

Recommendation of the Working Group on the Annexes of the Council Directive 2000/29/EC – Section II – Listing of Harmful Organisms as regards the future listing of *Liriomyza huidobrensis* (Branchard) and *Liriomyza trifolii* (Burgess)¹

Current regulatory status

Liriomyza huidobrensis and *Liriomyza trifolii* are currently regulated in Annex II, Part A, Section II of Council Directive 2000/29/EC for cut flowers, leafy vegetables of *Apium graveolens* L. and plants of herbaceous species, intended for planting, other than bulbs, corms, plants of the family Gramineae, rhizomes and seeds.

Introduction and movement within the Union of the regulated plants is subject to strict requirements listed under Annex IV, Part A, Section I (32.3) and Section II (23).

Identity of the pest

The biology of *L. huidobrensis* is not as well-known as that of some other *Liriomyza* species. Female flies puncture the leaves of the host plants causing small wounds which serve as sites for feeding or oviposition. Feeding punctures cause the destruction of a large number of cells and are more clearly visible to the naked eye. About 15% of the punctures made, contain viable eggs. Eggs are inserted just below the leaf surface. The number of eggs varies according to temperature and host plant. The larvae of *L. huidobrensis* pupariate within the leaf. Adult emergence occurs 7-14 days after puparation, at temperatures between 20 – 30 degrees Celsius. In northern Europe, *L. huidobrensis* is mainly a glasshouse pest.

L. trifolii pupariates externally, either on the foliage or in the soil just beneath the surface. Adults of *L. trifolii* live between 15 and 30 days. On Chrysanthemum the life-cycle is completed in 24 days at 20 degrees Celsius, however, on *Vigna* and *Phaseolus* it takes only 20 days at this temperature.

Distribution of the pest

Liriomyza huidobrensis is reported in 13 Member States of the EU, absent in 11 (6 of these after eradication) and transient in two. *L. trifolii* is present in 10, absent in 14 (8 of these after eradication) and transient in one. They are essentially present in all the Mediterranean countries, with increasing absences in Northern Europe.

Potential for establishment and spread in the PRA area

Both species have established populations in most countries of the EU. Outdoor populations are widespread in the Mediterranean area, and both species are found in protected cultivation in many EU countries. In northern Europe local spread is more restricted owing to lower outdoor temperatures. High summer temperatures may limit the spread of *L. huidobrensis* in the Mediterranean area.

¹ Scientific basis for the recommendation: Scientific Opinion on the risks to plant health posed by *Liriomyza huidobrensis* (Blanchard) and *Liriomyza trifolii* (Burgess) to the EU territory with the identification and evaluation of risk reduction options. EFSA Journal 2012;10(12):3028. [190 pp.] doi:10.2903/j.efsa.2012.3028. http://www.efsa.europa.eu/sites/default/files/scientific_output/files/main_documents/3028.pdf

There is little information published on the natural dispersal of both species. Adults are capable of only limited flights but can blow into crops from surrounding vegetation. Human activity is believed to be the key factor in the rapid spread of both *Liriomyza* species particularly via host planting material and cut flowers, which are the main long-distance dispersal/movement.

Potential for consequences in the PRA area

Both the adults and the larvae of both species damage a wide range of hosts, decreasing the quality as well as the yields of vegetables and ornamental crops in glasshouses and outdoors. The magnitude of the potential consequences is rated as minor for both species in Mediterranean areas. In non-Mediterranean countries it is moderate for both species in protected crops but, outdoors, impacts are minor for *L. huidobrensis* and minimal for *L. trifolii*. Growers have considerable experience in controlling these two *Liriomyza* species. Both species are regulated because of the serious direct and indirect damage they can cause to a wide variety of crops. They are established in outdoor and protected crops in several EU Member States.

Recommendation

Given their wide distribution in the Union territory, and the fact that eradication is no longer possible from the Union territory, if widely distributed in infested areas, the two species do not meet the conditions of Union Quarantine Pests.

However, considering still the impact of the two pests and that plants for planting, cut flowers and leafy vegetables are the main pathway of entry and spread into the EU, the Working Group recommends listing both *L. huidobrensis* and *L. trifolii* as Regulated Non-Quarantine Pests.

The application of protected zones to areas where the pests are not yet present can be applied to help prevent further spread.

Lastly, current regulated host plants should be updated to include additional commodities susceptible to the two species. A further look may be given to a list of a list of host species published in 2007 by the Annexes Working Group.