SUNSHINE AGRICULTURE
e-Newsletter

**ISSN (E): 2583 – 0821**

*Sun. Agri.:e- Newsletter*, (2023) *3*(4), 23-25

Article ID: 192

# Spiraling whitefly: *Aleurodicus dispersus*

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Open Access

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***Available online at***
www.sunshineagriculture.vitalbiotech.org

**Article History**
Received: 10. 04.2023
Revised: 14. 04.2023
Accepted: 20. 04.2023



## INTRODUCTION

*Aleurodicus dispersus*, a whitefly that is spiralling (Aleyrodidae: Hemiptera). It is a newly arrived polyphagous pest that attacks ornamentals, fruit trees, vegetables, and shade trees. It is indigenous to Central America and the Caribbean Islands. Its fast diffusion and adaptability account for its widespread distribution in practically all nations.

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In many nations, a few species of whiteflies are regarded as major insect pests of vegetation and ornamental plants. *Aleurodicus dispersus* (Russell), sometimes known as the spiralling whiteflies, has been observed on numerous plant species worldwide. These whiteflies are able to transfer plant diseases and only feed on leaves. Many studies have been conducted on whiteflies to determine the best pest management practises for control.

The use of parasitic wasps, predators, and entomopathogenic fungi as biological controls for spiralling whiteflies in the South Pacific is crucial. To keep the population of whiteflies at a minimum, other control strategies include physical, botanical, and chemical ones. Spiralling whiteflies have caused detrimental effects in the production of crops and ornamental plants. It is one of the most common pest that has the ability to spread diseases and influence the global food production.

**Distribution**

It is a newly arrived polyphagous pest that attacks ornamentals, fruit trees, vegetables, and shade trees. It is indigenous to Central America and the Caribbean Islands. Its quick diffusion and adaptability have led to its widespread distribution in practically all nations.

**Host range**

It is found on 128 plants including guava, cassava, cotton, chillies, tomato, brinjal, bhendi, papaya, crotons and weeds such as *Euphorbia, Corchorus, Eclipta, Vernonia, Vicoa, Acalypha, Alternanthra, Amaranthus, Convolvulus, Abutilon*etc.

**Life cycle**

Adult whiteflies are larger than many other kinds of whiteflies and have a waxy coating all over their bodies. Dark reddish-brown eyes. Three distinctive dots can be seen on the fore wings. On the underside of leaves, eggs are placed in concentric circles in a spiralling pattern. A typical egg period lasts 5-8 days. 22–30 days make up the nymphal phase. Adults can live for 13 to 21 days. In 40 to 50 days, the entire life cycle is completed.

On the bottom surface of the leaf, adults and nymphs swarm together, sucking the sap and causing premature leaf loss, chlorosis, yellow speckling, crinkling, and curling. Sooty mould fungal growth is also influenced by the release of honey dew. All stages of the pest secrete an abundance of white, waxy flocculent material, which is easily dispersed by wind and causes public

disturbance. It is also thought to be a vector for the deadly yellowing of coconut caused by mycoplasma.

**Management**

Due to the whitefly's numerous host plants, management of the pest has proven challenging. This coloniser (whiteflies), which sucks the sap from leaves, presumably utilised perennial plants like ornamentals, fruit trees, and shade trees successfully all year long. An area-wide control strategy, natural enemy enhancement, and environmental modifications must be used in combination to combat whiteflies. This kind of pest control is referred to as Integrated Pest Management (IPM), which combines a variety of different tactics. The IPM programme uses up-to-date, thorough information on insect lifecycles and interactions, together with pest management techniques, to manage pests in the most cost-effective manner with the least amount of risk to the environment and people.

Some management done are as follows-

- In addition to life stages, remove and destroy damaged leaves.
- Since weed plants like Abutilon, Acalypha, Euphorbia, etc. are alternate hosts, remove and eradicate them from the area.
- To draw in and kill the adults, use 15 yellow sticky traps per hectare.
- To eliminate all life stages, release 10,000 *Chrysoperla carnea* predators.
- Depending on the incidence, apply two to three applications of Fish oil rosin soap (FORS) 25g/L, NSKE 5%, neem oil 0.03% 1ml/l, phosalone 35 EC 3 L, triazophos 40 EC 3 L, or acephate 75 SP 1.5 kg in 1500-2000 L per hectare.
- Steer clear of extending crop growth with synthetic pyrethroids.