CHANGES OF *RIBES NIGRUM* DAMAGES BY *SYNANTHEDON TIPULIFORMIS* (LEPIDOPTERA : SESIIDAE) IN LATVIA IN 2008-2012

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The clearwing moth *Synanthedon tipuliformis* Clerck. is one of the most economically important phytophagi for *Ribes nigrum* and *R. rubrum*. In berry bush plantations it is ineffective to regulate the population of Clearwing moth, for butterflies have a discreet way of life and the maximum departure of **imago** coincides with the black current harvesting season when insecticide application is not permitted.

In Latvia, the Clearwing moth is little investigated therefore the objective of the current study was assessment of changes caused by damages in black currant plantations in the time period between 2008 and 2012.

The study was carried out in black currant plantations because black currants are the most widely grown representative of genus *Ribes* in Latvia. In 2008, 13 holdings were assessed: in Saldus (2 plantations), Talsi and Tukums (2 plantations), Dobele, Jelgava, Ķekava, Ikšķile (2 plantations), as well as in Pārgauja, Viesīte and Lubāna municipalities. In the following years, the trial was continued in smaller amount of plantations. In 2008 and 2009, twice over the vegetations season (in spring and autumn) 30 black currant branches were randomly cut out (five branches per bush). At the laboratory, all branches invaded with Clearwing moth larvae were recorded. Upon analysis, insufficiency of data was established; therefore in 2010 50 branches were sampled while in 2011 and 2012, 70 branches per plantation were sampled. One-way analysis of variance (ANOVA) and t-test (at $\alpha = 0.05$) in the program R 2.15.2 was performed to test the significance of differences.

Over spring of 2008, the Clearwing moth larvae were established in 3-70% of branches while in the fall: 3-53% of branches. In spring period, in the Jelgava municipality plantation, the number of the Clearwing moth larvae significantly differed from that in plantations of (2), Talsu, Saldus(1) and Viesīte municipalities. In plantation of Jelgava municipality the tending operations were not carried out, resulting in increase of the Clearwing moth plantation. In the fall, the number of the Clearwing moth larvae in Tukums (2) and Ķekava municipalities significantly differed from that of 6 plantations where they were established in the least numbers.

In Tukums municipality, the most significant differences were observed among generations of 2009/2010 and 2011/2012. In winter of 2010/2011, a large part of black currant shrubs were uprooted resulting in diminishing of the Clearwing moth population. In plantation of Pārgauja municipality significant differences were observed between the generations of 2008/2009 and 2010/2011. The results here could have been influenced also by incoherent tending operations and the location of plantation.

Clearwing moth was established in all black currant plantations assessed. In plantations of Tukums and Pārgauja municipalities, uneven oscillations of larvae numbers by generations were found with a cyclic trend however it would be necessary to continue the study to prove that.