

Abstract

Lycoriella auripila (Winn.) (Diptera: Sciaridae) and *Megaselia halterata* (wood.) (Diptera: Phoridae) are major pests of cultivated mushrooms, *Agaricus bisporus* (Lge.) Imbach. They have a high potential resistance to insecticides. It is necessary to study toxicity of insecticides against the dipteran pests of mushroom. This research investigated the toxicity of four commercial insecticides against both larval and adult stages of the pests including pyriproxyfen and cyromazine from insect growth regulators (IGR_s), trichlorfon from organophosphorus group and cypermethrin of group pyrethroids and the contact bioassay the adults was done by glass vial test and the LC₅₀ of sciarid and Phorid larval stage was done in growing medium of mushroom estimated. Insecticide treatments were incorporated into growing medium. The LC₅₀ values of the insecticides were determined. The results showed the LC₅₀ values of trichlorfon and cypermethrin for sciarid adults were 11.72, 18.44 mg/L, respectively and for phorid adults 11.03 and 9.65 mg/L, The values of LC₅₀ against the sciarid larvae for pyriproxyfen, cyromazine, cypermethrin and trichlorfon were 1.46, 31.15, 47.96 and 103.8 and for sciarid larvae 7.32, 189.65, 55.33 and 86.8, mg/L respectively. Trichlorfon is effective and safe insecticide for growing mushrooms in comparing with cypermethrin, because it is specific for mushroom flies and rapid decomposition in the environment. Also pyriproxyfen was more toxic insecticide on larvae of both the pests.

Keyword: Sciarid Fly, Phorid Fly, *Agaricus bisporus*, LC₅₀



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