

RESEARCH ARTICLE : Solvent extracts of medicinal plants against *BmNPV*

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SUMMARY : Grasserie, a viral disease caused by nuclear polyhedrosis virus inflicts great loss to mulberry silkworm, *Bombyxmori*L. This disease causes extensive larval mortality thereby reducing cocoon yield and ultimately silk yield. Five medicinal plants viz., *Eucalyptus citriodora*, *Cymbopogon citrates*, *Thymus vulgaris*, *Rosmarinusofficinalis* and *Annonasquamosa* were evaluated against grasserie on bivoltine double hybrid {(CSR 6 × CSR 26) × (CSR 2 × CSR 27)} revealed that *R. officinalis* (1000ppm) was not toxic to the silkworm and also enhanced the economic parameters of silkworm. *A. squamosa* (1000ppm) was highly toxic and caused 100 per cent larval mortality. Two different solvents, viz., chloroform and hexane were used for extracting active principles from four medicinal plants. The results revealed that chloroform extracts of *R. officinalis* (1000ppm) was found to be more effective against grasserie compared to other botanical extracts with the larval mortality of 12.66 per cent, whereas the larval mortality was 100 per cent in virus alone treatment. *R. officinalis* (1000ppm) enhanced the economic parameters of silkworm such as larval weight, cocoon weight, shell weight, filament weight. In the present work, GCMS studies with *R. officinalis* spots eluted through TLC revealed the presence of 22 compounds viz., Eucalyptol, Caryophyllene, Camphor, Borneol, etc.

KEY WORDS :

BmNPV, Medicinal plants, Mortality and economic parameters, GCMS

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