



## Insect pest infestation in Coconut Gardens of Tirupathur district

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### Introduction

Coconut crop is being cultivated in an area of 10626 ha with average productivity of 2979 lakh nuts /ha. In Tirupathur District, coconut cultivation is carried out in six blocks viz., Tirupathur, Kandili, Jolarpet, Natrampalli, Madhanur and Alangayam blocks. Coconut crop is attacked by numerous insects viz., Rhinoceros beetle, *Oryctes rhinoceros*, red palm weevil, *Rhynchophorus ferrugineus*, black headed caterpillar, *Opisina arenosella* and whitefly complex throughout the year causing considerable yield losses and the incidence is more during hot summer months. Based on the severity of coconut insect pests, survey was carried out in Jolarpet block of Tirupathur district during the month of July 2024.

### Body

Insect complexity with hidden nature of damage and tall nature of coconut makes more complex with management options. In spite of recent technological innovations also, the major loss in coconut is faced by the farmers because of poor nutrition and management. Moreover, many of the small

and marginal farmers are not able to meet out the cost of pesticide and inorganic fertilizers and the spray due to increased cost of plant protection chemicals and the height of the crop remains a constraint in imposing the chemical treatments. Biological control is an alternative approach to the chemical insecticides and it may be a safe, effective and ecofriendly method for coconut insect pest management.

Large scale adoption of biocontrol is still in an infancy stage due to non-availability of biocontrol agents Hence, the livelihood of coconut farmers could be increased with promotion of knowledge on adoption of existing timely management tools. It is therefore imperative to adopt crop pest calendar approach for higher production of coconut and possible only with sensitization and adoption of ecosmart technologies to coconut growers in major coconut growing areas of Tirupathur District.

Hence, survey was made in Jolarpet block of Tirupathur district (Table 1) to assess the incidence of major insect pests viz., rhinoceros beetle, whitefly complex, black headed caterpillar and red palm weevil in 5 fields comprising of three villages covering

28 acres of coconut cultivation. The incidence of rhinoceros beetle and whitefly complex incidence varied from 5.0-10.0 per cent, black headed caterpillar incidence varied from 35.0 – 90.0 per cent. Based on the incidence of insect pests, the following control measures were sensitized and demonstrations were made for the benefit of the coconut growers.

	<p>mixed with 5 litre of water for attraction of adults</p> <p>Installation of light trap @ one per acre during summer shower period</p>
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**Conclusion**

Large scale adoption and sensitization of biocontrol approach for higher production to coconut growers in major coconut growing blocks of tirupathur district will pave way to improve the livelihood of coconut growers.

<b>Insect pest</b>	<b>Recommendation</b>
<b>Black headed caterpillar</b>	<p>Removal and destruction of affected leaflets</p> <p>Installation of one light trap per acre between 7.00-11.00 p.m</p> <p>Release of Braconids @ 21 pockets per acre at 21 days interval</p> <p>Sowing of sunnhemp around the field and pulses to encourage the activity of natural parasitoids</p>
<b>Whitefly complex</b>	<p>Installation of yellow sticky trap @ 8 Nos per acre</p> <p>Insecticidal application has to be avoided so as to increase <i>Encarsia</i> activity</p> <p>Release of <i>Encarsia</i> @ 10 leaf bits per acre</p> <p>When population is heavy, spraying of water using power operated sprayer</p> <p>Spray of 1kg maida mixed with 5 litres of water and made upto 20 litres will remove the sooty mould</p> <p>To encourage activity of parasitoids, planting of banana or Annona @ 20 Nos</p>
<b>Rhinoceros beetle</b>	<p>Removal and destroy of grubs in manure pits and application of <i>Metarrhizium anisopliae</i> @ <math>5 \times 10^{11}/m^3</math></p> <p>Application of NSKE powder (50 g) + sand (100 g) in the crown region</p> <p>Installation of pheromone trap (Rhino lure) @ one /ha outside the coconut garden or Castor cake (1 kg) and Yeast (5 g)</p>



Date of Visit	Name of the farmer	Area	Villages	GPS Co-ordinates	Rhinoceros beetle (% incidence)	Rugose spiralling Whitefly complex (% incidence)	Black headed caterpillar (% incidence)
10.07.24	Mr.Vijayan	6 acres	Bethahallapalli	12.6394;78.5795	5	5	90
	Mr.Balaramareddy	8 acres	Bethahallapalli	12.6398;78.5796	10	5	80
	Mrs.Rani	2 acres	Chinnamottur	12.6256;78.5686	5	5	35
	Mr.Sivan	6 acres	Chinnamottur	12.6256;78.5686	5	5	70
	Mr.Prakasam	6 acres	C.M.Pudur		5	5	75

