Citrus Whitefly

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SCIENTIFIC NAME: *Dialeurodes citri* (Ashmead)
CLASS: Insecta
ORDER: Hemiptera
FAMILY: Alerodidae

Citrus whiteflies (Lyle Buss, Bugwood.org)


Citrus whitefly adult, eggs, and nymph (NC State Extension)

Description

Adults

The adult is a tiny, moth-like, mealy-white insect with a wingspan of less than 4.3 mm. Most often they rest on the undersides of leaves and fly about when plants are disturbed.

Eggs

The citrus whitefly lays yellow eggs with a nearly smooth surface. The eggs are about 0.25 mm long, elliptical, and most frequently laid on young tender leaves.

Nymphs

The first instar is the only mobile nymphal stage. After the first instar the nymphs are flattened, oval, and similar in appearance to soft scale insects. Nymphs are translucent, oval in outline, and very thin. The leaf color will show through the thin nymphal body; therefore, nymphs are difficult to see.

Pupae

The pupal case is very similar to nymphs but is slightly thickened and more opaque. The red eye spots of the adult are very prominent in developing pupal cases.

Biology

Distribution

Reported from Virginia southward and around to Texas, then westward to California.

Host Plants

The primary host plant is citrus of all types, but many ornamentals are also hosts. The most common are Allamanda, banana shrub, Boston ivy, chinaberry, English ivy, gardenia, lilac, pear, osage orange, and privet.

Damage

Direct damage is caused by the removal of sap. Indirect damage is caused by the excretion of copious amounts of honeydew where sooty molds grow. This black mold will contribute to poor aesthetics and perhaps interfere with photosynthesis.

Life Cycle

Winter or colder periods are passed as late nymphal stages on the undersides of leaves. These may be on some remaining plants or weeds growing under benches. In the spring or when heat is applied adults will emerge and deposit eggs on the undersides of new plant growth. These eggs will hatch in 8 to 24 days, depending on the temperature. The nymphal stage will last from 23 to 30 days. Overall, the life cycle from egg to adult will vary from 41 days to more than 300. The adult will live as long as 27 days.

Management Strategies

Controls are difficult because the eggs and nymphs are located on the underside of leaves, and they may also be resistant to some aerosol chemicals. Adult control usually will involve multiple applications as the nymphs mature and all have emerged as adults. Some of the new synthetic pyrethroids make controls much more successful. However, chemicals must be alternated to lessen the chance of a chemical-tolerant or resistant population developing. In some states biological control using *Encarsia lahorensis* has been very successful. This parasitoid should be functional in the Gulf Coast states and warmer areas of other states.

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