



Citrus Mussel Scale - South Korea

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At the annual Citrus Export coordinating meeting, DALRRD informed the industry about mussel scale infestation on citrus fruit inspected for export to South Korea. It is important that this situation receives urgent attention, to protect access to sensitive markets, as the citrus mussel scale is considered a phytosanitary pest by South Korea. An increase in mussel scale infestation could either be a repercussion from chemical pesticides that are detrimental to natural enemies or as a result of a reduction in the use of organophosphate and oil sprays. Careful attention needs to be given to ensure effective control of mussel scale in the field. This includes monitoring for mussel scale and where necessary, application of late corrective treatments. Likewise, packhouse procedures should be focussed on reducing the risk of consignment rejections.

The following recommendations will assist in reducing the risk of rejections:

1. Effective mussel scale control in the orchard:
 - Routine **scouting for mussel scale** in the orchards should be conducted. This must be done in the normal manner recommended by CRI for scouting for mussel scale (see "Orchard Inspection" and "Mussel scale" in "Integrated Production Guidelines Volume 3" on CRI's website (www.citrusres.com)). A minimum of 5 trees per hectare and 10 fruit per tree (including inside fruit) should be inspected.
 - **Ant control** is important for the biological control of mussel scale. Skirting of trees and weed control will help reduce the risk of ants gaining access to the tree canopy.
2. Identifying any problematic orchards:
 - Within the last two weeks before harvest, an **orchard inspection** for mussel scale infestation should be conducted in orchards where mussel scale has been observed earlier in the season. No orchards with any notable infestation at

the time of harvest must be included in the programme.

- On the first delivery of fruit from the orchard to the **packhouse, a sample of 100 fruit can be inspected for mussel scale**. The same fruit being inspected for mealybug can be inspected for mussel scale. No orchards with any notable infestation must be included in the programme.
 - **Online graders and sorters must be alerted and trained to look specifically for mussel scale-infested fruit** on the packing line and to diligently remove any fruit suspected of being infested. Graders and sorters must immediately report any findings.
3. Plant protection products:
 - With regard to the timing and number of treatments required in relation to scale density, the same approach can be adopted to that which is used for red scale control. Mussel scale is susceptible to pyriproxyfen as well as oil and organophosphate sprays. It is important to follow label instructions as well as the "Recommended usage restrictions for plant protection products on southern African export citrus". With proper scouting, the opportunity exists for spot treatments of mussel scale, which would reduce the chance of any repercussions.

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Sitrus Mossel-dopluis – Suid-Korea

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Tydens die jaarlikse Sitrusuitvoer-koördineringsvergadering het DALRRD die bedryf ingelig oor mossel-dopluisbesmetting op sitrusvrugte wat vir uitvoer na Suid-Korea geïnspekteer is. Dit is belangrik dat hierdie situasie dringend aandag kry om toegang tot sensitiewe markte te beskerm, aangesien die sitrus mossel-dopluis deur Suid-Korea as 'n fitosanitêre plaag beskou word. 'n Toename in sitrus mossel-dopluisbesmetting kan óf 'n nagevolg van chemiese plaagdoders wees wat nadelig vir natuurlike vyande is, óf as gevolg van 'n vermindering in die gebruik van organofosfaat- en oliebespuitings. Sorgvuldige aandag moet gegee word om te verseker dat effektiewe beheer van sitrus mossel-dopluis in die veld bereik word. Dit sluit monitering vir sitrus mossel-dopluis in, en waar moontlik, láát korrektiewe behandelings. Net so moet pakhuisprosedures daarop gefokus wees om die risiko van afkeuring van besendings te verminder.

Die volgende aanbevelings sal help om die risiko van afkeuring te verminder:

1. Doeltreffende sitrus mossel-dopluisbeheer in die boord:

- **Roetine-verkenning vir sitrus mossel-dopluis** in die boorde moet uitgevoer word. Dit moet gedoen word op die normale wyse wat deur CRI aanbeveel word vir verkenning vir sitrus mossel-dopluis (sien “Boord-inspeksie” en “Mossel-dopluis in “Geïntegreerde Produksieriglyne Volume 3” op CRI se webwerf (www.citrusres.com)). 'n Minimum van 5 bome per hektaar en 10 vrugte per boom (insluitend binnevrugte) moet geïnspekteer word.
- **Mierbeheer** is belangrik vir die biologiese beheer van sitrus mossel-dopluis. Soomsnoei (“skirting”) van bome en onkruidbeheer sal help om die risiko te verminder dat miere toegang tot die boomkap kry.

2. Identifiseer enige probleemboorde:

Binne die laaste twee weke voor oes moet 'n **boordinspeksie** vir sitrus mossel-dopluisbesmetting uitgevoer word in boorde waar sitrus mossel-dopluis vroeër in die seisoen waargeneem is. Geen boorde met enige noemenswaardige besmetting ten tye van oes moet by die program ingesluit word nie.

- Met die eerste aflewering van vrugte vanaf die boord na die **pakhuis, kan 'n monster van 100 vrugte vir sitrus mossel-dopluis geïnspekteer word**. Dieselfde vrugte wat vir witluis geïnspekteer word, kan vir sitrus mossel-dopluis geïnspekteer word. Geen boorde met enige noemenswaardige besmetting moet by die program ingesluit word nie.
- **Gradeerders en sorteerders moet gewaarsku en opgelei word om spesifiek vir sitrus mossel-dopluis-besmette vrugte op die paklyn te soek** en om nougeset enige vrugte wat vermoedelik besmet is, te verwyder. Gradeerders en sorteerders moet onmiddellik enige bevindinge rapporteer.

3. Gewasbeskermingsprodukte:

- Met betrekking tot die tydsberekening en aantal behandelings wat vereis word in verhouding tot dopluisdigtheid, kan dieselfde benadering gevolg word as dié wat vir rooidopluisbeheer gebruik word. Sitrus mossel-dopluis is vatbaar vir piriproxyfen sowel as olie- en organofosfaatbespuitings. Dit is belangrik om etiket-instruksies te volg, asook die “Aanbevole gebruiksbepelings vir gewasbeskermingsprodukte op Suider-Afrikaanse uitvoersitrus”.

Met behoorlike verkenning bestaan die geleentheid vir kolbehandelings van sitrus mossel-dopluis, wat die kans op enige nagevolge sal verminder.

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