

Impact of Organic Nutrients on the Occurrence of Sheath Mite, *Steneotarsonemus spinki* Smiley Infesting Rice and its Management in the Plains of West Bengal

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Abstract—Rice sheath mite, *Steneotarsonemus spinki* Smiley (Acari: Tarsonemidae) was found a serious threat to rice cultivation under Bengal basin of West Bengal, especially during the wet season. The mite appeared during tillering to panicle emergence time with a maximum population encountered during early ripening stage of the crop, resulting brownish pecks on the leaf sheath and poor filling of the grains particularly in case of susceptible rice cultivar, IET-4786 was observed. Field experiments were conducted at District Seed Farm, Bidhan Chandra Krishi Viswavidyalaya, Kalyani during kharif season, 2015 to understand the impact of organic nutrients on population of sheath mite in rice and their management by using different acaricides. The result of the experiment revealed that the mite population significantly varied among the different treatments. The maximum mite population (850 mite /sheath) was observed in chemical fertilizer treated plot with appearance of 58.33% damage symptoms followed by untreated control. The lowest infestation was recorded in mustard cake (14.33%) treated plot. Application of mustard cake and cow dung manure are very promising for maintenance of low mite population and securing higher seed yield. Among the different acaricides, propargite @ 1.5 ml/lt gave the highest mortality followed by diafenthiuron @ 1 g/lt. obviously, the highest yield was also obtained from plots treated with propargite (6.12 t/ha) which was statistically at par with diafenthiuron (5.98 t/ha).

Keywords: Rice, Sheath mite, organic nutrient, Chemical fertilizer, Acaricides.