

Monitoring of potential insect pests in commercial plantations of Japanese quince *Chaenomeles japonica* in Latvia

Ineta Salmane¹, Laura Ozoliņa-Pole^{2*}

¹Institute of Biology, University of Latvia, Miera 3, Salaspils LV-2169, Latvia

²Latvian Plant Protection Research Centre, Struktoru 14A, Riga, Latvia

*Corresponding author, E-mail: ozolina.pole@laapc.lv

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Area of commercial plantations of Japanese quince *Chaenomeles japonica* has risen substantially in Latvia during the last decade. There is an insufficient information on distribution of potential invertebrate pests in Japanese quince plantations. Latest available data about pests of *C. japonica* in Northern Europe is more than 15 years old, and only few samples from Latvia were included there.

ERAF project “Environment-friendly cultivation of emerging commercial fruit crop Japanese quince – *Chaenomeles japonica* and waste-free methods of its processing” (No. 1.1.1.1/16/A/094) was started in 2017.

One of the aims of the respective project was monitoring of potential *C. japonica* invertebrate pests in eight Japanese quince plantations in Latvia. This investigation is important for evaluation of phytosanitary status of Japanese quince plantations and identification of potential harmful organisms for which control plant protection methods would be necessary. The monitoring of invertebrates was performed in one plantation with integrated agricultural management system on three Japanese quince varieties (Institute of Horticulture, Dobele). In the rest seven plantations organic agricultural management system was used.

To perform an objectives at each quince plantation, one transect with 20 observation points was developed. For assessment of potential invertebrate pests and their damage

on *C. japonica* five methods were used in vegetation seasons 2017 – 2018: (1) visual assessment of European red spider mite *Panonychus ulmi* eggs on *C. japonica* twigs, (2) yellow sticky traps, (3) Delta traps with sex pheromones of tortrix moth *Archips rosana*, *Archips podana*, *Rhopobota naevana* and *Cydia pomonella*, (4) visual observations of quince buds, flowers and leaves, (5) visual assessment of quince fruit.

As a potential invertebrate pests in *C. japonica* plantations can be assumed several polyphagous species: European red spider mite *P. ulmi*, Tortricidae moth species *A. podana*, *A. rosana*, *C. pomonella*, black-veined white *Aporia crataegi*, and garden chafer *Phyllopertha horticola*. These invertebrates in case of favourable for their development and reproduction conditions can cause a damage to Japanese quince.

References

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