Guidelines for Dual Loading of Containers

1. Introduction

Dual loading of a container is not normally a pro-actively planned operation but a contingency action to deal with situation where pallets must be loaded out because of age or urgent market demands but the number of pallets at one loading point is insufficient to fill a container.

In the past alternative shipping opportunities such as port-hole containers (10 pallets per container) or specialised reefer ships (conventional shipping) offered a solution. However, port-hole containers have been discontinued and availability of shipping space on specialised reefers, during the deciduous fruit season, is almost non-existent. The result is that more than 95% of all deciduous being shipping in 12m integral containers. This implies consignments lots of 20 pallets are now required.

It would be ideal if an exporter's fruit is all at one location and 20/21 pallets lots available as and when required. This does not always happen in practice and the following options exist to deal with part loads (not necessarily in sequence of priority):

a. Combine loads of compatible specification or protocol (This can be different fruit kinds with the same shipping code, e.g. grapes and nectarines)
b. Wait for additional pallets to make up shortfall (Consider packing additional pallets but keep age implications in mind)
c. Ship odd pallets on conventional vessels (if available)
d. Move odd pallets to another loading point where other pallets are available to make up the shortfall or, alternatively, bring the shortfall quantity from the other source
e. Use a 6m container to load 10 pallets (Relatively scarce and expensive. 6m port-hole containers are no longer available.)
f. Divert odd pallets to the local market
g. Share container with another exporter if fruit is available at the same loading point (Co-loading – Important! Only one notified party allowed per container.)
h. Make use of dual loading by picking up the shortfall of pallets at a second loading point

The last option (dual loads) is not a standard operation. Care should be taken to evaluate alternatives. When viable alternatives have been considered and a dual load found to be the best solution, several aspects must be taken into consideration.

2. Protocols

The export shipping of perishable products falls under the statutory control of PPECB. Very specific protocols have been formulated and published for each product. These processes are monitored by PPECB.

A PPECB official is present when product is offered for inspection, temperature monitoring and supervision during loading of containers. One of the rules applied is that the temperature of the load may not exceed the specified carrying temperature by more than 2 degrees. In case of a dual load, PPECB requires the fruit to be on or below the carrying temperature at both loading points.

For container loading of deciduous fruit, PPECB applies a general TTT (Time Temperature Tolerance) of 6 hours. The logic of this rule is to allow 1 hour for the loading of the container, 2 hours for transport time and 3 hours for receipt and connecting to power at the container terminal stacks. Where dual loads are used, the 6 hour TTT rule still applies.

If the TTT is expected to be exceeded, it may be necessary to use a genset.

For deviations from the rules above, a T-13 dispensation from PPECB and approval of the shipping line are required.

3. PPECB Dual Load Criteria

3.1 Criteria applicable for conditions without generator unit:

- Maximum two loading points per container.
- Always start at the furthest load point (Refer to Point **7. Load Stability**)
- The distance between two points must be such that the total cumulative traveling time of 2 hours is not exceeded. This means that from completion of loading at the first loading point until entering the harbour may not exceed 2 hours.
- Products may be loaded at both points on condition that the pulp temperature is not more than 1.0°C above the applicable set point temperature except for Summer Pears (DP2) and Apples in bags (D-1.5) (minus 1,5°C setting) where the normal 2.0°C tolerance with a maximum loading pulp temperature of plus 0,5°C will be applied due to the low cold store delivery air temperature (DAT),
- Part loads loaded into the container at the second load point must be within the maximum prescribed tolerance (2.0°C above set point, except Peaches, Nectarines and Apricots where 1.5°C tolerance applies, and Plums 3.4˚C applies).

3.2 Criteria applicable for conditions with generator unit:

- Maximum two loading points per container.
- When carrying product and the total travelling time of two hours is going to be exceeded, a generator unit (external power supply) must be booked and attached to the container.
- The normal product tolerance will apply. This procedure will apply throughout the dual loading process.

3.3 PPECB Charges

PPECB charge for dual loads. These charges in October 2023, were as follows:

Container Loading Port – R595.65
Container Loading Inland – R770.04
Cold Treatment Container Deciduous, Citrus and Other Fruit – R1143.34
Dual Load – R1525.91

3.4 General

Please refer to PPECB's temperature regime code requirements as set out in their SCHEDULE 1/HP22 document (www.ppecb.com).

4. Cold Treatment Consignments

Dual loads for containers destined for cold treatment markets are not allowed. The risk of fruit (first load) warming to temperatures outside the prescribed tolerances is just too great.

5. Scheduling

With an increased risk of fruit exceeding the TTT, it is of paramount importance that the loading times are meticulously planned and adhered to. This applies particularly to the second loading point and preferential loading have to be arranged. It is strongly advised that the second loading point be advised the moment the vehicle leaves the first loading point. The driver must report to the second loading point immediately on arrival and not just fall into the back of the queue.

6. Documentation

Taking the restriction of the TTT into consideration, it is important to ensure that documentation is completed correctly and efficiently in order to avoid unnecessary delays.

7. Load Stability

A dual load necessarily implies that less than 20 pallets are loaded at the first loading point and that some of the pallets may shift or fall over during the trip to second loading point, especially if sharp inclines or rough driving are encountered. Measures to reduce the risk are the following:

a. Drivers must applies caution
b. Make sure that the pallets are tightly stowed to reduce gaps between pallets
c. Placement of the last two pallets must be such that backward or sideways toppling is reduced. This can be achieved by placing the last two pallets at an angle in the 1200mm side direction.
d. Use load bars (if available) to secure the last pallets
e. Consider the route conditions to and from each loading point. For example, if there are steep inclines en route to a loading point, it may be advisable to start at this loading point first (provided PPECB's TTT's are adhered to).

Transport contractors do not normally accept liability for damages en route when dual loads are transported. The risk must therefore be pointed out to exporters. Should damage to the fruit or container be identified on arrival at the second loading point, a deviation report must be made out and the PPECB official requested to verify and re-assess the situation.

8. Cost

In addition to PPECB's cost, there are three transport cost elements:

a. Distance
b. Time
c. Genset (when applicable)

It is not unreasonable of hauliers to expect to be remunerated for these additional costs.

The second loading point can be en route to the port or not. If en route to the port, the additional cost will be mainly additional time. Most contractors will charge a fixed fee, e.g. R800/additional loading point.

If the second loading point involves additional travelling distance, the haulier will expect compensation. An accepted formula is the cartage of the furthest loading point plus 50% of the nearest loading point's cartage.

If the cost, to move the required pallets from one loading points to the other by flatbed (or refrigerated truck), is less than the dual load cost, this option should be considered especially if only a few pallets are required. However, keep in mind that most loading points will charge a handling fee for pallets received from another loading point. The likelihood of a temperature rise in this process exists and re-cooling may be required. Any break in the cold chain is detrimental to the quality of the fruit.

9. General

Containers are not to be used for moving cargo, that are not earmarked to be exported in that specific container, between cold stores.

10. Conclusion

Where specific circumstances require the use of dual loads, several issues have to be taken into consideration to ensure a cost effective operation where quality risks are managed properly.