



Journal of Pesticide Science
Pesticide Science Society of Japan

[Available Issues](#) | [Japanese](#) >> [Publisher Site](#)

Author: Keyword: [ADVANCED](#)



[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1349-0923

PRINT ISSN : 1348-589X

Journal of Pesticide Science

Vol. 29 (2004) , No. 1 pp.33-39

[\[Image PDF \(1085K\)\]](#) [\[References\]](#)

Effect of Long-Term Successive Applications of Organic Fertilizers on Dissipation of Several Pesticides in Two Soils

Satoshi Suzuki¹⁾ and Toshikazu Otani²⁾

1) Tochigi Prefectural Agricultural Experiment Station

2) Faculty of Agriculture, Utsunomiya University

(Received: July 28, 2003)

(Accepted for publication: November 10, 2003)

Abstract:

The dissipation rates of dimethoate, fenobucarb, flutolanil, simazine, prometryn and alachlor were compared among an andosol and a gray lowland soil subjected to different fertilizing practices over a 20 year period. The rate constants for dissipation of most pesticides per biomass carbon, biomass nitrogen and esterase activity among the plots in each soil were less variable than the corresponding rate constants, indicating that the dissipation depended on microbial amount and activity. The rate constants in the gray lowland soil were similar to or greater than those in the andosol, despite the smaller values of microbial amount and activity in the former. This is due to the larger water soluble fraction/acetone soluble fraction ratios in the former. The long-term successive applications of organic fertilizers were less effective in the dissipation for the gray lowland soil than the andosol. This is likely to result from a less effective accumulation of microbial biomass in the former.

Keywords:

long-term successive applications of organic fertilizers, andosol, gray lowland soil, dissipation rates of pesticides, microbial amount and activity

[\[Image PDF \(1085K\)\]](#) [\[References\]](#)

Download Meta of Article [\[Help\]](#)

[RIS](#)

[BibTeX](#)

To cite this article:

Satoshi Suzuki and Toshikazu Otani, "Effect of Long-Term Successive Applications of Organic Fertilizers on Dissipation of Several Pesticides in Two Soils". *J. Pestic. Sci.* Vol. **29**, pp.33-39 (2004) .

doi:10.1584/jpestics.29.33

JOI JST.JSTAGE/jpestics/29.33

Copyright (c) 2004 Pesticide Science Society of Japan



[Japan Science and Technology Information Aggregator, Electronic](#)

