

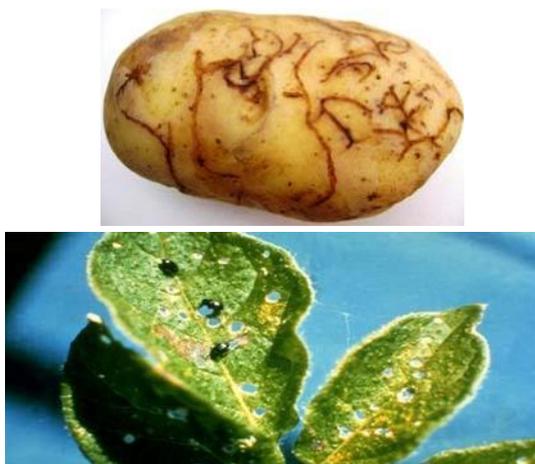
## Epitrix potato beetles

### Epitrix and damage

*Epitrix spp.* is a biological grouping of flea beetles which are known to feed upon and attack members of the *Solanaceae* family. This grouping includes the following species *Epitrix tuberis*, *Epitrix cucumeris*, *Epitrix similaris* and *Epitrix subcrinita*. All of these four different beetles are known to attack potato plants and tubers, *Solanum tuberosum*. The main reason that these four species are grouped together is because they are very similar. Due to these similarities the exact geographical distribution of *Epitrix spp.* is unknown. It is known that *E. tuberis* has become widespread within Western North America and *E. similaris* has been found in both Spain and Portugal. The adults are approximately 2mm long and hop like fleas as way of movement (they can also fly). The picture above shows *Epitrix similaris* on the left and *Epitrix cucumeris* on the right. All four species have shown they can exist within different climates, from a Mediterranean climate (Spain) to a temperate climate (USA and Canada).



The adults of the potato flea beetles feed on the leaves of the plants causing serious damage. This reduces the ability of the plant to photosynthesize which in turn affects the size and quality of the tubers and plant health. The adults then lay their eggs in the soil. The larvae then burrow into the tuber and/or the roots and begin to feed. This feeding causes significant damage to the tuber which may become unviable for sale, and the destruction of the roots can result in plant death.



The picture above left up shows the tunnels left by burrowing of the larvae of Potato flea beetle. The picture above left down shows the adult beetles feeding on the leaves of a potato plant; note the feeding holes that look as if they have been shot out. The picture on the right shows larvae of *Epitrix spp.* feeding on a potato tuber.





Due to the fact this pest and its larvae are so small it is crucial to keep an eye out for the relative symptoms of the pest. Adults feed on the leaves of the plant and leave holes which look like small shot wounds. The larvae tunnel and burrow into the roots and/or the tubers and leave conspicuous looking trails through them. The picture on the right shows a close up of the larvae of *Epitrix* spp.

### Current situation

Potato flea beetles (*Epitrix* spp.) have been identified in Portugal and Spain.

Serious tuber damage has been seen in Portugal since 2004 and *Epitrix similaris* and *E. cucumeris* have been found in fields where this damage has occurred. *E. similaris* has also been confirmed from potato crops across the Galicia region in Spain during 2011, following a finding in 2008. In November, 2014, the presence of *E. similaris* has been confirmed in ware potato and aubergine crops in the neighbouring region of Asturias. More recently, in spring 2015, symptomatic tubers and dead larvae were intercepted on consignments of Spanish ware potatoes imported from an area thought to be free of the pest.

### EU response

In March 2012, emergency measures ([Commission Implementing Decision 2012/270/EU](#) of 16 May 2012) were agreed to reduce the risks of further introductions of *Epitrix* potato flea beetles into the EU and to reduce the rate of spread of *E. similaris* and *E. cucumeris* within the EU.

Key points of this decision include:

- The introduction and spread of these organisms in the EU is prohibited.
- The Decision focuses on “potato tubers”, which includes both seed potatoes and ware potatoes.
- Imports: When potato tubers are imported from countries where *Epitrix* is present, the potato tubers **must either have been grown in a pest free area, or have been washed or brushed (or an equivalent measure applied), to ensure that there is no more than 0.1% of soil remaining.** The relevant option applied must be confirmed by an **Additional Declaration on the Phytosanitary Certificate.** The Certificate must also confirm that the potato tubers are free of *Epitrix*, its symptoms and soil (with a 0.1% tolerance), and that clean packaging has been used. If the pest free area option has been chosen, its name must be indicated on the Certificate.
- All potato tubers imported under this Decision must be **inspected at the point of import.**
- Surveillance: Member states must carry out annual surveys, particularly on potato crops and harvested potato tubers, and report the results annually to the Commission and other member states by 30 April. Other host plants can be included in the survey, but this is not compulsory.
- Findings: Where such surveys, or other evidence, confirm the presence of *Epitrix*, **demarcated areas\*** must be established. Details of these areas, with maps and a description of measures to be applied, must be provided to the Commission and other member states. Any findings of *Epitrix* must be reported to the responsible official body.





- Demarcated areas must consist of an infested zone and a buffer zone. The infested zone must include at least the fields where Epitrix has been confirmed and where infested potato tubers have been grown. The buffer zone must extend for at least 100m beyond the infested zone. If demarcated areas are geographically close they must be merged. The exact size of the zones must be determined according to scientific and other factors. The zones must be revised if further findings are detected.
- Demarcated zones can only be revoked if Epitrix has not been detected for a minimum of 2 years. An eradication or containment strategy must be pursued in demarcated areas, including treatment and disinfestation of potato tubers and a prohibition on planting host plants, where appropriate (i.e. most likely where eradication is being pursued). There must also be monitoring within the area and surveillance of potato tubers moving out of the area.
- Movement requirements: Potato tubers which originate in demarcated areas may be moved from such areas only if they are accompanied by a **plant passport** (i.e. the first movement out of the demarcated area must be plant passported, but subsequent movements are subject to existing requirements on identity/traceability). Such tubers must be grown at, and moved from, premises which are registered in accordance with existing EU legislation. They must meet the same requirements to those imposed on imported potato tubers from infested areas (i.e. washing or brushing etc).
- Potato tubers imported from third countries where Epitrix is present must also be plant passported when moved within the EU.

\*Below is the list and maps of current demarcated areas:

Portugal:

- [Demarcated areas – June 2014](#)
- [Demarcated areas – Madeira – September 2014](#)

Spain (28 demarcated areas):

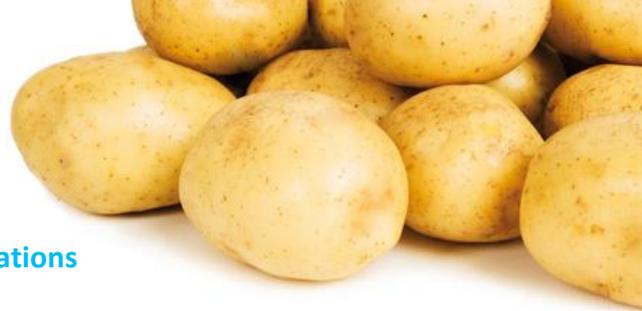
- [Distribucion Epitrix](#)
- [Demarcated Zones Epitrix - September 2015](#)

In September and October 2013, the Food and Veterinary Office (FVO) audited the arrangements in place in [Spain](#) and [Portugal](#) and concluded that while the situation in Portugal was largely satisfactory (as regards compliance with the EU legislation), the position in Spain was more concerning with a number of deficiencies noted.

In September 2014, [Commission Implementing Decision 2014/679/EU](#) established the extension of the legislation indefinitely, with an annual review of developments. It also granted greater flexibility as regards the location of the packing facility where potato tubers originating from an area demarcated for Epitrix are moved to prior to treatment so that tubers can be moved to facilities located outside a demarcated area. Such movement is subject to strict requirements that ensure the further spread of Epitrix is prevented.

In September 2015, the FVO audited the new demarcated areas in Spain. The report of this visit will be available around the end of the year.





## Conclusions and recommendations

**Prevention and control:** In order to be proactive as a sector, avert any possible alarmism, facilitate identification and avoid false positives and, most importantly, prevent the further spread of Epitrix to other regions and Member States, Europatat stresses the importance of having the membership spread the information on this guidelines to all potential interested parties and in particular to growers from the affected areas. Further relevant information is available through the websites of national authorities (particularly in Spain [here](#)) and the European Commission [here](#).

**Resolution of conflicts:** RUCIP rules (Rules and Practices of the Inter-European Trade in Potatoes)\* mention the fact that potatoes traded should be *“free from external or internal defects which could spoil their appearance or their quality”*.

\*The latest edition, RUCIP 2012, can be found [here](#).

However, RUCIP includes no specific mention to Epitrix. Therefore, Europatat recommends to include a specific clause in trade contracts regarding Epitrix to request that all the parties involved confirm to have taken knowledge of this guidelines, national information and the legislation applicable to the Epitrix.

In case of import of Epitrix affected potatoes, this finding must be reported to the national authorities, and the lot should be rejected. The exporter should be notified of the rejection and consequently the lot should be sent back or destroyed.

\*\*\*\*\*

