



**AgroFresh**

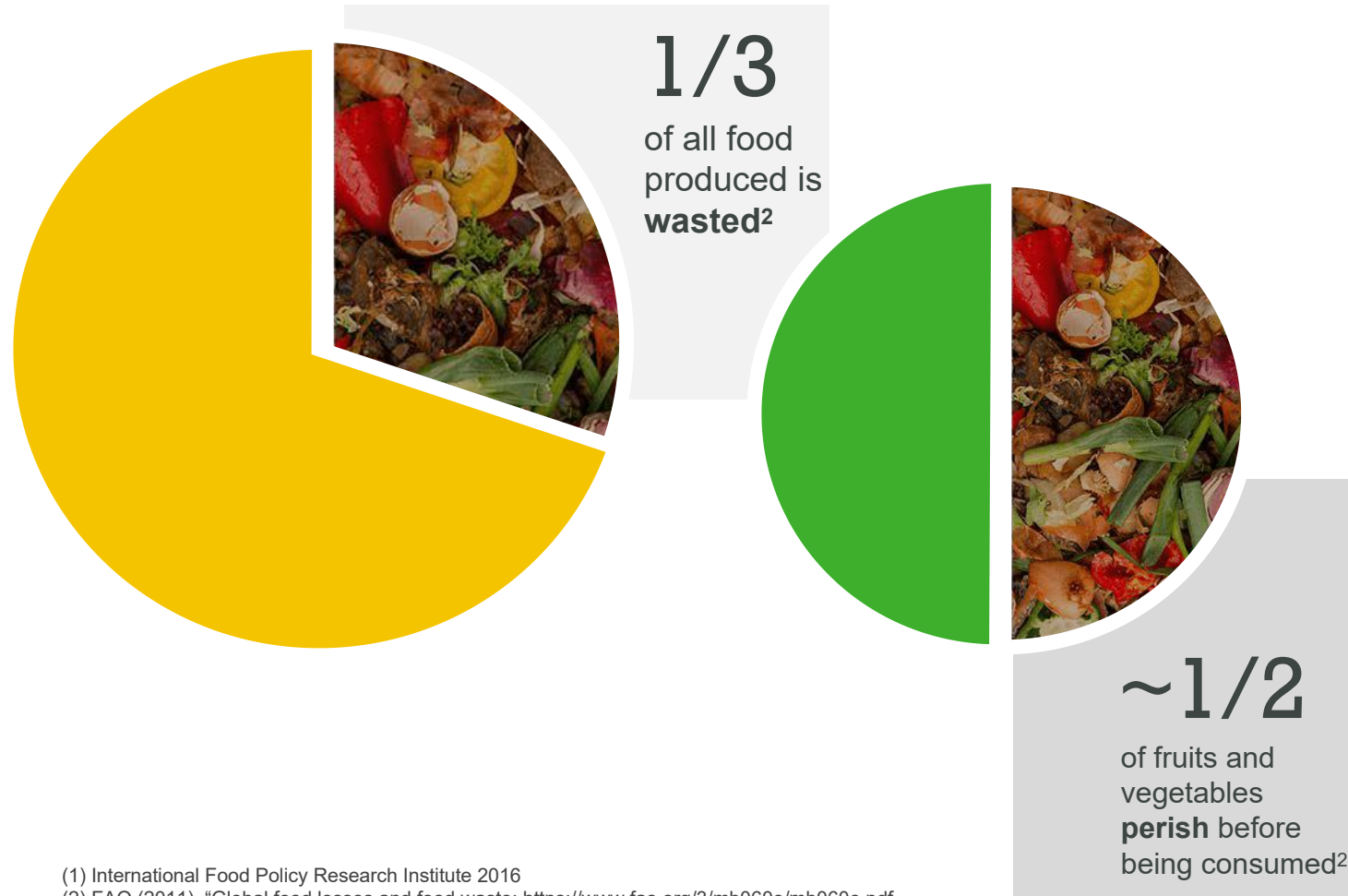
We Grow Confidence

# Addressing Produce Quality Through Supply Chain Challenges

Asiafruit Business Forum | 4<sup>th</sup> November 2022 | Bangkok

Nicholas Sanders  
Commercial Business Director, Asia-Pacific

# Globally \$1 Trillion in Food is Wasted Annually<sup>1</sup>

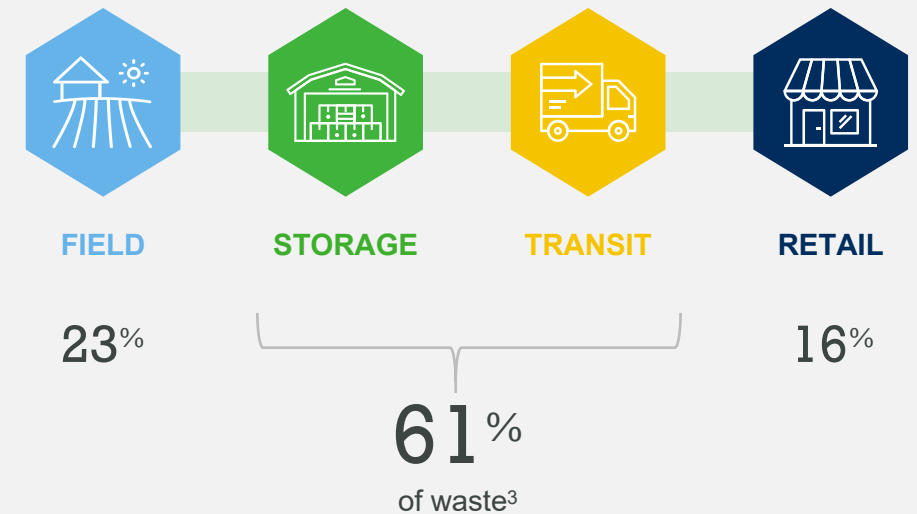


(1) International Food Policy Research Institute 2016

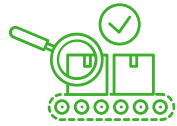
(2) FAO (2011). "Global food losses and food waste; <https://www.fao.org/3/mb060e/mb060e.pdf>

(3) PROMAR International; The Global Market for Post-Harvest Technology, 2019

# Produce Loss Across the Supply Chain



# Market Trends Drive Need for Produce Quality & Freshness Solutions



## Productivity and Efficiency Needs

Population growth pressuring resource availability (less labor, arable land, water, food security)

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## Increasing Demand for Fresh Produce

Secular trends toward healthy eating and fresh fruit and produce drive demand for global source markets and innovation from industry participants

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## Increasing Supply Chain Risk

Disruptions, longer transit times, greater burden on export markets

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## Digitization of Agriculture

Increasing demand for data – traceability, quality and food safety

# AgroFresh is a Global AgTech Leader with 40+ years of Delivering Solutions

## Our Vision

To be the guardian of the world's fresh produce

## Our Mission

We combine deep scientific knowledge with applied industry know-how to extend shelf life of the best-tasting produce, prevent food waste and conserve our planet's resources.



# A Diverse Portfolio of Solutions, Digital Technology and Services Across the Supply Chain



Near-harvest



Ethylene management to promote longer ripening time for improved quality and color, and better labor and harvest management



Post-harvest Storage/Packing/Processing



Ethylene management to maintain freshness, firmness and quality during storage, transport and ripening



Antimicrobials to prevent fungal decay, disinfectants for food safety prevention and equipment cleanliness



Transit/Retail



Plant-based Coatings to prevent dehydration and extend shelf life  
Solutions to maintain freshness in flowers



Integrated digital platform providing end-to-end visibility into real-time fruit quality inspection data, reporting and insights



# We're a global strategic partner you can count on

Commercial, R&D, Regulatory and Technical Service experts share know-how and data across regions to solve customer challenges and break new ground in new markets and applications



**Industry Leading Global**  
R&D and regulatory expertise  
in **over 50** countries



**Direct selling model with**  
**3,700** customers



Located in **key fruit**  
**growing** regions



● Global HQ  
● R&D Center

# A Proven Sustainability Track Record

AgroFresh's sustainability commitment comes from four decades of delivering **innovative solutions** that **prolong** produce freshness and **reduce** food waste/loss.

Our **dedication** to **protect** and **preserve** the planet has never wavered.

## The Sustainability Impact<sup>1</sup> of SmartFresh™



SmartFresh™ reduced apple waste

**>259k Metric Tons**

of apples saved from landfill<sup>1</sup>

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CO<sub>2</sub> reductions equivalent to taking more than

**2 Million Cars**

off the road for a year

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As a result of spoilage reduction

**2.5m Metric Tons**

of water saved

### Sources

<sup>1</sup> The Context Network, SmartFresh Sustainability Impact Study 2002 – 2018; SmartFresh™ usage in the United States, France, Italy plus global extrapolations AGFS ESG Report [https://www.agrofresh.com/wp-content/uploads/2022/03/Agrofresh\\_ESGReport\\_2020.pdf](https://www.agrofresh.com/wp-content/uploads/2022/03/Agrofresh_ESGReport_2020.pdf)



# Taking Quality & Freshness Further

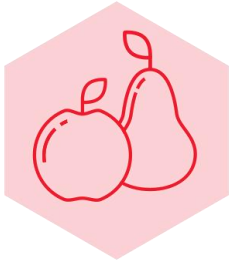
## A Case Study



# Quality Starts from the Field



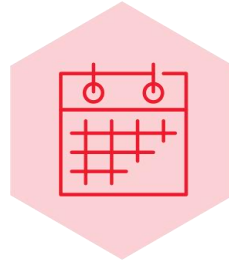
Controls peak ripeness for better fruit quality, increased orchard revenue potential and more peace of mind



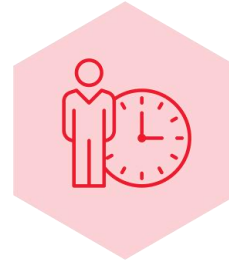
**PROVIDES CONTROL OVER HOW AND WHEN FRUIT RIPENS, TO HELP ACHIEVE BETTER FRUIT QUALITY AND HIGHER YIELDS**



**UNIQUE MODE OF ACTION PROVIDES BETTER CONTROL OF ETHYLENE RESPONSE**



**EXPANDS HARVEST WINDOW TO KEEP FRUIT ON THE TREE LONGER, FOR OPTIMAL COLOR, SIZE AND FIRMNESS**



**ALLOWS MORE FLEXIBLE LABOR MANAGEMENT**



# Quality during Storage and Transport



an AgroFresh solution

The game-changing Post-Harvest treatment that preserves quality during storage and transport

- **Ethylene management expertise**
- Decades of **maintaining quality throughout the supply chain**
- Puts the ripening process “on hold” to protect just-picked freshness and quality
- **Reduces weight loss and disorders** to achieve a bigger pack-out
- **Extends the storage window to improve inventory flexibility**
- Opens up opportunities in new, **more distant markets**



Untreated



Treated with **SmartFresh™**



**AgroFresh**



FRESHCLOUD™

Powered by AgroFresh

FreshCloud™ provides real-time digital insights from the orchard to market for Integrated Quality Management

# The Importance of having Integrated Digital Quality Management throughout the Supply Chain



IN FIELD/  
ORCHARD



RECEIVING &  
STORAGE



PACKING



OPERATIONS



PACKED STOCK



SHIPPING



SALES &  
MARKETING

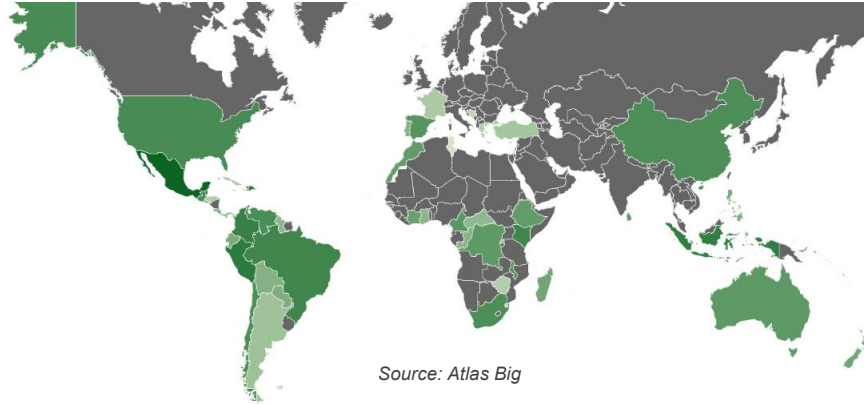


FRESHCLOUD™  
Powered by AgroFresh



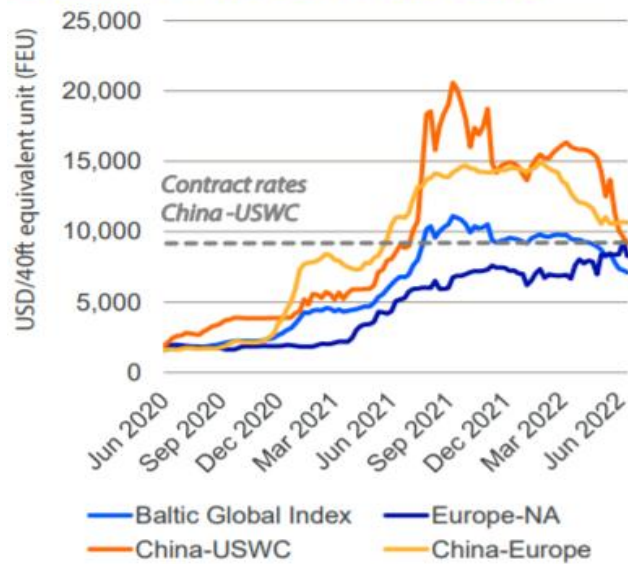
# Fresh Produce Traveling Longer Distances

World's Leading Avocado Producing Countries

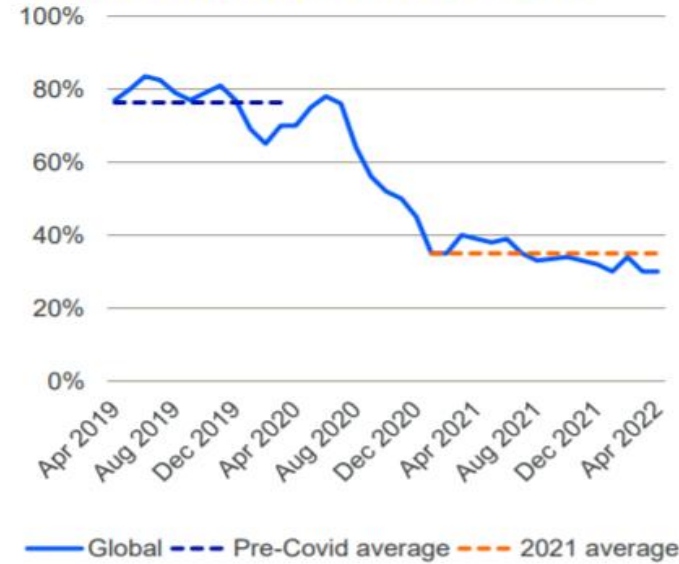


Source: Atlas Big

Container rates price evolution in major global lines, June 2020-June 2022



Percentage of on-time arrivals of container ships, April 2019-April 2022



Source: Freightos, Drewry, Sea-Intelligence, JOC, Rabobank 2022

# Plant-based Coatings



Plant-based solutions by AgroFresh

Plant-based, edible coatings extend produce shelf life, reduce food loss and waste and help deliver superior eating experiences to consumers

- Plant-based portfolio of solutions for a wide variety of crops from citrus to avocados to mangos
- Superior consumer and/or retailer marketing options



AgroFresh

# Results in Significantly Less Bruising & Better Appearance

AFTER  
RIPENING



VitaFresh™ coatings application does not negatively affect the internal condition of the fruit.  
Coated fruit does not present any significant damage or internal browning.

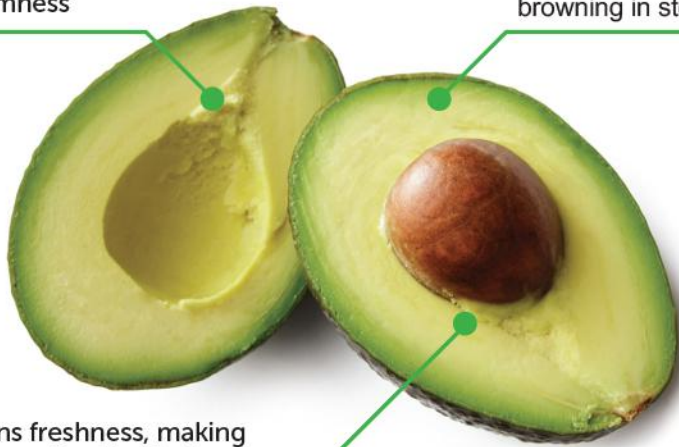
# Achieving Quality with SmartFresh™

## HASS AVOCADOS

Maintains pulp firmness

Helps reduce external, internal and vascular browning in storage

Maintains freshness, making fruit more attractive to buyers



### See the Difference



CONTROL



SmartFresh™

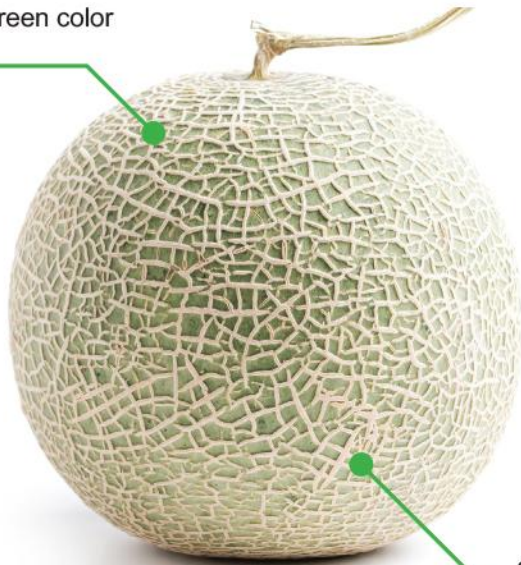




# Offer Better Quality Melons with SmartFresh™

## CANTALOUPES & HONEYDEWS

Keeps green color on nets



Reduces the incidence of brown spots on the skin

See the Difference



CONTROL

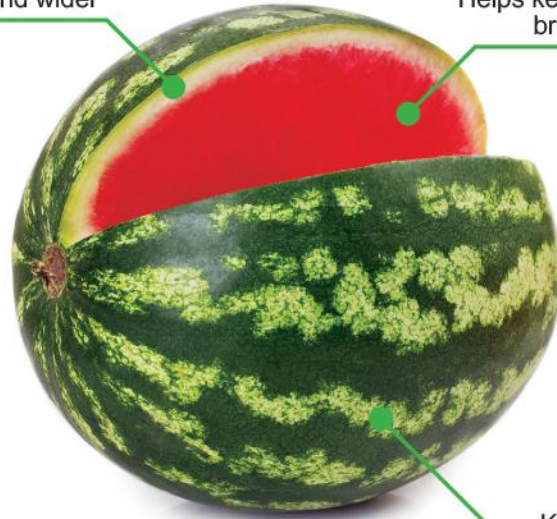


SmartFresh™

Simulating a commercial shipment from US to Europe, and then a shelf life of 12 days\*, **SmartFresh™ melons** were clearly **greener, firmer** and **less watery**

## WATERMELONS

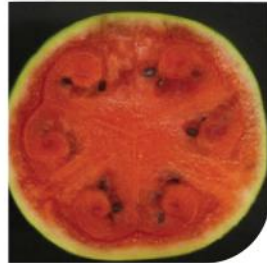
Keeps white rind clear and wider



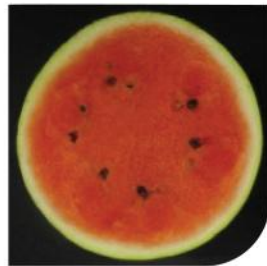
Helps keep flesh color bright and fresh

Keeps green skin color

See the Difference\*



CONTROL @ DAY 6



SmartFresh™

@ DAY 11

Source: AGFS

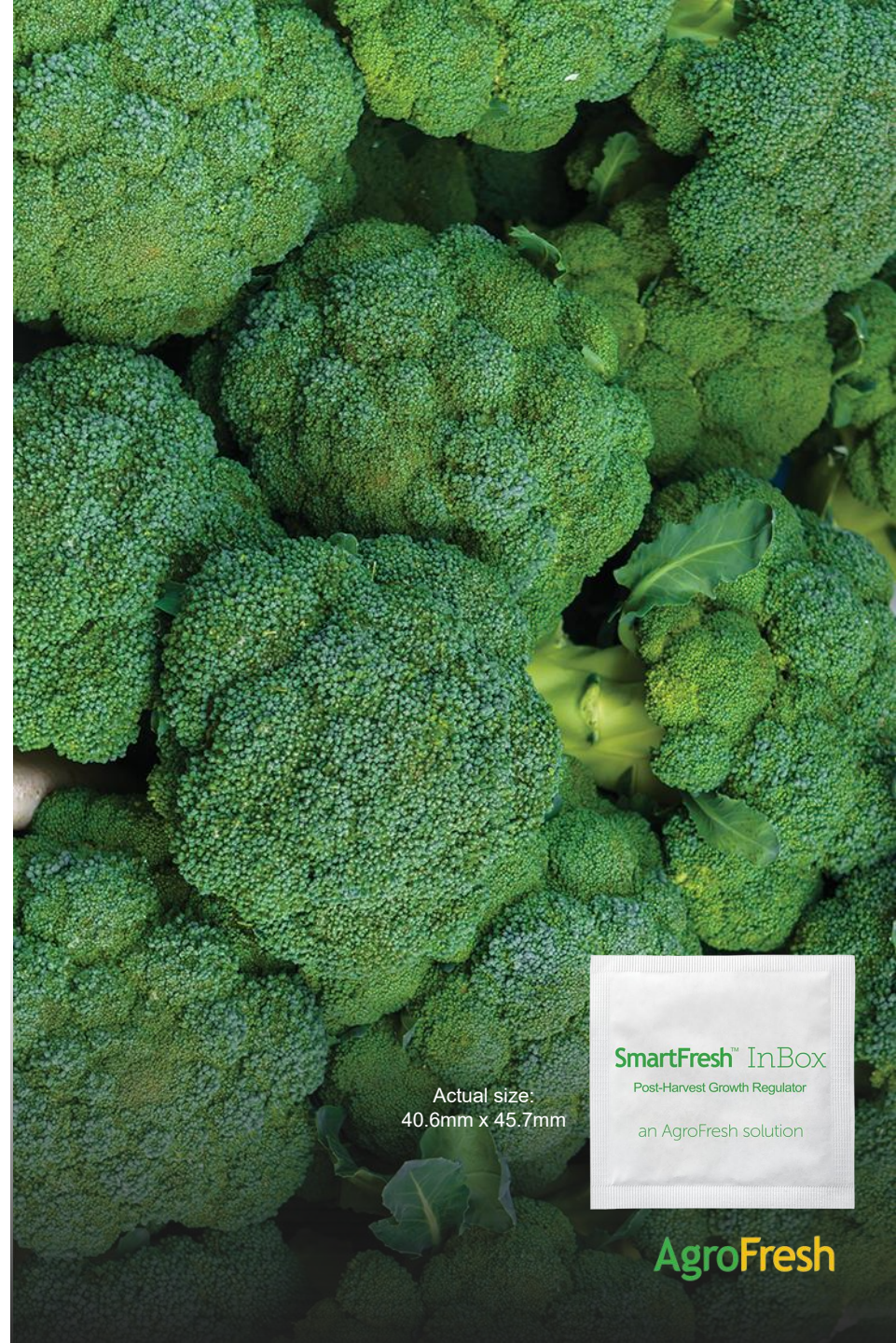
# 21 Days After the Start of the Trial



Polystyrene & Ice



SmartFresh™ InBox  
with a Normal Liner



SmartFresh™ InBox  
Post-Harvest Growth Regulator  
an AgroFresh solution

Actual size:  
40.6mm x 45.7mm

AgroFresh

Source: HortInnovation, HAL/HIA reports(VG13086/VG14062), Jenny Ekman”

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## Transit/Retail



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Solutions to maintain freshness in flowers

## We're With You All the Way

The produce experts at AgroFresh understand your fruit's entire post-harvest journey, so we know how to help you assess the risks and challenges. Together, we'll ensure you get the right freshness-protection interventions to align with your specific crops, processes and markets.



**Thank You!**

Nicholas Sanders  
**Commercial Director**  
**Asia-Pacific Region**

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