



ELSEVIER

Applied Soil Ecology 2 (1995) 33–43

Applied
Soil Ecology

Changes in microbial populations of an avocado plantation mulch suppressive of *Phytophthora cinnamomi*

M.P. You, K. Sivasithamparam*

Department of Soil Science and Plant Nutrition, School of Agriculture, The University of Western Australia, Nedlands 6009, W.A., Australia

Accepted 15 July 1994

Abstract

The microorganisms inhabiting organic mulch applied in avocado orchards in Western Australia were studied to determine their role in the suppression of *Phytophthora cinnamomi*. Populations of aerobic bacteria, fungi and actinomycetes within the organic mulch changed with time. Temperature and moisture levels of the mulch were positively correlated with the microbial populations. Bacterial and actinomycete numbers tended to increase following incubation of the mulch infested with *P. cinnamomi*. The infectivity of *P. cinnamomi* after 3 weeks of incubation in the mulch was negatively correlated with populations of fungi and actinomycetes.

Keywords: Infectivity; Microbial populations; *Phytophthora cinnamomi*; moisture; pH; Organic mulch; Temperature
