

First outbreak of serpentine leaf-miner *Liriomyza huidobrensis* (Blanchard, 1926) in Lithuanian glasshouses



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The State Plant Protection Service carries out the survey for quarantine pests in the glasshouses. During 2005 it was discovered a big quantity of *Liriomyza* specimens. The aim of this investigation was to determine pest species.



Fig. 1 *Liriomyza huidobrensis* (Blanchard) in *Gypsophila*



Fig. 2 *Liriomyza huidobrensis* (Blanchard) in *Petunia*



Fig. 3 *Liriomyza huidobrensis* (Blanchard) in *Gerbera*

Materials and methods

The direct survey was carried out on 18-07-2005 and 01-08-2005. The plants *Amaranthus*, *Argyranthemum* (cultivated), *Capsicum*, *Chrysanthemum* (cultivated), *Galinsoga*, *Gerbera* (cultivated), *Gypsophila* (cultivated), *Erigeron*, *Lactuca*, *Nicandra*, *Petunia* (cultivated), *Sonchus*, *Stellaria*, *Taraxacum*, *Tussilago*, *Verbena* (cultivated) and *Viola* (cultivated) were found with mines.

The insect species were determined according to the mining features exhibited by larva *in situ*, and the plants were identified at the site. Plants with mines were collected and miners were grown till adult stage in the laboratory. Adults of leafminers were identified by morphological examination (Spencer, 1973; Protocol, Collins). Some puparia and adults were examined by PCR-RFLP also (Kox et al., 2005).



Fig. 4 *Liriomyza huidobrensis* (Blanchard) in *Gerbera*

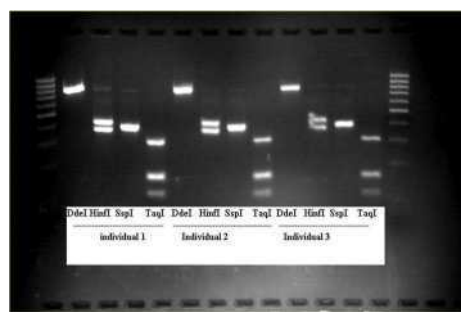


Fig. 5 RFLP analysis of *Liriomyza huidobrensis* (Blanchard) PCR products

Results

Three species of *Liriomyza* were detected: *Liriomyza huidobrensis* (Blanchard), *Liriomyza strigata* (Meigen), *Liriomyza bryoniae* (Kaltenbach). *Liriomyza huidobrensis* mined: *Amaranthus*, *Argyranthemum*, *Chrysanthemum*, *Galinsoga*, *Gerbera* (Fig. 3,4), *Gypsophila* (Fig. 1), *Erigeron*, *Lactuca*, *Petunia* (Fig.2), *Stellaria*, *Taraxacum*, *Tussilago* and *Viola*. The adults of *Liriomyza huidobrensis* were reared from these plants: *Chrysanthemum*, *Galinsoga*, *Gerbera*, *Gypsophila*, *Erigeron*, *Lactuca*, *Petunia*, *Stellaria* and *Tussilago*. *Liriomyza huidobrensis* (Blanchard) was confirmed by PCR-RFLP from *Gypsophila* and *Gerbera* (Fig.5). *Liriomyza strigata* (Meigen) attacked these host plants: *Galinsoga*, *Chrysanthemum* and *Viola*.

Liriomyza bryoniae (Kaltenbach) mined following plants: *Capsicum*, *Gypsophila*, *Nicandra*, *Sonchus*, *Verbena* and was confirmed from the *Sonchus* by PCR-RFLP.

The main pest which attacked cultivated plants in the glasshouse was quarantine leaf-miner *Liriomyza huidobrensis* (Blanchard).