



## **A guide for identification of FCM-infested fruit for packhouse delivery inspections and grading on the packline**

Sean Moore and Peter Stephen, Citrus Research International (CRI)

The False Codling Moth Risk Management System for Export of Citrus from South Africa (known as the FMS) requires mandatory inspection of samples of fruit from each orchard delivered to the packhouse. The size of the sample and the permitted threshold for infestation is determined by the Option under which the orchard is intended to be exported (consult the FMS approved on 18 December 2018). This inspection must be repeated for every four weeks that the orchard is harvested.

It is also mandatory under the FMS, that all FCM-infested fruit possible be removed from the packline during the grading process.

Both of these activities are not only mandatory under the FMS, but are extremely important in their ability to reduce the risk of FCM infested fruit being packed for export or of fruit being shipped under the wrong export Option. Consequently, their effective implementation will contribute significantly and dramatically to the efficacy of the FMS.

It is therefore imperative that the individuals conducting such inspections and grading are properly trained and have a full understanding of the importance of their role in the system. In order to aid this training process, CRI has prepared two sets of colour plates (as shown below), one showing a range of external symptoms indicating possible FCM infestation, and one showing several examples of actual FCM infestation within the fruit. These can be used, not only for training, but can be positioned in full view where inspections and grading are conducted, as a permanent reference point. These are also available for order from CRI as follows:

In A3 – R60

In A4 – R23

Plus the cost of packaging and transportation (courier)

Please contact Bella Thulare for orders:  
[bella@cri.co.za](mailto:bella@cri.co.za)

For any further queries contact Dr Sean Moore  
([seanmoore@cri.co.za](mailto:seanmoore@cri.co.za))



## **‘n Gids vir identifikasie van VKM- besmette vrugte vir pakhuis aflewering inspeksies en gradering op die paklyn**

Sean Moore en Peter Stephen, Citrus Research  
International (CRI)

Die Valskodlingmot Risiko Bestuur Stelsel vir Uitvoer van Sitrus van Suid-Afrika (bekend as die FMS) vereis verpligtende inspeksie van vrugmonsters van elke boord afgelewer by die pakhuis. Die monstergrote en die toegelate drempelwaarde vir besmetting word bepaal deur die Opsie waaronder die boord uitgevoer gaan word (konsulteer die FMS goedgekeur 18 Desember 2018). Hierdie inspeksie moet elke vier weke van oes van die spesifieke boord herhaal word.

Dit is ook verpligtend onder die FMS dat alle VKM besmette vrugte van die paklyn verwyder moet word gedurende die graderings proses.

Albei hierdie aktiwiteite is nie net verpligtend onder die FMS nie, maar is uiters belangrik as gevolg van hulle vermoë om die risiko vir verpakking van VKM besmette vrugte of die gebruik van die verkeerde uitvoer Opsie te verhoed. Gevolglik sal die doeltreffende implementering van beide aktiwiteite beduidend bydra tot die effektiwiteit van die FMS.

Daarom is dit noodsaaklik dat die individue wat sulke inspeksies en gradering doen, deeglik opgelei word en ‘n volle begrip het van die belangrikheid van hulle rol in die stelsel. Om hierdie opleidings proses te ondersteun, het CRI twee stelle kleurplate (soos onder gewys) voorberei. Een van hulle wys ‘n reeks eksterne simptome wat moontlike VKM besmetting aandui, en die ander een wys verskeie voorbeelde van werklike VKM besmetting binne die vrug. Hierdie kan gebruik word, nie net vir opleiding nie, maar kan sigbaar geplaas word waar inspeksies en gradering uitgevoer word, as ‘n permanente verwysingspunt. Hierdie is ook beskikbaar vir bestelling van CRI soos volg:

In A3 – R60

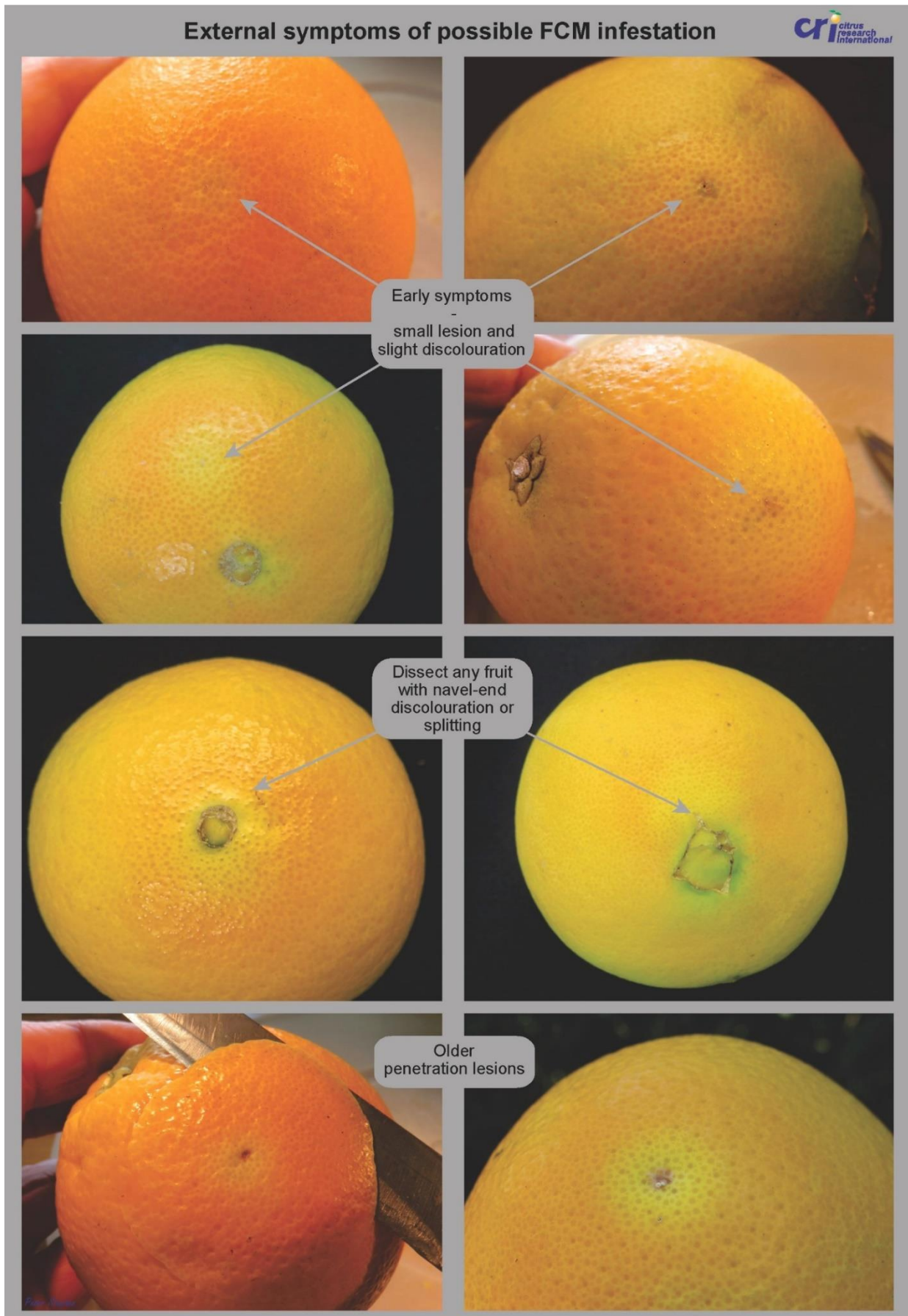
In A4 – R23

Plus die koste van verpakking en vervoer (koerier)

Kontak asseblief vir Bella Thulare vir bestellings:  
[bella@cri.co.za](mailto:bella@cri.co.za)

Vir enige verdere navrae kontak vir Dr Sean Moore  
([seanmoore@cri.co.za](mailto:seanmoore@cri.co.za))

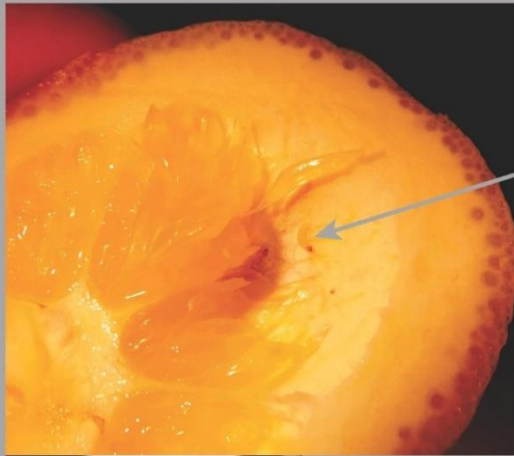
**JOU HEFFING WERK VIR JOU – PRODUSENTE SE HEFFINGS WORD AANGEWEND OM DIE  
AKTIWITEITE VAN DIE CRI TE BEFONDS**



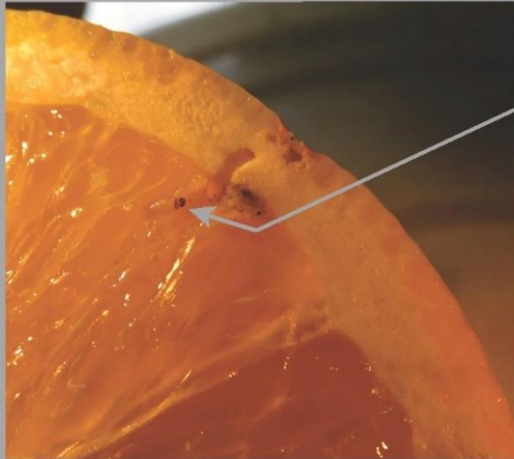
**JOU HEFFING WERK VIR JOU – PRODUSENTE SE HEFFINGS WORD AANGEWEND OM DIE AKTIWITEITE VAN DIE CRI TE BEFONDS**



## FCM infestation: internal symptoms

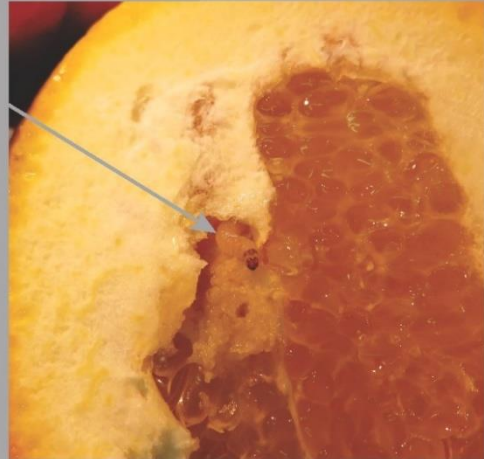


Young larvae - usually found in rind



Larger larvae deeper in fruit

FCM larval size range: 0.7 to 16mm



Larval frass indicates fruit definitely is or was infested



FCM larva with black or brown head capsule and clearly segmented body

Fruit fly larvae in fruit pulp. No head capsule, paired mouthparts, blunt rear end with two spiracles



**JOU HEFFING WERK VIR JOU – PRODUSENTE SE HEFFINGS WORD AANGEWEND OM DIE AKTIWITEITE VAN DIE CRI TE BEFONDS**