

Banana

Cavendish

2025



AIM OF THE STUDY:

DOES THE USE OF AN HDCOLD® CONTAINER IMPROVE THE QUALITY OF BANANAS UPON ARRIVAL COMPARED TO A STANDARD REFRIGERATED CONTAINER?

Current practice^{1,2} :

- Recommended storage prior to ripening and during transport:
13–14°C with 90–95% RH
- Ripening at 15–20°C and 90–95% RH
- Storage for 2 to 4 weeks, up to 6 weeks with controlled atmosphere
- High sensitivity to cold (visible browning after 72 hours of storage at 12.8°C), to impact, and to various fungal diseases such as crown rot and anthracnose

HDCold® technology:

- Cold system which maintain natural relative humidity at high levels (>98 %)
 - No addition of liquid water
 - Decrease of water loss, and therefore weight loss of the products
- Low temperature difference between the set point and the refrigerant:
 - Less hydric stress on the products
 - Less to no frost formation

¹ BMT, « Bananas - Cargo Handbook », consulté le 5 janvier 2026
<https://cargohandbook.com/Bananas>

² University of California, « Banane | Postharvest Research and Extension Center », 1996
<https://postharvest.ucdavis.edu/fr/produce-facts-sheets/banane-0>



RESULTS

Harvest date (Réunion):

- Harvests A and B: 3rd oct. 2025
- Harvests C and D: 16th oct. 2025

Packaging: plastic crate

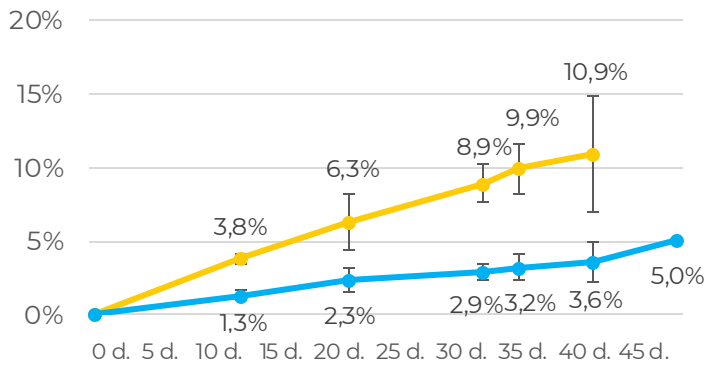
Setpoints: 14°C, 96% RH if regulated

Study conducted on four batches, with overall averages presented below.

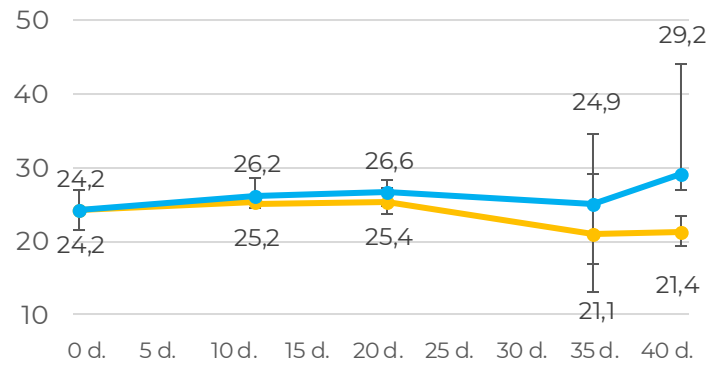
■ **Classical container**

■ **HDCold® container**

Weight loss (%)



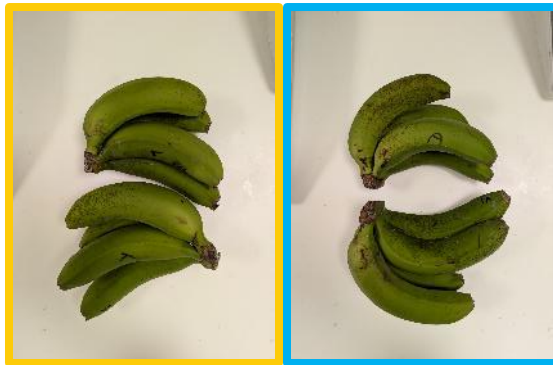
Skin and flesh firmness (mm)



External appearance at harvest*



External appearance after 21 days of storage*



External appearance after 41 days of storage*



* Bananas from Harvest A

CONCLUSIONS

According to the results of this trial, **HDCold® technology** on green Cavendish bananas:

- ✓ **Reduces weight loss** by two-thirds after 40 days of storage;
- ✓ **Maintains higher skin and flesh firmness;**
- ✓ **Delays the yellowing** of the bunches (bananas remain green after more than 40 days of storage).

RECOMMENDATIONS

14°C
96 % RH
Up to 40 days



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