

Evaluation of Divinaguma Agriculture Component - Homegardens

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FOREWORD

The *Divinaguma* Development Programme is the main household economic development programme of the present government. The programme comprises three main components such as the agricultural component, popularly known as the homegarden component, livestock component and the component of cottage industries. It is through these components the *Divinaguma* Development Programme expects to drive households towards economic development. Under *Divinaguma* programme, promoting and establishing homegardens were given prominence as it is beneficial to households from several aspects. The programme expected homegardens to increase household vegetable production and reduce purchase of vegetables. Also it was expected that increased households production would result in higher consumption of fresh and organic vegetables while increasing the household savings.

This study which is an evaluation of the *Divinaguma* homegarden programme was conducted one year after the commencement of its first stage. It envisaged the establishment of 10,000 households. The study presents some valuable findings and evolves few vital suggestions for the development of sustainable homegardens in the country.

As the report points out the *Divinaguma* homegarden programme has been able to create an unprecedented interest and motivation in the households for homegardens which are the sources of safe and cheaper food. Also, the programme has shown an initial success in contributing to the increase of household vegetable production. Nevertheless, ensuring sustainability of homegardens and establishing a homegarden culture still remains a challenge. The findings and the suggestions of this report would provide important guidelines in the particular direction.

E.M. Abhayarathna
Director

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Promotion of homegardens in the country was a main objective of the agricultural component of the “*Divinaguma*” household economic units development program carried out by the Economic Development Ministry. A request of the Secretary of Agriculture Ministry to evaluate the particular program paved the way for this study. As a result, the former secretary of Agriculture Ministry, Mr.Sakalasooriya deserves much of the credit for the seed of the idea of the study and the subsequent financial support provided. The encouragement and the managerial and administrative support provided by Mr. Mr.E.M Abhayarathna, Director of HARTI and Additional Director, Mr.J.K.M.D.Chandrasiri were mainly instrumental for the study’s success. They deserve the highest gratitude of the study team. The research team owes much gratitude to Mr.Jayathilaka Herath, Director, *Divinaguma* of the Ministry of Economic Development who extended immense support at the very outset of the study providing basic and primary ingredients and insights required for the study. Directors of Planning, Divisional Secretariats and the Additional Directors of Planning of the respective administrative districts and divisions where the study was carried out should be commended for their support in carrying out the study. The four casual investigators of HARTI; namely Miss. E.H.A. Ruwanpura, Mr. Sandun Yapa, Mr. G.W.K. Anura and Miss. D.M.N.K.Dalpitiya rendered enormous support in the collection of required data for the study and they are praised for a job done well. Mr. H.L.L Salinda, the administrative assistant of HARTI is also thanked for the assistance given in typing the report. The research team should also extend uncompromising thanks to Miss. Suharshi Perera, the Editor of HARTI who nicely edited the draft report. Finally, the support received from the *Divinaguma* ground level facilitators and the respondents who provided required information for the study are deeply appreciated for their valuable contribution in making this study a success.

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EXECUTIVE SUMMARY

Agriculture is one of the main components of *Divinaguma* Households Economic Unit Development program. In the agricultural component, a significant feature was the development of homegardens. The program initially envisaged to develop 2.5 million homegardens in three phases. In the first phase, it was to develop one million homegardens which included 100 homegardens from each village. This study evaluates the homegardens established in the first phase of the *Divinaguma* household economic units development program launched in March 2011. The study had several objectives from which the evaluation of the program could be better manifested. They include looking into the people's opinion of the *Divinaguma* homegardening Program, finding out whether households have adopted homegardens as a result of this particular homegarden Program, assessing the impact of *Divinaguma* homegarden Project on reducing the monthly expenditure of households on vegetable consumption and assessing whether an increase of household vegetable consumption has occurred through the adoption of new homegardens. In addition to that, the study also had the objective of making more viable and practical suggestions through which households can be encouraged for homegardening.

The sample of the study numbering 200 households was derived from four districts namely Gampaha, Kegalle, Anuradhapura and Puttalam by employing multistage random sample technique. Firstly, from each district, the Divisional Secretariat (DS) area with the highest number of GN divisions was selected. Secondly, five GN divisions with the highest number of households were selected from each of those four DS areas. Finally, 10 households involved in *Divinaguma* homegarden program were randomly selected from each GN divisions using the list of households obtained from the respective DS offices.

As to the findings of the study, *Divinaguma* homegarden program had made so much an initial impression that 98% of the beneficiary households had joined it without being prompted by the facilitators. As pointed out by 93% of the sample households, the program had been successful in the short run by increasing the households' production of vegetables at different levels. However, it has not been successful in establishing sustainable homegardens which are very much required to achieve the expected objectives. This is more attributable to the lack of awareness given on planning and maintaining of homegardens to the target group. Majority of the households are not satisfied with the awareness received and were disappointed over the lack of knowledge and poor enthusiasm of the facilitators. 71% of the households were not satisfied with the service of *Agriculture Research and Production Assistant* while 78% and 86% of them respectively opined the same with the *Samurधि Development Officer* and the *Grama Niladhari*. Quality of the seeds provided had been poor (62%). Only 19% of the

households had made any income from homegardens. Only three households of the total sample had managed to earn more than Rs.3000 in the month concerned in the study, from the homegarden. Households seemed to prefer sharing their excess productions of homegardens than selling it. 51% of the households had shared their excess with the neighbors. It was also evident, in the dry season many households almost completely give up homegardens due to lack of water. More than 91% viewed that they need better awareness and training to continue homegardening. The main areas which the awareness required are planning the garden, land preparation, suitable irrigation techniques to maintain homegardens in the dry season and pest control. In addition, easy access to planting materials for the households should also be ensured.

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LIST OF ABBREVIATIONS

ADC	Agrarian Development Centre
AI	Agricultural Instructor
APRA	Agriculture Research and Production Assistant
CDO	Coconut Development Officer
DAS	Department of Agrarian Services
EDM	Economic Development Ministry
GN	Grama Niladhari
SDO	Samurdhi Development Officer

CHAPTER ONE

Evaluation of Divinaguma Homegarden Development Program

1.1 Introduction

The Ministry of Economic Development launched the first phase of *Divinaguma Development Program* in March 2011. This program which had its theme as “*A self reliant household – A wonderful motherland*” can be treated as the highest number of households involved development program the country has ever implemented.

The overall objective of the *Divinaguma Development Program* is to uplift the living standards of the people of the country. According to the *Divinaguma* Circular No.1/ 2011 issued by the Secretary to the Ministry of Economic Development on 14 March 2011, it envisages developing sustainable household economic units. The *Divinaguma Development Program* implemented in three phases is expected to develop million household economic units in the first phase comprising 100 households from a village. The number of households expected to be developed at the end of the third phase is 2.5 million. The *Divinaguma* program has three main components through which the households are expected to be developed into sustainable economic units:

1. Agriculture
2. Livestock and Fisheries
3. Cottage Industries

Adopting the above components by households basically depended on their preference and potentiality. The agriculture component of the *Divinaguama* program promotes production and consumption of vegetables and fruits within the households. Development of homegardens has been identified as the best strategy to achieve this objective of the project. *Divinaguma* project has relied much on the homegardens to bring down high prices and abrupt fluctuations of supply of vegetables and fruits in the market.

Further, the program assumes that the increased production would lead to an increase in consumption and thereby reduction in nutritional deficiencies of the people. Further, the program expects that an increase in the households’ savings would occur since much of the households’ food requirements would be satisfied by households’ production.

1.2 Main Objective of the Study

The main objective of this particular study is to evaluate the *Divinaguma* homegardens program launched by the Ministry of Economic Development in March 2011.

Specific Objectives

1. To look into the people's opinion of the *Divinaguma* homegardens Program
2. To find out whether new households have adopted homegardens as a result of this particular homegardens program
3. To assess the outcome of *Divinaguma* homegarden Project on reducing the monthly household expenditure on vegetable consumption
4. To assess whether there had been an increase of household vegetable consumption through the adoption of new homegardens
5. To propose more viable and practicable suggestions with which households can become homegardens.

1.3 Methodology

This study was carried out initially using primary data. Secondary data requirement of the study was met basically by referring to the circular reports, newsletters, and other relevant publications issued by the Ministry of Economic Development as well as the reports and relevant records maintained by the selected District and Divisional Secretariats.

1.3.1 Primary Data Collection

To obtain the required primary data for the study a structured questionnaire sample survey of randomly selected samples was carried out in four districts; Gampaha, Kegalle, Anuradhapura and Puttalam. These districts were selected considering the level of implementation of all three components of *Divinaguma* program by the time the study was being planned.

The evaluation of the *Divinaguma* homegarden program involved a total sample of 200 households, 50 households each from a district. Multi-stage random sampling technique was used to derive the final sample. Following are the steps taken in selecting the sample.

1.3.2 Sample Selection

1. Selection of the Divisional Secretariat (DS) area with the highest number of GN divisions in the district
2. Selection of five GN divisions with the highest number of households from the particular DS division
3. Randomly selecting 10 households involved in *Divinaguma* agricultural program from each of the selected GN divisions using the relevant list of involved households

1.3.3 Data Analysis and Interpretation

Data analysis was done using the SPSS Statistical tool while data presenting mainly took the form of descriptive statistical techniques.

CHAPTER TWO

Objectives, Targets and the Operational Strategy of *Divinaguma* Development Program

2.1 Introduction

This chapter deals with the objectives to be achieved by the government from the *Divinaguma* Household Economic Unit Development Program and its strategies as well as the activities which are to be implemented.

Vision of the *Divinaguma* Program

“A self sufficient village with healthy and economically empowered families”
(*Economic Development Ministry*)

Mission of the *Divinaguma* Program

“Making one million household economic units which consist of homegardens, livestock, and cottage level industries in all villages covering the whole country”

2.2 Objectives

The Divinaguma Development program involving a huge number of households is the main grassroot level economic development initiative of the present government. This was introduced by the Ministry of Economic Development following the policy statement of *Mahinda Chinthana – Vision for the Future* which envisages a creation of a prosperous village by the year 2016 and the year 2011 budget statement of the President to create one million domestic economic units. The project’s prime objective is to make domestic or household economic units to be self-sufficient, financially secure, and to rely less on the market for their daily food requirements. By implementing the *Divinaguma* development program authorities also wish to achieve much broader goals such as developing rural economy, reducing poverty and malnutrition, connecting the households with the national economy and reducing of the food imports.

Followings are some of the specifically mentioned objectives of the *Divinaguma* program extracted from the *Divinaguma* Circular No.1/ 2011 issued by Dr. P.B. Jayasundara, Secretary to the Ministry of Economic Development on 14 March 2011.

- Encouraging households to start economic activities utilizing the locally available resources

- Encouraging households to become sustainable self-sufficient economic units (Producing of food items such as milk, eggs, vegetables and fruits etc. as required by the households)
- Increasing the area of the country's coconut cultivation by 15,000 acres
- Increasing the consumption of poison free daily meals produced out of the organically cultivated produce made in the household itself
- Increasing the nutritional level of the people
- Encouraging household members to cultivate their homegardens together with the participation of all family members so that it strengthens the unity of the family and improves the family bonds and happiness

Further, the Economic Development Ministry more concisely puts out the *Divinaguma* specific objectives in the following manner.

- ❖ Increasing the family nutrition
- ❖ Reducing daily living cost of the households
- ❖ Ensuring households' food security
- ❖ Making additional income sources for households

It also explains, as follows how it expects to achieve the above objectives.

2.2.1 Increasing the Family Nutrition

Increasing family nutrition which is the main specific objective of the *Divinaguma* program is expected to be achieved through the following measures.

- ❖ Adding fresh vegetables and fruits to the daily meals
- ❖ Supporting and directing people to consume more nutritious animal based products on a daily basis
- ❖ Directing households to produce poison free fruits and vegetables in the homegarden using organic fertilizer
- ❖ Making people aware of the better health habits and the nutritious value of the food

2.2.2 Reducing Daily Living Cost of the Households

It is through following actions the objective of reducing the daily living cost of the households is expected to be achieved.

- ❖ Adding what can be produced in the homegarden to daily food requirements of the households
- ❖ Using family labor and natural resources around households to minimize production cost

- ❖ Saving the money which costs the buying of vegetables, fruits and other animal based products within the household.
- ❖ Creating a market in the village for the products of the village. This is expected to give households an easy opportunity to turn their excess production into cash

2.2.3 Ensuring the Households' Food Security

Ensuring the households' food security is expected to achieve

- ❖ By introducing methods of food preservation and
- ❖ By diversifying crops in the homegarden

2.2.4 Introducing Additional Income Sources to Households

Following are the actions directed towards achieving the objective of introducing additional income sources to the households

By directing the excess production of the household to the market

- ❖ By earning a higher income from value added products
- ❖ By allowing village level entrepreneurs based on village level production

Divinaguma which is a three-pronged development program designed to achieve the above objectives identifies (1) agriculture, (2) small scale industries, and (3) fisheries and livestock as the required components to be developed at household level.

Divineguma program which envisions "A self reliant household – A wonderful motherland" targets the improvement of the overall living standards of the people coming under the program. It is also the theme of *Divinaguma* program which sees to establish self-sufficient or self-reliant households. All three components of the projects are directed to achieve the particular end either in combination or separately as appropriate to the families coming under the program. As a result the objectives of all three components of the *Divinaguma* program are very much the same though some components have specific objectives as well. When agriculture and livestock component is concentrated on the households' consumption and nutrition, the component of cottage industries seems more concerned on household income generation and making employment opportunities through better use of natural resources available.

2.3 Agriculture

Agriculture which is the main and the most widespread development component of the whole *Divinaguma* programme mainly focuses on homegardens. The first phase of the *Divinaguma* programme targeted the creation of 1 million homegardens throughout the country in 14000 villages or Grama Niladhari divisions. In the second phase it is expected to increase the number to 2.1 million and finally in the third phase to 2.5 million.

The following can be identified as the objectives the *Divinaguma* programme expected to achieve from the agriculture or the much known homegarden component of the program.

1. Increasing the production and consumption of vegetables at household level
2. Increasing the production and consumption of fruits at household level
3. Reducing dependency on the market for food
4. Reducing the household expenditure on food
5. Increasing family savings
6. Encouraging the consumption of position- free food through supporting the unity and the mental satisfaction of the family

In the shortest term it is by implementing the agriculture component the authorities of the *Divinaguma* program assumed to increase the country's food production.

2.4 Livestock and Fisheries

The livestock and fisheries sector like the agriculture component, targets improving the consumption and nutrition of the family. The vision and the mission of the *Divinaguma* livestock sector reads as, "Uplifting the nutrition level of the family and making additional income sources by promoting the poultry and dairy using the natural resources that can be found around the household" (*Divinaguma Jathika viaparaya, idiri maga*).

2.5 Cottage Industries

The 2011 Budget proposed to launch the national food production drive and to organize one million homegardens that include fruits, vegetables, poultry and livestock which are good sources of food supply to develop the backyard economy. This is with a view to address the challenges of global food insecurity and improves nutrition levels of families and to provide self employment opportunities. The inclusion of cottage industry was an extension to the above concept which was the origin of the *Divinaguma* programme. The main objective of the particular component was to establish industrial economic units through cottage industry to generate income and employment at household level.

2.6 *Divinaguma* Targets

According to the Economic Development Ministry, the transformation taken place in the social, economic, and cultural spheres over the years has adversely affected the daily food habits and consumption patterns of the people. This has badly affected the health of the whole population. In the past many used to make their own food and medicine from what they had in their homegardens and collected from around .They also had cottage

industries in their households. According to the ministry, this situation has changed now and the people have got used to depending on the market for everything.

The Ministry further comments that unlike today, in the past, from the time immemorial, livestock had been a very important and vital component of the households in Sri Lanka. This has been a low cost source of eggs and milk requirement of the household and provided manure for the garden as well. As the Ministry of Economic Development sees it, due to neglecting the resources in the environment and around the household and not having used them in any form of production, people have faced various economic and nutritional problems.

Further, the Ministry states, households have to spend so much at the market on what they otherwise would have obtained free of charge or at a minimum cost from their households itself. As a result, the Economic Development Ministry has the targets under the *Divinaguma* program to direct the households to regain and reinforce the strength and opportunities to create a healthy household economic unit.

The following tables show the targets of each component of the *Divinaguma* programme for 2011 and 2012 as put forward by the Economic Development Ministry.

Table No 2.1: Targets for Agriculture

2011	2012
<ol style="list-style-type: none"> 1. Establishing 1,300,000 homegardens island wide 2. Substantially decreasing the vegetables prices 3. Substantially increasing the households' vegetable consumption 4. Promoting the idea of poison free vegetable consumption 5. Inculcating the idea that there should be a homegarden in every household 6. Strengthening the efficacy of government extension service 7. Broadening the service of facilitators such as Grama Niladhari, Agriculture production and Research Assistant (<i>Krupanisa</i>) and Samurdhi Niladhari so that their service become more people-oriented 8. Making a huge awakening in the agricultural sector 9. Establishing 20,000 plant nurseries 10. Distributing 20,00, 000 million coconut plants 	<p>Distributing</p> <ol style="list-style-type: none"> 1. 2,500,000 seeds packages 2. 4,000,000 coconut plants 3. 2,000,000 fruit plants 4. 400,000 minor export crops, herbal, vegetables and other plants 5. Establishing 8000 greenhouses 6. Cultivating 100,000 acres of the crops such as peanuts, green grams, maize, black grams and sesame

Source: *Divinaguma Jathika viyaparaya, idiri maga*

Table No 2.2: Targets for the Livestock Sector

2011	2012
<ol style="list-style-type: none"> 1. Spreading poultry farming to 23, 000 households covering all provinces. 2. Distributing 230,000 one month old chicks to the beneficiary households. 3. Providing facilities and encouraging building of standard poultry sheds at household level. 4. Providing buffalo and other cows to selected households 5. Producing a mini hatchery for every district 6. Producing fresh milk and eggs in the household itself 7. Encouraging the consumption of home-made livestock products by changing attitudes through awareness 8. Making a broad change in the daily consumption patterns of the household 9. Making opportunities to earn an alternative income by excess production 	<ol style="list-style-type: none"> 1. Distributing 50 000 chicks for eggs 2. Establishing 125 small and medium size hatcheries 3. Distributing 3,000 high quality milk cows 4. Distributing 10,000 animals such as pigs, goats and ducks 5. Establishing and developing 25,000 cattle sheds 6. Establishing 25 centers of milk cooling 7. Establishing 300 fresh milk sale centers 8. Developing 20 under-utilized animal farms 9. Establishing 25 centers of cattle breeding 10. Providing facilities for 2,200 small scale dairy farms 11. Establishing 50 milk entrepreneur villages

Source: *Divinaguma Jathika viyaparaya, idiri maga*

Table No. 2.3: Targets for the Fisheries Sector

2011	2012
<ol style="list-style-type: none"> 1. Implementing 14 projects identified under <i>Divinaguma</i> development program in all districts of the island. According to the above, 6496 individuals (individual households) and as 6750 groups would benefit 2. Making opportunities for people living in the interior of the country such as central hills to access fresh fish and other freshwater fish products. 3. Encouraging the people in plantations for producing fish in seasonal and plantation tanks to alleviate their nutritional deficiencies. 4. Making people aware of the highly nutritious sea plants products ,encouraging their consumption and increasing availability in the market for easy buying 5. Promoting fisheries related food products for local and foreign tourists. 6. Making new job opportunities in fisheries and water resources sector related to tourism 7. Improving the post harvesting technology in fisheries sector and providing knowledge ,training and encouragement required for production efficiency in the sector 	<ol style="list-style-type: none"> 1. Improving facilities of 10, 000 saltwater fish industries 2. Improving facilities of 10,000 freshwater fish industries 3. Uplifting 5000 ornamental fish industries 4. Establishing 2,500 fish industries for development of tourist industry 5. Providing infrastructure facilities to develop 750 prawn farms 6. Directing another 12,500 families in cultivating sea plants

Source: *Divinaguma Jathika viyaparaya, idiri maga*

Table No. 2.4: Targets for the Cottage Industry

2011	2012
1. Establishing 30,000 household industries	3. Holding 15 district level exhibitions to promote traditional industries
2. Identifying and encouraging import substituting industries which can be implemented at household level	4. Establishing 60,000 cottage industries
	5. Providing facilities to develop 300 entrepreneur villages
	6. Promoting 25 craft villages
	7. Holding 1,000 training workshop for selected beneficiaries

Source: *Divinaguma Jathika Vijaparaya, Idiri Maga*

2.7 Operational Strategy of the Divinaguma Development Program

2.7.1 Operational Methodology

The *Divinaguma* Development Project expects to raise the living standards of the people. Further the particular project which is described as a social protection program by the EDM is an instrument of building the sustainable household economic units. This objective is supposed to be achieved through the active participation of people who join the project and government institutes by provision of all the facilities as required and pertinent to each household.

The operational strategy of *Divinaguma* development programme is explained by Circular No 1/2011 issued by the Secretary of the Ministry of Economic Development. According to the circular the three components of *Divinaguma* Development Program (agriculture, Livestock & Fisheries and the Cottage Industries) are operated by three national level sub committees which consist of the ministries coming under each component as shown below.

Agriculture

- Ministry of Agriculture
- Ministry of Agrarian Service and Wildlife
- Ministry of Minor Export Crops Promotion
- Ministry of Irrigation & Water Resources Management
- Ministry of Plantation

- Ministry of Coconut Development and Janatha Estate Development
- Ministry of Environment
- Ministry of Indigenous Medicine
- Ministry of Health

Fisheries and Livestock

- Ministry of Livestock and Rural Community Development
- Ministry of Fisheries and Aquatic Resources Development
- Ministry of Environment

Cottage Industries

- Ministry of Industry and Commerce
- Ministry of Traditional Industries & Small Enterprise Development
- Ministry of Technology and Research
- Ministry of Youth Affairs and Skills Development
- Ministry of State Resources and Enterprise Development

According to the circular while the EDM under its supervision and direction designs the national level program of the *Divinaguma* project in association of other relevant ministries and institutes as mentioned above, subordinating administrative bodies do relevant organizing, directing and coordinating at the respective level of administration.

As such *Divinaguma* project altogether comprises four directional and coordinating system in its operation as shown in the hierarchical order below. Further, the EDM wants *Divinaguma* project to go to the village as a common program organized by the village level committees to get the maximum contribution and the involvement of the people as the project is based on the vision of people initiated government facilitates.

1. National Level
2. Provincial Level
3. District Level
4. Divisional Level

2.7.2 Identifying Beneficiaries

According to the circular No 1/2011, selection of beneficiary households of the *Divinaguma* project primarily depends on the willingness and the enthusiasm of households to join the project. While a household of every social or working category such as Samurdhi beneficiaries, farmers, employees of both private and government sectors and retirees could join the project they should be ready to make their household economic units as required by the project. In the first round of *Divinaguma*, at least 100

such households were selected to be household economic units from one GN division finally totaling to one million household economic units from 14, 000 villages in the whole country.

2.7.3 Facilitators

There are four government officers who were named as facilitators due to their assigned responsibility to facilitate the household economic units which come under *Divinaguma* programme. These officers namely Grama Niladhari, Agriculture production and Research Assistant (Krupanisa), Samurdhi Niladhari and the Midwife are the main figures who were vested with the responsibility of implementing the *Divinaguma* Development Programme at ground level. These officers were to be trained and given relevant technological guidance and the knowledge by the trained officers from the respective ministries and institutes as required.

In the first round of the project, other three facilitators, except midwife, were to select and facilitate 100 households together from one GN division to make them into self sustained household economic units. The number of households each facilitator is responsible for is as follows.

- Agriculture Production and Research Assistant(Krupanisa) – 50
- Grama Niladhari-25
- Samurdhi Niladhari-25

Following are the main duties and the responsibilities of the facilitators

- Identifying beneficiary families from the GN division
- Provision of inputs for identified beneficiaries
- Close monitoring of the assigned household economic units
- Measuring and reporting the progress of household economic units and giving instructions for problems they encounter
- Coordinating with the government and other institutes related to this project as required

CHAPTER THREE

Socio Economic Characteristics of the Sample

3.1 Introduction

This chapter which is an overview of the study sample provides its major characteristics. The chapter mainly describes the sample structure and its attributes pertaining to the information on spheres like demography, livelihoods and the land extent of homegardens.

3.2 Sample Structure

The total sample of 200 households of the study came from four districts with 50 households from each district. The particular four districts were selected for the study based on the statistics of the Ministry of Economic Development which are comparatively higher in the level of implementation of the all three components outlined in the *Divinaguma* programme, by the end of year 2011.

Following is a summary of the study sample obtained by employment of multi staged random sampling technique described in the first chapter.

Table No. 3.1: Study Sample

District	Divisional Secretariat	Agrarian Service Centre	Village	No. of Households	
Gampha	Attanagalla	Nittabuwa	1. Maduwegedara	10	
			2. Kamburagalla	10	
		Urapola	3. Thihariya-East	10	
			4. Ellakkala	10	
			5. Sapugasthenna	10	
Kegalle	Rambukkana	Deliwala	1. Kadigamuwa	10	
			2. Hurimaluwa	10	
		Pinnawala	3. Keselwathugoda	10	
			4. Molagoda	10	
			5. Imbulgasdeniya	10	
Anuradhapura	Kekirawa	Maradankadawala	1. Maradankadawala	10	
			2. Maha kekirawa	10	
		Kekirawa	3. Olombawa	10	
			Madatugama	4. Horapola	10
				5. Madatugama	10
Puttalam	Chillaw	Chillaw	1. Weerapandiyana	10	
			2. Thissogama	10	
			3. Ambakandawila	10	
			4. Puliyankadawara	10	
			5. Maikkulama	10	

3.3 Population and Family Size

The study sample had a total of 834 household members of which the number of males were 414 while the balance 420 were females. The average family size of the sample is 4.17. From the sample households 33% had four members in a family. In each district, the households of four members are the highest. It is obvious from the parameters shown in the Table No: 3.2, that the composition of household population in the all four districts is identical.

Table No. 3.2: Central Tendencies of the Sample

District	Mean	Median	Mode
Gampaha	4.28	4.00	4
Kegalle	3.86	4.00	4
Anuradhapura	4.42	4.00	4
Puttalam	4.12	4.00	4

Source: Survey Data

In the sample, as many as 170 households which make 85% of the total households have only five or a lesser number of members. Only one household, out of the total 200 households sample has 10 members in the family. This overwhelmingly higher number of families with less members indicate the impact of both birth controlling and the popularity of widespread nuclear families. It also provides a clue on better applicability and prospects of developing homegardens in the country since a considerable portion of food requirement of a small family could be met by a homegarden of relatively small land extent.

Table No. 3.3: Family Size

District	No. of Family Members	No. of Households	% of Households
Gampaha	2-4	30	60
	5-7	19	38
	>8	01	02
Total		50	100
Kegalle	2-4	35	70
	5-7	15	30
Total		50	100
Anuradhapura	2-4	30	60
	5-7	19	38
	>8	01	02
Total		50	100
Puttalam	2-4	31	62
	5-7	19	38
Total		50	100

Source: Survey Data

3.4 Age Composition

The selected households of the study comprised the members of different age groups due to non consideration of age as a criteria to select the sample. The following table shows the nature of age differences among the household members of the sample.

Table No. 3.4: Age Distribution of the Sample

District	Age Groups (Years) (n=834)									
	<1	%	1-5	%	6-14	%	15-60	%	> 60	%
Gampaha	6	0.7	10	1.2	33	4.0	136	16.3	29	3.5
Kegalle	3	0.3	12	1.4	32	3.8	113	13.5	33	4.0
Anuradhapura	5	0,6	15	1.8	35	4.2	148	17.7	16	1.9
Puttalam	5	0.6	14	1.7	29	3.4	142	17.0	16	1.9
Total	19	2.2	51	6.1	129	15.5	539	64.5	96	11.5

Source: Survey Data

The table shows the age distribution of the sample. It also closely tallies with national population data. For instance, the age group of 60 years or more in the table makes 11.5% of the total population of the sample households with those below 14 years of age contributing 23.8%. When these numbers are compared with national data on population in 2011, (econ_&_ss_2013_e.pdf) the particular percentages are 9.25 and 26.3 respectively. The survey data while closely tallying with the national data, shows that demographic behavior in the country is very much the similar.

3.5 Education

A considerable variation in the level of education of the sample households' members can be witnessed due to the invariable and uncontrolled character of heterogeneity of the study sample. On the whole, the number of those who had received a comparatively higher level of education is relatively larger than those who had obtained a lesser education in the sample. However, only in the Puttalam district, a slight deviation can be witnessed. In the particular district the number of those who had studied up to grade 10 or below is higher than those who had an education beyond that. But in the other districts it is the reverse.

Table No. 3.5 shows the particular information with regard to the level of education of the households' members of the study sample.

Table No. 3.5: Level of Education

District	1-5	(%)	6-10	(%)	OL Passed	(%)	AL Passed	(%)	Graduates	(%)	Total
Gampaha	34	4.4	53	6.8	60	7.7	49	6.3	5	0.6	201
Kegalle	22	2.8	37	4.7	57	7.3	45	5.7	22	2.8	183
Anuradhapura	37	4.7	49	6.3	89	11.4	31	4.0	0	0	206
Puttalam	38	4.8	68	8.7	53	6.8	27	3.4	6	0.8	192
Total	131	16.7	207	26.5	259	33.2	152	19.4	33	4.2	782

Source: Survey Data

3.6 Livelihood Information of the Sample

The sample selected for the study is obviously a composition of diversely employed households. This is due to the fact that sample selection was neutral to the socio economic formation of the studied population. Further, the sample included households from a broader area as large and diverse as five districts. This also invariably caused the increase of the variety of livelihoods in the sample. In the Table No: 3.6 which shows the composition of the livelihoods of the sample, small businesses and trades have been included in the self-employment category in order to simplify the table. Following is a summarized picture of the main livelihoods of the sample households.

Table No. 3.6: Main Livelihoods in the Sample Households

Livelihoods	District							
	Gampaha	%	Kegalle	%	Anu'pura	%	Puttalam	%
Farming	09	18	07	14	25	50	10	20
Gov. employment	12	24	17	34	09	18	11	22
Private sector employment	15	30	11	22	03	06	06	12
Self-employed	09	18	09	18	06	12	07	14
Retired	03	06	03	06	02	04	02	04
Foreign Employment	-	-	01	02	02	04	02	04
Laborers	02	04	02	04	03	06	04	08
Fishing	-	-	-	-	-	-	08	16
Total	50	100	50	100	50	100	50	100

Source: Survey Data

Above table is only an illustration of the main livelihoods of the sample households. Many households were found to have other sources of income as well. In the Anuradhpura district the most number of households depend mainly on agriculture due to the prevalence of agriculture in the district. In others dependency of the households has spread equally upon several means of livelihoods.

The following table shows the number of employed members in the sample households. Highest are the households having two or more employed members. That amounts to 113 of the total 200 household sample of the four districts. The most prominent feature of the table is, unlike other districts the district of Anuradhapura has more two member employed households than one member employed households. The obvious reason for this is that in the Anuradhapura district agriculture normally makes few family members fully involved in it, thus the main livelihood of the majority of the sample households. For example, more often both husband and wife are very much engaged in agricultural activities recording both of them as being employed in agriculture.

Table No. 3.7: No. of Employed Members in the Sample Households

No. of Employed Members	No. of Households				Total	% of households
	Gampaha	Kegalle	Anu'pura	Puttalam		
One	29	26	13	19	87	43.7
Two	12	17	28	17	74	37.2
Three	03	05	05	09	22	11.1
Four	06	01	04	03	14	07.0
Five	00	01	00	01	02	01.0
Total	50	50	50	49	199	100

Source: Survey Data

3.7 Land Extent of Homegardens

When considering the size of homegardens of the sample one could see a significant variation. A large majority, as many as 147 households comprising 70% of the total sample owns less than 80 perches i.e. less than ½ an acre. Out of that, 72% of the households own plots from 10 to 40 perches. Those having homegardens of less than 10 perches are fewer, amounting to just around 5% of the sample. However, while in all other districts the number of households having less than ½ an acre of a homegarden are the highest, in the Anuradhapura district it is the contrary. Table No. 3.8 shows the extent of homegardens of the sample.

Table No. 3.8: Land Extent of Homegardens

District	Households' Land Extent										
	<10 Perches	(%)	10-20 Perches	(%)	21-40 Perches	(%)	41-80 (Perches)	(%)	<1(Ac)	(%)	>1(Ac)
Gampha	4	2.0	22	11.0	10	5.0	6	3.0	5	2.5	3
Kegalle	3	1.5	10	5.0	19	9.5	5	2.5	10	5.0	3
Anu'pura	1	0.5	5	2.5	12	6.0	12	6.0	11	5.5	9
Puttalam	3	1.5	10	5.0	18	9.0	9	4.5	4	2.0	6
Total	11	5.5	47	23.5	59	29.5	32	16.0	30	15.0	21

Source: Survey Data

3.8 Facilitators

Under the Divinaguma program, three village level officers - Grama Niladhari, ARPA and Samurdhi Niladhari were assigned the duty of facilitating the beneficiaries. The responsibility of selecting the beneficiary households was also on them. In the first round of the program, from each village 100 households were selected. Of them Samurdhi Niladhari and Grama Niladhari were responsible in selecting and facilitating 25 households each while ARPA had to select 50 to be facilitated by him. The Table No. 3.8 shows how the randomly selected sample beneficiary households had been distributed among the three facilitators.

Table No. 3.9: Households by Facilitators

District	Facilitator						Total
	Grama Niladhari	%	ARPA	%	Samurdhi Niladhari	%	
Gampaha	10	05	30	15.0	10	5.0	50
Kegalle	14	07	23	11.5	13	6.5	50
Anu'pura	16	08	19	9.5	15	7.5	50
Puttalam	14	07	20	10.0	16	8.0	50
Total	54	27	92	46	54	27	200

Source: Survey Data

CHAPTER FOUR

Findings of the Research

4.1 Introduction

This chapter consists of the major findings of the survey carried out on a sample of 200 households. These findings spread from the input and facilities provided under the program to the changes occurred in the household consumption and purchasing of vegetables.

4.2 Sectors Involved

As already mentioned in the second chapter the *Divinaguma* program was introduced as a three pronged approach to develop households as economic units. It was expected that the homegardens and livestock components would mainly help consumption and nutrition aspects of the households, and the cottage industry would increase the family income. However, it is with the homegardens that the *Divinaguma* program started and the expected number of households included from a GN division in the first round was 100. Of the three components, the *Divinaguma* program introduced to make household economic units, the component of agriculture (mainly the homegardens) was the one that the most number of households involved. Further it is the agriculture component that was implemented first, of the three components of the *program*.

Household involvement in the other two components mainly seemed to have depended on the facts such as its relevance to their present livelihoods, skills and knowledge they have to engage in the particular component and the other special reasons such as time availability. For example, households could involve in the component of cottage industries by their own will choosing an industry they preferred or they are already involved in. As such, their involvement depended much on the interest, skills and experience they already had on a certain industry. However, in the livestock component many households were found interested in cattle rearing and poultry farming, yet only a few households had received at least chicks at the time of the study. Under *Divinaguma* only 10 households from a GN division have received 10 chicks each. It seemed that under the *Divinaguma* programme cattle rearing had not received a satisfactory boost at the time of the field survey of the study. The majority of the households were found being unable to afford the high price to pay for cattle even on subsidy. It was revealed that in the provision of cattle under the *Divinaguma* programme half the cost was required to be borne by the recipient. Given the high price of animals, this was said to be an unaffordable cost to the poor people and they had not opted to receive cattle as a result.

The following table shows the sectors involved by the study sample.

Table No. 4.1: Sectors Involved by Households

District	Sector Involved				Total
	Home gardens Only	%	Home gardens & Livestock	%	
Gampaha	44	88.0	06	12.0	50
Kegalle	48	92.0	02	04.0	50
Puttalam	44	88.0	06	12.0	50
Anu'pura	43	86.0	07	14.0	50

Source: Survey Data

From the above table it is clear that the majority of the households are involved in homegardens only. Though the sample was selected for the purpose of evaluating the homegarden component, no restriction was applied in the sample selection, households involving more than one component get into the sample if they are involved in homegarden component as well. Nevertheless none of the households involved in the cottage industry under *Divinaguma* programme was present in the sample. The reason for this is the households' involvement in the particular component at the village level is less.

4.3 New Homegardens

In the study it was found that the majority of the sample households had engaged in homegardening before joining the *Divinaguma* homegarden program. Many reasons including the interest in cultivating and its advantages had prompted households to cultivate. Nevertheless, the *Divinaguma* programme has become a strong force and stimulant and it has persuaded people to think afresh of homegardening highlighting its numerous and immeasurable advantages through the unprecedented publicity given. The effectiveness of the *Divinaguma* homegarden project as an attitude changer and fresh stimulant has been so strong that it was praised and accepted by many studied households as a proper and prudent drive expected to be a solution for many consumption, nutrition and health related problems.

Table No. 4.2: Homegardening before *Divinaguma*

District	Cultivated the home garden before <i>Divinaguma</i>				
	Yes	(%)	No	(%)	Total
Gampaha	47	94%	03	6%	50
Kegalle	46	92%	04	8%	50
Puttalam	41	82%	09	18%	50
Anu'pura	44	88%	06	12%	50

Source: Survey Data

Above table points out that the majority of households had been cultivating their homegardens even before the intervention of the *Divinaguma* homegarden programme. Nevertheless they had not been able to have a regular or substantial support for their daily food requirement from the homegardens. This is due to lack of productivity and less sustainability mainly caused by irregular cultivation and poor awareness of home gardening on the whole. The following table depicts how the households had benefited from the homegardens prior to the intervention of *Divinaguma* homegarden programme.

Table No. 4.3: Benefits Received from Homegarden Prior to *Divinaguma*

Benefits	Number of Households											
	Gampaha		Kegalle		Puttalam		Anu,pura		Total (n=178)		% of households	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Provided much of the daily household's vegetable requirement	05	42	07	39	04	37	10	34	26	152	14.61	85.39
Provided much of the household's fruit intake	10	37	15	31	13	28	17	27	55	123	30.90	69.10
A Source of Additional Income	1	46	5	41	2	39	07	37	15	163	8.43	91.57
Reduced much of the household's food expenditure	6	41	05	41	3	38	08	36	22	156	11,23	87.77

Source: Survey Data

It is understood from the above table that only a very few households had managed to get a substantial support from their homegardens. Yet, as shown in the chapter three when considered the plots of land which made the homegardens, the majority of the sample households had in their possession a fairly adequate plot to receive a satisfactory support for their daily food requirement if utilized properly. Nevertheless, only 13% of the

total sample households had been able to fulfill much of their daily vegetable requirement from the homegarden as noticed from the above. Further, the number which could make any income from the homegarden has been very few while those households reported to have experienced a much reduction of the household's food expenditure due to homegardening are not many.

A higher number of households in every district depend mainly on homegardens for fruits. This is because consumption of fruits for many sample households is not a priority or habit. As a result in most cases their fruit consumption is limited to what they receive from the homegarden irrespective of frequency and variety. Therefore, it is obvious that their less purchasing of fruits from the market as shown in the table above is not because of they produce much of it at home but because of their less tendency to buy them from market, as fruit consumption for them is not a priority or a habit.

In considering the scenario discussed above before *Divinaguma* intervention, households apparently have not adequately utilized their homegardens for the production of vegetable or fruits, thus have not satisfactorily supported their food requirement. As a result, the initiative of the Ministry of Economic Development in encouraging households into homegardening can be seen as a step in the right direction.

4.4 Reasons to Join *Divinaguma* Homegardens Programme

The beneficiaries of homegardens have joined in the particular component of *Divinaguma* programme for different reasons. However, major reasons to join the program show households' true interest in homegardening and the clear understanding of its advantages. Out of a sample of 200 households, more than 140 amounting to 70% the total state their interest had driven them to join the project. The next majority which comprises 132 households (almost 70% of the total) believe homegardening as a means to obtain safe food. Another considerable portion numbering 110 households have joined the *Divinaguma* homegardening programme as they thought it was advantageous. According to the table in comparison with other worthy reasons for households to join *Divinaguma* homegardening programme, only a negligible number of households have joined in as reported due to being encouraged by the facilitator. They are just 8% of the sample .

Table No. 4.4: Reasons to Join *Divinaguma* Homegarden Programme

Reason	Number of Households					
	Gampaha	Kegalle	Anu'pura	Puttalam	Total	% of households
Own interest	41	39	36	29	145	72.5
As thought advantageous	28	23	31	28	110	55.0
As a means for safe food	44	38	28	22	132	66.0
Due to being encouraged by the facilitator	03	02	03	08	16	08.0
For effective use of the land	01	06	04	05	16	08.0

Source: Survey Data

4.5 Provided Inputs

In the first round of *Divinaguma* homegarden programme, beneficiary households were 100 from each village. By the time the survey was conducted they had received seeds twice. However, only once, they had received a small packet of fertilizer. Nevertheless few households of all four districts had not received the fertilizer packet. From four districts of which the sample comprised such as Gampaha, Kegalle, Puttalam, and Anuradhapura respectively 3, 5, 10 and 9 households had not received the particular fertilizer packet.

Apart from that, the *Divinaguma* programme has distributed a variety of plants such as spices, fruits of several varieties, coconut, jak, and cashew among beneficiary households as shown in the Table No: 4.5. However as in fertilizer, several households in the sample of all four districts had not received any plant though they preferred to receive at least some. Few others had opted not to take plants due to non availability of space. The number of households which did not receive plants were 9, 5, 6 and 15 respectively from Gampaha, Kegalle, Anuradahpura, and Puttalam districts. The number of plants received by households differs both owing to the availability of plants as well as the preference of the households which received them. Households with small plots of land did not prefer to have all the plants given to them but only few due to limited space available.

Table No. 4.5: Plants Received by the Sample Households

Plants	Households that received plants							
	Gampaha		Kegalle		Anuradhapura		Puttalam	
	No. of house-holds	No. of Plants	No. of house-holds	No. of Plants	No. of house-holds	No. of Plants	No. of house-holds	No. of Plants
Mango	30	31	22	37	32	38	04	04
Orange	22	22	12	13	04	11	04	04
Coconut	10	18	21	50	33	61	26	59
Cashew	-	-	-	-	32	57	01	05
Pomegranate	09	09	-	-	18	22	01	01
Guava	10	10	-	-	-	-	11	15
Rambutan	04	04	11	13	-	-	-	-
Pepper	08	14	08	09	-	-	-	-
Cinnamon	09	12	-	-	-	-	-	-
Arecanut	01	06	02	02	-	-	-	-
Ginger	-	-	02	10	-	-	-	-
Lemon	01	03	03	12	-	-	-	-
Jak	-	-	06	15	-	-	-	-
Butterfruit	-	-	02	02	-	-	-	-
Starfruit	-	-	09	09	-	-	-	-
Woodapple	-	-	03	04	-	-	-	-
Passionfruit	-	-	-	-	03	03	-	-
<i>Uguressa</i>	-	-	01	01	-	-	-	-

Source: Survey Data

The above table with details of the plants distributed by the *Divinaguma* programme among the sample households reveals several important facts. First and foremost it presents the picture of variation of the plants distributed among the districts. Accordingly, it is clear that the kinds of plants distributed in the studied districts have differed to match the particular climates. Especially when looking at the plants distributed in the Anuradhapura and the Puttalam districts this fact is clear. At the same time, lack of variety in distributed plants in the above districts compared to Gampaha and Kegalle also can be attributed to the climatic conditions in the particular districts. Therefore, it is justifiable to maintain the view that under the *Divinaguma* programme a logical distribution of plants among the districts has taken place.

Nevertheless some facilitators reported that they received only few plants in certain varieties and as a result they faced difficulties in distributing them among recipients. This

is clear from the above table. For example, only one sample family had received a plant of pomegranate in the Puttalam district. There had also been a less number of distributions of the plants like mango and Orange among the homegardening households in the particular district. Moreover, it is reported that pomegranate that grows better in the Anuradhapura district had not been received by any sample household. However, when it comes to coconut a satisfactory distribution has taken place in keeping with the objective of the *Divinaguma* programme to extend the area of coconut cultivation. In addition to the distribution of plants for homegardens, the *Divinaguma* programme, under agriculture development was found to have plans for other projects as well, aimed at encouraging fruit and coconut cultivations in the country. Some of these could be witnessed at the start of the survey. The particular projects were reported to have provided plants for beneficiaries to start relatively larger cultivations of fruits and coconuts. This would boost the country's fruit and coconut production as envisaged by the *Divinaguma* programme in future.

In the sample, almost all had planted all the seeds and plants they received except few households. The number of households which had not planted the seeds they were provided were one each from Gampaha and Kegalle districts while it was 5 in the Puttalam district. In the Anuradhapura district, the total number of households in the sample had planted the seeds they received. When looking at plants except a negligible few such as one household each from both the Gampaha and Kegalle districts and two households in the Anuradhapura district all other households had planted what they received. In the Puttalam district no household which received plants had failed to plant them.

4.5.1 Quality of the Seeds

Many households of the sample were disappointed over the quality of the seeds they received. It is clear from the Table No: 4.6. There are some comments especially regarding the seeds of the first round which were not up to the quality. Even some responsible officers commented that those seeds were hurriedly prepared without taking care of the quality and distributed in haste. Certain others said that packaging together with the fertilizer may have affected the quality of the seeds. Apart from that even agriculture related officers in the divisional and village level were in the dark and were uncertain and worried about the source of the seeds distributed specially in the first round of the *Divinaguma* homegarden project.

Table No. 4.6: Quality of the Seeds Received by the Households

Quality of the Seeds	Gampaha	Kegalle	Anu'pura	Puttalam	Total	% of households
Highly Satisfied	06	07	09	11	33	16.5
Satisfied	09	11	10	14	44	22.0
Not Satisfied	26	24	21	16	87	43.5
Not Satisfied at all	09	08	10	09	36	18.0
Total	50	50	50	50	200	100

Source: Survey Data

The above table clearly indicates that the majority of the households from all four districts were not satisfied with the seeds provided to them under the program. The particular number is over 61% altogether while 18% of being totally dissatisfied. Only 16.5% were fully satisfied with the seeds they received. Several reasons for the high level of dissatisfaction over the seeds could be found. The complaint as many as 80% of those were not satisfied over seeds made was their poor germination. More than 60% of them reported no or less yield. Around 55% attributed the lack of vigor or the healthiness of the germinated plants to immaturity of the seeds.

4.5.2 Provision of Instruments

Though it had been promised and given much publicity by the *Divinaguma* programme to provide a set of tools worth Rs.10, 000/, no household in the total studied sample had received them. That had disappointed the households that joined the program eroding their faith over the program to a certain degree. Also it has been a severe embarrassment to the facilitators as well. The facilitators had initially promised households a set of homegardening tools to encourage them to join the *Divinaguma* homegardening programme.

4.6 Awareness and Training

Under the *Divinaguma* programme it was revealed that both the facilitators and the beneficiaries had not received a satisfactory training or awareness on homegardening. Facilitators on the whole had received no special training on homegardening except at the inaugurating meeting held at the divisional secretariat level at the launch of the program. Of the facilitators, especially Grama Niladhari(GN) and Samurdhi Development Officer (SDO) who were not familiar with agriculture, reported to have preferred some satisfactory awareness on homegardening as they felt it was a requirement for them to play a significant role of the facilitator. However, no such training or education was provided.

In most of the studied villages, households had received only one training session organized in combination with three facilitators and conducted by the Agricultural Instructor (AI). This has been limited mainly to an awareness session or training on organic fertilizer making. Any household which failed to attend it had never got another chance.

Agriculture Research and Production Assistants (ARPA) had provided some knowledge and awareness required mainly by the households which came under their supervision. They have been able to do that due to their closer relation with AI and had the opportunity to know what they do not know from the AIs with regard to agriculture. Further, they had the working experience which was lacking in other facilitators, which was as an added advantage.

However the majority of the respondents were of the opinion that they did not receive a satisfactory awareness on homegardening specially pertaining to the vital areas such as land arrangement, ground preparation, pest control, etc. Most of them had not been aware of the awareness programs telecast or broadcast and also had not received guidance or direction.

The following table shows that in all four districts the highest majority was not satisfied with the awareness they received on homegardens under the *Divinaguma* programme as they had not got what they really expected from the mega project.

Table No. 4.7: Households' View on Training Provided

View on Training	Gampaha	Kegalle	Anu'pura	Puttalam	Total	% of households
Strongly Satisfied	05	07	04	08	24	12.0
Satisfied	13	11	09	13	46	23.0
Not Satisfied	22	21	24	20	87	43.5
Not Satisfied at all	10	11	13	09	43	21.5
Total	50	50	50	50	200	100

Source: Survey Data

It was also revealed that a considerable number of households had not received any instructions or had been monitored at least by the facilitators. Some households complained that the research team of this study was the only ones who visited and followed up on the *Divinaguma* seeds packet given to them. From that, it is evident that successful instructing, monitoring or evaluation of the *Divinaguma* homegarden project has not taken place. This shows that households had not received a satisfactory service in terms of instructions or awareness under the *Divinaguma* programme.

However, recent assigning of the newly recruited graduates by the Divisional Secretariat with the works related to the *Divinaguma* at village level seems advisable and would help in the future operations of the *Divinaguma* programme. Nevertheless these fresh graduates are not competent to instruct households on homegardens or on any other technical matter.

Table No: 4.8, provides the respondents' view over the service they received from several individual officers who were supposed to provide instructions and guidance under the *Divinaguma* homegarden programme. Accordingly it is clear that the highest majority of the respondents had not been satisfied with the service of any individual service provider. Extremely a few number of respondents had been strongly satisfied with any individual service provider. The maximum respondents' satisfaction comprising a bit more than just 25% of the respondents had been received by ARPA. It could be noticed that though some respondents had not received any particular service from the facilitators they did not make any negative comment about them, as facilitators were also residents of the same village.

However, it is noticeable that irrespective of much weight being given to increase the coconut cultivation in the country under the *Divinaguma* homegarden program no satisfactory awareness or knowledge had been provided to the households. In the study, not a single sample village which received an awareness program on coconute cultivation could be found.

Table No. 4.8: Service Rendered by the Officers

Service Rendered	AI	%	APRA	%	SDO	%	GN	%	CDO	% of households
Strongly Satisfied	11	5.5	14	07	07	3.5	05	2.5	00	00
Satisfied	18	09	40	20	36	28.0	23	12.5	09	4.5
Not Satisfied	32	16	51	26.5	28	14.0	33	16.5	00	00
No Service & not Satisfied at all	139	69.5	95	44.5	129	64.5	139	69.5	191	95.5
Total	200	100	200	100	200	100	200	100	200	100

Source: Survey Data

The Table No: 4.9, provides the information on the officers' visiting the households having *Divinaguma* homegardens. The numbers in the particular table are a further manifestation of the fact that monitoring and evaluation on homegardens as well as provision of required awareness to households has not been implemented adequately.

Table No. 4.9: Visiting of Households by the Relevent Officers

Officer	Frequency of Visiting (No.of times a household was visited since the start of Divinaguma Program)										
	1	2	3	4	5	6	7	8	9	10	0
AI	5		6	1							188
APRA	17	16	10	05	6	5	2	2	1	4	132
GN	11	07	05	2	2	3	1	3			166
SDN	12	09	9	07	2	2	3	1			155
CDO			4								195

Source: Survey Data

The table illustrates that visiting households by officers concerned under *Divinaguma* programme either to look into their progress in homegardens or providing instructions has not been sufficient. While a very few households seem to have received more frequent visits it was very often found to be from only one officer. Similarly as many as 36 households from the total sample of 200, had never been visited at least once by any. The number of households visited by the AIs and CDO are remarkably less. The vast expansion of the area and the other responsibilities of AI and CDO may hinder them from visiting individual households coming under the homegardens programme. Moreover the above mentioned officers seem to have the attitude that the *Divinaguma* homegarden programme is beyond their responsibility and the particular duty should be carried out by the facilitators. This implies the failure of those who implemented the *Divinaguma* program at the divisional level to ensure the involvement and adequate co-operation of the other relevant parties in implementing the program.

Further more, the 'planning of households economic units' under the *Divinaguma* programme targeted to be carried out within the period from 1st March 2012 to 30th March 2012 had not operated as speculated by the letter (MED/DEV/DN/HP/1) issued by the Additional Secretary (Development), of the Ministry of Economic Development. If this had been successful it would have given at least some favorable push to the emergence of more successful homegardens. According to the circular, households were scheduled to be visited by a group of competent officers and provide required guidance to plan and build successful homegardens. However, in practice this has been limited to a just collecting of information from the households by the facilitators. In certain cases facilitators were reported to have not visited households even at least for that purpose but gathered information through some other means.

It was also revealed in the study, that no role had been played by the midwife in relation to the *Divinaguma* homegarden program though she was supposed to support the implementation of the program at the household level. In addition to that, a severe drawback in the *Divinaguma* households' economic unit program was observed in

dividing households among facilitators. This seemed to have resulted in an attitude among the facilitators that they should look into and deal with only the households that come under their responsibility and not others. This situation had made an unexpected division among the village level officers. This apparently has affected the co-operation of village level officers and their service for the recipients of the program. Especially in the case of homegarden component all households require the service of ARPA. But under this divided situation ARPA seemed to have favored his/her own group of households.

4.7 Contribution to the Consumption

The large majority of the households in all four districts agree that due to the *Divinaguma* homegarden programme their domestic vegetable production had increased. Nevertheless the momentum could not be kept along due to various reasons including the dry weather experienced during a certain period of the year. The Table No.10 shows the opinion of the households on the increase of their own vegetable production due to the *Divinaguma* homegarden programme.

Table No. 4.10: Contribution to the Households' Vegetable Production

Nature of Impact	Gampaha	Kegalle	Anu'pura	Puttalam	Total	% of Households
Very much Increased	07	15	12	18	52	26.0
Somewhat Increased	41	33	34	28	136	68.0
No Change	02	02	04	04	12	06.0
Total	50	50	50	50	200	100

Source: Survey Data

According to the table, the production of vegetables by a majority of the households had increased. However, the households in which the production had somewhat increased are in the majority. Those households experienced 'very much increase' is only 26% of the total sample whereas the number of households which reported that their vegetable production was somewhat increased comprised 68% of the sample. However, what is important is that due to the *Divinaguma* homegardening programme at least within a certain period, the vegetable production of most of the beneficiary households had increased though at different levels. Moreover as evident from the table, those households which report to have enjoyed no increase in vegetable production at all due to *Divinaguma* homegardening programme is a negligible few which is as low as 6% of the total sample.

Table No.4.11 gives a percentage wise description of the quantitative change occurred in the households' buying of vegetable from the market due to the *Divinaguma* homegarden programme. This decrease in the quantities of vegetable purchased again reflects the quantitative increase of their domestic production. But the important fact is that though many households had not been able to produce large quantities for commercial purpose their production had been sufficient to cut down a considerable quantity or percentage of vegetable purchases. The table depicts the decrease of purchasing of vegetables from the market by the sample households due to the *Divinaguma* programme. These calculations were made referring to the purchases made by the households in the month before the survey. Accordingly the highest majority of the sample which is around 70% had been able to cut down 25% to 100% of vegetable purchases. Almost 29% of the studied households had been able to bring down at least 50% of their purchasing of vegetable due to *Divinaguma* homegarden programme. Many households were of the opinion that vegetable production in previous months was much better than the month concerned in the study. However, this success had come irrespective of certain problems and weaknesses attached to the way, the program was carried out and those related to beneficiaries. Some of these problems were discussed earlier. Nevertheless if people continue homegardening with their own interest and those responsible provide the right back- up it would help to make a substantial difference in the people's nutrition, their health, savings and all related aspects as envisaged by the *Divinaguma* programme in keeping with its rationale of the homegardening program.

Table No.4.11: Decrease in Weekly Purchasing of Vegetables

Level of decrease (%)	No. of Households					% of Households
	Gampaha	Kegalle	Anu'pura	Puttalam	Total	
5-10	01	00	02	00	03	1.6
11-25	15	10	11	09	45	22.6
26-50	23	19	18	21	81	40.6
51-75	03	08	08	06	25	12.6
75-100	03	10	08	11	32	16.1
No change	05	02	03	03	13	6.5
Total	50	49	50	50	199	100

Source: Survey Data

Table No.4.12 shows facilitator wise comparison of the reduction of purchasing of vegetables by the sample households from the market due to the influence of the *Divinaguma* programme. Accordingly more households of which facilitators were ARPA and the SDO have been able to reduce their dependency on market for vegetable at a

comparatively better level than the households facilitated by the GN. However, the performance of households facilitated by ARPA is much better. This can be attributed to the better chance and ability the ARPA had to educate his assigned households due to the nature of his job and the knowledge he gained through it. But other facilitators invariably were short of these skills.

Table No.4.12: Facilitator Wise Decrease of Vegetable Purchased by Households

Level of decrease (%)	No. of Households by Facilitators				
	GN	SDO	ARPA	Total	% of Households
5-10	02	01	00	03	1.5
11-25	22	12	11	45	22.6
26-50	21	17	43	81	40.7
51-75	01	12	12	25	12.6
75-100	02	08	22	32	16.1
No change	06	04	03	13	6.5
Total	54	54	91	199	100

Source: Survey Data

4.8 Contribution to Increase the Household Income

The findings of the study show that many families had been unable to gain an additional income from the homegardens by selling vegetables. Only 18% of the households had managed to sell some vegetables in the previous month before the data collection. According to the findings, homegardens are not a viable and consistent additional income source for many in the present form as it does not produce a considerable marketable surplus for the majority. However there exists the possibility of improving homegardens to that level especially with the provision of proper technical awareness and other support required. Households should be provided with awareness, techniques and facilities to maintain a homegarden which satisfactorily contributes to household's food consumption irrespective of the climatic changes. This is what was envisaged by the *Divinaguma* programme at its initiation. Many homegardens are only seasonal and exist in the rainy season only. This obviously does not serve the *Divinaguma* objective and it requires revising.

The following table shows the number of households which had made at least some income from the *Divinaguma* homegardens.

Table No. 4.13: Selling Vegetable by Households

District	Shared with neighbors				Total
	Yes	%	No	%	
Gampaha	07	14	43	86	50
Kegalle	13	26	37	74	50
Anu'pura	07	14	43	86	50
Puttalam	12	24	38	76	50

Source: Survey Data

It was also found that the majority of the households had not thought of making the homegarden a source of income but had considered reducing their cost of purchasing vegetables. This is evident by the fact that rather than selling what they had in excess, households prefer sharing it with neighbors. On the whole, we found that the number of households that shared their produce from homegardens to be higher than those which had tried to sell it.

Table No. 4.14: Sharing Vegetables with Neighbors

District	Shared with neighbours				Total
	Yes	%	No	%	
Gampaha	30	60	20	40	50
Kegalle	28	56	22	44	50
Anu'pura	16	32	34	68	50
Puttalam	28	56	22	44	50

Source: Survey Data

Even the few households which sold the produce of their homegardens have made only a trivial amount as the income from the homegarden. Only 10 households of the total sample had made an income of more than Rs1000 from selling of their vegetables for the whole month considered in the study.

The following table shows the income of the sample households from the homegardens calculated for the previous month of the data collection of the study.

Table No. 4.15: Contribution to Household Income

Income Category	Number of Households				Total	% of Households
	Gampaha	Kegalle	Anu'pura	Puattalam		
<1000	05	08	07	09	29	14.5
1001-2000	01	02	-	01	04	02.0
2001-3000	-	02	-	01	03	01.5
>3000	01	01	-	01	03	01.5
Total	07	13	07	12	39	19.5

Source: Survey Data

4.9 Impact on National Production

The *Divinaguma homegardens program* had twin objectives of increasing vegetables production at the household level and decreasing the households' dependence on the market for vegetables. Similarly it was expected to increase production at household level so that the excess would find its way to the market eventually bringing down the prices of vegetables in the market. However, this objective of the *Divinaguma* agriculture program seems to have been achieved only for a shorter period.

Table No: 4.15 shows the behaviour of the market prices of a few main vegetables in the year 2011 and 2012. These were among the main vegetables promoted by *Divinaguma* homegarden programme. It is clear from the table that the prices of the particular vegetables have decreased significantly for a period of around one year from the month of April 2011 to the corresponding month of 2012 though with some slight changes towards the end of 2011. This fall of high prices of vegetable since April 2011 to the corresponding period of 2012, may have been a result of the influence of the *Divinaguma* homegarden programme. Because, this fall of price clearly correlates with the findings of the study which shows an increase of households' production of vegetable though at different levels, had reduced the purchases. This resultant market demand can be justifiably assumed to have triggered the fall of vegetable prices. However as the table shows that towards the latter part of 2012 the prices of the vegetables again had started to rise. This is largely due to the harvest of the *Divinaguma* homegardens coming to an end and many abandoning the homegardens.

Table No. 4.16: Monthly Average Retail Prices of Several Selected Vegetables

Month	Monthly average prices of Several Selected Vegetables (Rs.)									
	Ladies Fingers		Snakegourd		Long Beans		Luffa		Brinjals	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
January	130.90	104.68	122.93	94.08	149.56	88.49	145.02	118.12	147.66	91.80
February	174.39	79.01	148.98	65.46	172.90	68.08	190.62	96.62	167.98	57.04
March	134.76	71.55	100.35	71.37	112.70	68.52	140.17	89.83	111.14	73.94
April	82.89	91.36	70.26	77.34	84.11	83.81	93.11	96.14	103.35	80.92
May	83.26	114.45	72.65	104.82	98.70	105.64	91.67	109.61	92.62	107.67
June	85.53	120.38	72.44	110.15	106.41	141.65	91.47	122.36	80.74	105.87
July	76.33	100.53	62.38	100.47	93.92	112.06	78.81	116.92	60.71	96.20
August	82.08	77.32	64.44	93.97	87.09	102.59	80.62	101.95	74.39	100.79
September	98.71	83.05	71.29	91.01	84.59	98.14	88.59	105.70	79.64	108.20
October	88.47	109.54	75.92	102.87	88.96	116.44	87.61	113.60	64.15	117.97
November	101.50	143.07	106.45	133.06	130.23	170.07	112.48	123.35	98.15	155.13
December	112.70	111.30	116.78	87.57	132.62	112.03	118.76	98.09	91.29	120.47

Source: HARTI, Market Prices

4.10 Family Members involved in Homegardens

The *Divinaguma* homegardens programme apart from other objectives is expected to make closely knitted and psychologically sound families through the homegardens. The program expected homegardens to be a mental relief to the family members and strengthen their bonds. As a result, the *Divinaguma* programme wished the involvement of all family members in the activity of homegardening.

Table No: 4.16, shows the involvement of family members of the studied sample in cultivating their homegardens. Accordingly in most of the households the homegardening has been much of husband's duty. In 102 households, i.e. in more than 50 % of the sample households mainly the husband is the caretaker of the homegarden. In 20% of the sample households all family members are involved in maintaining the homegarden. Nevertheless from the 200 sample households there were 71 households of which husband and wife or the whole family is involved in homegardening. Thus shows the *Divinaguma* homegarden programme to a certain extent has realized the above objective.

Table No. 4.17: Involvement of Family Members

Involved	District				Total	% of Households
	Gampaha	Kegalle	Anu'pura	Puttalam		
Husband Only	23	27	31	21	102	51.0
Wife Only	06	07	05	09	27	13.5
Husband & Wife	06	07	07	11	31	15.5
All in the Family	15	09	07	09	40	20.0
Total	50	50	50	50	200	100

Source: Survey Data

4.11 Respondents' Opinion over the Divinaguma Homegarden Programme

As mentioned above all respondents are of the opinion that popularising homegardening and encouraging households for that is a timely requirement and in that particular aspect, efforts made by the *Divinaguma* homegardening programme is commendable and praiseworthy. Highest majority i.e 94% of the total sample agreed that the publicity given to the *Divinaguma* homegarden programme caused people to think of homegardening afresh. Specially the reasons such as high chemical use in commercial cultivation and extreme price fluctuations of vegetables at times had also increased households' interest in homegardening. Nevertheless majority is not satisfied with the way the *Divinaguma* homegardening programme is practically operated. The sample households interviewed in the survey opined as to why homegardening should be popularised and in which ways the weaknesses of the programme could have been averted to make it a help for a more successful venture.

Table No. 4.18 shows the reasons stated forward by respondents as to why homegardens should be promoted and households should be encouraged to adopt homegardens.

Table No. 4.18: Reasons for Promoting Homegardens

Reasons	No. of Respondents	% of Responded Households
Reduce cost of living	199	99.5
Provide opportunity to consume healthy vegetables	148	74.0
Source of additional income	98	49.0
Provide mental satisfaction	162	81.0
For effective land use	12	06.0
Prevent wasting time in markets	06	03.0
Productive leisure time activity	89	44.5

Source: Survey Data

In the above table it has been mentioned the reasons according to the respondents' view as to why homegardens should be promoted. Thus the highest majority of the respondents believe that homegardening is beneficial to bring down the cost of living. Majority of households view homegardens as a source for healthy food and mental satisfaction creating a favourable environment to develop a culture of homegardens. Though small in number some respondents had looked at the advantage of homegardening from different angles. For example, 6 and 3 percent of respondents have viewed homegardening as a way of effective land use and saving the time spent in the market. The knowledge of these advantages of homegardening by the larger society may definitely ease the task of directing households to homegardening. Nevertheless as the respondents' view, the steps suggested in the Table No: 4.18, are required if it to be a reality.

Table No. 4.19: Ways to Promote Homegardens

Ways	No. of Respondents	% of Households
Changing attitudes by emphasizing the benefits	142	71.0
Providing awareness and training	195	92.5
Periodical monitoring and evaluation	188	94.0
Ensuring the easy access to quality seeds and planting materials	175	87.5
Providing instruments	54	52.5
Valuing the successful homegardens	42	21.0

Source: Survey Data

CHAPTER FIVE

Conclusion and Recommendations

5.1 Summary of Findings

1. The *Divinaguma* Homegarden programme had been able to create an unprecedented interest in the households for homegardens. This had been mainly created by the publicity given for the programme. As a result, it could be observed that the majority of the households had joined the program with much interest.
2. The programme had been successful in the short run by increasing the households' production of vegetables though at different levels. However, it has not been successful in establishing sustainable homegardens.
3. Majority of households had cultivated all seeds and plants provided with them under the program.
4. Only few households had made any income from homegardens. More households had preferred sharing any surplus rather than opting to sell.
5. The distribution of fruit samplings under the programme may have been determined by the geographical suitability for their cultivation. Accordingly a difference in the kinds of fruit saplings distributed among the sample districts could be noticed.
6. Majority of households of all the four sample districts were not satisfied with the quality of the seeds distributed in the first round of the *Divinaguma* programme. Many complained of the poor germination suspected due to the immaturity of seeds.
7. Due to the inadequate supply, facilitators had found difficulties in distribution of certain saplings of fruits among households bringing in the allegation of favoritism
8. Most of the households were unhappy over not receiving of the promised homegarden tools to the value of Rs.10, 000. The facilitators, who had assured households of the particular tools to encourage them for homegardens, expressed disappointment caused by the failure.
9. Awareness given under the programme to both facilitators and the households seems insufficient. Except ARPA other facilitators had found difficulties in providing households with necessary instructions.
10. No proper monitoring of homegardens had taken place. Certain officers apparently have regarded the responsibilities assigned to them as an extra burden. Especially GNs seem reluctant of being assigned with the duty of facilitating.
11. Most homegardens were seasonal and in the dry season they were abandoned due to the poor knowledge of the techniques of maintaining homegardens with the minimum supply of water.

12. Lack of cooperation of related institutions and officers at divisional level for the success of program could be observed. The program completely functioned by the planning section of the respective Divisional Secretariat.
13. The division of households among facilitators under *Divinaguma* homegarden program has caused a negative impact by compelling village level officers not to act fairly.
14. Attempt of *Divinaguma* programme to involve every household in the homegarden program seemed to have negatively affected the program. This is due to the differences in commitment of the households. In certain areas it was found that implementing of such a program is not practical concerning socio-economic environment of the particular areas.
15. Majority of the households were found to be eager to have homegardens for fresh and safe food and as a means of saving expenditure. As a result, there is a huge possibility of encouraging them to have more sustainable homegardens.
16. Households in common lack the knowledge in the areas like planning their gardens, using proper irrigation methods, control of pest and diseases and techniques of making maximum use of the small land extents which are the vital areas required for sustainable homegardens that can satisfy the objectives set by the *Divinaguma* homegarden programme.

5.2 Conclusion

According to the findings of the study the *Divinaguma* Homegarden Programme with its high publicity had made a huge initial impression within the whole population stimulating them to think afresh on homegardening. Nevertheless one year after the implementation it was found that the programme had gained mixed results. While it has been successful in the short term to increase the beneficiary households' production of vegetables its contribution to the establishment of more stable homegardens seems not much significant. This can mostly be attributed to the lack of awareness on planning and maintaining of homegardens in the target group. For the development of more stable homegardens it is required to provide the households with adequate knowledge or awareness. This includes proper planning of the land, imparting knowledge on pest and insect control as well as preparing ground for different crops in accordance with the nature of the land. Further, knowledge on the kinds of suitable irrigation techniques or methods for homegardens is required to enable households to have productive and dependable homegardens even during the dry season. Otherwise people would abandon their homegardens in the dry season when difficulties in water supply emerge.

Further, for maintaining successful homegardens, people should have easy access to planting materials. Though the *Divinaguma* programme had proposed to establish two nurseries in every village to facilitate the purchase of planting materials it has not been

successful. In many villages no such nurseries had been established or they were not operating to serve the purpose.

Although the *Divinaguma* homegarden programme had faced the above mentioned lapses in its implementation, on the whole the particular program should be identified as commendable and praiseworthy. Development of homegardens is a timely requirement. Implementation of the *Divinaguma* homegarden programme is a result of understanding of particular requirement by the authorities. Today the viability of the development of homegardens by encouraging households for that is relatively easy as well. This is mainly due to the interest in people for safe food. Further, the reduced family size seems another positive factor for the development of homegardens as much of the family food requirements can be satisfied by even a small homegarden. As a result, by providing the basic support as discussed above, households can easily be driven for successful and sustainable homegardens which would make the *Divinaguma* homegarden programme's objectives achievable.

5.3 Suggestions for an Effective Homegarden Programme

From the findings of the *Divinaguma* homegardens program the study was able to ascertain the following as basic requirements for the establishment of successful homegardens or to drive households for adopting and maintaining successful homegardens.

1. Should involve only the interested households
2. Should be given adequate knowledge and practical training on how to plan the garden, prepare ground for different varieties of crops depending on the nature of the land, pest control and how vegetable cultivation can be used as a means of land beautification etc.
3. Periodical monitoring and evaluation is a must
4. Should make quality seeds and other planting materials readily available at the right time
5. Lower income groups like *Samurdhi* beneficiaries must compulsorily have homegardens depending on their land availability to receive the particular allowance.
6. Every year Divisional Secretariat should select three model homegardens from each village and they should be rewarded. This would be an encouragement for sustainable homegardens.
7. Households should be made aware of how to maintain a dependable homegarden in the dry season (This is required very much for maintaining homegardens in the dry zone as well as in the wet zone in the dry season)
8. Through media the message of the advantages of homegardens should strongly and amply be communicated to the public

9. Government employees should be made aware of homegardening and reminded of its advantages at the institute level holding at least half a day seminar a year.
10. In schools there should be programs to inculcate the habit and promote the interest of cultivating as it is the school from where the culture and the interest of homegardening can easily be promoted
11. Divisions should not be made among village level officers in implementing the village level development program and instead an environment should be created for them to work together so that the beneficiaries would receive the service of all officers alike.
12. Should strengthen the extension service by ensuring the availability of adequate and knowledgeable officers at village level. This can be made by providing an extensive training to the three main facilitators and the recently recruited and attached graduates to the village.
13. Working cooperation in the relevant institutes at the ground level should be ensured.

Officers who assisted and who were contacted for information

Name of the Officer	Designation	Place of Work
Mr. Jayathilaka Herath	Director-Divinaguma	Ministry of Economic Development
Mrs. S.B. Sandanayake	Planning Director	District Secretariat -Puttalam
Mrs. Anoma Wijerathna	Planning Director	District Secretariat-Kegalle
Mr. Rathnasiri Wickramanayake	Assistant Director Planning	Divisional Secretariat -Chillaw
Mrs. U.S.N. Fernando	Divisional Secretary	Divisional Secretariat-Chillaw
Mr. S.S. Lusena	Divisional Secretary	Divisional Secretariat-Arachchikattuwa
Miss. N.R. Rashmi	Assistant Director Planning	Divisional Secretariat - Vennappuwa
Mr. D.M.Rathnayake	Divisional Secretary	Divisional Secretariat-Attanagalla
Mrs. Deepika	Assistant Director Planning	Divisional Secretariat-Rambukkana
Mrs. Disna Raasinghe	Assistant Director Planning	Attanagalla
Mr. H.M. Wijesinghe	Director Planning	District Secretariat-Anuradhapura
Mr. R.A.H.M. Sarath Rajakaruna	Assistant Director Planning	District Secretariat-Anuradhapura
Mrs. Irosha Hinidumage	Assistant Director Planning	District Secretariat-Kekirawa
Mrs. Dhehanawathi Manike	Assistant Director Planning	Divisional Secretariat-Mawanella
Mrs. A.W.Rukmani Ariyaratna	Divisional Secretary	Mawanella
Mr. J.H. Kasthuri Arachchi	Agrarian Development Officer	Thihariya

Name of the Officer	Designation	Place of Work
M. Priyanthi	Agrarian Development Officer	Pinnawala
Mrs. K.K. Ranaweera Menike	Agrarian Development Officer	Ellakkala
Ms. A.M. Pemawathi	Agrarian Development Officer	Kekirawa
Mrs. H.A.S. Piyawardhana	Agrarian Development Officer	Baminiyawatta-Mawenella
Mr. H.M. Kulathunga	Agrarian Development Officer	Maradankadawala
Mr. Kumara	Agrarian Development Officer	Madatugama
Mr. A.K. Gurusinghe	Agriculture Instructor	Baminiyawatta-Mawenella

Mrs. M.M. Sumudu Hathurusingha	Agriculture Instructor	Chillaw
Mr. Prasanna Disanayake	Agriculture Instructor	Kekirawa
Mrs. A.C. Jeewani Ariyadasa	Agriculture Instructor	Madatugama
Mr.T.V. Neel Pushpakumara	APRA	Sapugaskanda
Mrs. M.Riswana	Samurdhi Development - Officer	Thihariya
Mr. J. Fureen	Grama Niladhari	Thihariya-East
Mr. Olivar Ranasinghe	Grama Niladhari	Dhadagamuwa-East
Mr. Chandana Hewapathirana	Grama Niladhari	Hiripitiya
Mr. R.A Jayasena	Grama Niladhari	Maduwegedara
Mr. Kamal Wanigasekara	Grama Niladhari	Kamburagalla
Mr. Dayananda	Development-Officer	Divisional Secretariat-Rambukkana
Mrs. Mallika	APRA	Kadigamuwa
Mr. Aththanayake	Grama Niladhari	Kadigamuwa
Mrs. Chamila	Samurdhi Development Officer	Hurimaluwa
Mr. R.M.D.Rathnayake	Grama Niladhari	Imbulagasdeniya
Mrs. Nimali	Samurdhi Development Officer	Imbulagasdeniya
Mr Indika	Samurdhi Development Officer	Keselwathugoda
Mr. Himali Galpola	Samurdhi Development Officer	Molagoda
Mr. G.M. Palitha Gajasinghe	Samurdhi Development Officer	Olombewa-Kekirawa
Mr. T.M.K. Thennakoon	APRA	Maha-Kekirawa
Mrs . Nanada Kumarihami	APRA	Olombewa
Mrs. H.M.Kamani Chithralatha	APRA	Puliyankadawara
Mrs. Rose Champika	Samurdhi Development Officer	Puliyankadawara
Mr. Gamini Ranathunga	Samurdhi Development Officer	Ambakandawila
Mr. Sunil Dayarathna	Grama Niladhari	Weerapandiyana
Mr .W.S.R.N. Sudhath Priyantha	APRA	Weerapandiyana
Mr. Saman Chandrasiri	APRA	Thisogama
Mrs. Jeewani Siriwardhana	Grama Niladhari	Mugunuwatawana

REFERENCES

- Api Wawamu-Rata Nagamu-Evaluation Study Based on Maha Season of 2007/08(Sinhala-Unpublished)*, HARTI
- De Silva, P.C.J.(2011),Agricultural Extension in Domestic Sector; Problems, Weakness and Suggestions, for improvement, Sri Lanka journal of Agrarian Studies, Vol.15 No.1.2011
- Divinaguma Circular No.1/2011, Ministry of Economic Development
- Divinaguma National Project-Progress in Agriculture, Livestock and Fisheries Sector (31.12.2011), Ministry of Economic Development
- Gevatthe Wagawa*, (2011), Central Bank of Sri Lanka, Lasergraphic (Pvt.) Limited, Colombo 05
- Lurdu, M.D.S, Weerakkody P.R, Rambukwella, R.N.K,(2007) *“Krushikarma Paryeshana Niladaringe Wathman Thathwaya saha Anagatha Vibavathawayan”* HARTI, Colombo.
- MED/DEV/DN/HP/1(Letter - Planning of Divinaguma Households Economic Units-2012), By Additional Secretary (Development), Ministry of Economic Development
- http://www.cbsl.gov.lk/pics_n_docs/10_pub/_docs/statistics/other/econ_&_ss_2013_e.pdf