

14th International Conference on

Agriculture & Horticulture

August 15-16, 2019 | Rome, Italy

First research on pests of Japanese quince (*Chaenomeles japonica*) in Latvia

Janis Gailis¹, Laura Ozolina-Pole¹ and Ineta Salmane²¹Latvia University of Life Sciences and Technologies, Latvia²University of Latvia, Latvia

Since 1980's, Japanese quince (*Chaenomeles japonica*) is cultivated as minor fruit crop in Latvia. So far, growers have not reported any significant problems caused by invertebrate pests, however lately, total area of quince plantations is noticeable increasing and there is possibility that some pests of rose family (Rosaceae) crop plants or some polyphagous generalist pests may become significant pests also of Japanese quince. Therefore, objective of this research is to study potential pests of Japanese quince in Latvia.

Research was carried out in seven biological and one integrated farmed quince plantations dispersed in whole area of Latvia. Potential pests were studied with different methods: yellow sticky traps, pest registration on quince plants, delta traps with sex pheromones of rose tortrix (*Archips rosana*), large fruit-tree tortrix (*Archips podana*), holly tortrix (*Rhopobota naevana*) and codling moth (*Cydia pomonella*). Also visual assessment and registration of damaged buds, flowers, leaves and fruit was done. All studies were done during vegetation seasons of 2017 (cool and rainy) and 2018 (hot and dry).

Pest infestation level was low in both years. Buds, flowers, leaves and fruit were almost intact. Eggs of European red mite (*Panonychus ulmi*) were not recorded on quince twigs, however infestation of the mite was observed during summertime in one plantation located near heavy infested orchard. Tortrix moths appeared in plantations located near apple orchards. In all plantations, aphids (Aphididae) were caught with yellow sticky traps, but colonies of these pests were not observed on quince plants. During 2018 when weather was particularly hot and dry, low but noticeable infestation of garden chafer (*Phyllopertha horticola*) and black-veined white (*Aporia crataegi*) was observed.

This research was a part of 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).

Recent Publications

1. Grigaliunaite B, Zilinskaite S, Radaitiene D (2012) Phytosanitary condition of *Chaenomeles japonica* in Vilnius University Botanical Garden. Optimization of Ornamental and Garden Plant Assortment, Technologies and Environment: scientific articles 3(8): 25-29. (In Lithuanian, English summary).
2. Jaskiewicz B. (1995) The species composition of the aphids feeding on *Chaenomeles japonica* Lindl. in the Academy Park in Lublin. Annales Universitatis Mariae Curie-Sklodowska. Sectio EEE, Horticultura 3: 145-158. (In Polish, English summary).
3. Jaskiewicz B, Kmiec K, Gantner M (2004) Beet aphid and ornamental shrubs. Ochrona Roslin 49(6): 30-32. (In Polish, English summary).
4. Rumpunen K (2011) Pros and cons of Japanese quince (*Chaenomeles japonica*) - an underutilized pome fruit. Acta Horticulturae 918: 887-900.

Biography

Janis Gailis has a Master's degree in Biology and a PhD in Agriculture. He is working in Latvia University of Life Sciences and Technologies as docent and senior researcher since 2012. His scientific interests and activities are related with entomology (mainly Coleoptera). Main topics of Janis' studies are diversity and conservation of insects, integrated pest management, predatory insects as biological control agents of arthropod pests.

janis.gailis@llu.lv