

Imidocloprid as a Systemic-Acquired Resistant (SAR) Inducer in *Nicotiana tabacum* Var. Samsun NN Infected with Tobacco Mild Green Mosaic Virus

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Abstract : Plants have different layers of defense responses against biotic and abiotic stresses. One of the well-defined defense mechanism in plants is systemic acquired resistance (SAR) against a broad-range of pathogens. Salicylic acid (SA) plays a crucial role in regulation of the SAR pathway. It has been proved that Chemically SA-like compounds can mimic the SA signaling role. Imidocloprid is an insecticide being used to control whiteflies on crop plants. In order to study the possible role of Imidocloprid as an elicitor of SAR in plants, experiments were conducted in a completely randomized design frame with three treatments and duplicates on the detached leaves and whole *Nicotiana tabacum* var. Samsun NN. plants inoculated with Tobacco mild green mosaic virus (TMGMV). Compared with the effect of other SAR-inducers such as SA, Imidocloprid conferred a robust SAR induction in the infected plants. The results suggested that Imidocloprid even more powerful than SA can be considered as strong SAR inducer in the infected plants with viruses, which develop the local lesion symptoms.

Keywords : imidocloprid, *Nicotiana tabacum* var. Samsun NN, SAR, tobacco mild green, mosaic virus

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020