



Regulation of the black cherry aphid (*Myzus cerasi*) in organic table cherry production

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black cherry aphid (*Myzus cerasi*)

- Main pest in modern organic table cherry production with installed rain protection and insect nets
- Strong aphid populations can build up → large yield losses and tree damages:
 - Favourable microclimate
 - Less aphid antagonists (e.g. hover flies, lacewings or ladybirds)
- Control of stem mothers essential



black cherry aphid (*Myzus cerasi*)

- **Possible stages for successful regulation**
 - Oil products **before the hatching** of the fundatrices in spring at sprouting
 - Contact insecticides **after the hatching** of the aphids but before curling of the leaves caused by the sucking activity of the aphids
 - During **return flight** of the winged aphids from secondary hosts to the cherry trees but before laying of eggs
- **Current recommendation**
 - 1-2 treatments with paraffin oil at sprouting
 - Pyrethrum + Natural (soap) after flowering
 - NeemAzal T/S after flowering (slow effect)
 - Old trees: leaf damages possible, prevention of strong deformations of shoots and fruit contaminations
 - Young trees: strong aphid damages due to slow mode of action
→ **additional early treatment with fast effect important**

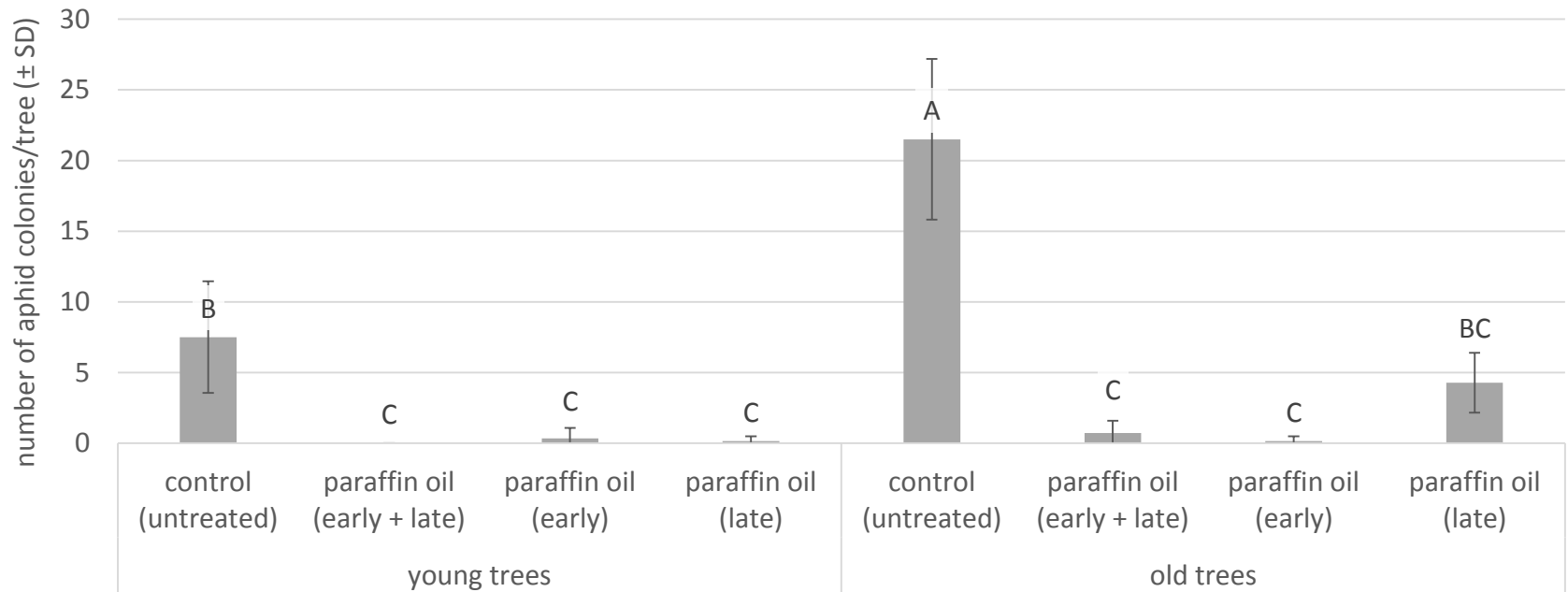


Experimental design trial 2017

- Trees of varieties Kordia (2013) and Merchant (2008)
- Treatments
 - «early»: paraffin oil 15.03.2017
 - «late»: paraffin oil 27.03.2017
 - «early + late»: paraffin oil 15. & 27.03.2017
 - control (untreated)
- Number of aphid colonies assessed on the 27.04.2017



Results trial 2017



- Number of aphid colonies significantly reduced in all treatments
- Better effect on younger trees
- Weakest effect with 80 % reduction on old trees in treatment «late»

Experimental design trial 2018

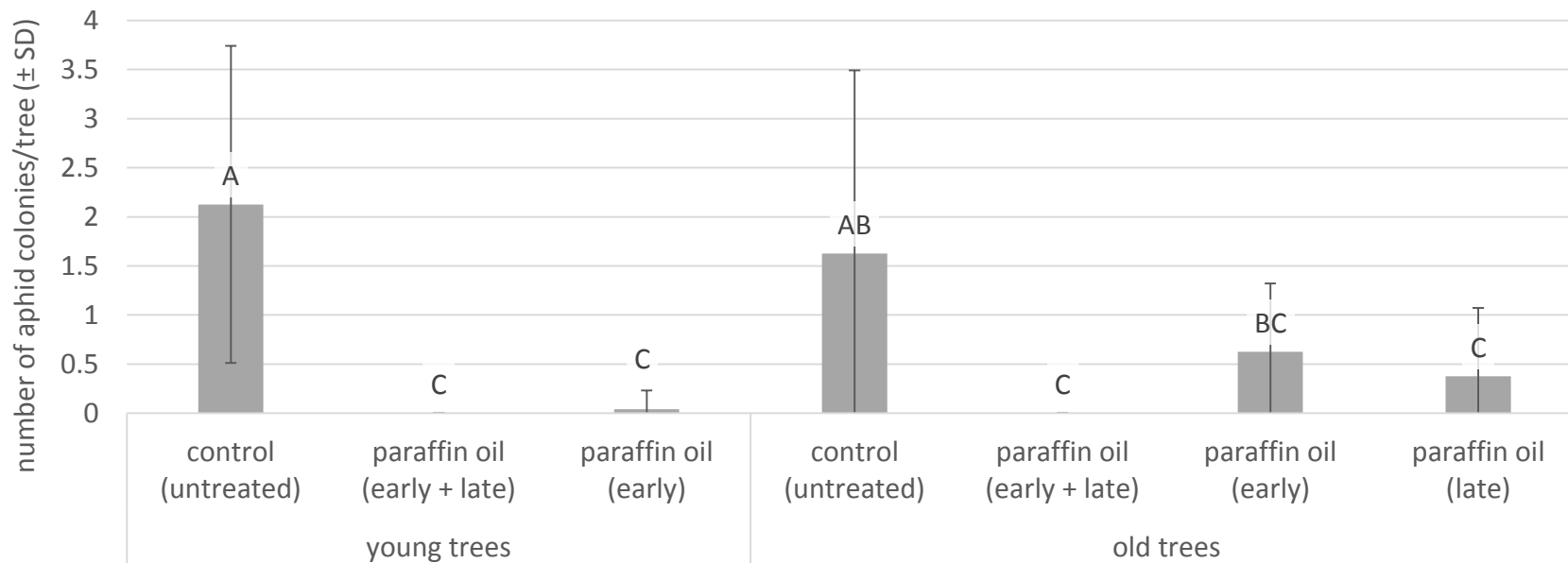
Trial with paraffin oil

- Trees of varieties Kordia (2017 and 2013) and Christiana (2017)
- Treatments
 - «early»: paraffin oil 02.04.2018
 - «early + late»: paraffin oil 02. & 06.04.2018
 - control (untreated)
- Number of aphid colonies assessed on the 13.04.2018

Trial with pyrethrum + soap

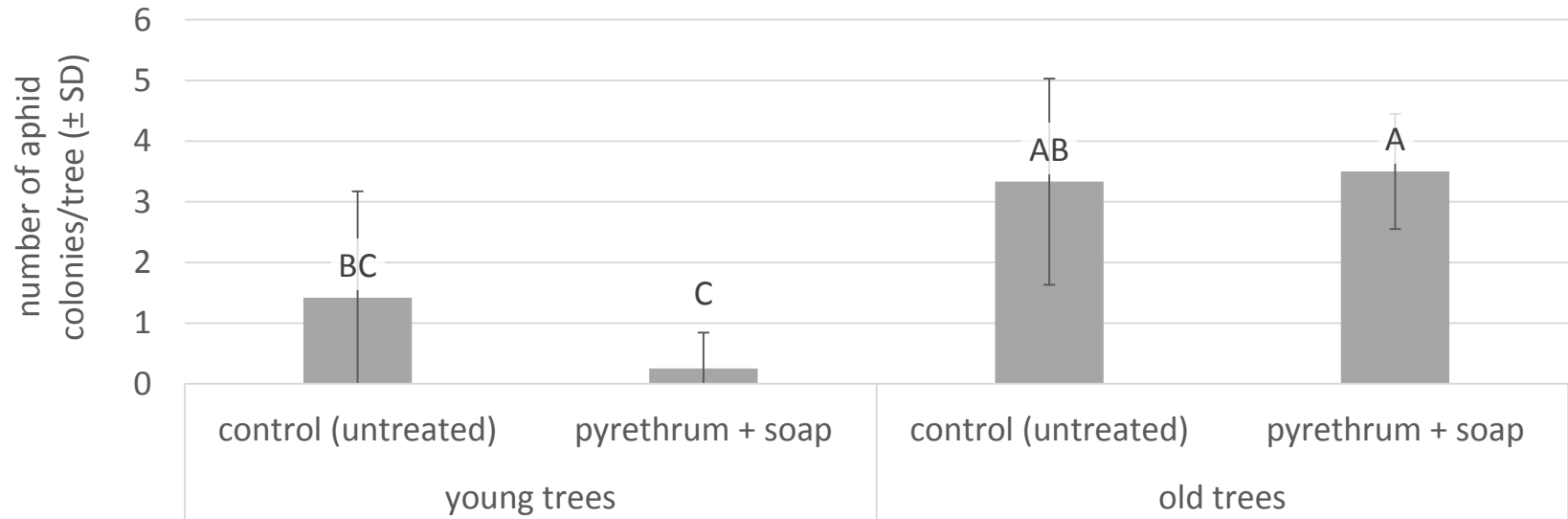
- Trees of varieties Kordia (2017 and 2013) and Christiana (2017)
- Treatments
 - Pyrethrum (Pyrethrum FS) + soap (Natural)
 - Control (untreated)
- Number of aphid colonies assessed on the 24.04.2018

Results trial 2018 – paraffin oil



- For young trees very good effect with the two treatments «early» and «early + late»
- For older, voluminous trees only good effect with two applications in the treatment «early + late»
- Insufficient effect for older trees with only one application

Results trial 2018 - pyrethrum + soap



- Non-significant partial reduction of 82% on the young trees
- No effect on the older, voluminous trees

Conclusions and outlook

- Application technique (wetting) crucial for success!
- Paraffin oil at sprouting
 - Most important treatment → Reduction of the stem mothers
 - With 2 treatments or already with 1 treatment up to 100 % effect
 - Effect still present after hatching of aphids
- Pyrethrum + soap
 - Treatments end of flowering before the leaves curl up
 - Very good application necessary (in 2 passes with high water volume)
 - Only with very good wetting (young trees) certain, but insufficient effect
- Neem preparations
 - 2-3 treatments from leaf development after flowering
 - Good effect with good application and slow aphid development
 - Insufficient effect on young trees and strong growth
- Indirect regulation of aphids in cherry orchards with flower strips and or release of beneficial insects

Thank you for your attention

