

Apple

Story® Inored
(cov)

2020



AIM OF THE STUDY:

WHAT IS THE IMPACT OF THE HDCOLD® TECHNOLOGY ON THE STORY® INORED APPLE STORAGE QUALITY ?

Current practices^{1,2} :

- Recommended maturity at harvest:
 - Starch: 7-8 (CTIFL notation)
 - Firmness: 8-10 kg/cm²
 - Sugar content: 12-15°C Bx
 - Acidity: 5-8 g of malic acid/L
- Normal cold storage (6 months): 3°C
- CA storage (7-8 months):
 - 2-3% O₂ / 1.5 % CO₂
 - 1 month delay after harvest necessary before lowering O₂ levels
- Main disorders:
 - Sensitive to chilling injuries
 - External and internal browning in CA condition

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 Westeramp P., 2023. Conditions de stockage des différentes variétés de pommes. 3 p.

² Dieudonne et al, 2023. Conservation de Story® Inored (cov), 10 années d'essais au CTIFL et CEFEL. Infos CTIFL 389

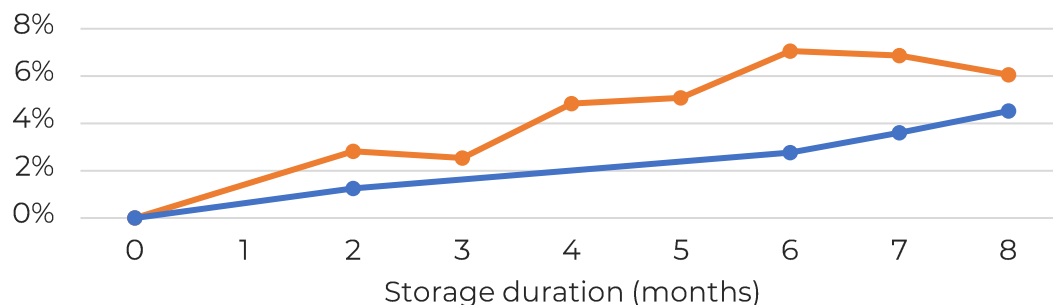
RESULTS

Harvest : 17th oct. 2020 (South-West of France) **Starch** : 9.5 (overripe)

Control coldroom (2°C)

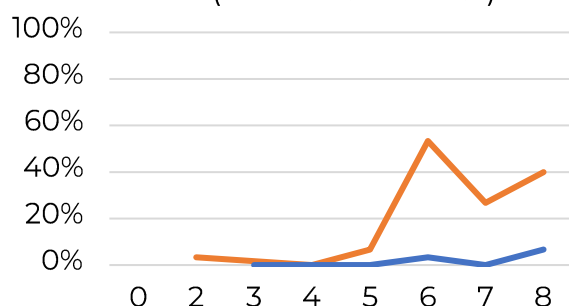
HDCold® coldroom (2°C, 98% RH)

Weight loss (%)



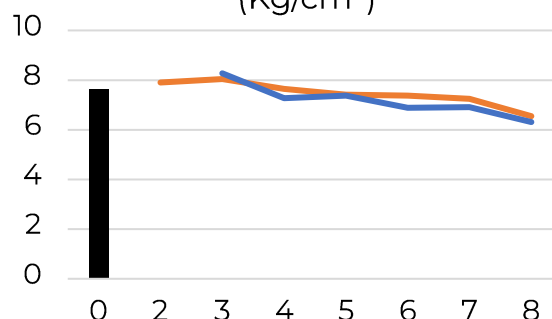
Wilting

(% of wilted fruits)



Firmness

(Kg/cm²)



After 7 months of storage	# on 30 apples		°Brix (sugar content)	Acidity (g/L malic acid)
	Physiological disorders	Fungal disorders		
Control	4	0	13.5	1.8
HDCold®	1	0	12.8	1.8

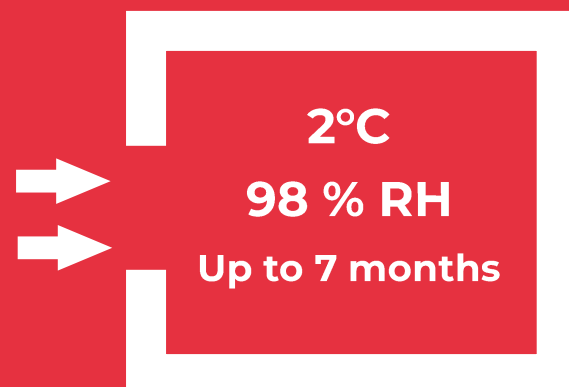
CONCLUSIONS

Based on these results, the HDCold® technology had the following impact:

- ✓ Significant reduction of weight loss
- ✓ Delay of wilting occurrence:
 - 8 months in HDCold® vs. 6 months in classical conditions
- ❖ Slightly lower sugar content (12.8 vs. 13.5)

No significant difference was noted in this trial on flesh firmness and titrable acidity.

RECOMMENDATIONS



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