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Response of Waste Egg Shells to Soil Fertility and its Impacts on the Growth of *Vigna mungo* L. Seedling

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Abstract–*Egg shells are one of the solid waste which contribute significantly to environmental pollution by its smell, provides the perfect habitat for flues, damage the nearby environment and also causes some allergies to people working nearby areas when kept for longer time. The novelty of this work is utilization of the waste egg shells in an environment friendly way. Researchers have studied the use of various biomaterials for soil fertility, However there is little report available on the use of egg shells. In the present study it was found that the waste egg shells contain Al_2O_3, SiO_2, SiO_3, CaO, MnO, Fe_2O_3, ZrO_2, Cl, K_2O, etc. which are the essential macro and micronutrients for plants. So waste egg shells can be used as plant fertilizer due to presence of 95% of calcium carbonate which is a potent source of lime to neutralize the pH of acidic soil. It was also found that Vigna mungo L. seeds were grown better in egg shell treated soil that is 10 mm larger than the plant grown in control. From this research, it can be concluded that waste egg shells can fulfil the mineral requirement for the growth of Vigna mungo L. plants as it enhanced the nutrient level in soil.*

Key words: Egg shell, Major and minor nutrient, Acidic soil, Fertilizer, Plant growth