

COMMERCIAL PRODUCTION VIA BIOFERTILIZER MANAGEMENT AND MICROORGANISM USING

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Farmers have adopted the strategy of increasing crop yields by applying large amounts of chemical fertilizers and pesticides. At present, however, the negative effects of chemical overuse, in terms of environment, and quality deterioration are becoming apparent. Organic wastes are utilized in agriculture commonly to improve soil fertility and better crop production. Using effective microorganism for inoculants bio-fertilizers have been encouraged to develop sustainable agriculture in Vietnam. We are exploiting two strains of nitrogen fixation bacteria (*Azotobacter* sp.), three strains of phosphorus solubilization microbe (*Bacillus* sp., *Candida* sp., *Klebsiella* sp.) and five strains of cellulose degradation micro-organisms. (one bacteria, two actinomycete, two fungi i.e. *Trichoderma* sp. and

Aspergillus sp.); and 04 antimicrobial resistance in fungi (*Phytophthora* spp., *Fusarium* spp. and *Sclerotium* spp.) included: 02 *Bacillus* sp. (HB5 and HB7) and *Trichoderma* sp. A combination of 3 or 5% inoculants (nitrogen fixation bacteria, phosphorus solubilization microbe) and treated organic waste with 1:10 ratios was the best treatment to produce organic bio-fertilizer. Five the best treatments selected for sterile carrier-based inoculants containing effective microorganism were recommended. Six protocols of product processing were proposed as: nitrogen fixing microbial fertilizer; phosphate solubilizing microbial fertilizer; cellulose degrading microbial fertilizer; *Bacillus* sp. inoculant against fungi; *Trichoderma* sp. inoculant against fungi and multistrain inoculants biofertilizer.

