EXECUTIVE SUMMARY

In Sri Lanka the actual yield is far behind the potential yield of green gram. Thus the increasing productivity is an overriding need to meet the government's objective of self-sufficiency in green gram production. Therefore, this study attempted to examine the extent of yield gap of green gram and to identify the socio-economic factors affecting the productivity of green gram in major producing areas with a view to identify solutions to overcome major constraints in order to propose possible means of increasing the productivity of green gram. The study was carried out in three selected districts namely Hambantota, Monaragala and Kurunegala and the total sample comprised 352 farmers. Both primary and secondary data utilized for the study have been gathered through a questionnaire survey, focus group discussions, key informant interviews and a literature survey.

The study findings show that the yield gap existed for green gram in all three selected districts and compared to the mean value of the potential yield (648 kg/ac), the percentage of yield gap was 73%. The yield gap of green gram was 63% when compared to the lower limit of the potential yield of 486 kg/ac. After estimating the relationship between the productivity and various socio-economic factors, results described that the degree of using hired labour, fertilizer cost and seed rate have a significant relationship with the productivity of green gram. These are the factors on which the relevant parties place emphasis, in order to increase the productivity of green gram.

The productivity has increased with the increased seed rate up to the recommended level (12kg/ac) and decreased thereafter. Further, the increase in seed rate had shown a decrease in productivity which can be attributed to increased plant density that constrains weeding and stimulates rapid spread of pests and diseases. The model illustrates that the farmers with access to hired labour were more productive. Weeding and harvesting are the most labour consuming operations in green gram and carrying out these operations at the proper time may result in a higher productivity. Green gram does not require large quantities of fertilizer as it is a leguminous crop, and most farmers had neither used fertilizer nor complied with recommendations, however, recommendations show that application of fertilizer will help in obtaining a better yield from lands which are continuously used for cultivation, showing a significant relationship with the productivity.

According to the farmers, lack of a proper market and a reasonable price for their products were the major problems they face. Further, the lack of storage facilities force them to sell their products immediately after harvesting at low prices. The above reasons demotivate the farmers from engaging in cultivating this crop.

More than 50% of the farmers in the total sample have grown the recommended varieties and the average yield of the recommended varieties is higher than that of the other traditional varieties and lower than the yield of the Australian variety.

About 41 percent of respondents highlighted that it is necessary to introduce new machinery in most labour intensive operations such as harvesting, weeding and land preparation. The prevalence of an extension service is not adequate in case of green gram as about 62 percent of the total sample had not received even a single visit during the cropping season and therefore it needs to be improved.

The current scenario surrounding the low green gram productivity in Sri Lanka requires the government to improve and expand the existing seed distribution programme in order to provide every single farmer with an adequate amount of good quality seeds in time. Since the land is fixed, the government should encourage the use of fertilizer, and this can be done by providing incentives for the setting up of cooperative shops to provide fertilizer to households at an affordable price with the view to increase the productivity. On the other hand, it is essential to develop a variety which is suitable for mechanization for the operations such as harvesting and weeding that utilize more labour as green gram is a labour intensive crop. Furthermore, it is important to establish a stable price for green gram and also a proper mechanism to purchase products and involve the private sector in purchasing the produce through forward contracts. In addition, the government should improve its method of gathering and disseminating of information that is vital for households. This also requires the government to expand its current level of extension services to provide better awareness on proper cultural practices, control of pests and diseases and also about the current rainfall pattern to avoid crop damages which reduce the quality of the output. Further, it is important that the government gets involved in providing proper storage facilities to store the produce of green gram until the prices go up in the market.