

# Control methods against the whitefly *Dialeurodes citri* in organic citrus

## Problem

*Dialeurodes citri* (Picture 1) is an invasive pest introduced in Spain in 1987. It was not treated as a pest until 2015, when it affected persimmon production. In 2021 it also started to act as a pest in citrus.

## Solution

A combination of monitoring methods and application of plant protection products to reduce first generation (normally from the end of May to the beginning of June). To establish the treatment period, the adult population must be tracked.

## Benefits

By reducing the first generation, the damage (i.e., sap consumption, honeydew and, consequently, sooty mould fungus) is strongly reduced.

## Applicability box

### Theme

Crop production, Citrus fruits, Disease and pest control

### Keywords

Citrus, Plant protection, Pest control, Biological control, Natural enemies

### Context

Mediterranean basin

### Application time

May to June

### Best in

Organic citrus orchards

## Practical recommendation

- The main damage caused by *D. citri* is due to black fungus sooty mould, which colonises the sweet secretions of this pest. The black fungus may cover the leaves and fruit. Heavily-infested trees become weak and produce small crops of insipid fruit.
- In the Mediterranean area, *D. citri* has three generations per year. Apply plant protection products on the first generation. If the first generation is not controlled, the damage and the followings generations cannot be well controlled. Sensitive stages are L1 and L2. L3 and L4 are very resistant to plant protection products.
- Plan protection products to control this pest are paraffinic oils and citrus oil. The moment to use plant protection products is usually 2 weeks after adult population peak (mainly end of May or beginning of June).



Picture 1: *D. citri* on citrus leaves. Photo: Vercher, R., Ecovalia.



Picture 2: Monitoring *D. citri* is necessary for control in organic farming. Yellow sticky traps are used to follow adults in spring (from April - June). Photo: Vercher, R., Ecovalia.



## Further information

### Further reading

- Cubian, M., Beitia, F., Weigand, S., Ferragut, F. and Monzo, C. (2022). Phytoseiid mite assemblages and *Dialeurodes citri* (Hemiptera: Aleyrodidae) infestations in persimmon orchards under different soil managements. Acta Hort. 1338, 291-298. DOI: 10.17660/ActaHortic.2022.1338.42
- Hernández de la Fuente, I., Laurin, M., Beitia, F. J., & Tormos, J. (2019). Estudio preliminar sobre la evolución poblacional de '*Dialeurodes citri*' (Ashmead)(Hemiptera: Aleyrodidae), en cultivos de caqui en la Comunidad Valenciana. Agrícola vergel: Fruticultura, horticultura, floricultura, (422), 221-226. (SP)
- Soto, A., Ohlenschlaeger, F., García-Marí, F. Distribution and Sampling of the whiteflies *Aleurothrixus floccosus*, *Dialeurodes citri*, and *Parabemisia myricae* (Homoptera: Aleyrodidae) in Citrus in Spain, Journal of Economic Entomology, Volume 95, Issue 1, 1 February 2002, Pages 167–173.

### Weblinks

- Check the Organic Farm Knowledge platform for more practical recommendations.
- *Dialeurodes citri* (citrus whitefly). CABI.
- MOSCA BLANCA *Dialeurodes citri* Ashmead (Mosca blanca de los cítricos) EN EL CULTIVO DEL CAQUI EN LA COMARCA DE LA RIBERA. Generalitat Valenciana. (SP)

## About this practice abstract

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