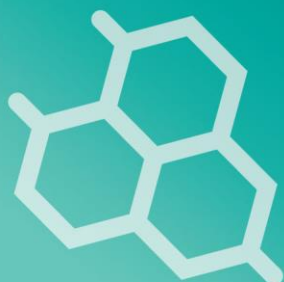


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Integrated Management of Foot Rot of Grasspea (*Lathyrus sativus*) Using Bio control Agents under Field Condition

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ABSTRACT

The experiment were conducted in the field laboratory of the Department of Plant Pathology, Bangladesh Agricultural University, Mymensingh, Bangladesh. The field experiments were carried out to find out the effect of cowdung, Bangladesh Institute of Nuclear Agriculture (BINA)-biofertilizer (BINA)-Biofertilizer and Bangladesh Agricultural University (BAU)-Biofungicide either alone or in combination in controlling foot rot disease of Grasspea (*Lathyrus sativus*). It has been observed that application of cowdung in the soil and seed treatment with BINA-Biofertilizer and BAU-Biofungicide either alone or in combination has the great effect on germination of seeds, post-emergence death of plants, plant stand, shoot and root length, fresh and dry weight of shoot and root, number of nodule/plant and weight of nodule/plant and Biomass production of Grass pea. BAU-Biofungicide resulted significant higher germination of seeds of Grasspea over all other treatments. The germination of BAU-Biofungicide treated seeds of Grasspea was 85.33%, respectively which showed up 25.49%, respectively higher germination over the control (untreated). Post-emergence deaths of plants due to foot rot disease were significantly reduced after combined seed treatment with BINA-biofertilizer and BAU-biofungicide. The maximum plant stand (96.94%) was recorded by applying cowdung and BINA-Biofertilizer in soil + treating seeds of grasspea with BAU-Biofungicide which

was followed by applying cowdung and BINA-Biofertilizer in soil + seed treatment with BAU-Biofungicide (94.94%). But minimum plant stand (74.17%) was recorded in control. Use of BINA-biofertilizer and BAU-biofungicide as seed treating biocontrol agents and application of cowdung in the soil as an organic source of nutrient resulted in higher shoot and root lengths, and dry shoot and root weights of **Grass pea**. BINA-biofertilizer significantly increased the number of nodules per plant and nodules weight of **Grass pea** (*Lathyrus sativus*). Seeds treating with BAU-biofungicide and BINA-biofertilizer and soil amendment with cowdung increased the biomass production of **Grasspea** up to 36.10 % over the control.



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