



Identification of pests likely to be imported with fruit to Europe



DROPSA project

Strategies to develop effective, innovative and practical approaches to protect major European fruit crops from pests and pathogens

- 26 partners from Europe, Asia, New Zealand and North America; 4-year project (2013 – 2017)
- Subjects: Biology and Ecology of *Drosophila suzukii* and of quarantine fruit crop diseases (*Pseudomonas syringae*, *Xanthomonas fragariae*, *X. arboricola*); Effective and innovative solutions to control them
- Evaluate the pathway risk to introduce new pests with fruit movements into Europe**

Background

A review of non-native fruit pests recorded in Europe during the last 10–15 years (Steffen *et al.*, 2015 a&b) identified 387 taxa, of which 68.5 % are insect pests. The pathway of introduction is often not known and many pests affecting fruit species may have been introduced with plants for planting or as contaminants.

Every year, around 78.5 million tonnes of fresh fruit and vegetables are produced within the EU, and more than 12 million tonnes are imported. No phytosanitary requirements apply for most fruits.

Methodology

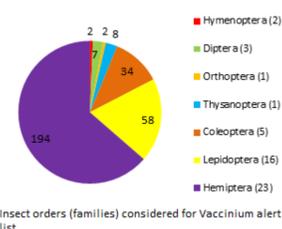


- 4 fruit selected considering EU production area, import volumes (from outside the EPPO region, emerging trade)
- Methodology (EPPO, 2016; used as a basis for EPPO Standard PM 5/9):
 - Step 1: basic worldwide list of pests (excluding pests not likely to be carried with fruit, pests already regulated)
 - Step 2: more information is sought, pests screened against criteria such as: association with traded fruit; presence in the EU; polyphagy; climatic similarity; impact; interception.
 - Step 3: mini datasheets prepared

Results

A large number of pests were identified as being potentially associated with fruit studied and not already present in the EU

- Vaccinium:** Alert List of 36 pests (incl. a part with “new” pests, pests recorded only in the wild, contaminants)



[Step 1: 729 pests, Step 2: 411 pests]

- Apple:** Alert list of 41 pests [Step 1: 1837, Step 2: 233]
- Orange and mandarines:** Alert list of 32 pests (report also includes a table of new pests present in a limited number of EU countries) [Step 1: 1545 pests, Step 2: 704]
- Table grapes:** Alert list of 30 pests (report also lists many contaminants than can be associated with bunch) [Step 1: 1040 pests, Step 2: 126]

The large number of pests associated to green parts may justify a requirement that consignments of fruit should be free from leaves.

Likelihood of transfer from consignment to crop production is difficult to assess, resulting in more insects being listed.

References

Steffen K, Grousset F, Petter F, Suffert M and Schrader G (2015a) EU-project DROPSA: first achievements regarding pathway analyses for fruit pests. EPPO Bull, 45: 148–152. doi:10.1111/epp.12179

Steffen K, Grousset F, Schrader G, Petter F and Suffert M (2015b) Identification of pests and pathogens recorded in Europe with relation to fruit imports. EPPO Bull, 45: 223–239. doi:10.1111/epp.12215

Holt J, Leach AW, MacLeod A, Tomlinson D, Christodoulou M and Mumford JD (2017) A quantitative model for trade pathway analysis of plant pest entry and transfer to a host in European Union territory. EPPO Bull, 47: 220–226. doi:10.1111/epp.12394

EPPO Standard PM 5/9 (2017) Preparation of pest lists in the framework of commodity PRAs (in press)

EPPO (2016) EPPO DT No. 1074, EPPO Secretariat’s approach for commodity studies. www.eppo.int/QUARANTINE/DT1074_Secretariat_approach_for_commodity_studies.pdf

Perspectives

- All datasheets will be available in EPPO Global Database
- Outputs of the project will be discussed in EPPO Panels to identify further action
- A quantitative model (Holt *et al.*, 2017) will be tested for some species

