

EFFECT OF SEED TREATMENTS WITH BIOAGENT () AND SOIL AMENDMENTS FOR CONTROLLING DAMPING OFF DISEASE COMPLEX OF SELECTED VEGETABLE

Mrs. Nasim Akhtar

Extendent Summary

Soil application with poultry waste, concodust, vermicompost, ash, sawdust, khudepana, cowdung, solarized sand *Trichoderma harzianum* and or with seed treatment with *Trichoderma harzianum* were evaluated against damping off, seed germination and growth characters of vegetable (tamato, potato, eggplant, chilli, cabbage and cauliflower) seedlings in the seed bed. Seed treatments with bio-agent were done by dipping the seeds in the spore suspension of bio-agent (*Trichoderma harzianum*) for 1 hour. After treatment, the seeds were allowed to dry up for 6 hours. Soil application by *Trichoderma harzianum* were done by drenched with the spore suspension @ 3 lit/seed bed with the help of compressed air hand sprayer following pulverized the soil to mix up the *Trichoderma harzianum* spores through out the soil. Different soil amendments were applied on seed bed soil and take rest for 15-30 days for proper decomposition, growing antagonistic microorganisms and developing suppressiveness. Seed germination, percent damping off at different days after sowing and growth characters were recorded in each vegetable from the seed bed. In the seed bed, seed + soil treatment with *Trichoderma harianum* performed better in terms of seed germination, percent damping off and growth characters than only soil application with *Trichoderma harzianum*. It was also found that seed treatment with *Trichoderma harzianum* then sown in different soil amendment applied seed bed performed better in all parameters than only soil application with soil amendment. Among the different soil amendment, poultry waste and vermicompost have promising effect in case of seed germination, percent damping off and seedling growth characters of vegetable seedlings. The finding of the present study emphasized the possibility of using bio-agent and soil amendment in controlling damping off disease with increasing seed germination and seedling growth of vegetable.