Effect of seed treatments on field performance of black gram (*Vigna mungo* L.)

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ABSTRACT : The present field experiment was conducted at Field Experimentation Centre, Department of Genetic and Plant Breeding, Sam Higginbottom Institute of Agriculture, Technology and Sciences, Uttar Pradesh during *kharif* 2014 with black gram cv. T-9. The seeds were coated with polymer in combination with fungicide (thiram), insecticide (imidacloprid), bioagent (*Trichoderma viride*) and maintained untreated seeds (control) where T_1 is polymer coat alone, T_2 is polymer + thiram, T_3 is polymer + imidacloprid, T_4 is polymer + thiram + imidacloprid, T_5 is polymer + thiram + imidacloprid + *Trichoderma viride* and T_6 is control. After seed treatment, the seeds were sown in the field with four replications adopting randomized block design in order to find out the effect of seed treatments on field emergence, pre and post emergence seed rot, plant biometrics *viz*., days to 50% flowering, plant height, number of primary branches, 100 seed weight, seeds per pod, pods per plant, clusters per plant, yield per plant and yield per hectare were recorded. Better field emergence and low seed and seedling mortality were recorded in T_5. Yield per hectare was more in seed treatments with T_5 (8.40 q/ha) followed by T_4 (7.90 q/ha). The additional increase in yield per hectare over control were 3.50, 3.00, 2.10, 2.70 and 1.10 q/ha in T_5, T_4, T_2, T_3 and T_1, respectively.

Key Words : Black gram (urd bean, urd dal) (*Vigna mungo* L.), field emergence, imidacloprid, polymer, fungicide (thiram), insecticide, bioagent (*Trichoderma viride*), plant growth, yield per plant.