CRI Cutting Edge
Securing the future of citrus through science
Dec 2019 No. 286

CELLULAR TEMPERATURE LOGGERS TO BE USED IN ALL FMS SHIPMENTS FOR THE 2020 SEASON

Tarl Berry, Paul Cronje (CRI), Paul Hardman (CGA), Werner van Rooyen (FPEF), Bernard Henning (PPECB), Elma Carstens and Vaughan Hattingh (CRI)

1. Background

Enhanced visibility of the South African citrus cold chain to EU markets has become essential to ensure the integrity of FMS cooling protocols. Currently, temperature data is only available after pallets have been unloaded and can only be accessed through a lengthy request process. Moreover, data is occasionally not available and in some cases is not in a format suitable for analysis. This restricts both the ability to reliably verify successful application of the protocol and precludes the ability to research means of improving the system to ensure compliance with the relevant regulations.

2. Cellular temperature loggers

To address these needs, the FMS working group agreed to specify that all refrigerated containers being shipped under FMS protocols in 2020 will need to be installed with PPECB approved temperature loggers. This was approved by DALRRD. A sub-committee of the FMS working group has deliberated extensively and agreed that it is imperative that such loggers will need to have cellular data download capabilities. Companies supplying these loggers will have to apply to PPECB to certify the loggers. This process will ensure that the loggers have the necessary technical specifications required. One of these specifications is that the temperature logger supplier has a system in place to securely share the data with the Citrus Temperature Database (CTD), which will operate in parallel to the PhytClean system. To date, three companies have applied successfully to participate in the CTD system, further details are available from PPECB:

- Emerson (climate.emerson.com)
- Most (most.tech)
- Sensitech (sensitech.com)

3. Data usage

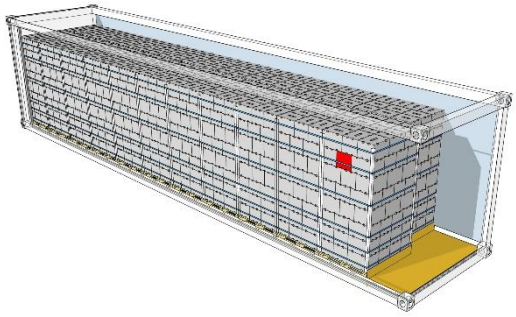
All data collected in the CTD system will be stored securely and will only be analysed by CRI for the purposes specified above. However, exporters and other related parties will still have access to their own logger data via the supplier's proprietary systems and services, as per normal operation in prior years. The CTD system will therefore have no influence on the normal flow of data between the service provider and the client (i.e. exporter). The CTD system will thus operate in parallel to current services. The CTD data will not be shared with external parties and will only be used for the purposes specified above, with the objective of improving the FMS and maintaining market access.

To streamline data sharing between the exporter, service provider and the CRI; PhytClean will include an agreement section during the respective phytosanitary application.

Full implementation of the system is expected to take place by late March. If a container of citrus is to be shipped to the EU under the FMS prior to this please contact the FMS steering committee.

4. New logger position in FMS shipments

From the 2020 season onwards, temperature loggers/sensors must be placed within a specific carton in containers (image below), this process will be monitored by PPECB. Both air and pulp cellular loggers may be used for FMS shipments, however, regardless of type, the sensor must be placed at least 10 cm from the side wall of the carton wall between fruit. See the FMS document Appendix 6 (cold chain and packaging) for further details.



New location (in red) of logger temperature sensors in FMS shipments

For any further queries contact Tarl Berry (tarl@sun.ac.za, 0824197218), Paul Cronje (paulcronje@sun.ac.za, 0844471047), Paul Hardman (ph@cga.co.za), Werner van Rooyen (werner@fpef.co.za), or Bernard Henning (bernardush@ppecb.com)

CRI Snykant
Verseker die toekoms van sitrus deur wetenskap
Des 2019 Nr. 286

SELLULÊRE TEMPERATUUR LOGGERS WAT IN ALLE FMS-VERSKEPINGS VIR DIE 2020-SEISOEN GEBRUIK MOET WORD

Tarl Berry, Paul Cronje, Paul Hardman (CGA), Werner van Rooyen (FPEF), Bernard Henning (PPECB), Elma Carstens en Vaughan Hattingh (CRI)

1. Agtergrond

Verhoogde sigbaarheid van die Suid-Afrikaanse sitrus-koue ketting na EU-markte het noodsaaklik geword om die integriteit van FMS verkoelingsprotokolle te verseker. Tans is temperatuurdata slegs beskikbaar nadat die pallette afgelaai is en kan slegs deur 'n omslagtige aanvraagproses bekom word. Daarbenewens is data per geleentheid nie beskikbaar en in sommige gevalle nie in 'n formaat wat geskik vir analises is nie. Dit beperk beide die vermoë om betroubaar die suksesvolle toepassing van die protokol te verifieer en sluit die vermoë om navorsing te doen om die sisteem te verbeter om nakoming van relevante regulasies te verseker, uit.

2. Sellulêre temperatuur loggers

Om hierdie tekortkominge aan te spreek, het die FMS werksgroep ooreengekom dat alle verkoelde houers wat in 2020 onder die FMS-protokolle verskeep gaan word, PPECB goedgekeurde temperatuurloggers moet installeer. Dit is deur DALRRD goedgekeur. 'n Subkomitee van die FMS werksgroep het na uitgebreide vergaderings saamgestem dat dit belangrik is dat sulke loggers oor die vermoë moet beskik om data via 'n selfoonnetwerk af te laai. Verskaffers van hierdie loggers sal by PPECB moet aansoek doen om hierdie loggers te sertifiseer. Die proses sal verseker dat die loggers oor die nodige tegniese spesifikasies beskik. Een van hierdie spesifikasies is dat die verskaffer van die temperatuurdatalogger 'n stelsel in plek het om die data veilig met die "Citrus Temperature Database" (CTD) te deel, wat parallel met die PhytClean-stelsel sal werk.

Tot op datum het drie verskaffers suksesvol aansoek gedoen om deel te neem in die CTD sisteem en verdere inligting is van PPECB beskikbaar.

- Emerson (climate.emerson.com)
- Most (most.tech)
- Sensitech (sensitech.com)

3. Datagebruik

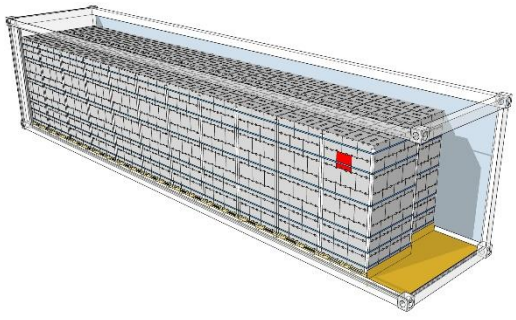
Alle inligting wat deur die CTD sisteem versamel word, sal veilig gestoor word en slegs deur CRI vir doeleindes soos hierbo genoem, ontleed word. Uitvoerders en ander verwante partye sal egter steeds toegang tot hul eie die logger-data hê via die verskaffer se unieke stelsels en dienste, soos per gewone gebruik in vorige jare. Die CTD data sal nie met eksterne partye gedeel word nie en sal slegs vir doeleindes soos hierbo genoem gebruik word, met die doelwit om FMS te verbeter en marktoegang te behou.

Om die vloei van data deling tussen die uitvoerder, diensverskaffer en CRI te optimaliseer, sal PhytClean 'n ooreenkoms-afdeling insluit tydens die respektiewelike fitosanitêre aansoek.

Die volledige implementering van die stelsel sal na verwagting teen einde Maart plaasvind. Indien 'n houer sitrus na die EU vroeër as einde Maart onder die FMS verskeep gaan word, kontak asseblief die FMS Bestuurskomitee.

4. Nuwe temperatuursensor posisie in FMS-verskepings

Vanaf die 2020-seisoen moet temperatuur-dataloggers/sensors binne-in 'n spesifieke karton in die houers geplaas word (foto hieronder). Hierdie proses sal deur PPECB gemonitor word. Beide lug- en pulp sellulêre sensors kan vir FMS-verskepings gebruik word, maar in beide tipes moet die datalogger/sensor minstens 10 cm van die sykant van die kartonwand, tussen die vrugte geplaas word. Raadpleeg FMS-dokument – bylaag 6 (koue ketting en verpakking) vir verdere besonderhede.



Nuwe posisie (in rooi) van temperatuur-datalogger/sensors in FMS verskepings.

Vir enige verdere navrae kontak Tarl Berry (tarl@sun.ac.za, 0824197218), Paul Cronje (paulcronje@sun.ac.za, 0844471047), Paul Hardman (ph@cga.co.za), Werner van Rooyen (werner@fpef.co.za), of Bernard Henning (bernardush@ppecb.com)