



RESEARCH PAPER

Enhancement in seed quality, growth and yield of wheat (*Triticum aestivum* L.) through polymer seed coating

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Abstract : Field experiments were conducted for two consecutive years (2009-10 and 2010-11) during *Rabi* seasons at the research farm of Directorate of Seed Research, Mau to study the effects of polymer seed coating along with insecticide, bio-agent and natural fillers on seed quality parameters, growth and yield of wheat. One year old seeds of two wheat varieties (HUW-234 and HD- 2824) were coated with 5 different treatments *viz.*, polykote @ 3 ml/kg seed alone (T₁), polykote @ 3 ml/kg + *Trichoderma viride* @ 3 g./kg seed (T₂), polykote @ 3 ml/kg + insecticide (carbaryl) @ 3g/kg seed (T₃), polykote @ 3 ml/kg + neem oil @ 10ml/kg seed (T₄) and in combination of polykote @ 3 ml/kg + insecticide (carbaryl) @ 3g/kg seed + neem oil @ 10ml/kg seed (T₅), one uncoated set of seed was kept as control (T₀). The seeds were shade dried after coating and sown in field using Factorial Randomized Block Design in 3 replications with applying recommended doses of NPK (120:60:40). Results obtained revealed that wheat seed coating with polykote @ 3 ml/kg seed + insecticide (carbaryl) @ 3g/kg seed (T₃), + neem oil @ 10ml/kg seed significantly increased the seed quality parameters, growth, total dry matter production, yield attributes and finally the yield of wheat over uncoated control. Moreover, polymer (polykote @ 3 ml/kg seed) coating in combination of insecticide carbaryl @ 3g/kg seed or neem oil @ 10ml/kg seed separately also showed at par results compared to the combination of polykote @ 3 ml/kg + *Trichoderma viride* (@3 g./kg seed) which showed non-significant results on above parameters.

Key Words : Polymer, Seed coating, *Trichoderma viride*, Neem oil, Carbaryl

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