Mini data sheet on *Platynota stultana*

Platynota stultana was added to the EPPO A2 List in 2017. A full datasheet will be prepared, in the meantime you can view here the data which was previously available from the EPPO Alert List (added for the second time to the EPPO Alert List in 2017 – deleted in 2017).

Platynota stultana (Lepidoptera: Tortricidae)

Why: *Platynota stultana* (Lepidoptera: Tortricidae – omnivorous leafroller) is a highly polyphagous leafroller native to Mexico and the Southwestern USA. As its potential host range includes economically important agricultural crops, ornamental plants, and even some tree species, it was included on the EPPO Alert List from 1998 to 2002 but at that time this did not trigger international phytosanitary action. However, the situation changed in Europe when its presence was first detected in 2009 in Spain. The EPPO Panel on Phytosanitary Measures and the Working Party on Phytosanitary Regulations have recommended that this pest should be added to the EPPO A2 List (the final decision will be taken by the EPPO Council in September 2017). In the meantime, it was felt useful to add again *P. stultana* to the EPPO Alert List to attract the attention of the NPPOs.

Where: *P. stultana* is thought to originate from semiarid regions of Northwestern Mexico (e.g. Sonora) and the adjacent Southwestern USA (e.g. Arizona). During the 20th century, it has been recorded as introduced and established in California (1920s), Hawaii (1990s) and Florida (1960s). In other Eastern and Northern US states, it is mainly recorded as a glasshouse pest and its establishment in those states on outdoor crops seems unlikely, as climatic conditions (e.g. winter temperatures) would be a limiting factor. In Europe, *P. stultana* was first found in February 2009 in Southern Spain on greenhouse capsicum crops in the province of Almeria (Andalucía). It was then found in the provinces of Alicante, Granada (Andalucía) and in Murcia on glasshouse and field crops. Examination of tortricid specimens which had been caught before, suggest that *P. stultana* was probably present in Southern Spain as early as 2005. In 2004, an incursion of a single larva (not followed by establishment) was noted in the United Kingdom on glasshouse plants of *Lantana* sp. which had been imported from the USA. Control measures were advised to the grower and the pest has not been found again.
EPPO region: Spain (Andalucía, Murcia).
North America: Mexico, USA (Arizona, Arkansas, California, Colorado, Florida, Hawaii, Illinois, Maryland, Massachusetts, Michigan, New Mexico, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Texas, Virginia).

On which plants: *P. stultana* is a highly polyphagous tortricid (hence its common name of 'omnivorous leafroller') which has been recorded on more than 25 plant families. Among the economically important host plants, the following species are mentioned in the literature: *Actinidia, Apium graveolens, Aster, Capsicum, Citrus limon, Citrus sinensis, Cyclamen, Dianthus, Juglans, Juniperus, Malus domestica, Medicago sativa, Phaseolus, Pinus, Prunus domestica, Prunus persica, Punica granatum, Pyrus, Rosa, Rubus, Salix, Solanum lycopersicum, Taxus, Trifolium, Vitis vinifera, Zea mays.* Many wild plants are listed as hosts and some of them may also be grown as ornamentals. In Spain, *P. stultana* has been recorded on *Capsicum annuum* (sweet pepper), *Solanum melongena* (aubergine), *Ocimum* spp. (basil).

Damage: larvae of *P. stultana* feed on leaves. Leaves are rolled and tied by silk, as they construct their nests. In the literature, there is little information about the current severity of damage and economic losses caused by *P. stultana* in Mexico and the USA. In the 1970s, it was recorded as an important pest of grapevine in the San Joaquin Valley, California. On grapevine, larvae feed on leaves, flowers, and fruit. Feeding activities on berries favoured

bunch rot which caused substantial reduction in yield (e.g. 25-80% loss). In Spain, for the moment there are no records of economic damage. The pest has mostly been observed on *C. annuum.* Larvae feed on the underside on the leaves, consuming the epidermis and mesophyll. Some damage has been described when larvae penetrate into capsicum fruit via the peduncle and bore galleries inside the fruit.
In North America where populations are established, *P. stultana* completes 4-6 generations per year, and adults may be present almost all year round. Eggs are laid in masses containing an average of 97 eggs per mass. Each female can lay from 100 to 600 eggs during its lifetime. Newly hatched larvae move towards the top of the plant and feed within a bud or between two leaves. Young larvae may also disperse to other hosts by ballooning in the wind on a silk thread. Later instars feed within a shelter constructed of rolled or folded leaves. Larvae complete 5 to 6 instars within a period of 20-30 days (in greenhouse conditions). Late instar larvae are approximately 12-15 mm long with a cream-colored, translucent abdomen. Larvae of the last generation overwinter in webbed nests. Pupation takes place in a rolled leaf. Adults are brownish moths with a wingspan of 2 to 2.5 cm.
Pictures can be viewed on the Internet:
https://www.ipmimages.org/browse/subthumb.cfm?sub=62856
http://idtools.org/id/leps/tortai/Platynota_stultana.htm

Dissemination: the flight capacity of *P. stultana* is not known but in general tortricids fly relatively short distances (e.g. 50-100 m). In international trade, *P. stultan*a has often been intercepted on capsicum fruit from Mexico. Although the pathway of introduction of the pest into Spain remains unknown, it clearly shows that the pest has been able to move from one continent to another, most probably via movements of plants.

Pathway: plants for planting, cut flowers and branches, fruit of host plants from countries where the pest occurs.

Possible risks: considering the wide host range of *P. stultana*, this pest has the potential to damage many cultivated and wild plants in the EPPO region. However, there is still some uncertainties about the level of damage and economic losses it can cause. Its introduction into Spain clearly demonstrates that it has the potential to enter and establish in the Southern and Mediterranean parts of the EPPO region. In other parts of the EPPO region, the pest is unlikely to establish outdoors but could be a threat to many glasshouse productions.

Sources

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