EFFECTS OF *JEEWAMIRTHA* AND MODIFIED J*EEWAMIRTHA* ON THE GROWTH AND YIELD OF GREEN GRAM (*Vigna radiata)*

I.A.P.U. Imbulana, S. Sutharsan, M. Thenuja* and P.O.P. Weerasinghe

Department of Agriculture, Faculty of Agriculture, Eastern University Sri Lanka

Abstract

Vigna radiata, popularly known as Mung bean belongs to family Fabaceae. The excessive and unnecessary use of inorganic fertilizer in agriculture cause harmful effects to the environment and living organisms. Due these adverse effects and high cost of chemical fertilizer there is a requirement for alternative low cost and harmless fertilizer which have the potential to provide the necessary nutrient requirement of crops. *Jeewamirtha* is one of the important organic liquid fertilizers that can be used to replace the synthetic fertilizers. A pot experiment was conducted at the crop farm of Faculty of Agriculture, Eastern University of Sri Lanka during August to November 2023, to investigate the effects of *Jeewamirtha* and modified *Jeewamirtha* on the growth and yield of *Vigna radiata.* The experiment was laid out in a Completely Randomized Design with five treatments and five replicates as; T1 (*Jeewamirtha*), T2 (Modified *Jeewamirtha* 1- *Jeewamirtha* + *Gliricidia* leaves), T3 (Modified *Jeewamirtha* 2- J*eewamirtha* + Poultry manure), T4 (Modified *Jeewamirtha* 3- *Jeewamirtha* + Wild sunflower leaves), T5 (Control - Department of Agriculture recommended fertilizer). All the agronomic practices were done according to the recommendation of Department of Agriculture, Sri Lanka, except fertilizer application which was done according the different treatments. Measurements of shoot dry weight, total yield and 100 seed weight were collected and data were statistically analyzed using Minitab 17 statistical software and mean separation was performed by Tukey's test at 5% significant level. In this experiment, no significant differences ($p>0.05$) were observed among the shoot dry weight, total yield and 100 seed weight. Accordingly, it could be concluded from this study is that the use of inorganic fertilizer, *Jeewamirtha* or modified *Jeewamirtha* have the same effect on the growth and yield of *Vigna radiata*. Therefore, the production of *Vigna radiata* by using *Jeewamirtha* or modified *Jeewamirtha* organic liquid fertilizer instead of inorganic fertilizer will be an economically and environmentally friendly way of crop production.

Keywords: *Jeewamirtha*, Modified *jeewamirtha*, Wild sunflower, Liquid fertilizer, *Vigna radiata*

**Corresponding author: thenuja2017@gmail.com*