EXECUTIVE SUMMARY

Rice is the most important crop for human well-being across the world and it is the staple food in 33 countries around the world including Sri Lanka (Krupnik,2005). Therefore improvement of rice productivity has been one of the main objectives of agriculture and rural development programmes implemented by successive governments over the last few decades (Perera, J. *etal*, 2007). The Green revolution in late 1960s was introduced to the farmers for increasing the yield. The Green Revolution consisted of introduction of fertilizer-responsive, lodging and disease- resistant and high-yielding varieties; investments in irrigation infrastructure; increased use of chemical fertilizers, herbicides, insecticides and fungicides, and government support through extension and micro-credit provisions (Ellis, 1993). Due to long term usage of agricultural inputs the fertility of the soil get diminished. Therefore to maintain the sustainability of paddy fields it is required to practice environmentally friendly methods. The System of Rice Intensification (SRI) has evolved in Madagaskar during 1980's and it has been implemented in more than 28 countries. SRI method was introduced to Sri Lanka during the year 2000. This is not a new technological method, but it is a set of different cultivation practices. The main features of these practices; are use of younger seedlings (8-12 days old), wider spacing, (one seeding per hill with 25 cm x 25 cm), not providing water logging conditions (drying and wetting), adding organic fertilizer and support for healthy growth of root system. Therefore this system can be considered as an alternative method of preventing the environmental degradation. Literature has shown that by practicing this SRI farming the quality and the quantity of the rice production can be increased. Even though SRI farming is a very good and eco-friendly method the adoption rate of this method is very low. Therefore the study on the present situation of SRI farming in Sri Lanka is timely and relevant.

The main objective of this study is to investigate the present condition of the SRI farming in Sri Lanka. The specific objectives are (1). to study the Socio-Economic conditions of the SRI farmers in Sri Lanka, (02). to investigate farming practices adapted by SRI farmers (3). to workout cost of production of SRI farming. (4). to investigate the problems and constraints in expansion of SRI method in the country and (5). to provide necessary policy guidelines towards promoting SRI farming in Sri Lanka.

The research was conducted in three districts of Sri Lanka: Hambanthota, Anuradhapura and Kegalle. Study area was selected based on the existence of SRI farmers in these districts. From each districts 30 SRI farmers and 20 conventional farmers were selected randomly and altogether 150 farmers were selected for the study. The secondary data about SRI farmers were obtained from the SRI network which was maintained by the Oxfam Australia. The primary information needed for the study was collected from the questionnaire survey. The field survey of the study was undertaken in June to September in 2009.

The proportion of SRI farmers below 30 years of age was 7.8%. But in between 30-50 age groups, 44% of the farmers were practicing SRI in the sample population. Approximately 12 % of the farmers were more than 60 years of age. This indicates that majority of the SRI

farmers belonged to young farmers groups. The study indicates that 45.6% of the SRI farmers had received education up to the secondary level (year 6 to G.C.E O/L). The average monthly household incomes were Rs.22,400.00, Rs.28,829.00, Rs.23,380.00 respectively in Kegalle, Anuradhapura and Hambantota districts. Most of the farmers received knowledge about SRI method from non-government organizations such as Oxfam, Gamidiriya, Jana Aruna Foundation, Mercy Crop and etc; it was 77.8% of the total sample.

This study reveals that the majority of SRI farmers (88.7%) transplanted seedlings between 7-12 days. In the conventional method the majority of farmers (66.7%) transplanted seedlings after 16 days of age. Transplanting and seedlings were the highest cost factor in SRI practices. In Kegalle district, Marking and transplanting cost per acre was about Rs.6,582.00, whereas, in Hambantota and Anuradhapura district costs were Rs.11,873.00 and Rs.8,632.00 respectively. The average number of tillers were around 23 in SRI method. But in the conventional method 05 tillers were observed as average tillers.

The average yield of SRI in the study area was 2,296 Kg/acre whereas in the conventional method it was 2,212 Kg/ acre. The T test proves that there was no significant yield variation between SRI and conventional method. The study also reveals that average cost of production both with and without family labour in SRI was higher than in the conventional method. This was mainly because the labour cost for several agronomical practices in SRI method was higher than the conventional method. There was a small price variation in the market between the SRI cultivated paddy and the normal paddy. The SRI cultivated paddy price was approximately Rs. 2/= higher than paddy cultivated under the normal conditions. The millers explained that SRI paddy yielded more rice and these were heavier than the normally cultivated paddy.

The SRI method was practiced by few innovative farmers in the country. Except some special cases the significant yield improvements could not be seen in this method. The SRI cost of production was also higher due to the huge amount of labour requirement. But with the environment concerns SRI method can be expanded to improve the soil quality, as continuous utilization of agro chemicals leads to deterioration of the soil quality. In order to maintain vigorous paddy plant population SRI method can be used for seed paddy production. The SRI method can be practiced to cultivate traditional paddy varieties. This paddy can be sold in the super markets at a better price. SRI method is a very good method for a sustainability of paddy farming in Sri Lanka.