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Research Paper

SERIFIT- A DISINFECTANT FOR EFFECTIVE SANITATION IN INDIAN SERICULTURE

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ABSTRACT

The Silkworm diseases are one of the constraints in silk production in Indian sericulture. The diseases are best prevented through effective disinfection of rearing house, its surroundings and rearing appliances as well as maintenance of hygiene. A suitable disinfectant is the primary need to eliminate the persistent pathogen load from the rearing environment. Formalin, Bleaching powder, Chlorine dioxide (Sanitech/Serichlor and Sanitech Super) and Asthra have been used as disinfectants in Indian sericulture for disinfection and to maintain hygiene. In this direction, Serifit, a new disinfectant (a chlorine based inorganic compound) manufactured by M/s Sree Rayalaseema Hi-Strength Hypo Limited, Kurnool, Andhra Pradesh, India was evaluated for its germicidal effect against the pathogens of silkworm. *In vitro* studies on the efficacy of different concentrations of Serifit against *Bacillus thuringiensis* and *Beauveria bassiana* proved the effectiveness of Serifit as a germicide at 0.15 to 2 %. *In vivo* studies of different concentrations of Serifit against all common pathogens of silkworm, *viz.,* polyhedra of BmNPV, spores of *Nosema bombycis* and *B. thuringiensis* and conidia of *B. bassiana* also confirmed its efficacy. Based on effective concentration, 0.20 % of Serifit was selected and this concentration was found effective for disinfection of contaminated rearing house, rearing appliances and silkworm egg surface. A technology on "Disinfection and Hygiene using Serifit" was tested both at laboratory and field conditions. In laboratory study, Serifit (0.20 %) was found effective for disinfection of rearing house and also for hygiene maintenance. Field trials of technology conducted at farmers' level in different sericultural areas of Karnataka, Tamil Nadu and Andhra Pradesh also indicated its effectiveness. The disinfectant is stable, non-hazardous, the least corrosive and suitable for effective sanitation.

Key words: *Bombyx mori* L., disinfectant, pathogens, sericulture, serifit, silkworm.