


**DEVELOPMENT OF THE SOIL FERTILITY ORGANIC
ENHANCEMENT PELLETS BY USING WATER HYACINTH
(*Eichhornia crassipes*), FISH WASTE POWDER AND ERP FOR
OKRA**



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ABSTRACT

Chemical fertilizers cause a slew of societal and environmental problems, and it is urged to explore the potential of locally available substances to supplement major nutrients to the crops. Water hyacinth (*Eichhornia crassipes*) had an environmental effect on the water bodies. Therefore, to effectively control the impact of water hyacinth in agricultural field; this study was initiated to find out the use of water hyacinth (*Eichhornia crassipes*) with nitrogen rich fish waste, and ERP as phosphorus source to prepare pellets as a nutrient source for the growth and development of okra. The experiment was conducted at the Eastern University of Sri Lanka in Batticaloa district. For this experiment, the Okra MI-5 variety was used. Research was carried out by using a complete Randomized Design (CRD) with eight treatments and three replicates. Two types of organic pellets by using different ratios of the ingredients were used as organic nutrient sources. Organic pellet A included the 1:1:1 ratio (water hyacinth (*Eichhornia crassipes*): fish waste powder: ERP) and organic pellet B included the 3:1:2:1/2 (Water hyacinth (*Eichhornia crassipes*) fish waste powder: ERP) ratio. Treatments used were T1- Control (only soil), T2 – Organic pellet A (before sowing and 20 days after Planting), T3 – Organic pellet A (before sowing), T4 – Organic pellet B (before sowing), T5 – Organic pellet B (before sowing and 20 days after Planting), T6 – Organic pellet B (before sowing ,15 and 30 days after Planting), T7 – Organic pellet A (15 days after sowing + 50% urea), T8 – Organic pellet B (after 15 days after sowing + 50% urea). Black polythene bags with 4 cm height and 30 cm diameter were used in this experiment. From this study, it was found that growth

and yield parameters of okra MI 5 variety were increased by using organic pellet B rather than organic pellet A.

Key words: ERP, Fish waste, Organic & inorganic fertilizer, Water hyacinth (*Eichhornia crassipes*)

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