

**NEEM PLANT, *AZADIRICHTA INDICA* (MELIACEAE) AS AN ALTERNATE
HOST FOR THE PINK MEALYBUG, *MACONELLICOCCUS HIRSUTUS*
(GREEN, 1908) (HEMIPTERA: PSEUDOCOCCIDAE)**

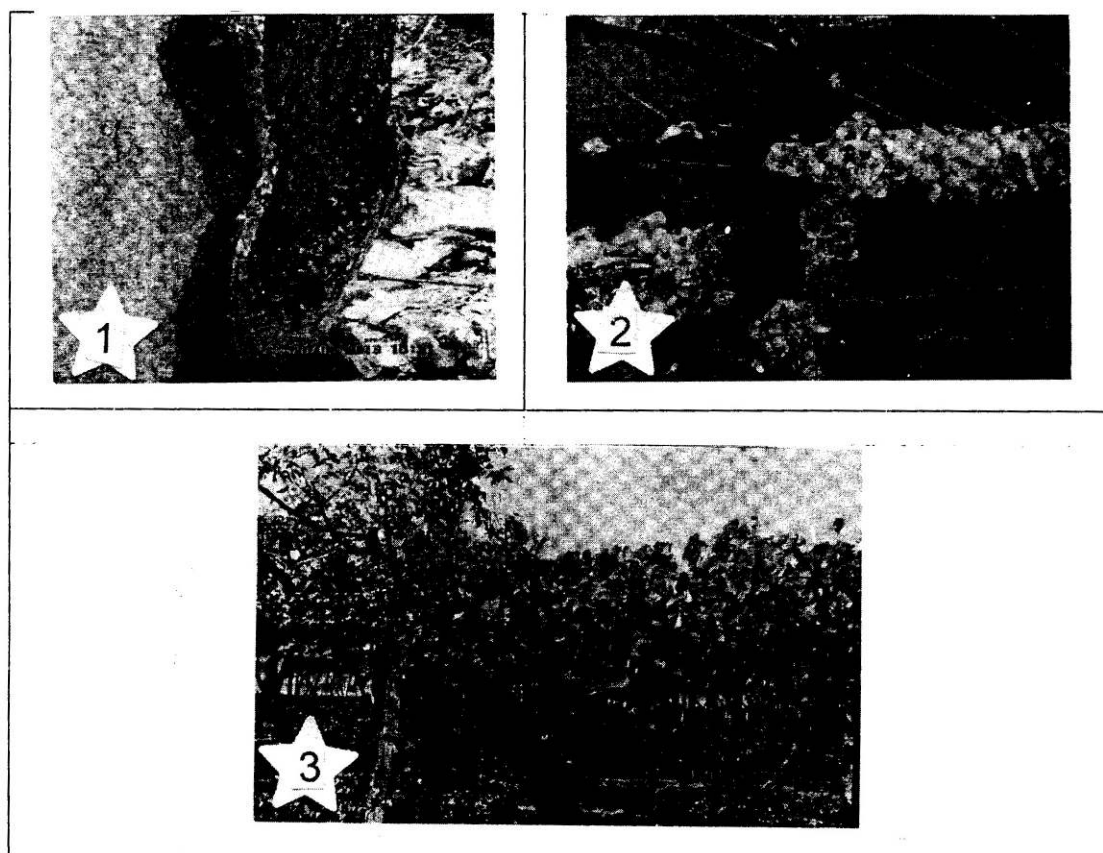
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The pink hibiscus mealybug (PHM), *Maconellicoccus hirsutus* (Green, 1908) (Hemiptera: Pseudococcidae) is a serious, polyphagous pest of many agricultural and ornamental plants in tropical and subtropical regions. While the primary host of *M. hirsutus* is the ornamental *Hibiscus rosa-sinensis*, the mealybug will also feed on and inhabit a wide range of predominantly woody plants, including ornamentals (http://www.eppo.org/QUARANTINE/insects/Maconellicoccus_hirsutus/DS_Maconellicoccus_hirsutus.pdf).

Key words : *Azadirichta indica*, alternate host, *Maconellicoccus hirsutus*.

Adult mealybugs are about 3 mm long and pink in body color but covered with a waxy secretion. The Males have two long waxy tails and are smaller than females, (<http://entnemdept.ufl.edu/creatures/orn/mealybug/mealybug.htm>) reddish brown and have one pair of wings. Host records extend to 76 families and 200 genera, with some preference for Fabaceae, Malvaceae and Moraceae (Mani, 1989; Garland, 1998). In India, stunted and distorted growth caused by *Maconellicoccus hirsutus* (Green, 1908) in mulberry is known as Tukra disease (Rao *et al.*, 1993) and is a problem in most of the silk producing areas (Tewari *et al.*, 1994). Feeding by this sucking pest causes plant deformation (curling and contortion) and lowered aesthetics, which result in heavy economic losses.

M. hirsutus causes severe damage to grapes in India, with up to 90% of bunches destroyed in Bengaluru (Manjunath, 1985) and heavily infested bunches are unfit for consumption or marketing (Vereesh, 1986). Dense colonies of *M. hirsutus* were observed on a neem tree, *Azadirichta indica* (Meliaceae) adjacent to a vineyard in Vijayapura, Devanahalli Taluk, Bengaluru (12°58'N 77°34'E), Karnataka. The colonies were wide spread in cracks and crevices on the main trunk and twigs of the tree serving as preferred microhabitat (Figs. 1 & 2). The proximity of the neem tree to the vineyard and structures such as stone pillars, mist nets and poles (Fig. 3), could have facilitated spread of the mealy bugs from the main to alternate hosts and vice-versa. *M. hirsutus* can spread locally by wind at the crawler stage as well. Seasonality and host availability decide shift between the two flora as it is capable of having up to 15 generations per year with parthenogenetic and bi-parental reproduction (www.cabi.org). The observation coincides with the summer in the region and grapes were ready to be harvested. Neem is reported as an alternate host for *M. hirsutus* (www.cabi.org). Proper understanding of presence of non-crop alternate hosts enhance pest management strategies thereby decreasing the number of insecticide sprays needed to suppress polyphagous pests like *M. hirsutus*.



Figs. 1-3 : *M. hirsutus* congregation on the basal portions of the neem stem; 2. Mass of *M. hirsutus* on neem stem; 3. The neem tree adjacent to the vine yard.

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