

ABSTRACT

THE EFFECTS OF SOME ORGANIC AMENDMENTS ON STRAWBERRY, CROWN AND ROOT ROT IN STRAWBERRY CAUSED BY *Macrophomina phaseolina* (Tassi) Goid. AND MICROSCLEROTIA QUANTITY IN SOIL

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This study were conducted to assess the effectiveness of some organic amendments on *Macrophomina phaseolina* that cause collapsed and dying problems on strawberry plants. For this purpose, olive oil waste, poultry manure, sulphur, cotton delintation waste, vermicompost; as a plant material onion, leek, cauliflower, broccoli, cabbage, corn, wheat, broad bean, lettuce, mustard were incorporated in soil. In this study, high virulent *M. phaseolina* (Omp 1), isolated from strawberry plant were inoculated at a rate of 50 ms/g soil. In order to determine the effects on microsclerotia of *M. phaseolina*, organic amendment incorporated sterile and non-sterile soil was infested with *M. phaseolina* inoculum and microsclerotia isolation were done after incubated for 30 day. In pot studies, the plants growing in the soil which was infested *M. phaseolina*, were evaluated in terms of disease severity during the trial and at the end of the trials plants uprooted and recorded their weights to determine the effects on plant growth. After uprooting strawberry plants from pots, to determine the effects of organic amendments on microsclerotia viability in pot soil, microsclerotia were isolated from the pot soil. The lowest microsclerotia were detected sulphur (100 gr/da) added soil at 8,8 microsclerotia/1 gr soil. In sterile soil, lowest microsclerotia were detected respectively incorporated with olive oil waste (0,8), broccoli (2,5), vermicompost (6) and mustard (6,7). In pot trials without *M. phaseolina*, poultry manure, sulphur (100 kg/da) and sulphur (50 kg/da) gave the best results according the plant growth rate. In pot trials inoculated with *M. phaseolina* best plant growth rate were obtained respectively, sulphur (50 kg/ da), sulphur (100 kg/da).

Key Words: *Macrophomina phaseolina*, organic amendment, strawberry, wilting and charcoal rot