Grant Number: TG/2012/Tech-D/07 **Date of Award**: 15th October 2012

Project Title: Assessment of Socio-economic viability of simplified hydroponics to improve the household food production and to develop a strategy for commercialization

Date the Project work commenced: 1st June 2013

Date of Completion of the Grant Period: 30th June 2014

Date of submission of the final report: 12th August 2014

Total Allocation of Funds: Rs.593, 950.00

Total expenditure at the time of completion of the grant period: Rs.812,662

A) Details of Team Members

1. **Team Member – Dr.Susil H.Liyanarachchi**
   Team member - Mrs. M.D.J.S.Saparamadu
2. Details of collaborators - None
3. Place where the project was carried out – Colombo and Kalutara Districts
4. Project personnel
   1. **Number of personnel employed – 1**
   2. Their status after the completion of the project – unemployed
5. Final Financial statement is attached – Yes

B) Executive summary of the project

Simplified hydroponics system is a low cost agriculture production system based on hydroponics principles. The system consists of three components – grow boxes, inert medium and the nutrient solution. We have developed a low cost nutrient solution for this system which has been patented nationally and numerous field investigations conducted demonstrated the feasibility of growing a vast array of vegetable species under this system.

The objective of the project was to assess the socio-economic viability of the simplified hydroponics system and to develop a market strategy for wider adoption of this system for household vegetable production. The project was carried out in Colombo and Kalutara Districts involving 20 households, 10 schools and 08 institutions.

Results of the pilot project revealed that the simplified hydroponics system is an appropriate and affordable technology for household vegetable production and is most suited for those households having limited land/space for conventional home gardening. However, fewer inputs required for crop production such as less labor, lesser amounts of water, lesser time for maintenance of the hydroponics gardens and absence of weed control makes this system attractive for anyone who is interested in home gardening. Main criteria for judging the effectiveness of the system is the yield obtained from crops and as mentioned above the levels of inputs required for household vegetable production. In

order for wider adoption of the technology all three components of the system needs to be available commercially.

Based on the experiences and insights gained from those participated in the pilot project, a commercializing strategy has been developed.

C) Report in Detail

Introduction/Background

Simplified Hydroponics is a low cost agriculture production system based on hydroponics principles. The system consists of three components – grow boxes, inert medium and the nutrient solution. We have developed a low cost nutrient solution for this system which has been patented nationally and numerous field investigations conducted demonstrated the feasibility of growing a vast array of vegetable species under this system.

National Science Foundation has approved a one year grant to implement a project on assessing the socio-economic viability of simplified hydroponics systems and to develop a market strategy for wider adoption of this system. The project was carried out in two districts, namely Colombo and Kalutara Districts involving 20 households, 10 schools and 08 institutions.

This report presents project end results which include the findings of the socio-economic assessment and the market feasibility study conducted. The findings are based on the experiences of and insights generated by those participated in throughout the project period.

Objectives

Overall objective of the project is to assess the socio-economic viability of simplified hydroponics technology for household vegetable production for consumption purposes and to develop a strategy for commercialization.

Activities and Outputs

Description of the work carried out during the reporting period against the work Plan

Activity	Progress
Output I. 10 number of community managed simplified hydroponics demonstrations gardens in selected schools, elderly homes, children's homes established and functioning in each District by the end of year one	
1.1 Selection of schools and public institutions	Completed
1.2 Initial visit to the places and induction	Completed
1.3 Sensitization program for AGA Offices in selected places including the GN officers and	Completed