.
- If an insured animal is permanently disabled and destroyed, 90% of the insurance coverage is paid as indemnity. If it is not destroyed, the owner is entitled to 50% of the insurance coverage.

3.5.6 Paddy Stores Insurance

In terms of the powers vested with the Board by the Agricultural and Agrarian Insurance Act No 20 of 1999, steps were taken by the AAIB to launch an insurance scheme for the storage and preservation of agricultural products. As an initial step in this regard, an insurance scheme was introduced for farmers relating to the storage and preservation of paddy. It was implemented with effect from April, 2001.

The main objectives of the paddy stores insurance scheme include:

- To provide a good market value to the producer by providing insurance coverage at times when the paddy stocks produced by the farmers are stored in their homes;
- To provide coverage for unexpected damage when paddy is stored by paddy purchasing institutes;
- To act as a guarantor when paddy-storing institutes obtained loans;
- To provide the cover of a social security benefit scheme to farmers through those schemes.

This insurance scheme was implemented under two categories for farmers engaged in storing of paddy, as follows:

i. Cultivating paddy and storing it at home.
ii. Storing in warehouses maintained by farmer organizations, co-operative societies, farmer companies, and paddy purchasing centres and by individuals.

In the implementation of the insurance scheme, steps were taken to launch promotional programme in order to introduce the scheme by paying more attention to districts such as Polonnaruwa, Anuradhapura, Kurunegala, Hambantota etc., which are leading the paddy storing areas and the Mahaweli areas, having identified them as divisions. It is expected to achieve market progress in this regard during the ensuing year.

3.5.7 The Farmers' Pension and Social Security Benefit Scheme

3.5.7.1 The Need for a Social Security Benefit Scheme

The need for a social security benefit scheme for the Sri Lankan farmers in view of their income instability and unpredictable economic conditions cannot be overemphasized. This scheme was proposed in recognition of the farmers' contribution to the economy. The farmers' pension and social security benefit scheme was implemented by Act No. 12 of 1987 and the scheme got off the ground from March, 1987. It provides not only a lifetime pension or financial assistance in case of disability but also gratuities to the dependents in the event of the untimely death of the beneficiary. It is expected that as a long-term goal, the scheme would result in structural changes in the social matrix of the Sri Lankan community, attracting more young people to farming as a viable career.

3.5.7.2 Objectives

- To provide financial support to farmers who reach old age or those who become disabled;
- To extend financial relief to dependents through a death gratuity in the event of the farmer's untimely death;
- To promote life insurance as a meaningful social security measure;
- To foster the saving habit among the farmers;
- To recognize the farmers' role in the economy and to make farming a secure profession;
- To broaden the services of the AAIB to the farming community.

3.5.7.3 Eligibility

Eligibility interior in as follows:

- Farmers not less than 18 years of age and not more than 59 years of age on the date of enrolment.

- They should grow any of the following crops either as an owner, cultivator, tenant or lease cultivator:
  - Paddy and cereals
  - Other field crops and vegetables
  - Roots and tuber crops
  - Fruits
  - Betel
  - Sugar cane
- Owner cultivators who grow less than two acres of tea
- Owner cultivators who grow less than three acres of rubber
- Owner cultivators who grow less than five acres of coconut
- Owner cultivators who grow less than three acres of mixed-crops
- Livestock farmers
- Agricultural workers

3.5.7.4 Benefits of the Scheme

i. A farmer who pays his contribution in full is entitled to receive a periodical pension for life from the age of 60 years.
ii. Farmers in the age group of 55 to 59 years are eligible to receive their pension after 5 years
iii. In the event of the death of a contributor while receiving his pension, his spouse will receive it until the age of 80 years.
iv. When the contributor is permanently disabled before he becomes entitled to receive his pension, he is paid an indemnity of Rs.50,000/= and the net premium with the interest or if he prefers to get his benefit under total disablement, he will receive a monthly allowance from the date of total disablement.
v. When a contributor is partially disabled before he becomes entitled to receive his pension, he will receive a disablement gratuity of Rs.25,000/= and net premium with the interest or if not get his benefit under total disablement, he will receive a monthly allowance from the date of disablement.

3.5.8 'Suva Setha' Health Insurance Scheme

The 'Suva Setha' health insurance scheme launched by the Board in terms of Agricultural and Agrarian Insurance Act No. 20 of 1999 came into operation with effect from 8th May 2000. Such an insurance scheme meant specifically for the health of farmers has not been undertaken by the leading insurance agencies in Sri Lanka.

In keeping with the above objective, the 'Suva Setha' insurance scheme was launched with the aim of providing financial benefits to the farmers to defray expenses incurred by them as hospital charges, operation costs, specialized medical fees, X rays and deep rays costs, electronic and radium test charges, etc. Under this insurance scheme, a farmer is required to pay an annual contribution of Rs.350/= and it has been planned to grant the contributor a sum of Rs.25,000/= in respect of costs mentioned above.

The Development and the Field Officers who work at district office level deal with the implementation process of the District Assistant Directors in this regard who are involved in preliminary district level supervisory and operative activities.

3.5.9 Fishermen's Pension and Social Security Benefit Scheme

This scheme is being implemented jointly by the Fisheries and Ocean Resources Department and the Agricultural and Agrarian Insurance Board under the Fishermen's Pension and Social Security Benefit Scheme, Act No. 23 of 1991.

CHAPTER FOUR

Agricultural Insurance Scheme Operated by the Private Sector

4.1 Introduction

Agricultural insurance schemes operated by the private sector organizations have traditionally insured a range of health and asset risks in many developing and industrial countries. But, in recent years it covers sixty crops around the world. Although, the private sector crop insurance may have considerable potential to expand in the developing countries, there are some constraints that need to be overcome. These are:

i. Crop insurance by the private sector is legally restricted in some countries, particularly where a publicly owned scheme is already operating.
ii. Even where the private sector is allowed to operate, it may find it hard to compete with a heavily subsidized public scheme.
iii. In countries where insurance institutions have been nationalized, the absence of diversified private insurers with solid experience in automobile, home, life or health insurance offers a weak base for building up agricultural insurance.
iv. There are infant-industry problems in establishing agricultural insurance, particularly where the initiative is taken by farmers rather than by an existing non-agricultural insurer.
v. The potential amount of international re-insurance that can be obtained for agriculture may be limited. At present re-insurance can only be purchased in the European markets; the U.S. and Japanese markets have been unwilling to participate.

These are constraints that governments can help to overcome, and it is possible that private insurance could play a much-expanded role in many developing countries. However, given the inherent difficulties and costs of insuring most agricultural production risks, the potential for crop insurance is limited (Agricultural Insurance in Asia, Seminar report, 1990, Japan).

In the early 1980s' the general insurance business in Sri Lanka was opened to private sector insurance companies. However, such liberalisation was not offered in the agricultural insurance sector. As a result, the AIB continued to enjoy its monopoly power with respect to paddy insurance. Even though the other subsidiary crops and livestock farming sectors did not have such restrictions, the low volume of business did not attract private insurance companies to venture into agricultural insurance. Even in the developed countries with commercial agriculture supported by advanced

farm technology, the governments have found it extremely difficult to motivate private insurers to take up comprehensive agricultural insurance due to its low potential for commercial profitability and attractive returns. After the enactment of the Agricultural and Agrarian Insurance Act No. 20 of 1999, in Sri Lanka, private insurers were permitted to undertake crop insurance. This is an important juncture in the history of agricultural insurance where a private insurance company had evinced an interest in running a comprehensive agricultural insurance scheme covering perils due to natural hazards. In Sri Lanka, only one private company namely Ceylinco Insurance Company Limited (CICL), has started a limited scheme in selected areas, since the opening up of agricultural insurance to the private sector.

This is one of the leading insurance companies with 50 years of experience in the insurance sector in Sri Lanka and it is the largest private insurance company operating in Sri Lanka. The CICL initiated the agricultural insurance scheme named 'Govi Rakshana' as a pilot project operative from 1992/93 *maha* season at Mahaweli Systems C, H and U. The CICL has expanded its services to various sectors including life insurance for farmers during 1999 after the enactment of the new Act.

The extent of paddy land insured by the CICL in 1993 amounted to 1,170 hectares and the premium collected was les than one million (Rs.868,000). The payment of indemnity for paddy farmers stood at Rs.1.09 million. The extent of paddy land insured by the CICL has shown an increasing trend. The area insured under the paddy crop by the CICL was 15,310 hectares in 2004 and it has shown an increase of 14,140 hectares compared with that of 1993. With the enactment of the new act in 1999, the CICL has expanded its services to various sectors, with a wider scope. Table 4.1 indicates the performance of the paddy insurance scheme under the CICL.

Table 4.1: Performance of the Paddy Insurance Scheme of CICL

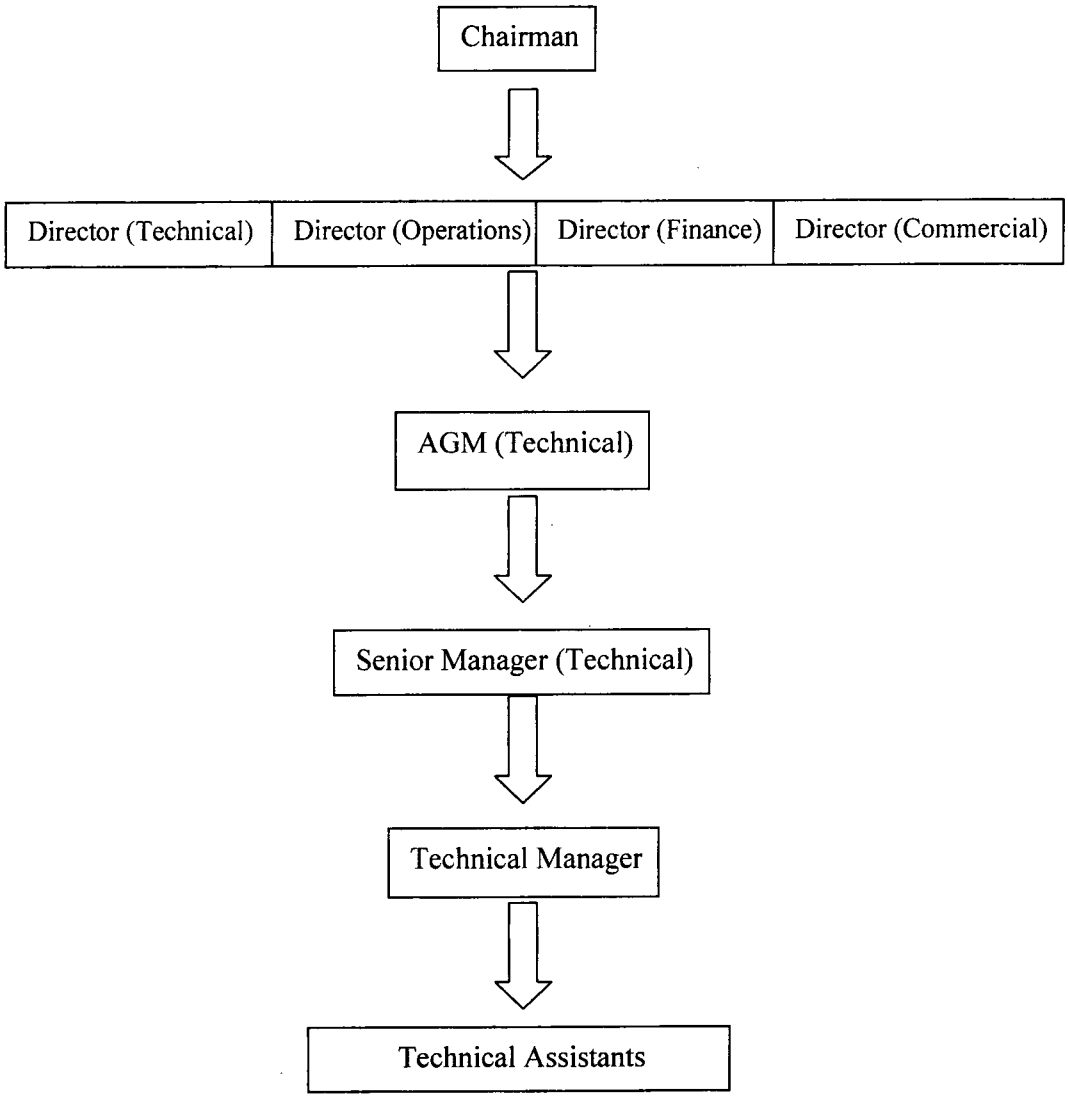
Season	Area Cultivated	Area Insured	Participation as a Percentage of Total Area Cultivated
1993 *yala*	289	0.42	0.1
1993/94 *maha*	581	0.75	0.1
1994 *yala*	349	0.28	0.1
1994/95 *maha*	567	0.20	0.03
1995 *yala*	348	0.14	0.04
1995/96 *maha*	499	0.43	0.1
1996 *yala*	250	0.02	0.1
1996/97 *maha*	473	0.45	0.1
1997 *yala*	257	0.17	0.1
1997/98 *maha*	574	0.57	0.1
1998 *yala*	298	0.43	0.1
1998/99 *maha*	538	0.78	0.1
1999 *yala*	341	0.71	0.2
1999/2000 *maha*	549	1.96	0.3
2000 *yala*	812	2.25	0.3
2000/2001 *maha*	479	4.92	1
2001 *yala*	319	2.63	1
2001/2002 *maha*	531	5.12	1
2002 *yala*	319	2.85	1
2002/2003 *maha*	618	3.56	0.6
2003 *yala*	401	6.68	1.7
2003/2004 *maha*	542	11.55	2.1
2004 *yala*	258	3.76	1.4

Source: CICL

4.2 Organizational Structure and Administration

The organizational structure of the CICL is given below:

Figure 4.1: Organizational Structure of the CICL (Agricultural Insurance Scheme)



The staff involvement in the Ceylinco agricultural insurance scheme is comparatively lower than that of the other insurance schemes of the CICL. The Director, the AGM and the Senior Manager (Technical) act as the policy formulating body of the company for different insurance schemes operated by the company. All the operational work is carried out by the Technical Manager and there is only one Technical Manager attached to the head office. The branches of the company perform agricultural insurance activities at the district level, and 16 Technical Assistants are attached to these branches of Anuradhapura, Kekirawa, Dambulla, Ampara, Kantale, Kaduruwela, Monaragala, Nuwara Eliya, Jaffna, Kurunegala, Mahiyangana, Bandarawela, Tissamaharamaya and Embilipitiya.

4.3 Types of Agriculture Insurance Schemes

The CICL, which is the only private insurer operating in agricultural insurance sector, expanded its services to other sectors and offered coverage to other crops. The livestock insurance scheme started in 1993. Recently, the company has extended its schemes to cover vegetables, potato and poly tunnel crops such as roses, gebera, and carnation. Venturing into a wider range of activities, they now operate a Ceylinco 'Govi Vishrama' life insurance scheme, medical insurance scheme, personal accident and funeral expenses insurance scheme.

Schemes operated by the CICL are listed below:

i. Paddy crop insurance scheme.

ii. Subsidiary crops insurance scheme which includes the following:

- Cowpea
- Soya bean
- Green gram
- Ground nut
- Big onion
- Red onion
- Chillies

iii. Insurance schemes for other crops:

- Seasonal crops
- Gingerly
- Maize crop
- Perennial crops
  - Pineapple
  - Banana
  - Cashew
- Plantation crops
  - Sugar cane
  - Coconut
  - Rubber

iv. Livestock insurance scheme.

v. Personal accident and funeral expenses insurance scheme.

vi. Farm implements insurance scheme.

vii. Life insurance scheme.

viii. Medical insurance scheme

4.4 Operation of Paddy Insurance Scheme

For paddy, insurance is offered against the following natural hazards resulting in total or partial loss of yields:

- Pests
- Diseases
- Flood
- Drought
- Shortage of water
- Excess water
- Damage due to wild animals and birds

Period of Insurance:

Seven days after the sowing or transplanting of the crop up to the date of harvesting.

4.4.1 Premium Rates/Insurance Coverage

The specified premium at the rate of 6% of the coverage for cultivation under major and minor irrigated conditions and 8% of the coverage under rain fed conditions should be recovered before sowing or transplanting of the crop as the case may be in the direct insurance, subject to the insurance operation calendar.

In the case of insurance under the bank loan scheme, the insured should submit the loan application to the bank before commencement of sowing or transplanting as the case may be, subject to the insurance operation calendar.

Table 4.2: Insurance Coverage and Premium Rates

Cover/Land class	Sum Insured per Acre (Rs.)	Premium Rate	Premium (Rs.)
All land class	5,000/= 30,000/=	6% - 8%	300/= 2,400/=

Source: CICL

4.4.2 Insurance Operation Calendar

The relevant Technical Assistants in consultation with the Technical Manager prepare an insurance operation calendar for each area. This calendar fixes the periods for premium payments, sowing, loss notification, loss assessment and all other relevant insurance activities.

Figure 4.2: Format of an Insurance Operation Calendar

Name of Paddy Variety	Duration	Duration in no. of Days	Date of Commencement of Sowing or Transplanting	Last Date of Sowing or Transplanting	Last Date of Payment of Premium

Source: CICL

4.4.3 Validity of Premium Paid

The premium paid by the insured in respect of a cultivation season will be valid only in respect of that season, unless otherwise cultivation was not done for valid reasons, in which case the insured should notify the company before the termination of the season according to the cultivation calendar. If the company accepts the premium, the reason for non-cultivation of the field, the premium will be made valid for the ensuing season.

4.4.4 Reporting of Damages

In case damage has occurred to the insured field due to insurable causes, such damage should be reported to the Ceylinco Branch Office on the prescribed 'Ceylinco Govi Rakshana – Claim Form', within seven days of occurrence of the damage.

4.4.5 Inspection of Insured and Damaged Fields

A yield assessment team will inspect all the insured and damaged fields at least two weeks prior to the harvesting of the crop. Under no circumstances should the insured and the damaged field be harvested before the inspection of the field by the yield assessment team of the CICL. The yield assessment will be based on an eye-estimation of the yield of the damaged crops in case of partial losses.

4.4.6 Standard Yield

Losses to crop will be based on the short fall over the standard yield fixed for the area for the *maha* and the *yala* crops separately. The standard yield, which is the average yield, is calculated for a determined number of consecutive seasons, where the *maha* and the *yala* crops are taken separately. Shortfall on the standard yield occurring due to insurable causes of damage will be considered as a loss due to insurable causes. The quantity of loss will be calculated as a percentage based on the standard yield, presently used by the Census and Statistics Department.

4.4.7 Yield Assessment by Crop Cutting Survey

A crop cutting survey on 10% of the total number of claims made will be done using a simple crop-cutting instrument on a random sampling basis. This will be a test check as to whether over assessment of losses have been made by the yield assessment team.

4.4.8. Payment of Indemnity

a) First Stage Damage
From the date of sowing or transplanting up to the 30th day, indemnity payable will be 60% of the coverage, less 20% operative excess.

b) Second Stage Damage
From the 31st day of sowing or transplanting of the crop up to flowering, indemnity payable will be 80% of the coverage, less 20% operative excess.

c) Final Stage Damage
From the date of flowering up to harvesting of the crop, indemnity payable will be 100% of the coverage, less 20% operative excess.

20% excess will be in operation under the scheme, which means indemnity is not payable for losses of 20% and less.

Depending on the variety of paddy used, the number of days taken for flowering from the date of sowing or transplanting is known. Based on this fact, and the date of damage of the crop, the three stages of damage could be determined.

4.4.9 Determination of Loss Percentage

Crop losses are calculated as a shortfall on the determined standard yield. If the yield assessed is equal to or more than the standard yield, then there is no loss to the crop and indemnity is not payable. If the assessed yield is less than the standard yield then the loss percentage is calculated as follows:

$$\text{Total Loss Percentage} = \frac{\text{Standard yield} - \text{Assessed Yield}}{\text{Standard Yield}} \times 100\%$$

4.4.10 Calculation of Indemnity Payment

- Insurable loss % = Total loss % - % of loss due to un-insurable causes.
- Indemnifiable loss % = Insurable loss % - 20 % excess
- Indemnity Payable = Coverage X Indemnifiable loss % X Stage of damage % X Indemnifiable Acreage X Ownership of land %

4.4.11 Performance of Paddy Insurance Scheme by CICL

The CICL launched their crop insurance schemes for paddy during 1993 *yala* experienced a low level of farmer participation during the season, but experienced a low level of farmer participation during the first 5 year period. A significant increase of the area insured was observed in the *maha* 1999/2000 and thereafter the paddy insurance has gathered momentum. From the start of the operation of the paddy insurance scheme up to now, the company had to face losses by way of indemnity payments only in three seasons. Area insured was highest during the *maha* 2003/2004. Total premia collected was Rs.15.33 million whereas the total indemnity paid was Rs.20.15 million (Annex 2).

4.5 Other Insurance Schemes

4.5.1 Subsidiary Crop Insurance Scheme

Following crops are insured under this scheme:

- Big Onion
- Chilli
- Soya Bean
- Cowpea
- Green gram
- Ground nut

Insurable causes are same as specified for the paddy insurance scheme.

4.5.2 Insurance Scheme for Other Crops

There are three important categories of crops under this insurance scheme.

- Seasonal Crops
  - Gingerly
  - Maize Crops
- Perennial Crops
  - Pineapple
  - Banana
- Plantation Crops
  - Sugarcane
  - Coconut
  - Rubber

Insurable causes of damages are pests, diseases, drought, wild animals, heavy wind, fire and excess water. These causes vary from crop to crop.

4.5.3 Livestock Insurance Scheme

Under livestock insurance scheme, the CICL insures only cattle and goats.

Cattle insurance:

- Milk cattle
- Milk buffaloes
- Stud bulls
- Stud buffaloes
- Draught Bull
- Draught and ploughing buffaloes.

Goat insurance:

- Cross breed
- Stud breed
- Pure breed
- Local breed

Under Livestock Insurance Scheme, there are two types of insurance cover, which are lower cover and higher cover.

Performance of Livestock Insurance Scheme in Sri Lanka by the CICL from the year 1991 to 2005 is given below.

Table 4.3: Number of Insured Animals and Percentage of Claims

Year	No. of Animals Insured	Gross Premium Income (Rs.)	Gross Claims Paid (Rs.)	Claims Percentage
1991	501	150,497	13,500	9%
1992	523	157,097	26,100	16%
1993	757	227,202	78,750	34%
1994	1,299	389,670	148,632	38%
1995	431	129,462	235,056	181%
1996	1,010	303,061	152,361	50%
1997	2,584	775,324	228,550	29%
1998	2,004	601,544	195,090	32%
1999	1,884	566,817	234,055	41%
2000	2,010	612,064	127,234	21%
2001	NA	105,346	165,379	156%
2002	NA	327,328	158,615	48%
2003	NA	595,368	232,920	39%
2004	NA	534,304	295,283	55%
2005	NA	329,716	304,119	92%

Source: CICL
NA= Not Available

The highest percentage of claims was reported in 1995 as 181%, followed by 156% in 2001.

4.5.4 Ceylinco 'Grameen'

This insurance only focuses on women farmers who get cultivation loans for vegetables, paddy and other crops. Premium rate is 4 percent of the cultivation loan for all types of the above crops and indemnities are paid for crop damage with zero excess.

Premium is Rs.165/= per year for crop loans up to Rs.50, 000/= and it is Rs.250/= per year for crop loans ranging from Rs.50, 000/= to Rs.100,000/= for life cover under the Ceylinco Grameen.

4.5.5 Ceylinco 'Govi Vishrama'

This is designed specially to provide financial assistance to farmers who are left helpless with no benefits in their old age. It offers several options for policyholders to pay the premium after receiving a bountiful harvest so that financial constraints will not affect the continuity of the benefits. Customers may change the premium value and as a result can decide the amount of pension to be provided at retirement.

CAPTER FIVE

Performance of the Paddy Insurance Scheme of the Agricultural and Agrarian Insurance Board (AAIB)

5.1 Review of the Past Performance

The paddy insurance scheme commenced in 1958 as a pilot project and covered around 28,000 acres. The second period was from 1962/1963 to 1972 and the area under insurance gradually increased to around 200,000 acres. The results of the first 15 years (1958-1973) of operation of the paddy insurance scheme are summarized below:

Area insured at the inception (1958)	28,000 acres
Area covered in 1973	300,000 acres
Total indemnity paid	Rs.15.9 million
Total premium due for 15 years	Rs.16.9 million
Loss ratio on the basis of claims paid to premium collected	245%

The enactment of the Agriculture Insurance Law No.27 of 1973, which was effected in 1974, witnessed some major changes.

The performance of the third period (1973-1983) is as follows:

i. Even though stipulated in the law, the compulsory paddy insurance was not wholly strictly enforced due to socio-economic and political reasons.
ii. The coverage offered by the insurance did not match with the actual cost of cultivation.
iii. Low participation of farmers and adverse selections were significant (Adverse selections - The tendency for facing higher risks farmers to purchase insurance).
iv. The AIB, in the normal seasons could not meet the indemnities in full from the AIB fund within 15% of the total insurance liability, even though financially assisted by the government in some seasons.

The fourth phase of the scheme began from 1983 to 1999. Certain administrative and policy changes were effected at the AIB.

After that phase, agricultural insurance scheme operated by the Agricultural Insurance Board, was brought within a broader framework by the Agricultural and Agrarian Insurance Board Act No. 20 of 1999 with a view to establishing it on a self-finance basis.

Table 5.1, describes the paddy crop insurance programme in Sri Lanka since 1958 up to now, with regard to administration, areas covered, premium rates, and indemnities paid.

Table 5.1: Administration, Area Covered, Premium Rates and Indemnities 1958-2006

Period	Administration	Areas	Premium /Acre (Rs.)	Indemnity /Acre (Rs.)	Minimum Loss %
1958-1974	Dept.of Agrarian Services	Selected districts	6/=	100/= - 180/=	30
1975-1983	Agricultural Insurance Board	All island	3/= - 30/=	300/= - 500/=	30
1984-1999	Agricultural Insurance Board	-Do-	36/= - 114/=	600/= - 2,200/=	20
1999 to date	Agricultural and Agrarian Insurance Board	-Do-	100/= - 300/=	1,000/= - 6,000/=	20

Source: AAIB

5.2 Performance of the Paddy Insurance Scheme during Last Ten Years in Respect of Total Area of Insured Paddy Lands

The paddy insurance scheme covers the entire country. With policy changes, and smoothed out operational procedures a greater farmer participation in the scheme is anticipated. However, the performance of the paddy insurance scheme during the last ten years has registered a declining trend.

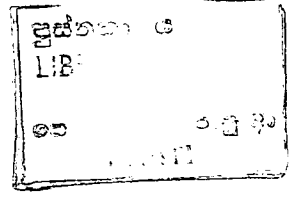
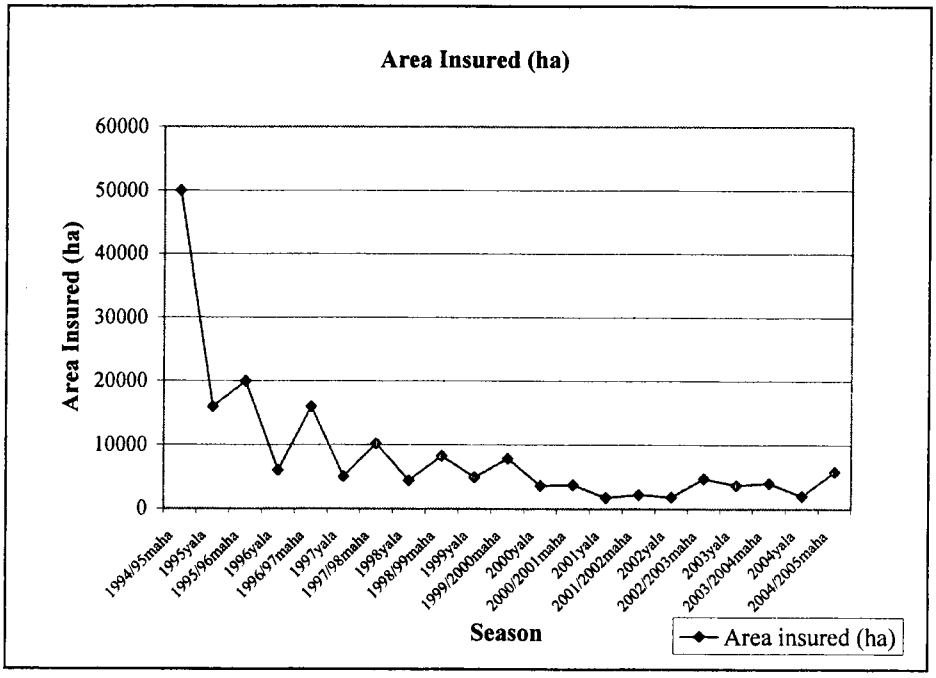


Figure 5.1: Total Paddy Area Insured (Hectares) During Last Ten Years (See Annex 3)



The figure 5.1 reveals the declining trend in the extent of paddy lands insured in both the *yala* and the *maha* seasons. The extent of paddy lands insured by the AAIB in the 2004/2005 *maha* season was 5,800 hectares. When compared with the 50,000 hectares insured in the 1994/95 *maha* season, the drastic drop (44,200 ha) is glaringly obvious. This was mainly due to the low farmer participation. The suspension of providing coverage for paddy lands in some of the areas worsened the situation further. As an example in 2000, the operation of the paddy insurance scheme was suspended in the wet zone districts of Colombo, Gampaha, Kalutara, Kegalle, Galle, N'Eliya and Ratnapura as a policy option. Conversely, the insurance of croplands in very high-risk areas had been implemented on a selective basis. Particularly, the high level of damages which caused a higher tendency for compensation, and increased administrative expenses were the reasons for the suspension of paddy insurance in some districts and some areas. Difficulties encountered in providing coverage for paddy lands in the northern and eastern parts of the country led to suspension of the paddy insurance scheme totally in Mullaitivu and Kilinochchi districts and were partially implemented in the protected areas of Jaffna and Vavuniya districts. In every district, rain fed areas, are not promoted for insurance by the Agricultural Insurance Board. Paddy insurance scheme is functioning as collateral for the farmers to get crop loans. It is another reason for the decline in the extents insured.

5.3 Assessment of the Performance

There are three important ratios to measure the performance of the paddy insurance scheme.

- Loss ratio
- Paid rate ratio
- Expenses ratio
- Participation ratio is also an important indicator.

The following data illustrates the performance of paddy insurance during the last 10 years (from 1994/95 *maha* to 2004/2005 *maha*).

$$\text{Loss Ratio} = \frac{\text{Indemnities Paid (Rs)}}{\text{Premium Collected (Rs)}}$$

$$\text{Paid Rate Ratio} = \frac{\text{Indemnity Paid (Rs.)}}{\text{Maximum Liability (Rs.)}} \times 100$$

$$\text{Expenses Ratio} = \frac{\text{Total Expenses (Rs.)}}{\text{Premium Collected (Rs.)}}$$

$$\text{Participation Ratio in Terms of Acreage} = \frac{\text{Area Insured (ha.)}}{\text{Area Sown (ha.)}} \times 100$$

5.3.1 Loss Ratio Analysis

Table 5.2: Loss Ratio Analysis

Season/Year	Premium Collected (Rs.'000) 1	Indemnities Paid (Rs.'000) 2	Difference Between 1-2 (Rs.'000)	Gross Loss Ratio
1994/95 *maha*	30,554	21,484	9,070	0.7
1995 *yala*	8,926	4,471	4,455	0.5
1995/96 *maha*	12,357	17,135	-4,778	1.4
1996 *yala*	3,751	2,577	1,174	0.7
1996/97 *maha*	9,736	5,467	4,269	0.6
1997 *yala*	3,174	1,852	1,322	0.6
1997/98 *maha*	6,597	1,003	5,594	0.2
1998 *yala*	2,657	4,818	-2,161	1.8
1998/99 *maha*	5,373	4,337	1,036	0.8
1999 *yala*	2,930	1,472	1,458	0.5
1999/2000 *maha*	5,012	3,388	1,624	0.7
2000 *yala*	2,067	592	1,475	0.3
2000/2001 *maha*	1,653	2,689	-1,036	1.6
2001 *yala*	1,028	280	748	0.3
2001/2002 *maha*	1,499	992	507	0.7
2002 *yala*	1,040	981	59	0.9
2002/2003 *maha*	3,361	2,860	501	0.9
2003 *yala*	2,632	944	1,688	0.4
2003/2004 *maha*	3,611	7,892	-4,281	2.2
2004 *yala*	1,488	679	809	0.5
2004/2005 *maha*	4,448	3,453	995	0.8

Source: AAIB

The loss ratio analysis can be used in formalizing the financial stability of a crop insurance scheme. Under the paddy insurance programme, relatively low premium rates are charged to make the scheme more affordable to the small farmers. However, Agricultural Insurance Board mainly derives its revenues from the premium collection. The Board depends on these funds for insurance operations, indemnity payments, and administrative costs. According to the amount of premium collected and indemnities paid by the AAIB, we can calculate the gross loss ratio.

At the initial stages of the crop insurance scheme, the commitment on claims far exceeded the premium collection in most of the seasons, because of some policy decisions. The indemnities paid far exceeded the premium collection, the gross loss ratio was high (more than 1) in some of the seasons during the period of 1970-1980 (Annex 3).

To minimize this deficit, several steps were taken by the AAIB

- The insurance of croplands in very high-risk areas was pursued on a selective basis. The insurance programmes were suspended in areas where crops have been damaged for five consecutive years.
- In every district, rain fed areas were removed from the crop insurance programme and in the other areas, it was confined only to the farmers who had obtained crop loans (AAIB-Annual Report, 2002).

In the last ten year period, there were only four seasons where payment of indemnities was over and above the premium collection. These seasons were the *maha* 1995/96, the *yala* 1998, the *maha* 2000/2001 and the *maha* 2003/2004. The gross loss ratio was higher than 1in those seasons. The highest gross loss ratio was recorded in *maha* 2003/2004 in which the Board was called upon to pay indemnities in a massive sum for damages reported under drought conditions in Mannar district. Indemnities paid in this season amounted to Rs.7, 892,000/- whereas the premium collection was only Rs.3, 611,000/-.

In the *maha* 2000/2001, also the Boards' indeminity commitment was very high due to the reported flood damages in Ampara and Batticaloa districts. During the past ten years (*maha* 1994/95- *maha* 2004/2005), the premium collected was Rs.114 million and the amount of indemnities paid was Rs.89 million. The total gross loss ratio during this period was 0.7 (less than 1). The data establishes the facts that in most of the seasons during the last decade, a satisfaction performance has been registered so far as the indemnities and premium are concerned.

The income from premium in 1994/1995 *maha* season, was Rs.30,554,000/-. In 2004/2005 *maha* season it was only Rs.4,448,000/- registering a drop of about 85% in the premium income.

5.3.2 Paid Rate Analysis

Paid rate is another important ratio to assess the performance. This is certainly a downward rend in the performance,

Table 5.3: Paid Rate Analysis

Season	Indemnity Paid (Rs.)	Maximum Liability (Rs.)	Paid Rate (%)
1995/96 *maha*	17,135,000	240,926,000	7.1
1996 *yala*	2,577,000	78,577,800	3.3
1996/97 *maha*	5,467,000	209,540,800	2.6
1997 *yala*	1,852,000	65,481,500	2.8
1997/98 *maha*	1,003,000	133,321,500	0.8
1998 *yala*	4,818,000	57,886,600	8.3
1998/1999 *maha*	4,337,000	108,405,500	4.0
1999 *yala*	1,472,000	64,039,900	2.3
1999/2000 *maha*	3,388,000	102,936,600	3.3
2000 *yala*	592,000	46,883,800	1.3
2000/2001 *maha*	2,689,000	48,717,600	5.5
2001 *yala*	280,000	22,525,000	1.2
2001/2002 *maha*	992,000	28,810,800	3.4
2002 *yala*	981,000	23,574,400	4.2
2002/2003 *maha*	2,860,000	61,554,200	4.6
2003 *yala*	944,000	48,457,900	1.9
2003/2004 *maha*	7,892,000	52,385,200	15.1
2004 *yala*	679,000	26,192,600	2.6
2004/2005 *maha*	2,852,165	75,959,600	3.8
2005 *yala*	459,878	4,6634,700	1.0

Source: AAIB

In agriculture, except in the case of a natural calamity, an event of 100% crop damage is infrequent. In most areas, the damages are partial. However, in the case of paddy insurance, the AAIB had to meet the indemnity requirements from the agricultural insurance fund upto 15% of the total insurance liability and any excess was to be met from funds forthcoming provided by the government. But, this government fund was not forthcoming after the implementation of the new Act in 1999. During the last ten year period (*maha* 1995/96, *yala* 2005) there was only one season (*maha* 2003/2004), in which the paid rate has reached 15% of the total insurance liability of the Agricultural Insurance Board. This was due to the heavy damages in Mannar district which necessitated the payment of large amount as indemnities. In other seasons, paid rate ratio ranged between 1%-8% of the maximum liability. It shows that even in the normal seasons, indemnities could not be met in full from the AIB fund within the 15% of the total insurance liability.

5.3.3 Participation Ratio

Analysis of participation can be assessed in two ways.

- Participation in paddy insurance in terms of acreage

- Participation in paddy insurance in terms of the number of farmers

Table 5.4: Participation Ratio in Terms of Insured Extent

Season/Year	Area Sown (000 ha)	Area Insured (000 ha)	Participation as % of Total Area Sown
1994/95 maha	567	50	8.8
1995 yala	348	16	4.6
1995/96 *maha*	499	20	4.0
1996 *yala*	250	6	2.4
1996/97 *maha*	473	16	3.4
1997 *yala*	257	5	1.9
1997/98 *maha*	574	10.18	1.8
1998 *yala*	298	4.42	1.5
1998/99 *maha*	538	8.27	1.5
1999 *yala*	341	4.89	1.4
1999/2000 *maha*	549	7.86	1.4
2000 *yala*	812	3.58	0.4
2000/2001 *maha*	479	3.72	0.8
2001 *yala*	319	1.72	0.5
2001/2002 *maha*	531	2.2	0.4
2002 *yala*	319	1.8	0.6
2002/2003 *maha*	618	4.7	0.8
2003 *yala*	401	3.7	0.9
2003/2004 *maha*	542	4.0	0.7
2004 *yala*	258	2.0	0.8
2004/2005 *maha*	581	5.8	0.9

Source: AIB

A significant extent of about 40% of the cultivated lands was insured during the *maha* season in 1977/78. This drastically sank to a very low level of 9% in *maha* 1994/95 and further declined thereafter. From the *maha* season 1994/95 to *maha* 2004/2005, the percentage of insured paddy lands has dropped from 9% to 1%, consequent upon the lower farmer participation. The situation was more or less the same for all paddy lands cultivated in 2005.

Table 5.5: Participation Ratio in Terms of No. of Farmers

Year/Season	No. of Farmers Participation in Paddy Insurance Programme
1994/1995 *maha*	47,856
1995 *yala*	15,260
1995/1996 *maha*	22,480
1996 *yala*	7,200
1996/1997 *maha*	14,800
1997 *yala*	5,422
1997/1998 *maha*	9,801
1998 *yala*	4,254
1998/1999 *maha*	7,897
1999/ *yala*	4,571
1999/2000 *maha*	7,365
2000/ *yala*	3,237
2000/2001 *maha*	3,344
2001 *yala*	1,559
2001/2002 *maha*	1,926
2002 *yala*	1,457
2002/2003 *maha*	4,350

Source: AAIB

A total number of 47,856 farmers participated in the paddy insurance scheme in the *maha* 1994/1995, which dropped to 4,350 in the *maha* 2002/2003. This represents a decline of 91% due to a variety of reasons. As for farmer participation, the voluntary participation has gradually declined. The AAIB engaged in the expensive exercise of increasing voluntary participation from 1983 up to 1989, taking measures like increasing coverage, etc. But, the end result was the same. Now, Sri Lanka's paddy crop insurance scheme is directly linked with the bank loans for cultivation purpose.

Table 5.6: Total Insured Farmers by Type of Participation

Season	Direct Participation %	Loan Participation %
1994/1995 *maha*	5	95
1995 *yala*	8	92
1995/1996 *maha*	8	92
1996 *yala*	9	91
1996/1997 *maha*	5	95
1997 *yala*	6	94
1997/1998 *maha*	2	98
1998 *yala*	1	99

Source: AAIB

The above table ratifies the fact that over 90% of the total insured farmers had done so to get crop loans from the banks.

5.3.4 Expenses Ratio Analysis

The paddy insurance scheme, which provides insurance coverage for natural and other types of risks, is normally considered as a non-viable venture from a business point of view.

Table 5.7: Expenses Ratio Analysis

Year	Premium Collection (Rs.)	Cost of Operation (Rs.)	Administrative Expenses (Rs.)	Total Expense (Rs.)	Expense Ratio
1995	42,430,660	2,525,237	24,053,011	26,578,248	0.63
1996	15,770,090	1,405,589	25,123,900	26,529,489	1.70
1997	13,297,204	1,098,303	30,359,812	31,458,115	2.40
1998	9,250,889	719,310	19,910,238	20,629,548	2.23
1999	7,864,368	114,353	18,825,404	18,939,757	2.41
2000	6,968,986	404,607	35,360,293	35,764,900	5.13
2001	3,392,140	368,648	37,785,116	38,153,764	11.25
2002	2,717,416	205,580	36,304,181	36,509,761	13.43
2003	5,992,708	259,948	8,307,965	8,567,913	1.43
2004	4,912,341	460,756	15,456,072	15,916,828	3.24
2005	7,037,535	325,377	8,939,717	9,265,094	1.32

Source: AAIB

The statistics for the period 1995-2005 reveal that the expense ratio was very high in most of the years. For a premium of Re.1.00, the Board had to expend more on operational and administrative cost. This ratio was very significant in the year 2001 and 2002.

The commitments of indemnities, administrative and operational expenses have a exceeded in the premium collection crop insurance scheme. Income and expenditure account of the paddy insurance scheme in 2005 is as follows. Administrative expenses are far beyond the indemnity payments; more than 65% of the total expenditure of the Board in 2005.

Income	Rs.
Insurance Premiums Collected	4,061,655
Other Income	253,151
Interest on Investment	5,586,960
Total Income	**9,901,766**
Expenditure	
Indemnities	4,014,167
Operational Expenses	325,378
Administrative Expenses	8,939,717
Total Expenditure	**3,279,262**

CHAPTER SIX

Review of the Other Insurance Schemes of the Agricultural and Agrarian Insurance Board and Government Intervention

6.1 Other Insurance Schemes

6.1.1 Livestock Insurance Scheme

The livestock insurance scheme commenced in 1976, offering insurance coverage to cattle, provided to the farmers for rearing under a dairy development project sponsored by the International Development Agency (IDA). This project lasted up to 1980. A higher mortality rate was recorded for imported cattle at the initial stage of the project, due to the difficulties of imported breeds to adjust for the tropical conditions. In 1979, a scheme was launched to insure local animals issued to farmers under a project implemented by the Ministry of Rural Industrial Development. With the increasing number of animals and time, the mortality rate gradually declined.

By the year 2005, the livestock insurance scheme had been in operation for 29 years. Although, it was initially started for cattle, it has now been expanded for goats, heifer and poultry, with a successful distribution island-wide.

Statistics for the last ten years (1996-2005) reveal the performance of the livestock insurance scheme. At the end of 2005, the total number of insured animals of this scheme exceeded 100,000 heads since its inception.

Table 6.1: Performance of the Livestock Insurance Scheme

Year	No. of Insured Animals	Premium Collected (Rs.)	Indemnity Paid (Rs.)	Gross Loss Ratio
1996	8,289	3,214,732	1,025,854	0.3
1997	4,977	1,717,306	760,506	0.4
1998	7,297	2,566,577	1,257,978	0.5
1999	10,301	3,659,886	1,319,974	0.4
2000	10,109	3,673,493	1,427,957	0.4
2001	8,991	3,021,410	1,246,855	0.4
2002	7,460	2,596,220	204,659	0.1
2003	9,389	2,979,536	2,495,558	0.8
2004	26,339	2,873,710	1,768,017	0.6
2005	13,016	4,123,458	1,827,568	0.4

Source: AAIB

According to the table, the gross loss ratio is less than 1 in every year. Amount of annual average premium collected was Rs.30 million and the average indemnity paid was Rs.13 million, during the last ten year period, an increase of 28% in the premium income. However, indemnity payments have increased by 78% within the same period. Altogether 8,289 animals were insured in 1996 which increased to 13,016 in 2005. The breakdown of the total insured animals by categories is tabulated below:

Table 6.2: Total Insured Animals by Categories

Animal	2001	2002	2003	2004	2005
Heifer	3,348	546	-	-	19
Cattle	1,557	1,759	1,951	2,305	3,315
Goat	4,089	5,155	5,323	4,661	4,078
Poultry	-	-	-	19,373	5,604
Total	8,994	7,460	7,274	26,339	13,016

Source: AAIB

Of the animals insured during the period 2001- 2005, the cattle and goat insurance has made at steady progress. Poultry insurance commenced from 2004 and the total number of birds insured marked the highest level in 2004 and 2005, compared with other categories.

Table 6.3: Indemnity Payments

Year	No. of Insured Animals	No. of Animals Indemnity Paid	Percentage of Animals Indemnity Paid
2001	8,994	313	3%
2002	7,460	419	6%
2003	7,274	444	6%
2004	26,339	342	1%
2005	13,016	278	2%

Source: AAIB

Table shows, that only a very small number of animals accounted for indemnification and percentage wise it was a minimal of 4.

Table 6.4: Targets and Achievements of the Livestock Insurance Scheme of the AAIB

Year	No. of Target Animals	No. of Achievements	Percentage of Achievements
2001	11,570	8,994	77%
2002	11,825	7,460	63%
2003	10,980	7,274	66%
2004	87,200	26,339	30%
2005	73,519	13,016	18%

Source: AAIB

The table reveals that the scheme has maintained a fairly satisfactory progress. During the years 2001, 2002 and 2003 the achievement exceeded 60% of the total target. Comparatively 2004 and 2005 registered a very lower level.

However, when compared with the crop insurance scheme, the livestock insurance scheme can be considered as a viable enterprise less vulnerable to risks. Income and expenditure of the livestock insurance scheme in 2005 are as follows;

Income and Expenditure

Income	**Rs.**
Premium collected	2,984,683
Other Income	253,151
Income	**3,237,834**
Expenditure	
Indemnities	2,464,089
Operational Expense	739,732
Expenditure	**3,203,821**

6.1.2 Subsidiary Food Crops and Other Crop Insurance Schemes

The AAIB operates insurance schemes for subsidiary food crops and other crops such as seasonal crops, perennial crops, and plantation crops. The AAIB launched an insurance scheme for seed bean cultivation in a particular district of the island from 1984 *yala* season. An insurance scheme for chilli got under way in one of the dry zone districts from the 1985 *yala* season. Subsidiary food crops like soya bean, green gram, cowpea, chilli and groundnut etc, were offered insurance coverage in a high land-farming project in the dry zone districts in the southern part of the island, commencing from 1984/85 *maha* season. Sugar cane grown by the farmers under a settlement project also came under insurance. Betel, a commercial crop grown particularly in the wet zone of the country was also insured. This insurance programme was implemented on a pilot project basis in two districts.

The board also offered an insurance coverage to girkin, a commercial crop meant for the export market. Pineapple growers in selected areas were also qualified for insurance.

Under the other crops insurance scheme, the Board introduced two new crop insurance schemes for tobacco and gingerly in 2001. Ornamental plants including, anthurium and orchid cultivated on a commercial scale too were extended insurance coverage.

The AAIB in collaboration with the Department of Agriculture also implemented the export crop insurance scheme. Export crops suffered heavily as a result of the severe drought experienced in Hambantota, Moneragala, Gampaha and Kandy districts, during the latter part of the year 2001.

Performance of the insurance of those crops is shown as follows:

Table 6.5: Insurance Scheme of Sugar Cane

Year	Insured Acre	Premium (Rs.)	Indemnities Paid (Rs.)	Gross Loss Ratio
1994	335.8	62,926	9,288	0.1
1995	2,127.0	473,770	218,957	0.5
1996	937.0	183,481	259,551	1.4
1997	786.0	250,000	141,703	0.6
1998	314.7	66,670	124,185	1.9
1999	380.0	106,698	15,644	0.1
2000	976.0	385,024	353,553	0.9
2001	722.0	324,834	364,353	1.1
2002	703.0	337,844	112,903	0.3
2003	144.5	65,410	0	0

Source: AAIB

During the period from 1994 to 2003, the gross loss ratio was less than 1 in most years, indicating a premium collection over and above the indemnities.

Table 6.6: Insurance Scheme of Coconut Cultivation

Year	Insured Acre	Premium Collected (Rs.)	Indemnity Paid (Rs.)	Gross Loss Ratio
1994	1,190	529,793	56,469	0.1
1995	1,550	675,000	40,600	0.1
1996	5,490	2,358,842	36,910	0.2
1997	277	155,000	12,255	0.1
1998	31	15,254	221,370	14.0
1999	100	19,500	51,550	2.6
2000	2.33	1,216	0	0
2001	NA	NA	NA	NA
2002	35.5	28,420	0	0
2003	16	3,480	0	0

Source: AAIB
NA=Not Available

From 1994 to 1997, the gross loss ratio was at a very low level. In 1998, it was very high and the total insured acres have dropped drastically after 1997.

Table 6.7: Insurance Scheme of Chillies

Year	Insured Acre	Premium Collected (Rs.)	Indemnity Paid (Rs.)	Gross Loss Ratio
1994	2,150	1,242,330	4,381,452	3.5
1995	3,102	1,862,850	2,941,421	1.6
1996	370	183,680	397,360	2.2
1997	692.5	404,940	0	0
1998	NA	NA	NA	NA
1999	696.25	417,750	116,200	0.3
2000	161.5	114,150	0	0
2001	184	115,650	79,440	0.6
2002	70.25	42,150	23,487	0.5
2003	23.5	22,480	0	0

Source: AAIB
NA=Not available

After the period from 1996, the gross loss ratio was at a satisfactory level. But, the total insured acreage of chilli has dropped gradually.

Table 6.8: Insurance Scheme of Big Onion

Year	Insured Acres	Premium Collected (Rs.)	Indemnity Paid (Rs.)	Gross Loss Ratio
1995	961	1,241,450	346,566	0.3
1996	370	166,600	259,551	1.5
1997	172	173,175	3,825	0.02
1998	11	11,700	0	0
1999	78.33	101,900	135,256	1.3
2000	17	25,500	59,906	2.3
2001	81.25	121,875	106,290	0.8
2002	NA	NA	NA	NA
2003	3.3	4,875	13,563	2.8

Source: AAIB
NA=Not Available

After 1997, the participation in the big-onion insurance scheme has dwindled. Gross loss ratio was also higher than 1 in most of the years during that period.

6.1.3 Farmer Pension and Social Security Benefit Scheme

This scheme is indirectly related with the insurance of crops. But, the two schemes have close linkages after the implementation of the farmer pension scheme in March, 1987. Over 50,000 farmers have joined in this scheme and Rs.32,324,706/= by way of farmer contribution have been collected as at 1st of January, 1990. Further, a total of Rs.2,123,000/= have been paid as a result of 133 reported deaths and 7 reported disabilities. The enrolment in this scheme is summarized in table 6.9.

Table 6.9: Enrolment of Farmers for the Farmers' Pension and Social Security Benefit Scheme

Year	No. of Enrolments
1987	13,459
1988	21,810
1989	9,455
1990	38,712
1991	86,094
1992	45,004
1993	17,762
1994	10,973
1995	15,952
1996	45,404
1997	28,915
1998	94,243
1999	80,120
2000	68,334
2001	72,208
2002	30,953
2003	35,524
2004	44,358
2005	32,799
Total	**792,147**

Source: AAIB

Since its inception, the total number of farmer enrolments to this scheme has exceeded 750,000. In the year 1987 it was 13,459 and in 2005 it was 32,799 an increase of 19,340 farmers. The rate of enrolments during the last 8 years has shown a comparatively upward trend. The enrolment of farmers in 2001, under the special programme 'Rekawaranaya' which was implemented for the first time can be mentioned as a special occasion.

Figure 6.1: Performance of the Farmer Pension Scheme

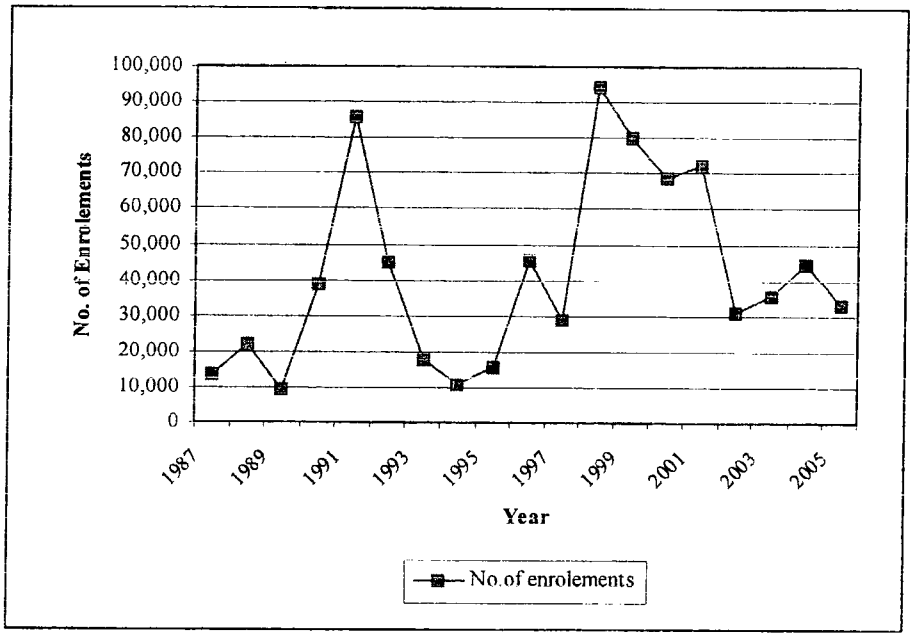


Table 6.10: Targets and the Achievements of the Farmer Pension Scheme

Year	Targets	Achievements	Percentage of Achievements
2001	60,000	72,208	120%
2002	50,000	30,953	62%
2003	50,000	35,524	71%
2004	54,000	44,358	82%
2005	58,000	32,799	57%

Source: AAIB

The target for 2001 was 60,000 contributors, but 72,208 farmers were enrolled exceeding the target. Table reveals that the achievement of the farmers' pension scheme was satisfactory. In most of the years, it has been able to reach over 50% of the set target.

Table 6.11: Enrolment of Farmers from the Beginning up to the End of 31st July 2005

Age Range	18-29	30-35	36-45	46-50	51-54	55-59	Total
No. of Farmers	249,715	148,288	196,536	69,665	50,049	65,219	779,472
Percentage	32%	19%	25%	9%	7%	8%	100%

Source: AAIB

Statistics on the farmers' pension and social security benefit scheme from the beginning up to the end of 31st July 2005 reveal that the highest number of enrolments was recorded from among the young farmers (age range 18-29). It was 32% of the total enrolments.

Details of the payment of pension and collection of premia are summarized as follows:

Table 6.12: Net Loss Ratio of the Farmer Pension Scheme

Year	Net Premium Collected Rs. (1)	Payment of Pension Rs. (2)	Difference between (1)-(2) Rs.	Net Loss Ratio
1992	41,321,377	1,711,500	39,609,877	0.04
1993	43,955,669	4,887,202	39,068,467	0.10
1994	40,752,423	797,189	39,955,237	0.02
1995	49,789,118	13,193,390	36,595,728	0.30
1996	109,907,878	31,371,336	78,536,542	0.30
1997	80,011,432	50,678,085	29,333,347	0.60
1998	112,964,881	62,591,948	50,372,933	0.50
1999	139,122,070	74,198,822	64,923,248	0.50
2000	198,090,641	88,585,200	109,505,441	0.40
2001	212,264,839	116,202,030	96,062,809	0.50
2002	220,680,792	166,742,791	53,938,001	0.70
2003	152,171,304	224,700,646	-72,529,342	1.50
2004	169,973,147	334,710,182	-164,737,035	2.00
2005	161,843,217	416,185,474	-254,342,257	2.60

Source: AAIB

The government had recommended the establishment of a fund called the Farmers Pension Fund to carry out the financial functions of the farmer pension and social security benefit scheme. The main source of income of the fund had been identified as the contributions of the farmers, government grants to the fund and the interest income earned on the investment of the excess finances of the fund. The main items of expenditure of the fund had been identified as the payment of the farmer's pension

and expenditure amounting to 2% of the interest income as administrative expense of the scheme. As the scheme did not envisage payment of pension during the first five years, it was expected to build up a fund during that period.

According to the table net loss ratio was at a very low level in the early years. After 1996, it has shown an increasing trend, moving up to more than 1.5 from the year 2003. Payments of pension could not be met within the premium collected, during the period of 2003-2005. According to the table 6.12, during the period of 1996 to 2005, the premium collected has increased by around 292% due to the increasing trend of farmer participation in this scheme. However, the payments of pension have marked a massive increase of around 24,000% during the period. Several reasons can be attributed to this phenomenon.

As a whole, young farmers participated in the scheme on a large scale since its inception. But, the situation has changed during the recent years. The rate of contribution of the members within the age range of 55-59 years was less than 20% at the beginning and it has increased up to 40% from the year 2002. Hence, the Board was called upon to pay an unprecedented sum of money by way of pensions. This is higher than the premium collected. Although the minimum pension payable has changed several times from 1992, the premium rates have remained unchanged since its inception. This was another reason for the rise of the net loss ratio.

6.1.4 'Suva Setha' Health Insurance Scheme

The 'Suvasetha' health insurance scheme launched by the Board in terms of Agricultural and Agrarian Insurance Act. No.20 of 1999 came into operation from the year 2000. This scheme aimed at providing financial benefits to the farmers to defray expenses incurred by them as hospital charges, charges for surgery, etc. There is a significant progress in farmer contribution to this scheme. A list of contributors enrolled from 2001 up to April 2006, is given in table 6.13.

Table 6.13: Enrolment of Contributors

Year	No. of Enrolments
2001	3,649
2002	549
2003	905
2004	1,453
2005	2,090
2006 (Up to April)	4,100

Source: AAIB

6.2 Government Intervention in the Agricultural Insurance Scheme

Risk management interventions are quite often undertaken by governments because agriculture plays a critical role in the economies of many developing countries (Pramod K. Mishra, Agricultural Risk, Insurance and Income,1996).

Government intervention in crop insurance scheme;

i. The government directly or indirectly undertakes its administrative responsibility and bears the entire or the major part of its cost of administration.
ii. The government also shares a part of the risk of crop production, or pays a part of the premium usually to keep the cost of insurance within the paying capacity of the farmers.
iii. The government also generally underwrites the excess risks through provision of capital funds (as in U.S.A.) reinsurance or loans (as in Japan and Canada) and/or through special grants from the general budgetary funds.

Such cost and risk sharing by the government is justified primarily on two grounds:

i. The special susceptibility of agricultural and specially crop production to losses due to natural causes over which farmers generally have no or little control.
ii. The general interest and dependence of an entire community or country for food and other essential agriculture raw materials on a sound system of agricultural production as well as on a financially strong farming community (P.K.Ray, Crop Insurance in Asia, 1987).

However, a survey of crop insurance programs all over the world shows that most of these institutions are either state owned or state operated. Dr.Ryohel Kada, analysed the factors that have contributed to the Japanese rice crop insurance scheme particularly:

i. Well-balanced government leadership and spontaneous farmer participation;
ii. Well-organized social infrastructure;
iii. Continued financial support by the national government.

The government intervention to provide financial support to the agricultural insurance program in developing countries is very important for the under mentioned reasons.

i. The government has better access to information of farmers' risks in view of its existing network to gather such information. The private sector does not invest in such an undertaking considering the greater risk involved in agriculture compared to other schemes.
ii. The second reason on the other hand, is based on the argument that while the government is willing and able to allocate large funds to industry and other

non-agricultural sectors, it should provide the same support to agriculture, which happens to be the major source of income of most countries. With active government intervention, the farmers are given proper motivation to better increase production and income (Agricultural Insurance in Asia, Seminar report, 1990, Japan).

Agricultural insurance in Sri Lanka is not a profit-oriented enterprise. The heavy government subsidy involved reflects the service-oriented nature of the scheme. However, the Agricultural and Agrarian Insurance Board (AAIB) has been able to operate the schemes with the Government assistance as a welfare service to the rural farming community. The government of Sri Lanka announced that the government grant to the AAIB would be terminated from the financial year 1998. Therefore, the Board has organized its activities so as to become financially viable. In addition, in the context of the new economic liberalization policies of the country, the Board has to compete with other private sector insurance companies in crop and livestock sectors. However, the expenses are more than the income of the Agricultural Insurance Board, in every year. As a result, the board has to depend on government grants. The total administrative cost of the Board was to be borne by the government. Government grants for the administration expenses for the period 1995-2002 are indicated below.

Table 6.14: Government Grants for Administration Expenses

Year	Grants (Rs.)
1995	11,165,533
1996	8,600,000
1997	10,000,000
1998	14,600,000
1999	17,500,000
2000	33,050,900
2001	36,197,500
2002	32,200,000

Source: AAIB

Government grants towards the capital of the Agricultural Insurance Board are presented below.

Table 6.15: Government Grants for Capital

Year	Grants (Rs. million)
1991	24
1992	30
1993	38
1994	39
1995	39
1996	41
1997	44
1998	46
1999	51
2000	54
2001	58
2002	60

Source: AAIB

Since its inception, the Board obtained annual government grants to manage its activities, which are considered as a welfare service to the farming community. However, the Board functioned under the consolidated fund of the government since its inception in 1974 and it was brought within a broader framework by the Act No. 20 of 1999, with a view to establishing it on a self financing basis.

According to the recommendations of an advisory committee, the government should make a contribution of Rs.750 million to the farmers' pension fund for 10 years at Rs.75 million per year. However, the government contributions for the fund had been received only for 4 years as shown below:

Table 6.16 Government Contribution to Farmer Pension Fund

Year	Contribution (Rs.)
1987	66,750,000
1988	75,000,000
1989	25,000,000
1990	6,500,000

Source: AAIB

It was observed from the above that out of the funds expected as government contributions only a sum of Rs.173 million (23%) had been received. According to the actuarial report of the AAIB in 2000, the farmers' pension scheme fund was of a very unsound position during the period from 1992 to 2000, resultant on the non-receipt of the government grants as specified. Its assets will be adequate to pay only 18.5% of the proposed pensions.

CHAPTER SEVEN

Farmer Participation in the Paddy Insurance Scheme

7.1 Introduction

Agricultural insurance is mainly dovetailed and integrated with the participation of farmers. The objective of the crop insurance scheme in Sri Lanka is to reduce the farmers in case of risks in an agricultural undertaking through suitable indemnification and it also aims at stabilizing farmers' income particularly in disaster ridden periods. It can be effective when fluctuations in income are primarily due to variation in yield.

The success of agricultural insurance depends on widespread participation of a large proportion of farmers. But, the drop in farmer participation in the scheme had been a problem throughout. Steven Holmstrom *etal,* (1981) have reported that low participation and the lack of motivation to join the crop insurance scheme are attributed mainly to the existence of different categories of farmers such as:

i. Affluent farmers with own capital able to face crop failures and live in low risk areas.
ii. Part time farmers having other source of income.
iii. Subsistence farmers, with small plots unable to pay the insurance premium.

However, the farmer participation in the agricultural insurance scheme is the most significant factor, because it is mainly dovetailed with the farmers. To ensure a successful participation of farmers in this scheme, it is very important to identify the problems, and get back ideas, and suggestions of farmers with regard to this scheme. To achieve this objective, a sample survey was carried out in four major paddy producing districts and data and information were collected from both insurance holders (AAIB and CICL).

7.2 Socio-economic Background of Farmers in the Study Area

7.2.1 Educational Level and Age Group

The total sample size was 295 (except for Ampara district) of insured paddy farmers comprising 202 farmers under the AAIB and 93 farmers under the CICL in Kurunegala, Anuradhapura, Polonnaruwa and Hambanthota districts. The following table reflects the distribution of the targeted population and the sample size in each district:

Table7.1: Spatial Distribution of Farmers in Each District

Districts	AAIB		CICL	
	Targeted Population	Sample Size	Targeted Population	Sample Size
Kurunegala	278	56	56	11
Anuradhapura	117	23	45	9
Polonnaruwa	325	65	164	33
Hambanthota	291	58	200	40
Total	1,011	202	465	93

Source: HARTI Survey data, 2006

About 78% of total sample population comprised males and the rest females. Table 7.2 reflects the percentage distribution of the total sample population according to the age groups

Table 7.2: Distribution of Sample Farmers by Age Groups

Age group	Percentage
20 < 30	5
30 < 40	17
40 < 50	27
50 < 60	29
60 < age	22

Source: HARTI Survey data, 2006

According to the table, the higher percentages of farmers, 29% and 27% belong to the age group of 50-60 years and 40-50 years respectively. It reveals that the majority of insured farmers are over 40 years of age. Participation of young farmers in the crop insurance scheme was very much low.

The educational status of the sample farmers is given in table 7.3

Table 7.3: Level of Education

Level of Education	Percentage
No schooling	3
1-5 (primary)	24
6-10 (secondary)	31
G.C.E. (O/L)	28
G.C.E. (A/L)	12
Technical/Diploma	1
Graduate	1
Total	100

Source: HARTI Survey data, 2006

Table 7.3 reveals that the majority of the farmers had received a primary or secondary education and 28% had G.C.E. (O/L) qualification. The situation is very favourable for the AAIB to run a proper awareness program about the crop insurance scheme. So that the majority of the farmers would be in a position to convince themselves of the scheme resulting in an increase in the voluntary participation of farmers' in this scheme.

7.2.2 Primary Occupation and Monthly Household Income

The table 7.4 indicates the major occupations of the sample household farmers.

Table 7.4: Primary Occupations

Primary Occupation	Percentage (%)
Farming	87
Trading	1
Self Employment	1
Government Employment	8
Pensioner	2
Animal Husbandry	1
Total	100

Source: HARTI Survey data, 2006

As expected, the larger majority of the insured farmers are engaged in farming, pursuits as their mainstay. So far as the monthly income level of the sample household is concerned at Kurunegala, Anuradhapura and Polonnaruwa, the monthly income of the majority of farmers amounts to Rs.10,000 to Rs.20,000. Most of the farmers who earn a monthly income over Rs.20,000, were reported from Hambanthota and Polonnaruwa. Monthly household income distribution of the sample farmers is tabulated below.

Table 7.5: Monthly Household Income Distributions of Sample Farmers

Districts	<Rs.1,000	Rs.1000< Rs.10,000	Rs.10,000< Rs.20,000	Rs.20,000<	Total
Kurunegala	8%	38%	39%	15%	100
Anuradhapura	4%	40%	39%	17%	100
Polonnaruwa	-	22%	53%	25%	100
Hambanthota	-	13%	42%	45%	100

Source: HARTI survey data

7.3 Type of Ownership of Land and Type of Irrigation

7.3.1 Type of Ownership

In the surveyed areas, more than 70% of the farmers under the paddy insurance scheme at Kurunegala, Anuradhapura, and Polonnaruwa, solely own their lands. At Hambanthota, 61% of the farmers own their lands and 30% are tenant farmers. Share tenancy type farmers are higher in Hambanthota district than in other districts. However, most of the farmers who insured their paddy lands owned their holdings.

Table 7.6: Ownership of Land

District	Ownership of Land (%)					Total
	Sole Owned	Jointly Owned	Share Tenancy	Leased	Mortgage	
Kurunegala	70	11	18	-	1	100
Anuradhapura	75	7	8	8	2	100
Polonnaruwa	83	-	13	4	-	100
Hambantota	61	3	30	5	1	100

Source: HARTI Survey data, 2006

7.3.2 Irrigation Type

As the study locations were selected to represent the major five paddy producing districts, most of the study villages had the major irrigation facilities. At Kurunegala, the farmers who worked in major irrigation schemes and rain fed conditions insured their paddy lands while at Anuradhapura both major and minor irrigated paddy lands were insured. Both at Polonnaruwa and Hambanthota, only major irrigated lands were insured. This data reveals the fact that the high-risk areas have been left out of the scheme for the most part.

Table 7.7: Irrigation Type

District	Irrigation Type (%)			Total
	Major	Minor	Rain fed	
Kurunegala	50	4	46	100
Anuradhapura	64	36	-	100
Polonnaruwa	100	-	-	100
Hambanthota	100	-	-	100

Source: HARTI Survey data, 2006

According to the table 7.7, about 50% of the farmers in Kurunegala district were served by major irrigation, while 46% were under rain-fed cultivation.

7.3.3 Extent of Land Cultivated

The percentage of insured farmers in relation to the total extent of cultivation (both high lands and low lands) is shown in the table 7.8.

Table 7.8: Farmer Participation by Extent of Cultivation

District	Extent of Cultivation in Acres (%)				Total
	<1	1<3	3<5	5 <	
Kurunegala	22	64	11	3	100
Anuradhapura	3	43	39	15	100
Polonnaruwa	0	69	18	13	100
Hambanthota	1	34	52	13	100

Source: HARTI Survey data, 2006

According to the statistics, over 60% of the insured farmers in Kurunegala and Polonnaruwa districts cultivated holdings of more than 1 acre but less than 3. On the other hand, the majority of the insured farmers (52%) in Hambanthota had cultivated extents of 3 to 5 acres. According to the survey, more than 75% of the farmers, who obtained the paddy insurance policy, owned 1-5 acres of paddy lands, revealing the tendency on the part of the small scale farmers to resort to insurance.

7.4 Obtaining of Credit for Crop Cultivation

7.4.1 Source of Credit

The crop insurance scheme has been directly linked with the farmers' possibilities to get bank loans for cultivation purposes. The amount of crop loans taken by the farmers mainly determines the insurance coverage, in the agricultural insurance scheme.

Table 7.9 indicates the percentage of farmers' responses for getting cultivation loans.

Table 7.9: Farmers Responses for Getting Crop Loans

District	Farmers Responses for Getting Crop Loans (%)		Total
	Yes	No	
Kurunegala	96	4	100
Anuradhapura	92	8	100
Polonnaruwa	97	3	100
Hambanthota	97	3	100

Source: HARTI Survey data, 2006

In all the four districts, almost all the farmers sampled, had obtained crop loans from lending institutions. This proportion ranges between 92% - 97% of the total sample in every district. However, it was 100% in every district under the CICL, because

voluntary participation was not observable in the CICL agricultural insurance scheme. It is mainly determined by the crop loan.

The higher cost of inputs necessitates the farmers to seek agricultural credit. Most of the lending institutions do not issue any agricultural credit without proper insurance coverage. The crop credit insurance provides relief to both the farmers and the lenders at the same time. While providing an incentive for promoting the agricultural sectors, the farmers have crop insurance to protect themselves against losses in production and the banks have desired some sort of credit insurance system to protect themselves against default of payments resulting from the farmers' inability to re-pay loans when they suffer crop losses.

Table 7.10: Source of Credit

District	Source of Credit (%)			Total
	State Banks	Private Banks	Other	
Kurunegala	96	-	4	100
Anuradhapura	66	32	2	100
Polonnaruwa	99	1	-	100
Hambanthota	81	19	-	100

Source: HARTI Survey data, 2006

The percentage of farmers who obtained crop loans is indicated in table 7.10, which revealed that the majority of the farmers in each district have depended on the state banks for crop loans. It clearly shows that, if the crop insurance is made a compulsory collateral when disbursing cultivation loans, the coverage will increase as majority of the farmers are dealing with the government banks.

7.4.2 Loan Amount

Table 7.11 indicates the loan amount, borrowed by farmers from the credit institutions.

Table 7.11: Loan Amounts

Districts	Loan amount (Rs.)					
	< 10,000	10,000< 20,000	20,000< 30,000	30,000< 40,000	40,000< 50,000	50,000<
Kurunegala	41%	26%	21%	6%	3%	3%
Anuradhapura	26%	36%	26%	4%	4%	4%
Polonnaruwa	-	26%	59%	15%	-	-
Hambanthota	4%	11%	46%	14%	18%	7%

Source: HARTI Survey data, 2006

In Kurunegala district, 41% of the farmers borrowed less than Rs.10, 000/= each for their cultivation purposes and in Anuradhapura district, 36% of the loans ranged

between Rs.10,000/= to Rs.20,000/=. Most of the responded farmers in Polonnaruwa (59%) and Hambanthota districts (46%), borrowed up to Rs.20,000/= but not more than Rs.30,000/=. This was mainly due to the large extent of cultivated and insured lands within those two districts.

Table 7:12: Mean Value of Credit Obtained and the Insured Extent

District	Mean Value of Credit Amount (Rs.)	Mean Value of Insured Extent (Acres)
Kurunegala	13,860	1.83
Anuradhapura	11,830	2.45
Polonnaruwa	28,826	3.26
Hambanthota	31,948	3.55

Source: HARTI Survey data, 2006

Table 7.12 presents the mean value of credit obtained by the sample farmers and mean value of the cultivated extent. In Polonnaruwa and Hambanthota districts, the value of loans, amount of credit and the extent of insured lands were higher than in the other districts. However, in all the four districts the crop loan was mainly dovetailed with the extent of insured lands.

7.4.3 Payment of Credit

The high defaulting rate of loans in a singular obstacle faced by the lending banks (Maurice and Nelson, Exploiting crop-credit insurance for development purposes in developing nations,1977). However, according to field observations, the re-payment situation was at a satisfactory level. More than 60% of farmers in these districts have totally settled their crop loans. A majority of the farmers had reported that in the event of their difficulties of the payment, they would be deprived of their entitlement to credit for cultivation.

Table 7.13: Payment of Credit

District	Payment of Credit (%)					Total
	Completed Payment	Still Paying the Loan	Time Available to settle Loan	Payments not Completed	Paid at Once End of Season	
Kurunegala	60	24	-	16	-	100
Anuradhapura	66	18	-	16	-	100
Polonnaruwa	72	13	3	12	-	100
Hambanthota	90	3	-	5	2	100

Source: HARTI Survey data, 2006

The re-payment situation was much better in Polonnaruwa and Hambanthota districts, because the monthly income level of the farmers of the two districts was also better than in the other districts.

7.4.4 Crop Insurance as a Compulsory Component in Crop Loan Programme

An agricultural insurance programme also has something to offer to an institutional credit programme. Even at times of crop failure, it enables the credit institution to recover their loans and assures sufficient liquidity for further credit operations. Agricultural insurance itself could be offered as collateral for loans (N. Sandarathna, 1974) using insurance to reduce risk in peasant agriculture.

The payment of the insurance premium is compulsory for granting crop credit by most of the government and private banks. In the event of crop failure, an agreed proportion of the indemnity payments is paid by the Agricultural Insurance Board directly to the credit agencies (banks). Although the amount of indemnity is inadequate to cover the total crop loan in most instances, it helps to reduce the farmers' debt to some extent. In other words, despite crop insurance, a farmer continues to be in debt after a crop failure.

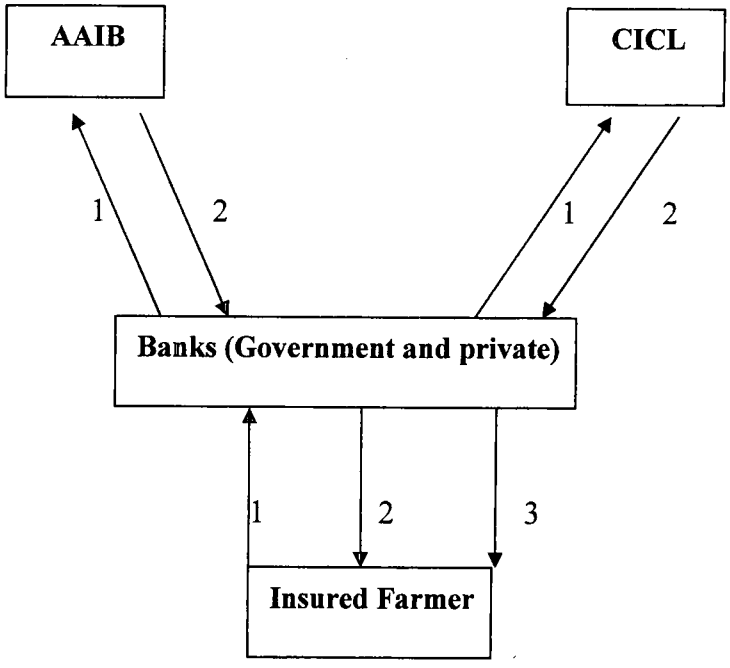
Our field survey revealed that, almost all the farmers who borrowed crop loan from banks had insured their crop lands. Table 7.14 indicates the percentage of the farmers who respond to the compulsory nature of insurance to get crop loan.

Table 7.14: Crop Insurance as a Compulsory Component to get Crop Loans

District	Whether Crop insurance is Compulsory to Get Crop Loan? (%)		Total
	Yes	No	
Kurunegala	92	8	100
Anuradhapura	94	6	100
Polonnaruwa	100	-	100
Hambanthota	98	2	100

Source: HARTI Survey data, 2006

Figure 7.1: Operation of Crop Insurance and Credit



1 – Premium
2 – Compensation
3 – Agricultural credit

7.5 Factors Influencing Farmers' Participation in Crop Insurance Scheme

7.5.1 Awareness of Farmers about Crop Insurance

Table 7.15 shows that, more than 50% of the farmers (insured) in all the four districts were not aware about the crop insurance scheme.

Table 7.15: Farmers Awareness

District	Knowledge about Crop Insurance (%)		Total
	Yes	No	
Kurunegala	37	63	100
Anuradhapura	50	50	100
Polonnaruwa	43	57	100
Hambanthota	32	68	100
Total	41	59	100

Source: HARTI Survey data, 2006

Farmers, who insured were aware about this, only as a requirement for borrowing crop loans from the lending institutions. Other than that, they did not have a clear idea about the benefits or importance of the crop insurance scheme, prompting them to request that insurance should not be made compulsory for obtaining crop loans.

This survey revealed that, almost all the farmers insured were loan takers. As shown in the table 7.16, the majority of the farmers reported that, their participation in the crop insurance scheme was mainly conditioned by the loan. Crop insurance is one of the tools of risk management in agriculture about which the farmers have the least knowledge. Table 7.16 presents the reasons given by the sample farmers for participation in the crop insurance scheme.

Table 7.16: Reasons for Participation

District	Reasons (%)			Total
	To Get Crop Loan	Natural Hazards	To Get Crop Loan and Natural Hazards	
Kurunegala	96	4	-	100
Anuradhapura	95	-	5	100
Polonnaruwa	94	-	6	100
Hambanthota	100	-	-	100
Total	93	4	3	100

Source: HARTI Survey data, 2006

7.5.2 Methods of Awareness

It transpired in the study that the farmers had relied on seven sources, tabulated below, to make themselves aware of the agricultural insurance scheme.

Table 7.17: The Methods of Awareness

Methods of Awareness	% of Farmers
Insurance Officer	40
Media	3
Banks	38
Other farmers	11
Agricultural Officer	1
Govi Niyamaka	1
Mahaweli Officer	1
Other	5
Total	**100**

Source: HARTI Survey data, 2006

Majority of the sample farmers (40%) had their awareness from the insurance officer. About 38% came to know of the scheme through banks. However, the involvement of such officers as the Agriculture Officer, the Govi Niyamaka and the Mahaweli Officer was almost negligible in disseminating the crop insurance programme among the farmers.

7.5.3 Extent of Insured Paddy Lands

The extent of insured paddy lands in the 2004/2005 *maha* season is shown in table 7.18

Table 7.18: Extent of Insured Paddy Lands

Districts	Extent of Insured Paddy Lands (%)						Total
	< 1 Ac	< 2 Ac	< 3 Ac	< 4 Ac	< 5 Ac	> 5 Ac	
Kurunegala	58	17	17	4	-	4	100
Anuradhapura	15	26	57	2	-	-	100
Polonnaruwa	-	4	96	-	-	-	100
Hambanthota	5	15	44	23	8	5	100

Source: HARTI Survey data, 2006

A little over half of the sample farmers in Kurunegala district had insured less than 1 acre of paddy land. In the other three districts, the majority of the farmers had insured more than 2 acres and less than 3. In Hambantota district, the percentage of farmers who had insured more than 4 acres of paddy land was comparatively higher than in the other districts.

Table 7.19: Mean Values of Cultivated Extent and Insured Extent

District	Extent of Cultivated Ac (Mean Value)	Extent of Insured Ac (Mean Value)	% of Insured Extent out of the Cultivated Extent
Kurunegala	3.91	2.00	51
Anuradhapura	6.40	2.95	46
Polonnaruwa	7.64	3.24	42
Hambanthota	7.28	3.47	48

Source: HARTI Survey data, 2006

According to the above table, of the four districts, the proportion of insured extent of paddy lands was the highest in Kurunegala mainly because of the larger number of rain-fed farmers. These farmers have an encouraging incentive to insure their high-risk portion of paddy lands. The mean value of extent-cultivated in Kurunegala was 3.91 acres and out of that, 2 acres had been insured.

When the four districts are taken as a whole, a higher percentage of the insured farmers cultivated between 2½ acres to 5 acres of paddy and the majority of the

sample farmers had insured 1 to 2 ½ acres out of the total cultivated extents in all the four districts. It reveals that the small-scale farmers have mostly relied on paddy insurance as collateral for loans from the banks.

Table 7.20: Cultivated Extents and Insured Extent of Paddy Lands

Insured Extent (Ac) / Extent Cultivated (Ac)	< 1 Ac	1 < 2 ½	2 ½ < 5	5 < 7 ½
< 1 Ac	2 %	-	-	-
1 < 2 ½	6 %	3 %	-	-
2 ½ < 5	4 %	25%	10%	-
5 < 7 ½	1%	4%	17%	4%
7 ½ < 10	-	12%	10%	2%

Source: HARTI Survey data, 2006

7.6 Premium and Insurance Coverage

7.6.1 Level of Premium

Crop insurance is operated by the government which bears the cost of administration with no profit intended. The AAIB has determined the premium rates according to the irrigation type and the risk levels based on an evaluation of the past insurance experiences. Table 7.21 comprises the data on premium rates relevant to the four districts.

Table 7.21: Premium Amount and Percentage of Farmers

District	Premium amount (Rs./Acre)				
	100<250	250<300	300<500	500<750	Total
Kurunegala	61%	26%	9%	4%	100
Anuradhapura	25%	71%	4%	-	100
Polonnaruwa	-	18%	81%	1%	100
Hambanthota	22%	68%	7%	3%	100

Source: HARTI Survey data, 2006

The Agricultural Insurance Board has introduced different premium rates based on the above factors and the farmers have several options to choose from. Table 7.21 reveals that, 61% of the farmers in Kurunegala district had paid less than Rs.250/= as an average amount of premium. But, in Anuradhapura and Hambanthota districts, the corresponding figures in respect of the majority of the farmers ranged between Rs.250/= to Rs.350/=. In Polonnaruwa 81% of the farmers had paid a premium ranging between Rs.300/= to 500/=. Normally, the farmers decided their premium

rates according to their income levels and the paying capacity. But, the study revealed that, most of the farmers selected the lowest premium rate.

7.6.2 Method of Payments of the Premium

As mentioned earlier, the crop insurance scheme is linked with the agricultural credit. So, main activities of premium collection and payments of indemnities are operated through the government and private banks. Table 7.22 shows the methods of payment of the premium.

Table 7.22: Method of Payment of Premium

Districts	Method of Payment (%)				
	To the Bank when Obtaining Credit	To the Insurance Officer	To the District Office	Others	Total
Kurunegala	58	17	-	25	100
Anuradhapura	76	19	5	-	100
Pollonnaruwa	94	-	-	6	100
Hambanthota	100	-	-	-	100

Source: HARTI Survey data, 2006

It clearly indicates that the majority of the farmers paid their premium through banks, which was charged as a part of the credit disbursed. However, the link of insurance to credit is not the way out to overcome the other deficiencies of the scheme such as inequity in premium rates, delays in indemnity payments and inadequate indemnity coverage.

7.6.3 Insurance Coverage

The sum insured represents the insurance coverage. Insurance coverage is usually based on:

i. Cost of production (cultivation)
ii. A part of the value of yield
iii. The amount of production loan or crop loan

In Sri Lanka, it is based on the cost of cultivation. It is easier to assess the cost of production, which means cost of land preparation, use of inputs and the related activities. However, insurance coverage depends on the risk level of paddy lands and the type of irrigation. Table 7.23 reveals the mean value of coverage, cost of production and loan amount. It shows that, in most of the districts the insurance coverage was not sufficient to cover the loan amount, the farmers borrowed from the lending institutions or the cost of production. It is one of the major drawbacks to promoting the agricultural insurance scheme among the paddy farmers.

Table 7.23: Mean Values of Insurance Coverage

Districts	Insurance Coverage (mean value)	Cost of Production (mean value)	Loan Amount (mean value)
Kurunegala	Rs.11,478	Rs.15,600	Rs.13,860
Anuradhapura	Rs.14,671	Rs.18,688	Rs.16,830
Polonnaruwa	Rs.30,484	Rs.21,206	Rs.26,826
Hambanthota	Rs.17,567	Rs.21,996	Rs.31,948

Source: HARTI Survey data, 2006

However, the field survey revealed that, the majority of insured farmers were unaware of the insurance coverage they paid; they only knew that a certain amount of money had been deducted by the banks as a premium, when they disbursed the crop loan.

7.7 Crop Damages for Paddy

7.7.1 Type of Crop Damages for Paddy

The crop insured, is non-existent at the time of insuring. Furthermore, the value of the crop increases with time from sowing to the harvest remains unknown. In agriculture, except in the case of a natural calamity, an event of 100% crop damage is infrequent. In most areas, the damage is partial. In Sri Lanka, crop damages due to all forms of natural disasters are insurable. More specifically seven insurable causes have been defined as mentioned in the chapter 3. Once a paddy farmer suffers a loss due to one or more of such causes, he can claim the indemnity. Table 7.24 indicates all types of crop damages experienced in all the survey locations.

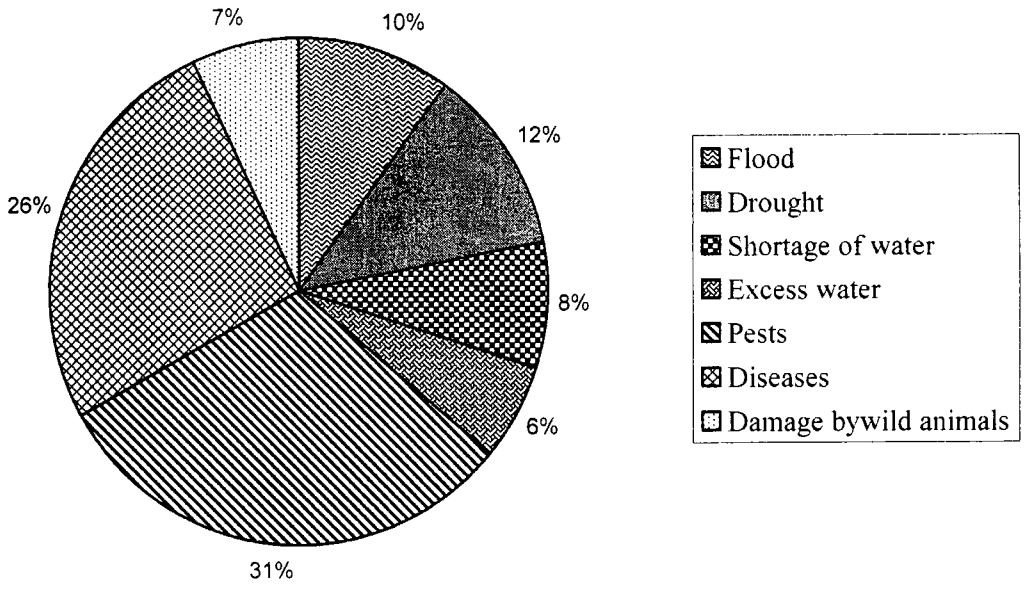
Table 7.24: Crop Damages

Districts	Crop Damages (%)							Total
	Flood	Drought	Shortage of water	Excess water	Pests	Diseases	Damaged by wild animals	
Kurunegala	-	78	11	-	11	-	-	100
Anuradhapura	-	24	9	-	43	14	10	100
Polonnaruwa	10	-	12	6	22	32	18	100
Hambanthota	12	4	4	13	38	29	-	100

Source: HARTI Survey data, 2006

In Kurunegala district, 78% of farmers reported that drought was the main reason for their crop damage. In Polonnaruwa, Anuradhapura and Hambanthota pests and diseases were the most prominent causes. Crop damages by drought or shortage of water was comparatively low in those three districts, where the farmers cultivated their paddy lands under major irrigation schemes.

Figure 7.2: Type of Crop Damages



7.7.2 Occurrence of Crop Damages

Crop damages can occur at various stages, from the sowing to harvesting. The Agricultural Insurance Board has categorized the stage of damages as follows:

- Initial stage losses
- 1st stage losses
- 2nd stage loses
- 3rd stage loses

Payment of indemnities also varies according to the stages of damages. Table 7.25 indicates the stages of paddy crop with the occurrence of crop damage.

Table 7.25: Stage of Paddy Crop with the Occurrence of Crop Damage

Districts	Stage of Damage (%)				
	Initial stage	1st stage	2nd stage	3rd stage	Total
Kurunegala	-	-	78	22	100
Anuradhapura	-	5	71	24	100
Pollonnaruwa	6	8	60	26	100
Hambanthota	8	-	67	25	100

Source: HARTI Survey data, 2006

According to statistics mentioned in the table, most of the damages were reported during the 2nd stage in every district. Initial stage losses and 1st stage losses were minimal.

7.7.3 Time Taken to Inform of the Crop Damages

Successful implementation of crop insurance requires immediate supervision and assessment of crop damage and early indemnification. To achieve this, the farmers should notify their crop damage within 14 days. Table 7.26 indicates the time taken by the farmers to notify crop damages. Any damage to the insured paddy crop should be reported within 14 days of its occurrence, to the Agrarian Service Center (ASC) or the relevant officer. The farmer himself needs to report to the ASC of the losses or if he resides far away should send a letter describing the nature of damage, date of occurrence, etc, within the specified time period.

Table 7.26: Time Taken to Inform the Crop Damage

Districts	Time Taken to Notify Crop Damages (%)				
	1st day itself	Within 1 week	Within 2 weeks	More than 2 weeks	Total
Kurunegala	-	43	14	43	100
Anuradhapura	-	90	10	-	100
Polonnaruwa	3	72	10	15	100
Hambanthota	-	84	5	11	100

Source: HARTI Survey data, 2006

Majority of the farmers in every district reported their crop damages, within a week after the damage had occurred. However, a considerable number of farmers in Kurunegala, Polonnaruwa and Hambanthota had taken more than 2 weeks to do so. This was mainly due to their unawareness about the rules and regulations of the crop insurance scheme.

7.7.4 Reporting of Crop Damages

Majority of the farmers, in Kurunegala, Anuradhapura and Hambanthota districts reported their damages to the Agriculture Service Centers (ASC). In Polonnaruwa district, 74% informed of their damages to the Mahaweli Officer. This data revealed that, the farmers have closer linkages with the ASC Officers and Mahaweli Officers than with the insurance field officers.

Table 7.27: Reporting of Crop Damage

Districts	Reporting of Crop Damages (%)				Total
	ASC	Mahaweli Officer	Banks	Insurance Officer	
Kurunegala	72	-	14	14	100
Anuradhapura	78	-	-	22	100
Polonnaruwa	13	74	03	10	100
Hambanthota	94	-	-	06	100

Source: HARTI Survey data, 2006

7.7.5 Extent of Damage

Table 7.28 presents the mean values of extent of damaged acres.

Table 7.28: Extent of Damage

Districts	Mean Value of cultivated Extent (Ac.)	Mean value of insured Extent (Ac.)	Mean Value of Damaged Extent (Ac.)	Extent of insured land as a % of cultivated (Ac.)	Extent of damaged Ac. as a % of insured lands
Kurunegala	3.91	2.00	1.50	51	75
Anuradhapura	6.40	2.95	1.63	46	55
Polonnaruwa	7.64	3.24	1.46	42	19
Hambanthota	7.28	3.47	0.92	48	26

Source: HARTI Survey data, 2006

The total sample comprises insured paddy farmers. The extent of insured land as a percentage of the cultivated extent of paddy lands is more than 50% lands in Kurunegala district. In other three districts, it is less than 50%. Extent of damaged acreage as a percentage of insured paddy acres was as high as 75 in Kurunegala district. The lowest damages were reported from Polonnaruwa and Hambanthota districts.

7.8 Loss Assessment, Indemnity Payments and Benefits

7.8.1 Stage of Loss Assessment and Valuation

The objective of the Sri Lanka crop insurance scheme is to cushion the farmers' losses risk in case of risks in an agricultural undertaking through suitable indemnification. In order to achieve this, indemnification of losses at various stages of the crop, such as damage to nurseries, damages immediately after planting, etc will have to be considered. The assessment of damage is based on eye estimation. Normally, insured farmers come to ASC and register their claim, or notify the crop damage to the Insurance Officer or other relevant Officers. Table 7.29 indicates the nature of the valuation team.

Table 7.29: Nature of the Valuation Team

Estimating Officer	Percentage
Agriculture Insurance Officer	49
Insurance Assessment Group	51
Total	**100**

Source: HARTI Survey data, 2006

Following the notification of crop damages, the officers of the AAIB go through the claims registered in the loss notification register to check the legality of claims, according to the rules and regulations of paddy insurance. Normally, to assess the loss, an insurance assessment group functions, comprising the Agricultural Research and Production Assistant of the ASCs, the Loss Assessing Officer of the AAIB, a member of the farmer organization and the Agriculture Instructor of the Agrarian Service Centers.

According to the table 7.29, 51% of the farmers have reported the participation of the loss assessment team to assess their crop damages. However, the rest of the farmers claimed that only the Agricultural Insurance Officer participated in the loss assessment.

Table 7.30 indicates that the assessment team or the Agricultural Officer mostly did loss assessment, at the 3rd stage of the crop despite the fact that the crop damages mostly occurred in the 2nd stage of the crop (as shown in table 7.25).

Table 7.30: Stage of Valuation

Districts	Stage of Valuation (%)			
	1st stage	2nd stage	3rd stage	Total
Kurunegala	-	25	75	100
Anuradhapura	-	43	57	100
Pollonnaruwa	10	30	60	100
Hambanthota	07	33	60	100

Source: HARTI Survey data, 2006

The method used in assessing the yield is ocular estimation. After the loss assessment the loss notification registers are taken to the district office of the AAIB.

7.8.2 Method of Indemnity Payments

The Actuarial and Research division of the AAIB scrutinizes the legality of claims and computations done by the District Office. The payable claims are approved by the Actuarial and Research Director to effect payments. Indemnities could be paid to the insured in various ways (see table 7.31).

Table 7.31: Method of Indemnity Received

Districts	Methods of Indemnity Received (%)			Total
	To the Farmer by Cheque	Through Agrarian Service Centers	Through Banks	
Kurunegala	-	-	100	100
Anuradhapura	12	12	76	100
Polonnaruwa	6	-	94	100
Hambanthota	-	29	71	100

Source: HARTI Survey data, 2006

As the paddy crop insurance scheme is directly linked with the crop credit scheme, indemnities are also paid mostly through the banks. As shown in the figure 7.1, the AAIB sends the indemnities to the relevant banks to set off against their crop loans. However, in case of rejected or suspended claims, it has to be informed to the insured farmers. The survey revealed that, the farmers did not receive any notice, informing of the reason for rejection or suspension of their claims.

7.8.3 Time Taken to Receive Indemnities

Prompt inspection of crop losses and payment of indemnities without delay is basically essential for an efficient agricultural insurance programme, particularly to build confidence among the farmers about the insurance scheme. Table 7.32 indicates the time taken to receive the indemnities.

Table 7.32: Time Taken to Receive Indemnities

Time duration	1 month	2 months	3 months	>3 months
Percentage	7	33	14	46

Source: HARTI Survey data, 2006

Obviously the majority of the farmers (46%) revealed that, the payment of indemnities was held up for over three months. This is one of the reasons for low farmer participation in the paddy insurance scheme. The objective of the crop insurance scheme is to give farmers a minimum protection against the risk of crop failure with the prompt payment of indemnities. Otherwise, the farmers had to confront the problem of financing his next cultivation season. So, the payments of indemnities should be made at least within two months.

7.8.4 Amount of Money Received for Crop Damages

Insufficient indemnity payments could cause dissatisfaction among the insured paddy farmers. Table 7.33 reveals the mean value of indemnity received by the farmers and as a percentage of insurance coverage.

Table 7.33: Method of Indemnity Received

Districts	Coverage (Rs.)	Indemnities (Rs.)	Indemnity payment as a % of insurance coverage
Kurunegala	15,247.74	8,332.50	55%
Anuradhapura	20,823.00	3,890.00	19%
Polonnaruwa	29,483.52	3,141.50	11%
Hambanthota	20,785.71	1,733.33	8%

Source: HARTI Survey data, 2006

According to the table 7.33, in Kurunegala district, indemnity payment was more than 50% of the insurance coverage, whereas in other districts it was less than 20%.

7.8.5 Satisfaction of Farmers about the Indemnity Payments and Appeal Situation

Table 7.34 presents the satisfaction otherwise of the farmers about the indemnity payments. Almost all the farmers were dissatisfied with the indemnities, they received. It was 100% in Kurunegala and Hambanthota districts.

Table 7.34: Satisfaction of Farmers

District	Satisfaction (%)		Total
	Yes	No	
Kurunegala	-	100	100
Anuradhapura	30	70	100
Polonnaruwa	16	84	100
Hambanthota	-	100	100

Source: HARTI Survey data, 2006

Majority of the farmers opined that the amount of indemnities was not sufficient to cover even ¼ th of the production cost per acre or the cost of the crop damages. Most of the farmers aired the view that the inadequacy of the indemnities arises from the underestimation of crop losses. This is really a disincentive for farmers to have a hand in the paddy insurance scheme. This could result in low farmer participation in paddy crop insurance scheme.

However, in the event of a disagreement with the decision in respect of his claim, an insured farmer can appeal within 30 days of such notification to the Board. Such appeals are investigated and the claims are re-examined by the Board. But, in the field survey, no such appellants were found. In fact they were not aware about this; another instance which brings into light the farmers' lack of awareness about the functioning of the insurance scheme.

7.8.6 Other Benefits Obtained by the Insured Farmers

In the agricultural insurance scheme, the farmers who have insured their paddy lands for six consecutive cultivation seasons (3 years) with no claims for indemnities were given a concession of free insurance for the seventh cultivation season. This was mainly aimed at sustaining the farmer participation in the insurance scheme. But, its impact has not been significant as seen from the data (table 7.35).

Table 7.35: Farmer Participation in Crop Insurance

Districts	Farmer Participation (%)		Total
	Continuously	Occasionally	
Kurunegala	39	61	100
Anuradhapura	36	64	100
Polonnaruwa	49	51	100
Hambanthota	58	42	100

Source: HARTI Survey data, 2006

The participation of most of the farmers at Kurunegala, Anuradhapura and Polonnaruwa in the crop insurance scheme had been occasional and conditioned by their need to get bank loans for cultivation purposes. However, in Hambanthota district, 58% of the farmers had participated continuously in the scheme.

Yet even among the sample of continuously insured farmers, none had got any additional benefit through the insurance scheme. Despite the claim of the Board that there are some other benefits for actively participating farmers, impact of any such benefit was not observable during the survey.

CHAPTER EIGHT

Comparison of Paddy Insurance Scheme Operated by the AAIB and the CICL

8.1 Introduction

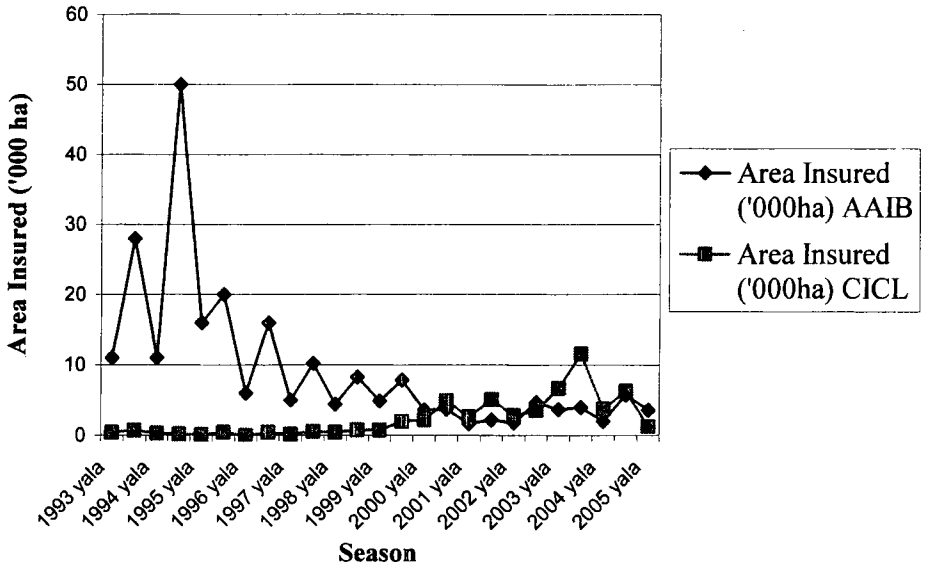
The Agricultural Insurance Board (AIB) was established in 1973 and the insurance business was a monopoly of the government at that time and the AIB was vested with the authority of providing agricultural insurance schemes for various fields in the agriculture sector. In the early 1980's, the general insurance business in Sri Lanka was opened to the private sector insurance companies. Due to its low potential for commercial profitability and attractive returns, the private sector participation in agricultural insurance was not forthcoming at that time. Only one private company (Ceylinco Insurance Company Limited) has entered this field since 1993. The AAIB diversified its services in the agrarian sector in 1999 to compete with the private sector following the enactment of the Agricultural and Agrarian Insurance Act. No. 20 of 1999.

8.2 The Performance of the Paddy Insurance Scheme

8.2.1 Administration

The organizational structure for the crop insurance programme under the private company is far below that of the AAIB. The AAIB operates 25 district offices and 5 sub offices, 44 Development Officers and 72 Field Officers attached to these offices. The private company has only 16 Technical Assistants at district level to operate the whole programme.

Figure 8.1: Area Insured by AAIB and CICL



8.2.2 Area Insured

Under the monopolist status of the AIB, the contribution to the paddy insurance scheme was remarkably high during the period from 1975 to late 90's. The farmers' participation in crop insurance under the CICL was not very promising initially. During the period from *yala* 1993 to *yala* 2000, the total area insured by the CICL was comparatively low compared to AAIB.

Though greater farmer participation was anticipated in the paddy insurance scheme with the private sector involvement, the total area insured has declined significantly since the early 1990s'.

A declining trend of the total area insured under the AAIB and an increasing trend under the CICL was observable (figure 8.1). During the period from the *maha* 2000/01 to the *yala* 2005, the total area insured under CICL was higher than that of the AAIB except for the *maha* 2002/03 and the *yala* 2005.

Though, the CICL crop insurance programme was handled by sixteen staff members they were able to popularize their insurance scheme more efficiently than the AAIB, attracting more farmers into their scheme.

At present the paddy insurance scheme is functioning as a tool of detainment of farmers who obtain crop loans. A minimal voluntary participation could be seen under the AAIB (4%) but the farmer participation in CICL was ensured only through crop loans by banks (Table 8.1)

Table 8.1: Reasons for Participation of Crop Insurance Scheme

Type of Insurance	Percentage of Insured Farmers and Reasons for it	
	To Get Crop Loan	Natural Hazards
AAIB	96%	4%
CICL	100%	-

Source: Field data, HARTI, 2006

8.2.3 Gross Loss Ratio

As described in the table, during the last ten years the AAIB experienced more than 1 of gross loss ratio in the four seasons, in which the payments of indemnities outweighed the premium collected. Whereas, the private firm experienced such a gross loss ratio only once during that period, in the *maha* 2003/04. The gross loss ratio was recorded as 2.2 for AAIB and 1.3 for the private firm. This was mainly due to a prevailed drought condition.

Table 8.2: Paddy Insurance Scheme Operated by AAIB and CICL
Gross Loss Ratio Analysis

Season	Gross Loss Ratio AAIB	Gross Loss Ratio CICL
1994/95 *maha*	0.7	0.5
1995 *yala*	0.5	0.4
1995/96 *maha*	1.4	0.7
1996 *yala*	0.7	NA
1996/97 *maha*	0.6	0.3
1997 *yala*	0.6	NA
1997/98 *maha*	0.2	0.6
1998 *yala*	1.8	0.3
1998/99 *maha*	0.8	0.7
1999 *yala*	0.5	0.4
1999/2000 *maha*	0.7	0.5
2000 *yala*	0.3	0.6
2000/01 *maha*	1.6	0.8
2001 *yala*	0.3	0.6
2001/02 *maha*	0.7	0.5
2002 *yala*	0.9	0.7
2002/03 *maha*	0.9	0.5
2003 *yala*	0.4	0.2
2003/04 *maha*	2.2	1.3
2004 *yala*	0.5	0.3
2004/05 *maha*	0.8	0.5

Source: AAIB and CICL
NA=Not Available

8.2.4 Premium Rates and Insurance Coverage

Premium rates and insurance coverage under the AAIB vary depending on the various land classes namely major irrigation, minor irrigation and rain-fed. Also, there is a special insurance coverage for the Mahaweli areas under both insurance schemes. The AAIB's insurance coverage and premium are also conditioned by the risk levels which are classified as low, medium and high and also they have two types of rates as the general rate of insurance coverage and the premium and a special insurance coverage and premium for the seed paddy production and the *yaya* development project program. The CICL operates only one type of insurance coverage. Details are tabulated in 8.3.

Table 8.3: Insurance Coverage and Premium Rates

Insurance Type	Insurance Coverage (Rs./Acre)		Premium Rates (Rs./Acre)	
	Maximum Coverage	Minimum Coverage	Maximum Rate	Minimum Rate
AAIB (Normal Scheme)	6, 000/=	1, 000/=	300/=	100/=
AAIB (Special Scheme)	15, 000/=	5, 000/=	750/=	300/=
Private Sector	30, 000/=	5, 000/=	2, 400/=	300/=

Source: AAIB and CICL

The AAIB offers a maximum coverage of Rs.6,000/= per acre under major irrigation scheme and the minimum coverage of Rs.1,000/= per acre for high risk areas under rain fed conditions while the CICL offers a common insurance coverage and premium rates for all land classes. The CICL's coverage ranges from Rs.30,000/= per acre to Rs.5,000/= per acre. The maximum premium is Rs.300/= per acre for low risk areas under the AAIB and the minimum is Rs.100/- per acre for rain fed high-risk areas. But, the maximum premium charged by the CICL, amounts Rs.2,400/= per acre, while the minimum is Rs.300/= per acre.

As described above, there is a significant variation of insurance coverage and premium levels between the AAIB and the CICL

8.3 Farmer Participation in the Paddy Insurance Scheme

8.3.1 The Ways of Awareness

As discussed in the chapter six, a fewer than half of the surveyed farmers had an awareness about the crop insurance scheme. The following table depicts the channel through which insured farmers became aware of crop insurance.

Table 8.4: Channels through which Farmers Became Aware of Insurance

Channels	Farmers Insured under AAIB	Farmers insured under private firm	Total
Insurance Officer	57	22	79
Media	5	1	6
Banks	42	32	74
Other farmers	15	6	21
Agriculture officer	2	0	2
Govi Niyamaka	2	0	2
Mahaweli officer	1	1	2
Other	6	4	10

Source: Field Data, HARTI, 2006

The table reveals that 57% and 42% of the surveyed farmers came to know about the programme of the AAIB through the Insurance Officers and the banks respectively. 32% of those, who insured under the private firm, gained the knowledge from the banks when obtaining the crop loans.

8.3.2 Reporting of Crop Damages

In the AAIB insurance programme, 46% of the surveyed farmers reported their crop damages to the ASCs. Around 39% of the farmers in the Mahaweli areas relied on the Mahaweli Regional Offices for this purpose. But, the farmers who patronized the private firm mainly reported their crop damages to the banks from which they obtained their crop loans. Accordingly about 39% of the respondents reported to the banks. Because the private company does not have field offices at district level, most of the farmers tended to inform their crop damages to the ASCs and Mahaweli Offices nearby.

Table 8.5: Farmers' Responses of Reporting Crop Damages Under both Insurance Schemes

Reporting of Crop Damages	AAIB (%)	CICL (%)
ASCs	46	28
Mahaweli Officer	39	22
Banks	4	39
Insurance Officer	11	11
Total	100	100

Source: Field Data, HARTI, 2006

8.3.3 Source of Credit

The majority of the farmers who came under the state insurance programme (AAIB) depended on the state banks for crop loans, while a little over half of the insured under the CICL got their loan requirements from the state banks. Accordingly, the CICL has sourced both the state and the private banks to promote their programme.

Table 8.6: Sources of Crop Loans Obtained Under Each Scheme

Insurance Type	Source of Credit (%)		
	Government Banks	Private Banks	Other
AAIB	85	13	2
CICL	47	53	-

Source: Field Data, HARTI, 2006

8.3.4 Indemnity Payments

46% of the farmers claimed damages under each insurance scheme and only 23% of the farmers insured under the AAIB and 32% of the farmers under the CICL received indemnities. Indemnity payments were more efficiently attended to by the private firm.

Table 8.7: Indemnity Payments for Crop Damages by AAIB and CICL

Particulars	Type of Insurance	
	AAIB	CICL
No. of Insured farmers	210	95
No. of damages informed	97	44
Damages informed – (%)	46	46
No. of respondents received indemnities	22	14
Indemnities received for informed damages (%)	23	32

Source: Field Data, HARTI, 2006

8.3.5 Method of Indemnity Received

About 84% of the farmers under the AAIB and 96% of the farmers under private company received their indemnities through banks. In addition, some of the farmers insured under the AAIB received indemnities through ASCs and by cheque.

Table 8.8: Method of Indemnity Received by Farmers Insured under the AAIB and CICL

Method of Indemnity Received	Insurance Type (%)	
	AAIB	CICL
To the farmer by a cheque	7	-
Through ASCs	9	-
Through Banks	84	96
Other	-	4
Total	100	100

Source: Field Data, HARTI, 2006

8.3.6 Time Taken to Receive Indemnities

As shown in the table, 46% of the farmers under the AAIB insurance scheme received indemnities after three months of reporting damages and 33% of the farmers received indemnities within a two month period. About 60% of the respondents of the private insurance scheme received indemnities within one or two month period, also indicating that indemnity payment of CICL is more efficient than that of the AAIB.

Table 8.9: Time Taken to Receive Indemnities under both Insurance Schemes

Type of Insurance	Time Taken to Receive Indemnities (%)			
	1 month	2 months	3 months	> 3 months
AAIB	7	33	14	46
CICL	20	40	25	15

Source: Field Data, HARTI, 2006

8.3.7 Farmers Satisfaction

A notable proportion of the farmers are not satisfied with the indemnity payments under these insurance schemes. The farmers in the study area experienced very low crop damage also warranting low indemnities.

Table 8.10: Satisfaction of Farmers Regarding the Indemnity Payments under both Insurance Schemes

Insurance Scheme	Satisfaction of Farmers (%)		
	Yes	No	Not Reported
AAIB	3	21	76
CICL	7	25	68

Source: Field Data, HARTI, 2006

Application procedure is less cumbersome at the CICL than at the AAIB. Hence, most of the farmers revealed that transactions with the private CICL are easier than the AAIB. The satisfaction of farmers under CICL was higher than that of the AAIB.

CHAPTER NINE

The Problems Faced by Relevant Participants and Suggestions

9.1 Background

The Agricultural Insurance Board was established in 1973 to minimize the risk taking by the small farmers. Later on, the private sector also entered into the sphere of the agricultural insurance. Several agricultural insurance schemes in operation have failed to attract a sizeable number of farmers into these schemes. Therefore, this study seeks to explore the reasons for low participation. This chapter presents an overview of the problems and issues experienced by both implementing agencies in the operation of the schemes.

9.2 The Farmers' View

The Agricultural Insurance Board has provided insurance coverages to a series of crops including the major crop paddy and livestock enterprises during the last three decades. However, the lukewarm response shown by the farmers to this programme is coupled with several problems as evinced by the experiences of the two agencies. These problems can be discussed on a priority basis. The farmers aired their views on the following problems (Annex 4).

About 17% of the respondents of the total sample perceive non-payment of indemnities as their main hurdle. The agreement of crop insurance necessitates the estimation team to include the respective farmer, but in most of the cases this requirement was not adhered to. Hence, the farmer was not aware of the reason for not receiving his indemnity payments.

About 16% of the total sample reported that they had only a meager awareness of the crop insurance scheme. Farmers in the Polonnaruwa represent the highest number of such farmers. The AAIB responses is that it does not have enough field staff to implement a comprehensive awareness programme. Therefore the AAIB anticipated this function to be performed by the Agricultural Research and Development Assistants attached to the ASC's at field level. However, it is left unattended.

About 16% of the farmers responded that the indemnity is not sufficient, in accordance with the cost of production and the conditions of the insurance agreement. The study revealed that the cost of production of paddy ranged between Rs.21,000/=

to Rs.25,000/= per acre. However, the maximum insurance coverage under the normal crop insurance scheme is Rs.6,000/= per acre (for seed paddy Rs.15,000/= per acre and special project Rs.10,000/= per acre). So the farmers claim is proved true. Also, the insurance coverage varies according to the stage of crop damage and out of that 20% is deducted for administrative expenses. Further, the criteria for loss assessment also vary according to the condition of the crop (stage of the crop) and the standard yield per acre of that area. Standard yield per acre is mostly lower than the existing yield of the area. The loss assessment is based on eye estimation. Hence, it is subjective. Though the loss assessment is done at 1st and 2nd stages, the claims are paid at the final stage after two to three months have elapsed.

In addition to the above, the farmers also came out with the following problems in all the districts surveyed:

i. Inefficiency of the officers attached to the agricultural insurance programme.
ii. Delays involved in the assessment of damages at the initial stage, hold up the re-cultivation process.
iii. Farming activities could not be done according to the conditions of the agreement.
iv. Minor damages were not taken into account.
v. Interest of bank loans increased due to the delays in indemnity payments.
vi. No direct linkage between the farmers and the insurance company.
vii. Difficulty to obtain indemnities for damages by wild animals.
viii. Estimation done during the harvesting period, irrespective of the stage of the crop damages.
ix. Application form for the insurance claim is difficult for the farmers to comprehend.

Furthermore, in almost all the areas the farmers opted for the crop insurance scheme as a pre-requisite to obtain crop loans. Some of the farmers were not aware of the details of the crop insurance scheme and its coverage (other than drought, damages by insects and diseases etc.). The officials bring up agricultural insurance only at the pre-seasonal meetings (*kanna* meetings) but the farmers at field level are not aware of that. The farmer participation in the pre-seasonal meeting was less than 15% of the total farmer population in the area or the project. Further, the coordination between the farmers and the relevant insurance institutions was lacking except in instances of the collection of premium.

9.3 The Problems Faced and the Views of the Relevant Authorities

The agricultural crop insurance programme of the AAIB was implemented with the assistance of the Agricultural Research and Development Assistants who serve at field level. These staff are attached to another Department and this duty was not included in their duty list rendering it impossible for the AAIB to expect a proper service from them.

There was no transparency in the loss assessment procedure, leading to poor farmer participation. In addition, instances have been reported of political interference and malpractices of certain officers in some areas. The stances of the AAIB in that inter personal communication with the farming community would entail a heavy cost. Hence, the propaganda was limited to some extent.

The Act makes provision for the AAIB to seek re-insurance to minimize the risk of the institution. But, none of the insurance companies are willing to offer re-insurance for the AAIB. Without which the re-insurance, the AAIB is bearing a menacing risk. However, as the CICL is a leading insurance company of the private sector, their schemes have re-insurance coverage.

The agricultural insurance programme is also a part of the extension service. But, the other relevant departments are not collaborating in the programme at field level. The paucity of a sufficient field staff for the operational activities of the AAIB has forced it to depend on the officers attached to other relevant departments. Field staffs comprising only 116 (Field Officers and Development Officers) are deployed by the AAIB to cover 546 ASCs'. An attitudinal change at the helm of the AAIB is imperative to make agricultural insurance a service or business oriented enterprise. When the private sector intervened in the business, the credit officers were remunerated for their services. Therefore, they are encouraged to provide a better service in the private insurance companies.

At present some public and private banks issue crop loans without having insurance cover. Bank of Ceylon has introduced a special savings account named 'Ran Govi Ginuma' to give crop loans. Also, at the Rajarata Bank the crop insurance was not a pre-condition for crop loan. These new trends will not augur well for crop insurance schemes which link insurance to agricultural loans.

In the livestock insurance sector, some problems were revealed by the officers of the AAIB:

i. Lack of sufficient healthy animals to insure under the livestock scheme
ii. Lack of sufficient veterinary surgeons in rural areas

Absence of training facilities both local and overseas is a disincentive. It is important to provide foreign exposure and share the experiences on insurance in other countries, especially in the Asian and Pacific region.

9.4 Suggestions Made by the Farmers

The study obtained information on various suggestions made by the farmers to solve or minimize the problems affecting the agricultural insurance programme. The farmers' suggestions were analyzed on a priority basis within a district. According to the analysis, the suggestions were prioritized.

Around 16% – 39% of farmers surveyed, suggested that an awareness programme on the importance of agricultural insurance schemes should be conducted by the AAIB, a suggestion that came from 39% of the respondents (Kurunegala), followed by 35% (Anuradhapura), 26% (Polonnaruwa) and 16% (Hambantota).

About 26% of the farmers in each district (Kurunegala and Anuradhapura) stressed the need of the crop insurance programme because of the high risks they face.

About 17% of the surveyed farmers in Polonnaruwa district suggested that farmers should have an opportunity to directly deal with the insurance institutions.

The highest percentage of the surveyed farmers at Hambantota (22%) suggested that insurance should not be a pre-requisite for credit (Annex 5).

The other suggestions reported by the farmers are appended. It is clear that the farmers' confidence in the agriculture insurance schemes implemented has sunk to a low level.

i. On entering into an insurance agreement, the farmers should be given all the details about crop damages and the payment of indemnities.
ii. Activities must conform to the conditions of the insurance agreement.
iii. The farmers should get a feed back regarding the process of indemnification after the loss assessment.
iv. The farmer must participate in the loss assessment process.
v. Loss assessment of the primary stage damage should be expedited.
vi. The Insurance Officers should be called upon to discharge their responsibilities duly.
vii. Indemnity should be paid to settle the crop loan in case of total crop failure.
viii. Extra benefits or bonus schemes should be introduced to regular farmers and they should be educated about such benefits.
ix. The amount of insurance cover should be increased.
x. There should be a good relationship between the farmers and the field officers.
xi. Indemnity given to crop damages must be increased.
xii. The farmers should have the opportunity for direct dealings with the insurance institutions.

9.5 Suggestions Made by Relevant Authorities

The AAIB cadre needs to be strengthened. The staff at present numbers 303 but the approved cadre is 457. The Board is a B grade statutory institution but the salary scales specified for a B grade institution are not effected.

During the past 19 years, the premium of the pension scheme payable by the farmers and the fishermen has not been changed. This has made inroads into the fund situation

of the Board. Therefore, the premium of all the insurance schemes should be increased and the insurance schemes should be re-organized to attract more farmers.

To minimize risk bearing of the AAIB, the government intervention is important. The paddy insurance should be compulsory. Therefore, it is important to introduce a corporate programme with the relevant departments and the monitoring should be done by the Ministry of Agriculture. The programmes of crop insurance can be coupled with life insurance. Further, the 'Suwasetha' scheme should be expanded country wide, supplemented with an attractive propaganda programme.

Some more suggestions are:

i. To contort the effects of a national disaster, a strong national disaster fund along with a well-organized institution to operate it is a timely need.
ii. The crop insurance programme should be made compulsory in major irrigation areas.
iii. In the provision of all the subsidies in the agricultural sector, the crop insurance should be conceded as a condition.
iv. In the mapping out of the national agricultural policy, agricultural insurance should be give pride of place.
v. Crop insurance offered by the AAIB should be made compulsory when obtaining crop loans through government banks.

CHAPTER TEN

Conclusion and Recommendations

10.1 Conclusion

Agricultural Insurance is one of the tools of risk management in the present agricultural sector. It could contribute significantly to increase productivity by helping the farmers to undertake the risky investment in agriculture. At present, the paddy insurance scheme covers the entire country and the insurance has been extended to other sectors covering floriculture, export crops, perennial crops, livestock etc. However, the AAIB does not promote insurance cover in high-risk areas since the Boards' finances do not warrant taking the risk of paying. This study concludes that the AAIB lags behind in the achievement of the objectives for which it was set up

The paddy insurance scheme of the AAIB initially covered 40% of the paddy lands in the *maha* 1977/78 and it drastically dropped to 1% in the *maha* 2004/2005. The area insured by the private insurance company has shown an increasing trend compared to that of the AAIB. However, the total area insured under both insurance schemes (AAIB and CICL) is far from satisfactory. Both the AAIB and the CICL have insured only around 2% of the total cultivated lands in the *maha* 2004/2005. These lands were insured mainly to obtain the crop loans. It was observed that the agricultural insurance policy is not a demand driven policy.

Although, the importance of the crop insurance program should be seen from the perspective of the small farmers who comprise the majority of the farmer population in Sri Lanka, the farmers have lost confidence in the crop insurance scheme and their participation has also dropped drastically. Most of the farmers are dissatisfied with the crop insurance scheme due to the inadequacy of indemnities compared with the cost of production or amount of crop damage, and the delay in indemnity payments. There is little transparency in loss assessments and indemnity payments. The under-estimation of crop losses too, has caused dissatisfaction among the farmers. Thus, most of the farmers are not interested in crop insurance and they consider it as an extra burden on them. Low farmer participation bears testimony to the fact that the scheme itself is not keeping up with its major objective of insuring the paddy lands against crop failures. Such low farmer participation has resulted in an increase in the administrative cost per farmer, and the cost involved in the premium collections and the loss assessment per farmer.

About 99% of the insured farmers joined the crop insurance scheme to obtain a bank loan because of the banking regulations in some of the banks. Therefore, the farmers

did not join the crop insurance programme to cushion the effects of a risk of crop damage. Those who insured on non-credit basis insured only the damage prone portion of their holdings. So, the adverse selection is a significant feature in voluntary participation. The farmers who do not get crop loans for their cultivation purposes have little incentive to get crop insurance. About 59% of the insured farmers in all the four districts were not aware about the crop insurance schemes of both the AAIB and the CICL. Also, the farmers' awareness about its benefits was rather negative and their opinion about its operation was not convincing at all. Inadequate communication between the farmers and the insurance officers and the cumbersome application procedure also negatively affected the expansion of the insurance scheme. Present insurance scheme covers risks only up to the harvest and does not cover the marketing of produce.

At present in some banks, the crop insurance is not considered as compulsory to grant crop loans. As a result of this, the number of farmer participating in the crop insurance programme is likely to decline further in future.

Indemnity payment by the private company was more efficiently done than of the AAIB and about 60% of the respondents of the private insurance scheme received indemnities within one or two month period. Unlike in the case of the AAIB, the application procedure of the CICL poses no difficulty for the farmers. Hence, most of the farmers revealed that the transactions with the CICL are easier than the AAIB.

The administration expenses were higher than the indemnity payments in the paddy and the other insurance schemes and the amount of indemnities, administrative expenses and operational expenses out weighed the premium collection.

Administrative lapses were another major debacle in popularizing the scheme. Malpractices in the operation of the scheme in respect of remittance of premium collections, claims, loss assessment and indemnity payments have negative effects on the expansion of the crop insurance scheme.

The farmers are interested in the farmer pension and social security benefit scheme because they have some confidence about their pension after the age of sixty until death. Hence, the farmer participation in that scheme was encouraging (from the year 1995 to 2005, the farmer enrolments for this scheme had increased by 106%) and in some of the years, the achievement had exceeded the annual target (eg. in 2001 it was 120%). But, the farmer pension scheme fund also hangs in the balance since the government grants were not forthcoming. Although the payment of pension has increased several times, the premium rates have remained unchanged since its inception. This also contributed to the lack of soundness. During the year 2005, the payment of pension was 257% of the premium collection.

During the last few years, weight given for the crop insurance scheme has dropped gradually. From the year 1995 to 2005, the operational cost of the paddy insurance scheme had dropped by 87%. In order to maintain sustainability, the AAIB is

promoting the paddy insurance within the major irrigation schemes where the risk is low and as the Board could not ensure its financial stability with the paddy insurance scheme, they tend to promote other profitable insurance schemes (eg. 'Suvasetha' health insurance scheme). The study concludes that the crop insurance scheme has failed in the realization of it's prime objective of the stabilizing farm income through the process of indemnifying crop losses emanating from a series of natural hazards.

10.2 Recommendations

For the smooth functioning of a viable crop insurance scheme, the AAIB should be more concerned with the immediate supervision and assessment of crop damages and timely payments of indemnities. To overcome the delay in the payment of indemnity, the administrative structure must be decentralized so that indemnity payments could be expedited through its existing branch office network over the island. Also, there is a need for well-trained personnel to attend to the task of loss assessment facilitating the prompt payment of indemnities obviating the inaccuracies in assessment. A scientific technique, which can at least supplement the eye estimation method, has to be worked out.

The insurance coverage of crop insurance scheme needs to be increased to at least two thirds of the cost of cultivation and it should be changed periodically depending on the changes in the cost of production. The premium rates of farmer pension and social security benefit scheme must also be increased by a reasonable amount.

It is necessary to intensify the extension activities to create an awareness among the farmers about the agricultural insurance scheme and these activities could be coordinated with the Agrarian Development Centers as well as the Agricultural Research and Production Assistants.

Crop insurance should be made compulsory when disbursing of crop loans by the government and the private banks. It also could be linked with the fertilizer subsidy program carried out by the government. For a successful crop insurance program, it is necessary to have a strong foundation with no political intervention.

A re-insurance system and a proper computerized database must be adopted.

There is the need of government intervention for the crop insurance scheme when the amount of indemnities exceeds 15% of the fund (At the seminar on agricultural insurance schemes in Asia, held in Japan, in 1990, most of the participant countries argued that government financial support is critical to sustain the program).

Insuring groups of farmers can reduce administration costs for small-scale farmers and it will help to encourage the farmers to organize themselves to insurance mutually and such a course of action will accrue benefits both for the insured and the insuring agency.

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Annex 1 : Distribution of Staff of the AAIB in District Offices and Sub Offices

District	Assistant Directors	Development Officrs	Field Officers
Colombo	1	1	2
Gampaha	1	2	3
Kalutara	1	2	3
Kandy	1	4	2
Matale	1	3	1
Nuwara Eliya	1	2	3
Galle	1	2	4
Matara	1	1	3
Hambantota	1	1	4
Batticaloa	1	1	2
Jaffna	1		1
Ampara	1	1	4
Tricomalee	1	1	4
Kurunegala	1	5	
Puttalam	1	3	1
Anuradhapura	1	1	5
Polonnaruwa-Bakamuna (Mahaweli G)	1	1	3
Badulla	1	2	4
Monaragala	1	2	4
Rathnapura	1	1	2
Kegalle	1	3	1
Mahawa	1	2	3
Udawalawa (Mahaweli U)		1	2
Thambuttegama (Mahaweli H)	1	1	4
Girandurukotte (Mahaweli C)	1	1	1
Manampitiya (Mahaweli B)			2
Mannar	1		2
Vavuniya			
Killinochchi	1		2
Mullaitivu			
Total	**26**	**44**	**72**

Annex 2: Performance of the Paddy Insurance Scheme in Ceylinco Insurance Company

Season	Area Cultivated (000ha)(1)	Area Insured (000ha)(2)	Premia Collected (Rs.000)(3)	Indemnities Paid (Rs.000)(4)	Deference between (3-4)	Gross Loss Ratio
1993 *yala*	289	0.42	310	64	247	0.21
1993/94 *maha*	581	0.75	558	1,028	-470	1.84
1994 *yala*	349	0.28	206	112	94	0.54
1994/95 *maha*	567	0.2	151	70	81	0.46
1995 *yala*	348	0.14	107	47	60	0.44
1995/96 *maha*	499	0.43	317	215	102	0.68
1996 *yala*	250	0.02	16	NA	16	0
1996/97 *maha*	473	0.45	332	104	228	0.31
1997 *yala*	257	0.17	129	NA	129	0
1997/98 *maha*	574	0.57	423	262	161	0.62
1998 *yala*	298	0.43	100	34	66	0.34
1998/99 *maha*	538	0.78	656	449	207	0.68
1999 *yala*	341	0.71	632	253	379	0.40
1999/2000 *maha*	549	1.96	3,897	2,135	1,762	0.55
2000 *yala*	812	2.25	2,006	1,127	879	0.56
2000/2001*maha*	479	4.92	4,376	3,608	768	0.82
2001 *yala*	319	2.63	2,336	1,490	846	0.64
2001/2002 *maha*	531	5.12	4,512	2,422	2,090	0.54
2002 *yala*	319	2.85	2,565	1,816	747	0.71
2002/2003 *maha*	618	3.56	3,957	2,104	1,853	0.53
2003 *yala*	401	6.68	8,250	1,327	6,923	0.16
2003/2004 *maha*	542	11.55	15,335	20,148	-4,813	1.31
2004 *yala*	258	3.76	6,039	1,893	4,146	0.31

Annex 3: Operation of the Paddy Insurance Scheme in AAIB

Season	Area Cultivated (000ha) (1)	Area Insured (000ha) (2)	Premia Collected (Rs.000) (3)	Indemnities Paid (Rs.000) (4)	Deference between 3-4 (Rs.000)	Gross Loss Ratio (Indemnity /Premia)
1975 *yala*	624	54	800	1,299	-499	1.62
1975/76 *maha*	1,147	198	3,854	4,734	-880	1.22
1976 *yala*	642	114	1,568	2,846	-1,278	1.81
1976/77 *maha*	1,329	288	4,155	3,091	1,064	0.74
1977 *yala*	718	58	801	452	349	0.56
1978 *yala*	301	33	1,270	1,881	-611	1.48
1978/79 *maha*	562	62	3,721	9,465	-5,744	2.50
1979 *yala*	255	22	1,301	3,503	-2,202	2.69
1979/80 *maha*	628	38	3,037	4,706	-1,669	1.55
1980 *yala*	246	18	1,287	1,988	-701	1.54
1980/81 *maha*	600	37	3,893	2,845	1,048	0.73
1981 *yala*	381	11	1,436	668	768	0.46
1981/82 *maha*	508	34	5,032	6,059	-1,027	1.20
1982 *yala*	282	5	768	333	435	0.43
1982/83 *maha*	633	24	3,567	2,120	1,447	0.59
1983 *yala*	237	6	953	1,126	-173	1.18
1983/84 *maha*	623	34	6,499	13,416	-6,917	2.06
1984 *yala*	384	12	2,619	4,565	-1,946	1.74
1984/85 *maha*	570	24	6,322	7,207	-885	1.14
1985 *yala*	312	11	2,803	4,693	-1,890	1.67
1985/86 *maha*	555	30	7,373	16,146	-8,773	2.19
1986 *yala*	340	22	6,630	13,194	-6,564	1.99
1986/87 *maha*	508	48	12,960	37,240	-24,280	2.87
1987 *yala*	273	20	5,750	10,060	-4,310	1.75
1987/88 *maha*	533	40	12,100	17,437	-5,337	1.44
1988 *yala*	130	13	3,488	4,127	-639	1.18
1988/89 *maha*	469	24	6,137	7,619	-1,482	1.24
1989 *yala*	258	13	3,266	3,128	138	0.96
1989/90 *maha*	531	25	6,783	6,577	206	0.99
1990 *yala*	333	15	4,072	2,410	1,662	0.59
1990/91 *maha*	501	38	10,378	6,533	3,845	0.63
1991 *yala*	329	16	4,231	2,683	1,548	0.63
1991/92 *maha*	577	30	8,371	5,152	3,219	0.61
1992 *yala*	255	9	2,439	1,806	633	0.74

Cont..

Cont..

1992/93 *maha*	546	23	10,103	3,616	6,487	0.36
1993 *yala*	289	11	4,479	2,350	2,129	0.52
1993/94 *maha*	581	28	10,723	20,193	-9,470	1.88
1994 *yala*	349	11	6,413	6,689	-276	1.04
1994/95 *maha*	567	50	30,554	21,484	9,070	0.70
1995 *yala*	348	16	8,926	4,471	4,455	0.5
1995/96 *maha*	499	20	12,357	17,135	-4,778	1.39
1996 *yala*	250	6	3,751	2,577	1,174	0.69
1996/97 *maha*	473	16	9,736	5,467	4,269	0.56
1997 *yala*	257	5	3,174	1,852	1,322	0.58
1997/98 *maha*	574	10.18	6,597	1,003	5,594	0.15
1998 *yala*	298	4.42	2,657	4,818	-2,161	1.81
1998/99 *maha*	538	8.27	5,373	4,337	1,036	0.81
1999 *yala*	341	4.89	2,930	1,472	1,458	0.50
1999/2000*maha*	549	7.86	5,012	3,388	1,624	0.67
2000 *yala*	812	3.58	2,067	592	1,475	0.29
2000/2001*maha*	479	3.72	1,653	2,689	-1,036	1.63
2001 *yala*	319	1.72	1,028	280	748	0.27
2001/2002*maha*	531	2.2	1,499	992	507	0.66
2002 *yala*	319	1.8	1,040	981	59	0.94
2002/2003*maha*	618	4.7	3,361	2,860	501	0.85
2003 *yala*	401	3.7	2,632	944	1,688	0.36
2003/2004 *maha*	542	4	3,611	7,892	-4,281	2.18
2004 *yala*	258	2	1,488	679	809	0.46
2004/2005 *maha*		5.8	4,448	2,852	1,596	0.64

Annex 4: Problems Faced by the Farmers

Problems	Percentage
Reasons were not given for non payment of indemnities	17
Lack of awareness regarding the crop insurance scheme	16
Indemnity is not sufficient and delayed	16
Inefficiency of the officers attached to the agricultural insurance scheme and malpractices	12
Interest of bank loans has increased due to delays in indemnity payments	8
Difficult to get insurance policy for lands which are not legally owned	6
It is difficult to obtain indemnities for damages by wild animals	6
Re-cultivation gets late due to delays in estimation at the initial stages	5
Activities could not be performed according to the condition of the agreement	4
Application form of the insurance claim is not easily understood by the farmers	4
Small damages were not concerned at all	3
No direct linkage with farmers and the insurance company	2
Estimation is done during the harvesting period, disrespecting of the stage of the crop damages	1
Total	100

Annex 5: Suggestions Made by Farmers

Suggestions	Districts			
	Kurunegala	Anuradhapura	Polonnaruwa	Hambanthota
Direct awareness about crop insurance scheme is very important	39%	35%	26%	16%
As the risk is high, the crop insurance is essential	26%	26%	12%	12%
There should be a good relationship with farmers and insurance field officers	8%	1%	1%	2%
Insurance should not be compulsory	_	2%	8%	22%
Indemnity given to crop damages must be increased	5%	11%	11%	8%
Farmers should have an opportunity in dealing directly with the insurance institutions	_	3%	17%	14%
When signing an insurance agreement the farmers should be given all the details about crop damages and the payment of indemnities	3%	5%	4%	10%
Activities should be done only according to conditions of the insurance agreement	3%	3%	2%	3%
The farmers should get a feed back regarding the process of indemnification after the crop damage estimation	3%	2%	5%	_
The farmers should have an opportunity to participate in the damage estimation process	_	3%	1%	1%
Estimation of the primary stage damages should be expedited	5%	7%	3%	_
Responsibilities of the insurance officers should be duly fulfilled	3%	_	1%	1%
Indemnity should be supplied to cover the crop loan when the crop is totally damaged	_	1%	2%	1%
Extra benefit should be given for continuous and regular participants and the farmers should be acknowledge about it	_	_	3%	3%
The amount of insurance cover should be increased	5%	1%	4%	7%
Total	100%	100%	100%	100%