

# Economics of Neem Pesticides Application

—A Case Study in Nagpur and Wardha, India—

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Neem tree is abundantly and freely available in India and its fruits can be utilized as a fertilizer and environmentally friendly pesticide. In spite of India's long history of neem utilization as a medicine and pesticide, and despite of the various activities of The Neem Foundation such as awareness and training programs, and demonstration trials, adoption of the neem pesticide (NP) by farmers has not been successful in the region. Our previous research (Joshi and Kaneko, 2006) showed that preparing home-made NP was time consuming, and education had a negative and income had a positive effect on adoption of the neem pesticide. By the way, The Neem Foundation started to make and sell the neem pesticide in 2005. So, farmers began to use the neem pesticide without making the neem pesticide by themselves.

To find out the further factors causing the lower adoption of NP, we conducted a field survey from December 2007 to February 2008 in Nagpur and Wardha. We visited 347 farmers among approximately 1000 farmers who had participated in The Neem Foundation activities, of which 188 farmers refused or could not be contacted even after visiting twice. As a result 159 respondent farmers were interviewed.

Based on the survey results this paper aims at analyzing how characteristics of farms, such as the size of farm, cropping pattern and availability of family labor, etc., affect farmers' adoption of NP.

In addition, it examines risks incurred with NP application and possible price premium for NP, applied farm products. It was said that NP has slow or uncertain effect on pest control. So it is assumed that NP application might cause more damage than chemical pesticides (CP) application. The marketing channel for organic products is yet to be developed in India. Nevertheless, considering consumers' consciousness of food safety among urban middle class consumers, it is assumed that organic farm products would be priced to some extent higher than non-organic farm products. The paper tries to make clear the relevance of the two assumptions while comparing NP and CP applications at the farm level.