

# DAFM Plant Pest Factsheet

## *Bemisia tabaci* Silver-leaf whitefly

Irish  
Protected  
Zone Pest!

Fig 1: Adult *Bemisia tabaci*

### Pest Characteristics

- **Pest:** *Bemisia tabaci*
- **Common name:** Silver-leaf whitefly
- **Hosts:** *Bemisia tabaci* is a whitefly pest that is known to feed on over 600 plant species. It poses a significant threat to certain crops cultivated in Ireland, such as *Capsicum annum* (pepper), *Euphorbia pulcherrima* (poinsettia), *Ocimum basilicum* (basil) and *Solanum lycopersicum* (tomato).
- **Invasive Risk:** The pest is highly invasive and now has a near world wide distribution (Fig 3), however, it is yet to establish in Ireland. To prevent its entry, Ireland maintains Protected Zone status to exclude infested imports.
- **Entry Pathways:** *Bemisia tabaci* is often intercepted by DAFM on imports of host plants. Any host plants imported from regions where the pest is present can be considered as likely entry pathways.
- **Adaptability:** The pest is capable of establishing in the Irish climate and would become a serious threat to protected cultivation should it establish.
- **Impact:** *Bemisia tabaci* feeds on host plant sap, this reduces host vigour, fruit ripening and induces other physiological disorders. Notably, it is a vector of many destructive plant viruses, particularly the Begomoviruses.
- **Symptoms:** Whitefly infestations are generally observed as dense clusters on the underside of leaves (Fig 2). Whitefly feeding typically induces curling and/or yellowing (chlorosis) in host plant leaves. Larvae produce a “honey dew” which gives plants a sticky feel. Notably, *Bemisia tabaci* could easily be mistaken for the whitefly *Trialeurodes vaporariorum* which is widespread throughout Ireland and commonly seen infesting glasshouses.



Fig 2: *Bemisia tabaci* infestations of larva, puparium and adults on undersides of leaves



An Roinn Talmhaíochta,  
Bia agus Mara  
Department of Agriculture,  
Food and the Marine

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- **Lifecycle:** Adult females lay eggs on the underside of leaves. Eggs can hatch after about 2 weeks in warm conditions (~25°C) from which the first instars, known as “crawlers”, emerge. Crawlers are the only mobile stage of the 4 larval instar phases *Bemisia tabaci* develops through between egg hatch and adulthood. Crawlers do not travel far and settle on a leaf surface feeding directly on the plant sap. Fourth instars develop into a puparium in which they mature. The adults that emerge from the puparia are capable of flight and begin mating from the first day. Mating can occur several times during an adult female’s lifespan (~60 days). Females can lay up to 160 eggs which results in high population levels generally seen in infestations.
- **Dispersal:** Adults are poor flyers, however, wind dispersal can spread adults over longer distances than they would usually fly naturally.
- **Distribution:** *Bemisia tabaci* is considered to have been possibly native to India. It spread rapidly to now have a near worldwide distribution, however it is yet to establish in Ireland (Fig 3).
- **If suspected:** DAFM Inspectors conduct annual surveys to substantiate Ireland’s pest free status for *B. tabaci*. If you find a suspected specimen please submit images to DAFM at: [plantpestreport@agriculture.gov.ie](mailto:plantpestreport@agriculture.gov.ie)

Photo credits: All images used in Figures 1, 2 and lifecycle were obtained from the EPPO *B. tabaci* images repository: <https://gd.eppo.int/taxon/BEMITA/photos>

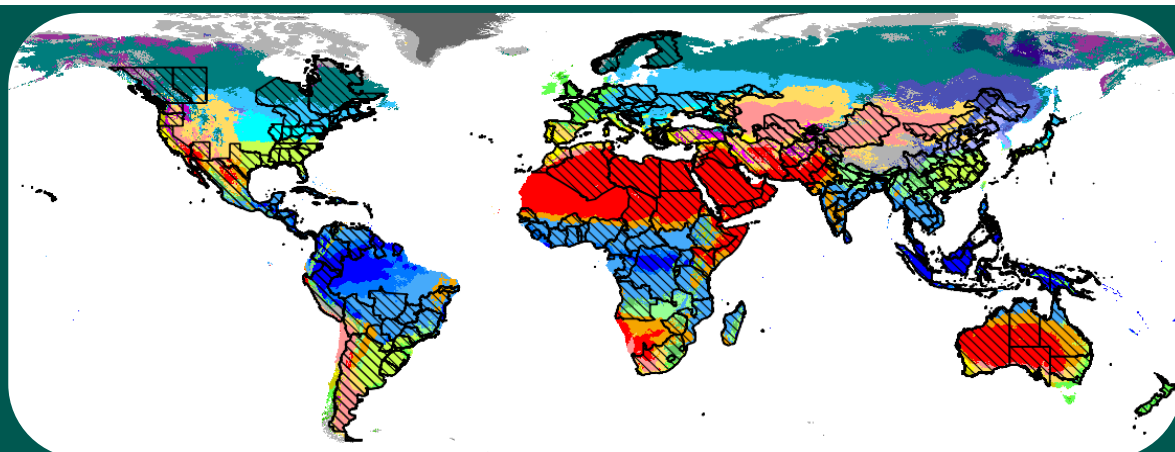


Fig 3: Known world distribution of *B. tabaci* (cross hatched areas) overlaid on regional climate classifications



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