

Effect of Botanicals on the Population Dynamics of *Nephotettix virescens*, Rice Tungro Disease Incidence and Yield of Rice

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Leaf extracts of *Vitex negundo* L., *Synadenium grantii* Hook. f. and *Prosopis juliflora* (SW) DC., and cake of *Azadirachta indica* A. Juss. were evaluated for their efficacy in reducing the population of the green leafhopper, *Nephotettix virescens* (Distant), and its transmission of rice tungro virus under field conditions. All four plant species tested reduced the population of the vector significantly in both the nursery and main field. The lowest population of the vector was recorded with application of neem cake at 5 kg/0.032 ha of nursery, followed by foliar spray of neem seed kernel extract at 5% in the main field. Rice tungro disease incidence was also less in this treatment, with maximum grain yield of 3580 kg/ha in 'Kharif' (July–Oct.) and 3257 kg/ha in 'Rabi' (Nov.–March) seasons, and a cost:benefit ratio of 1:3.9 in both seasons. However, the maximum cost:benefit ratio of 1:5.6 and 1:5.8 in Kharif and Rabi seasons, respectively, was recorded with *V. negundo*.

KEY WORDS: Plant extracts; *Vitex negundo*; *Synadenium grantii*; *Prosopis juliflora*; neem (*Azadirachta indica*) cake; green leafhopper; rice tungro virus; disease control.

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