

Population Dynamics of Mite, *Aceria Tulipae* (KEIF.) on Garlic (*Allium Sativum* L.) and its Management under Bengal Basin

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Abstract—Garlic (*Allium sativum* L.) is one of the most important spice crops in West Bengal grown during the winter months (October/November to March/April). But mite pest *Aceria tulipae* (Keifer) causes heavy damage and limits its production. Mite infestations were found as early as the two to three-leaf stage of the crop, during the last week of December. The population was found to be increased gradually and reached the maximum during mid-February thereafter gradually decline by the end of March with the onset of high temperature and moderate rainfall and maturity of the crops. A very low population was found at the end of February. Both temperature and relative humidity (max) had a non significant and positive relationship with the garlic mite population. The five varieties evaluated were found infested by the mite; Goldana, local were most susceptible and Katki was found to be the least susceptible. One days after spraying ethion was found most effective and very low population (2.13 mites per sq. cm.) was found in this treatment very closely followed by profenophos (2.19 mites per sq. cm.). There is no significant difference between these two treatments. Similar trend was found at three days after spraying. Five days after spraying profenophos was found most effective acaricide and very low population (1.88 mites per sq. cm.) was found in this treatment very closely followed by spiromesifen (1.89 mites per sq. cm.). Ten days after spraying dicofol was found to be the most effective acaricide and very low population (1.40 mites per sq. cm.) was found in this treatment closely followed by ethion (3.0 mites per sq. cm.). From overall observation Ethion was found most effective acaricide very closely followed by profenophos. Dicofol was found most persistent acaricide.

Keywords: Incidence, variety, acaricides, sustainable management, spices.