

**EFFECT OF FERTILIZER FORMULATED WITH BIOCHAR
ENRICHED WASTE COCONUT WATER ON GROWTH AND
DEVELOPMENT OF CHILLI (*Capsicum annum*)**

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ABSTRACT

As the population grows in Sri Lanka, the demand for food and agricultural crops grow as well. Thus, the new tendency in farming techniques which include new fertilizing techniques has evolved., coconut water is rich in many macro and micronutrient such as potassium, and phosphorus which is essential in plant growth. Hence, this research is aimed at formulating a fertilizer by utilizing waste coconut water as an organic constituent and the nutrient analysis, physio-chemical and microbiological analysis were done for the formulated fertilizer to analyze its capability as a fertilizer.

chemical fertilizer importation has been banned in Sri Lanka due to many economic, environmental, and health reasons. Therefore, Sri Lankan agricultural sector is now facing a shortage of fertilizers. Thus, Sri Lanka is focusing on developing healthier, eco-friendly, and economically beneficial alternatives for replacing chemical fertilizers. On the other hand, the coconut industry is one of the major industries in Sri Lanka and coconut water is wasted in coconut industries without utilizing them.

Silvermill Natural Beverages (PVT) Ltd, in Loluwagoda, is a number one coconut-based beverages producer and exporter in Sri Lanka which is discard about 100-200L of coconut water as waste daily Moreover, the formulated fertilizer was tested on plants to analyze the effect of the fertilizer on plants. The formulated fertilizer was compared with a market-available foliar fertilizer. The findings of the research indicated that the formulated fertilizer with coconut water is a good alternative for commercial fertilizer and more suitable for phosphorus intake rather than nitrogen intake of the plants.

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