

3rd International Conference**On****Modern Research in Biological, Pharmaceutical, Medical and
Environmental Sciences****Organized By Indian Academicians And Researchers Association****On****9th October 2022**

**EFFECTS OF MULCHING ON GROWTH AND YIELD OF OKRA (ABELMOSCHUS
ESCULENTUS) CV. HARITHA****A. L. Manasar¹, S. Sutharsan², L. M. Rifnas and S. L. Iqbal³**^{1,2}University of Colombo Institute for Agro-Technology and Rural Sciences, Hambantota, Sri Lanka³School of Agriculture, Palamunai, Sri Lanka**ABSTRACT**

Mulch has a great role in soil moisture conservation through modification of microclimatic soil conditions. It helps to prevent weed growth, reduce evaporation, and increase infiltration of rainwater during the growing season. Different types of mulches have been used to obtain good crop growth and yield. Hence considering this a field experiment was laid out at the Sri Lanka School of Agriculture – Palamunai. to evaluate the effect of different types of Mulching materials in the growth and yield performances of Okra (*Abelmoschus esculentus* L.) under field conditions. There were five treatments (T1- Control, T2-Paddy straw, T3-Mango leaves, T4- Polythene, T5-Paddy husk) with four block and the experimental units were arranged in the Randomized Complete Block Design (RCBD) manner. Growth parameters those were plant height, stem girth, number of leaves, days for 50% flowering, yield components and total yield were evaluated for the ability of the different mulching materials in Okra cultivation. Collected data were analyzed using ANOVA procedures by SAS statistical software. Plant height showed significant difference on later days of crop growth. Higher plant heights were observed in T3 and T4 and the lowest was found where no any mulching material applied. Stem girth showed not significant ($p > 0.05$) during the entire growth period for all the mulching materials used. No. of leaves showed significant ($p < 0.05$) values except 2nd week. It was found that, highest number of leaves observed in T4 where polythene mulch applied and the lowest number of leaves found in control treatment where no any mulch applied. Early days of harvesting, yield and yield components showed significant ($p < 0.05$) differences between the treatments. On the basis of yield, Application of polythene mulch showed not significant with application of paddy straw on 4th harvesting. Paddy straw and paddy husk showed similar performances with T4. Even though polythene mulches showed better performances in most of the tested parameters, it can be concluded that, paddy straw and paddy husk were the viable options next to polythene mulch as an environmental friendly strategy.

Keywords: *Abelmoschus esculentus*, Environmental friendly, Growth, Mulch, Weeds