Adoption of climate smart agricultural practices towards sustainable crop production in Batticaloa District, Sri Lanka

N.N.W. Arachchi[1], G.A.S. Ginigaddara [1], S.P. Dissanayake[1] and K.M.K.K. Kaculandara[1]

Abstract

Imbalanced environmental sustainability resulting from over utilization of synthetic fertilizers, pesticides and commercialization of agricultural practices is a significant problem in agricultural areas in Sri Lanka. Agricultural productivity in *Batticaloa* District is severely affected due to extreme weather conditions, climate change and water scarcity. Organic farmers are adopting Climate Smart Agricultural (CSA) practices as a solution for unfavorable climatic conditions and water scarcity prevailing in the area. This preliminarily study was attempted to identify the different CSA practices adopted by organic farmers towards sustainable crop production in *Vaharai* and *Kiran* representing two Divisional Secretariat in *Batticaloa* District. Hundred organic farmers were selected via simple random sampling method and primary data were collected using pre-tested questionnaires. Descriptive analysis was employed in data analysis.All of respondent farmers, 44% had acquired at least primary education, 86% engaged in farming as primary occupation and 86% were married. Organic farmers belonged to 45 years of age in average and consisted of 4 members in their household. The results revealed that female farmers are highly involved in organic farming (60%) than male farmers. Most of the organic farmers (44 %) had 17 years farming experience on average. Ninety four percent of farmers utilize their own land in organic farming and earn Rs.23, 000.00 of average income monthly. Findings indicate that organic manure usage, composting, maintaining buffer zone for crops and, crop and livestock integration are highly-practiced ($\geq$ 60% of farmers) CSA practices while mulching and thatching, micro irrigation and, rearing and conservation of indigenous cattle are the moderately-practiced (31-59% of farmers) ones. Planting onset of rains and cover cropping (live mulching) were poorly-practiced ($\leq$ 30% of farmers) CSA practices. According to the survey results, poor knowledge and lack of agricultural infrastructure were detected as the limitations for the lower adoption of CSA practices by organic farmers in *Batticaloa* District in Sri Lanka. Hence this study suggests strengthening of the farmers' awareness level on CSA practices for them to be more resilient with their cropping systems for climate change.

Keywords: *Adoption, Batticaloa, Climate smart agriculture, Organic farming*

[1]*Department of Agricultural Systems, Faculty of Agriculture, Rajarata University of Sri Lanka, Puliyankulama, Anuradhapura. Corresponding author's email: wanuwangi@gmail.com*