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ONLINE ISSN : 1349-0923
PRINT ISSN : 1348-589X

**Journal of Pesticide Science**
Vol. 29 (2004) , No. 1 pp.46-49

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# Tiadinil, a Novel Class of Activator of Systemic Acquired Resistance, Induces Defense Gene Expression and Disease Resistance in Tobacco

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(Received: July 22, 2003)
(Accepted for publication: October 14, 2003)

**Abstract:**
Systemic acquired resistance (SAR) is a potent innate immunity system in plants and effective against a broad range of pathogens. Tiadinil (TDL), *N*-(3-chloro-4-methylphenyl)-4-methyl-1,2,3-thiadiazole-5-carboxamide, was recently developed to control rice blast disease without direct antimicrobial activity. To clarify the mode of action of TDL, effects of TDL on tobacco plants were investigated. TDL induced resistance against tobacco mosaic virus and tobacco wildfire disease (*Pseudomonas syringae* pv. *tabaci*) without antimicrobial activity in tobacco plants. TDL also induced the expression of SAR marker genes. These results indicated that TDL induced SAR in tobacco plants.

**Keywords:**
systemic acquired resistance (SAR), tiadinil, tobacco, plant activator, *Pseudomonas syringae*

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Michiko Yasuda, Hideo Nakashita and Shigeo Yoshida, “Tiadinil, a Novel Class of Activator of Systemic Acquired Resistance, Induces Defense Gene Expression and Disease Resistance in Tobacco”. *J. Pestic. Sci.* Vol. **29**, pp.46-49 (2004) .

doi:10.1584/jpestics.29.46

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