

Apple

ABOUT HAZEL TECHNOLOGIES®

Hazel® is an agricultural technology company dedicated to reducing food waste by extending the quality and shelf-life of fruits and vegetables.

Our mission is to increase the efficiency of the produce supply chain through innovative, easy-to-use solutions.

HAZEL 100™ FOR APPLES: What is it, How it works

The Hazel 100 sachet is easy to apply and maintains produce quality during storage, transit and arrival. Inside the sachet is biodegradable, eco-friendly material that we engineered to store & time-release the active ingredient, 1-MCP.

1-MCP prevents apples from ripening by blocking their absorption of ethylene – the fruit-damaging gas emitted during the decomposition process. Unlike other 1-MCP technologies, Hazel 100 has engineered the 1-MCP active to be stored within a dry packet and released over time, enabling it to protect the fruit longer and more uniformly, while leaving no surface residue behind.

Funded by:



BENEFITS

- Extends shelf-life
- Retains color
- Maintains firmness/pressure
- No additional machinery or training required
- Protects against cold-chain breakage
- No residue

ACADEMIC VALIDATIONS



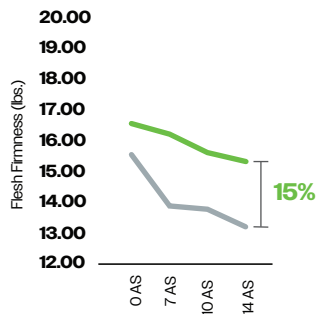
CASE STUDY: HAZEL 100™ KEEPS APPLES 15% FIRMER

A 2021 study, performed in partnership with Sacia Orchards, was designed to test Hazel 100™'s effectiveness in maintaining pressure/firmness in a “treated” sample of apples vs. an “untreated” control sample.

The study measured the “Flesh Firmness” of each set of apples at 0, 7, 10 and 14 days after they were transitioned from a cold storage environment to ambient storage.

Group 1 - tracks Flesh Firmness of the treated vs. untreated/control, following a 60-day period in cold storage.

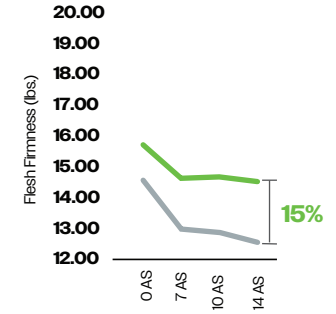
Firmness Over Time
After 60 Days in Cold Storage



— Treated with Hazel 100™
— Control / No Hazel 100™

Group 2 - tracks Flesh Firmness of the treated vs. untreated/control following a 90-day period in cold storage.

Firmness Over Time
After 90 Days in Cold Storage



In both groups, Hazel 100™-treated apples measured **15% more firm than the control after 14 days in ambient storage.**



Dano Simmons
Owner
Peace Valley Orchards

"[While using Hazel 100™] we've gotten much greater retention of pressure on [our] fruit than we ever have in the past.

We've kept golden delicious until April at 14 pounds pressure with nothing but the [Hazel 100™] product on it. And I gotta tell you, we've had difficulty keeping Golden Delicious in our CA rooms with that pressure, in April.

I'm not sure the [Hazel] product [for short-term, as opposed to long-term CA,...]isn't as good or better than a CA room."

To learn more, visit www.hazeltechnologies.com

This work is supported by [USDA] [grant no. 2016-33610-25479, 2017-33610-27304] from the USDA National Institute of Food and Agriculture.