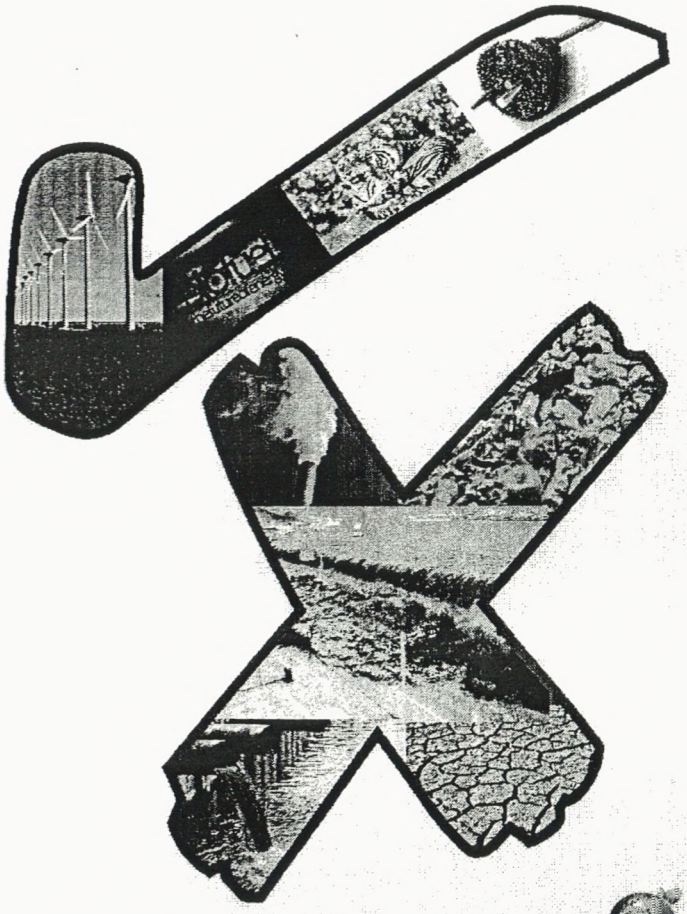

GO GREEN *with* **PENGREEN**

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BOOK OF ABSTRACTS

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EFFECT OF INTEGRATED USE OF AGRICULTURAL WASTES (COIR PITH AND PRESSMUD) AND BIOFERTILIZER ON GROWTH AND YIELD OF GREEN GRAM (*Vigna radiata* L. cv. G1)

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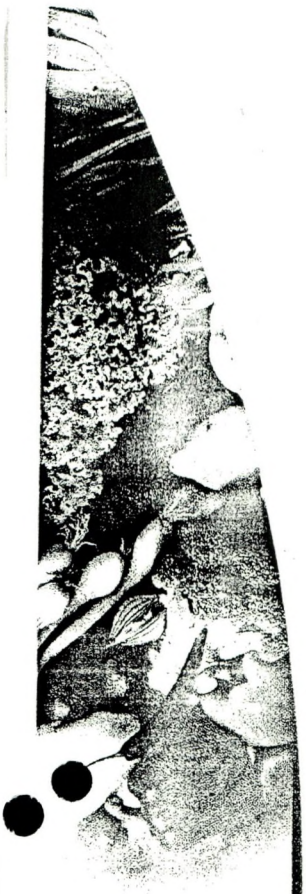
A pot culture experiment was conducted to evaluate the response of pressmud and coir pith in combination with biofertilizer (*Rhizobium*) on the vegetative and yield parameters of the green gram. After composting, the pH and electrical conductivity were increased in compost. The macronutrients like nitrogen, phosphorus and potassium were increased but a decreasing trend was noticed in organic carbon and carbon/nitrogen ratio. The experiment was carrying out with four treatments with three replicates. The vegetative parameters like root length, shoot length, number of leaves, number of nodules and plant biomass were significantly increase in all the treatments. The yield parameters such as number of pods/plant, weight of pods/plant, length of pods were significantly increased by all the treatments and the combined application of composted pressmud (12.5 t/ha), composted coir pith (12.5 t/ha) with biofertilizer (*Rhizobium*) was found to be more effective. The pH, electrical conductivity, phosphorus and potassium were raised by the application of composted pressmud, composted coir pith and *Rhizobium*. From the present investigation, it has become evident that the composted pressmud, composted coir pith and biofertilizer treatment had a positive influence towards biometrical and yield characters of green gram. Hence, it was concluded that the pressmud and coir pith on composting along with *Rhizobium* can be effectively used as an organic manure substitute.

Key words: Coir pith, Pressmud, *Rhizobium*, *Vigna radiata*



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Prospects of agroindustrial wastes and biofertilizer utilization on the growth and yield of cow pea (*Vigna unguiculata* L.)

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ABSTRACT

Fertilizers are one of the most important factors to increase the productivity of crops. High yield of modern agriculture are mainly depend on chemical fertilizers. The present study is to analyze the effect of the interaction between different rates of agricultural wastes (coir pith, pressmud) and biofertilizer (Rhizobium). Biofertilizers has greater amounts of bacteria responsible for fixation of nitrogen. A pot culture experiment with four treatments was carried out to study the effect of composted coir pith, pressmud and Rhizobium on growth and yield of cow pea. On the 30th, 60th and 90th day of growth, result obtained proved that all the tested vegetative growth and yield parameters were significantly increased in cow pea (root length, shoot length, number of leaves, number of nodules, plant fresh weight, plant dry weight, number of pods/plant, weight of pods/plant, length of pods). The highest values were recorded in treatment composted coir pith, composted pressmud in combination with biofertilizer.

Key words: Coir pith, pressmud, Rhizobium, *Vigna unguiculata* (L). var. CO4 (cow pea).

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