



EFFECTS OF PLANT LITTER DIVERSITY AND QUALITY ON SOIL MICRO- AND MESO-FAUNA

Ardhini R Maharning dan Agus Irianto
Fakultas Biologi Universitas Jenderal Sudirman

ardhini.maharning@unsoed.ac.id

ABSTRACT

The objective of the research was to follow the abundance and functional structure of soil nematodes (microfauna), collembolans and mites (mesofauna) in decomposing plant litter with relation to its initial C:N and species richness of the litter. A total of seven plant species of various quality (C:N <10, 20-40, >60) was combined to provide habitat for soil organisms. There were eight combination designed as treatments. Samples were taken after one, two, and four weeks incubation. The results indicated that fauna abundance and diversity were no difference in seven, four, and three combination of plant litter. Litter quality, however, were most likely influenced the fauna diversity, in which intermediate and high quality of litter supported the fungal feeders. It was concluded that plant litter quality affected nematode, collembolan, and mite communities more strongly than plant litter diversity.

Key words: *plant litter, nematodes, collembolans, mites*