

Obvladovanje karantenskih listnih zavrtalk (*Liriomyza* spp.) v Sloveniji

Gabrijel SELJAK

KGZS, Kmetijsko gozdarski zavod Nova Gorica, Pri hrastu 18, SI-5000 Nova Gorica

V Sloveniji in tudi v EU so pod fitosanitarnim nadzorom štiri vrste listnih zavrtalk iz rodu *Liriomyza* Mik. [Diptera, Agromyzidae]. Vrsta *Liriomyza sativae* Blanchard, 1938 je na seznamu I.A.I in je v Evropi še ni, bila pa je že večkrat preprežena pri uvozu rastlin iz tretjega sveta. Ostale tri vrste – *L. bryoniae* (Kaltenbach, 1858, *L. huidobrensis* (Blanchard, 1926) in *L. trifolii* (Burgess, 1880) - so v Evropi razširjene, vendar pod fitosanitarnim nadzorom in razvrščene na seznam I.A.II. Vrsta *L. bryoniae* je avtohtona palearktična vrsta in je tudi v Sloveniji splošno razširjena. Na seznamu karantenskih vrst je zaradi možnosti zamenjave z vrsto *L. huidobrensis*. Vse štiri vrste so izrazito polifagne z zelo širokim izborom gostiteljskih rastlin. *L. huidobrensis* je izvorno neotropska, *L. trifolii* pa nearktična vrsta. Obe sta zdaj razširjeni tudi v Evropi predvsem v pokritih prostorih. V Sredozemlju lahko preživita tudi na prostem in povzročata precejšnjo škodo pri gojenju okrasnih rastlin in vrtnin. Obe vrsti sta bili v zadnjih letih večkrat prepreženi tudi pri uvozu okrasnih rastlin in vrtnin v Slovenijo. V l. 1999 sta bili v Sloveniji najdeni dve žarišči vrste *L. huidobrensis*, v l. 2001 pa še eno, vedno v pokritih prostorih. Vsa dosedanja žarišča so bila z ustreznimi karantenskimi in varstvenimi ukrepi sanirana.

Pojavljanje vrste *L. trifolii* v Sloveniji je bilo potrjeno v poznih sedemdesetih letih v rastlinjakih v okolici Brežic. Bolj sistematično spremljanje te vrste na ozemlju Slovenije v zadnjih letih kaže, da je večina ostalih pisnih navedb o pojavljanju te vrste na prostem najverjetneje napačnih in se po vsej verjetnosti nanašajo na vrsto *L. congesta* (Backer, 1903). Pri pregledu 28 vzorcev metuljnic z značilnimi poškodbami, 11 vzorcev žerk iz teh rogov in 4 vzorcev vzgojenih imagov v l. 2001 nismo nikoli našli vrste *L. trifolii*. Iz tega sklepamo, da karantenske vrste *L. trifolii* v Sloveniji ni in da so zato poostreni fitosanitarni ukrepi še vedno smiselni in potrebni.

V primeru pojava novih žarišč karantenskih listnih zavrtalk je potrebno napadene rastline ali njihove dele takoj uničiti in izvesti preventivno tretiranje proti morebitnim preživelim osebkom. Proti žerkam so razmeroma učinkoviti pripravki na osnovi abamektina, ciromazina in piretroidov. Za popolno eradikacijo je proti odraslim osebkom potrebno izvesti tudi zaporedno zaplinjevanje s sulfotepom. Za množično obvladovanje teh vrst v rastlinjakih se v praksi uspešno uporablja parazitoid *Diglyphus isaea*. V prispevku bodo podrobneje predstavljene posamezne vrste in poškodbe, ki jih povzročajo na gostiteljskih rastlinah.

ABSTRACT

Control of quarantine leaf miners (*Liriomyza* spp.) in Slovenia

There are four *Liriomyza* species [Diptera, Agromyzidae] currently under the phytosanitary control in Slovenia and in the EU. The *Liriomyza sativae* Blanchard, 1938 was put on the I.A.I list. It is not present in EU yet, but it has been repeatedly intercepted during import inspections of consignments from the third countries. The remaining three species – *L. bryoniae* (Kaltenbach, 1858, *L. huidobrensis* (Blanchard, 1926) and *L. trifolii* (Burgess, 1880) - are present in EU, but

the phytosanitary measures are widely implemented. The *L. bryoniae* is a palaeartic species, native and widely spread also in Slovenia. It was put on the quarantine list to prevent possible confusion with the closely related *L. huidobrensis*. The four species discussed are extremely polyphagous with a very large host range. *L. huidobrensis* is a neotropical and *L. trifolii* a not arctic species, both are currently present and widely disseminated throughout the Europe, mainly in greenhouses. In Mediterranean countries serious outbreaks and economic damages in the outdoor fields have been also reported. Both species have been repeatedly found during the import inspections of flowers and vegetables in Slovenia too. Two focuses of *L. huidobrensis* were found in greenhouses in 1999 and another one in 2001. In all these cases the quarantine and chemical eradicating measures were successfully carried out.

The first confirmed occurrence of *L. trifolii* in Slovenia was recorded in the late 1970's in the vicinity of Brežice. Other records concerning the outdoor occurrence of this species on Leguminosae were in all probability erroneous and they most likely refer to *L. congesta* (Backer, 1903). Examination of 28 samples of Leguminosae leaves with characteristic leaf-mines (collected in different localities mostly in the south-western and south part of Slovenia), 11 preparations of larvae and 4 reared adults from those leaves in 2001 were carried out, but *L. trifolii* was never found. These investigations and the official samples submitted for diagnosis in the last few years permit the conclusion that *L. trifolii* is not present in Slovenia yet and therefore the appropriate phytosanitary measures are still necessary to prevent its introduction.

In case of accidental occurrence of quarantine *Liriomyza* leaf miners in greenhouses, the infested plants or their parts should be destroyed and preventive chemical treatments against surviving specimens should be carried out. The insecticides abamectin, cyromazine and some pyretroides have shown comparatively good effectiveness against maggots. For a complete eradication of these pests in greenhouses some additional fumigations with sulfotep against the adults are usually recommended. The parasitic wasp *Diglyphus isaea* is also very available for the control of these leafminers in greenhouse crops. A more detailed overview of quarantine *Liriomyza*-species and their effect on crops will be further discussed.