

#### Imperial College London



## Food Industry Trends and Consumer Preferences for Blueberries

Dr. David Hughes
Emeritus Professor of Food Marketing

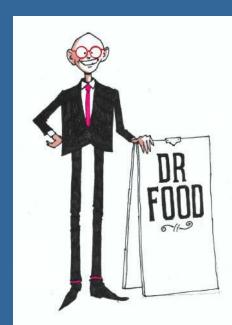
IBO Summit 2023 Centrum Spotkania Kultur Lublin, Poland

Tuesday, July 4th, 2023





www.supermarketsinyourpocket.com



We are Living in Particularly Turbulent Times which are, likely, the New Normal!

## unprecedented

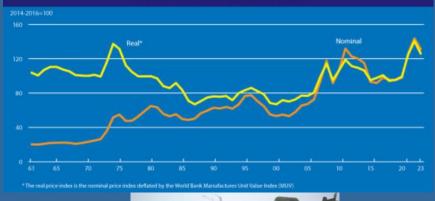
**Definition:** 

never done or known before.

/n'presidentid/



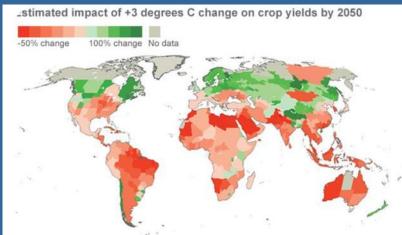








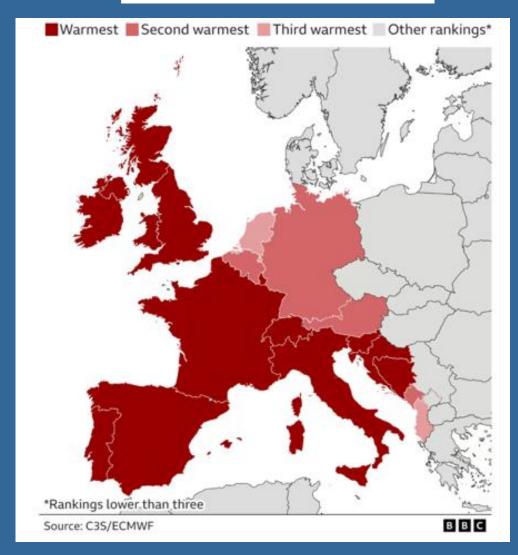




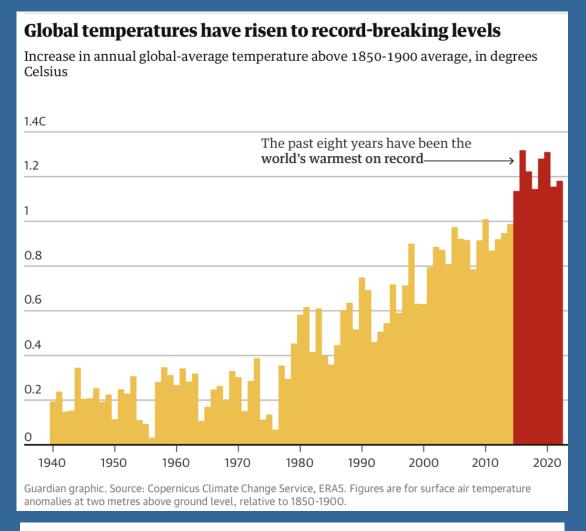


Which countries had their warmest ever year in 2022?

Twelve European countries broke temperature records in 2022



# Global temperatures in 2023 set to be among hottest on record



Sea level rise accelerates, European glacier melt shatters records,



US scientists confirmed that El Niño had started. Experts say it will likely make 2024 the world's hottest year.





### Food security is back on EU leaders' menu with a global flavour

## Countries are Increasingly Concerned About Their Food Security

# UK sleepwalking into food supply crisis, says farming union December 6th, 2022



'Tsunami of need' - UK's biggest food bank network launches emergency appeal October 20th, 2023



38 36 48 50 52 60 92 94 100 115 141 148

China Food Imports by Year

1997 to 2022

Yes, we have no tomatoes: Why shelves are emptying in UK stores

February 2023

Rabobank analysis forecasts "eggflation" to remain high in 2023

1200

Over 2 million households in Australia (21%) have experienced severe food insecurity in the last 12 months



Nearly 6 million people in Canada experienced

food insecurity in 2021,



Home-based foodbank needs help as demand soars in Christchurch June 2021



India's rice export ban: The Asian countries set to be hit hard — and those that'll profit September 2022



Argentina keeps beef export ban in place until 2024 January 2023



#### Global risks ranked by severity over the short and long term

"Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period"



2 years		10 years	
1	Cost-of-living crisis	1	Failure to mitigate climate change
2	Natural disasters and extreme weather events	2	Failure of climate-change adaptation
3	Geoeconomic confrontation	3	Natural disasters and extreme weather events
4	Failure to mitigate climate change	4	Biodiversity loss and ecosystem collapse
5	Erosion of social cohesion and societal polarization	5	Large-scale involuntary migration
6	Large-scale environmental damage incidents	6	Natural resource crises
7	Failure of climate change adaptation	7	Erosion of social cohesion and societal polarization
8	Widespread cybercrime and cyber insecurity	8	Widespread cybercrime and cyber insecurity
9	Natural resource crises	9	Geoeconomic confrontation
10	Large-scale involuntary migration	10	Large-scale environmental damage incidents

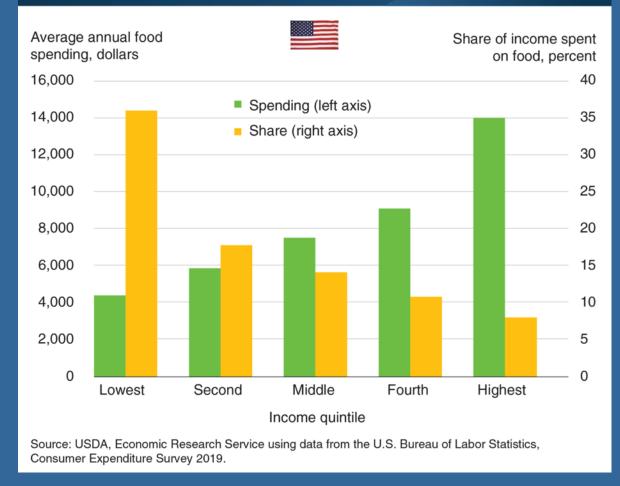
The Global Risks
Report 2023
18th Edition

**January 11th, 2023** 

"... predicts persistent polycrises of food, energy & fertilizer shortages during the next 2 years ... food system failures are unavoidable and society can expect further food price spikes as the cost of living crisis continues".

## Food spending and share of income spent on food by U.S. households, 2019

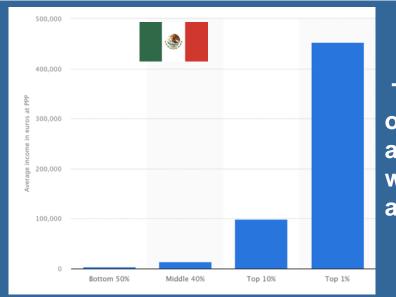




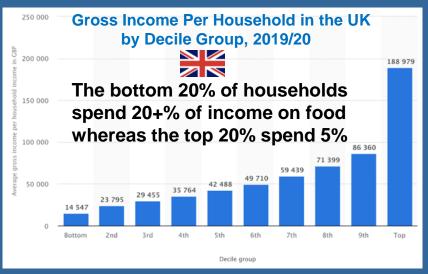
The Lowest 20% of Households
Spend 37% of Their Income on
Food Whereas the Top 20%
Spend 7% of Their Income on Food

#### The "Haves" and "Have Nots"

Average income in Mexico in 2021, by income percentile



The top 10% of households are comfortable whereas 90% are in trouble!

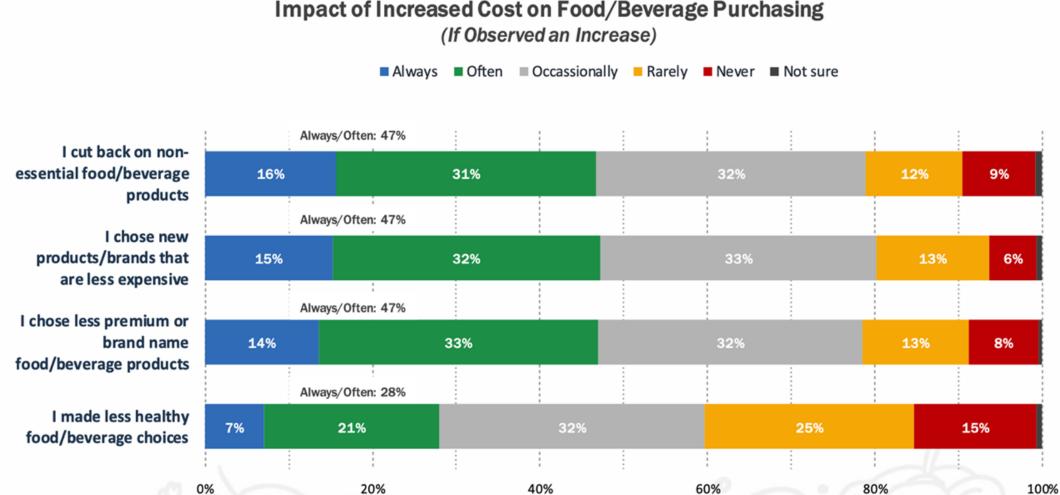




## Nearly half who saw an increase say it always/often impacts purchasing

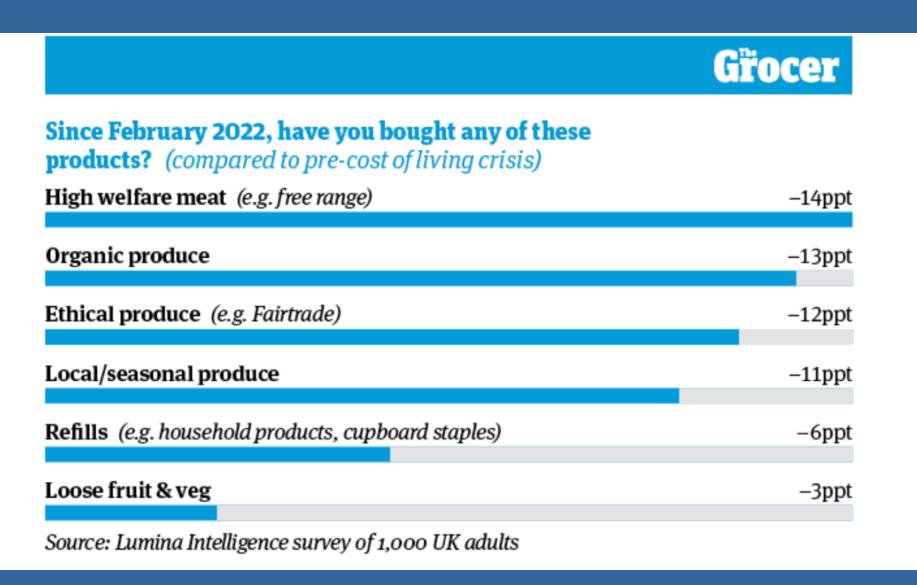


Three in ten say they have made less-healthy choices. Younger generations are more likely to cut back on non-essential items than their older counterparts.





## Shoppers giving up on organic and healthy foods to cope with cost of living



Survey undertaken August 2022







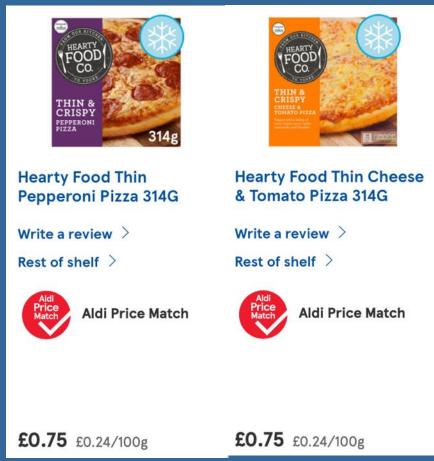
In the EU, p.c. fresh produce consumption down by 10% in 2022/23: Germany -12%; Spain -10%; UK -5%; USA -4%. Fruit & Veg. seen as being expensive. Frozen sales spike!



### **How Low Can You Go?!**



## Hard Discounters, Aldi and Lidl, Drive Coruscating Retail Food Price War in UK

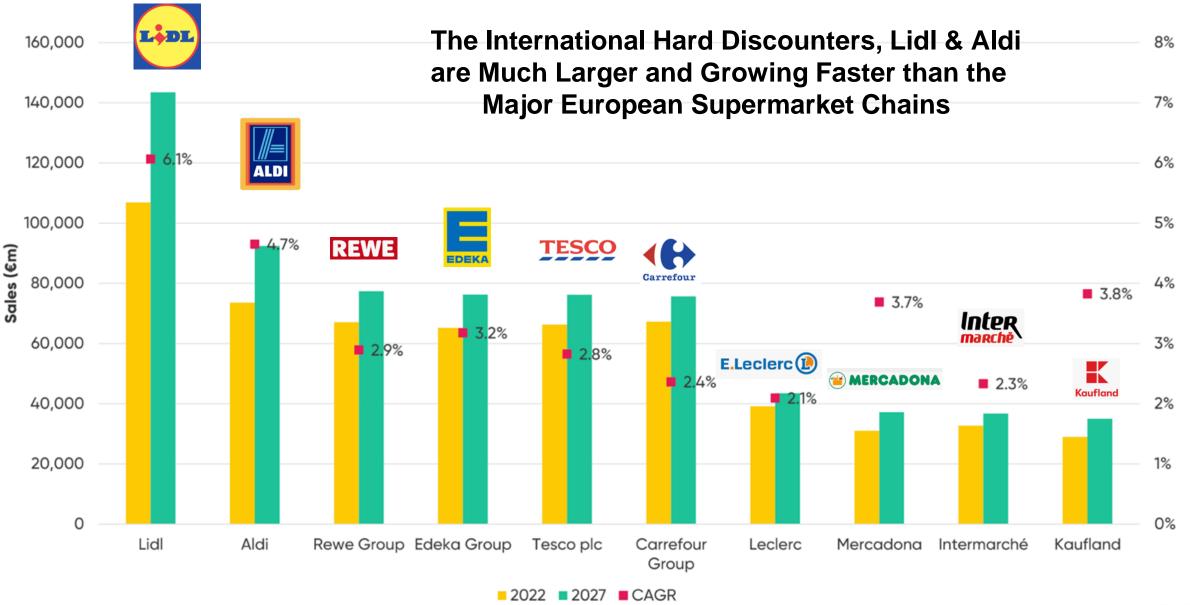








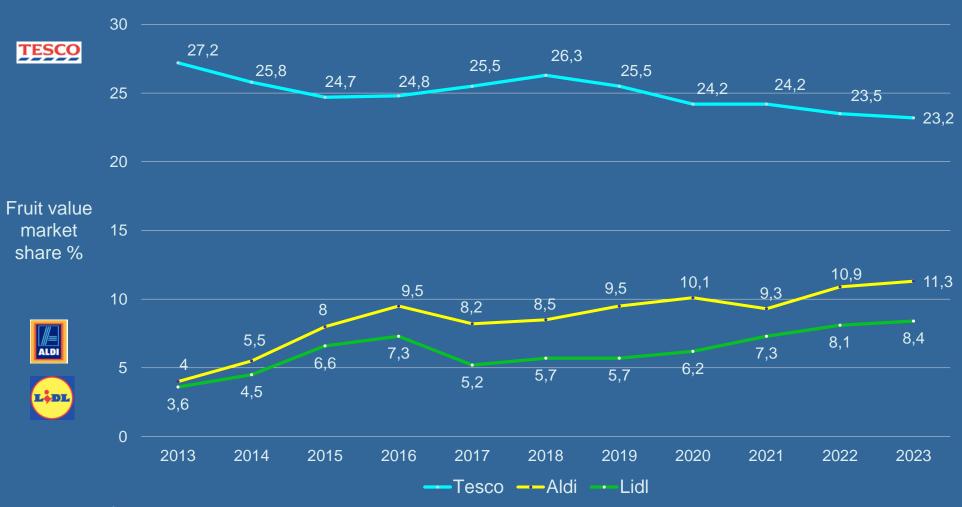
## Europe's top 10 grocery retailers: sales growth 2022-27



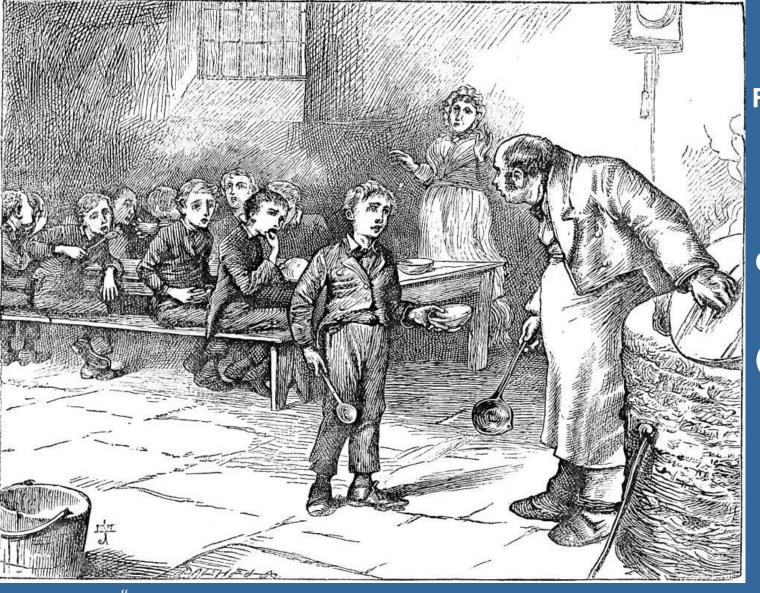




## Fresh Produce Retail Value Market Share for Tesco, Aldi & Lidl 2013-2023\*



Source: Kantar UK to w/e June 11th, 2023



Life in 2023 "Every Country": Food for "The Haves and The Have Nots"

Oliver: "Please Sir, I Want Some Fruit".

Workhouse Master: "WHAT! ......" (grudgingly) "OK but you can only have Aldi price-matched apples and, certainly, NO blueberries for you."

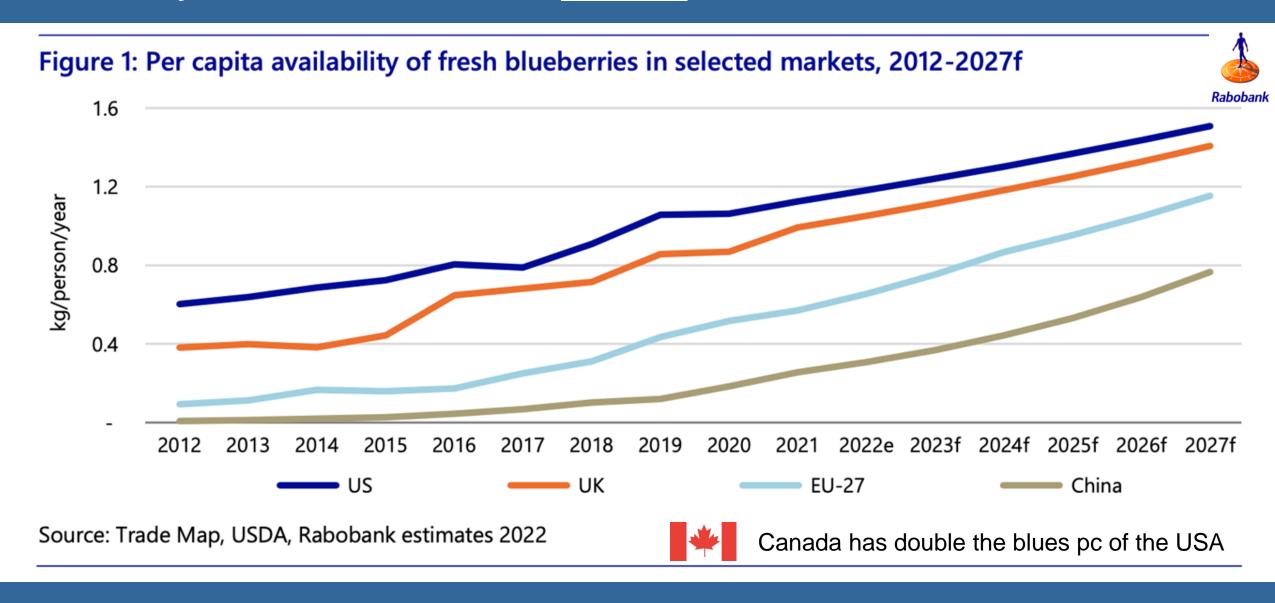
"Starvation in the Workhouse", Henry Furniss 1910
Courtesy of The Victorian Web and Apologies to Charles Dickens



Dr. Food @ProfDavidHughes

The spectre of a Dickensian workhouse Christmas beckons for income "Have Not" households. Thank goodness for chicken but what about chicken producers? £2.90/kg. in UK (\$US1.58/lb.) defies economic logic in the face of spiralling input costs. Eggs are being rationed, chicken next?

### By Most Measures, Future <u>Demand</u> for Blueberries Looks Excellent





#### Value Share of the UK Retail Fruit Bowl 2007 versus 2023



Retail Fruit Value 2007 £3,671 million	%	Retail Fruit Value 2023 £6,203 million	%
Apples	18.7	Berries	27.6
Berries	18.3	Apples	15.0
Bananas	15.7	Grapes	14.3
Citrus	14.2	Citrus	13.3
Grapes	12.5	Tropical Fruit	10.0
Tropical Fruit	9.2	Bananas	9.9
Stone Fruit	6.8	Stone Fruit	6.0
Pears	4.6	Pears	3.7

**OR** 



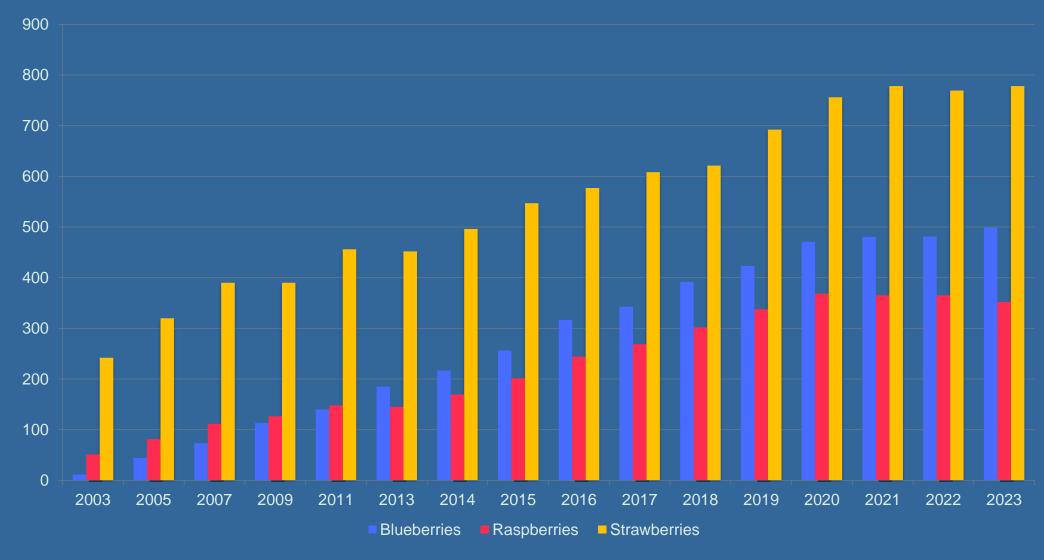
Average Weekly Household Spend £2.80

Average Weekly Household Spend £4.50

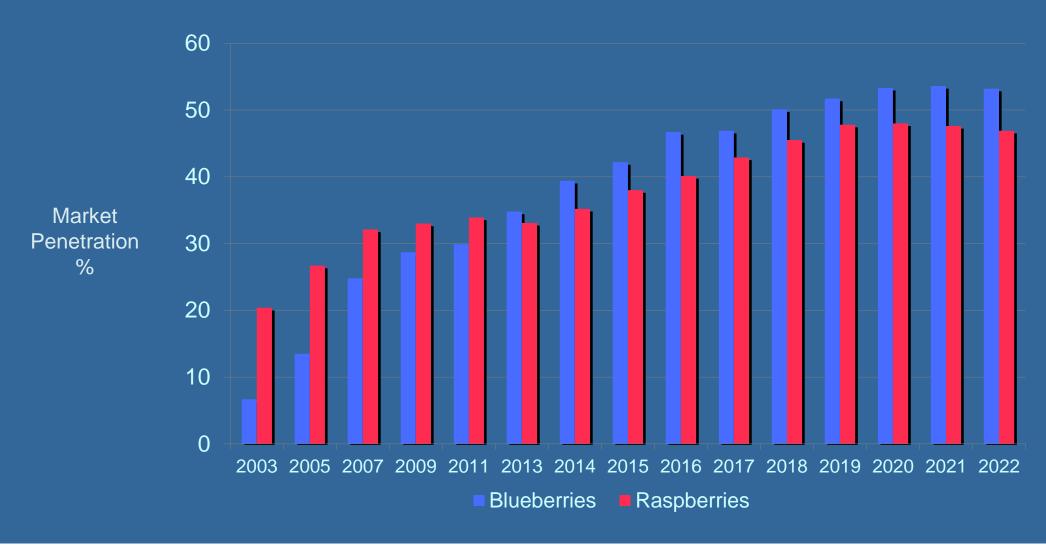
In 2023, Average Weekly Household Spend on Fresh Fruit & Veg. was £8 (\$10) - About 3 Takeaway Coffees!



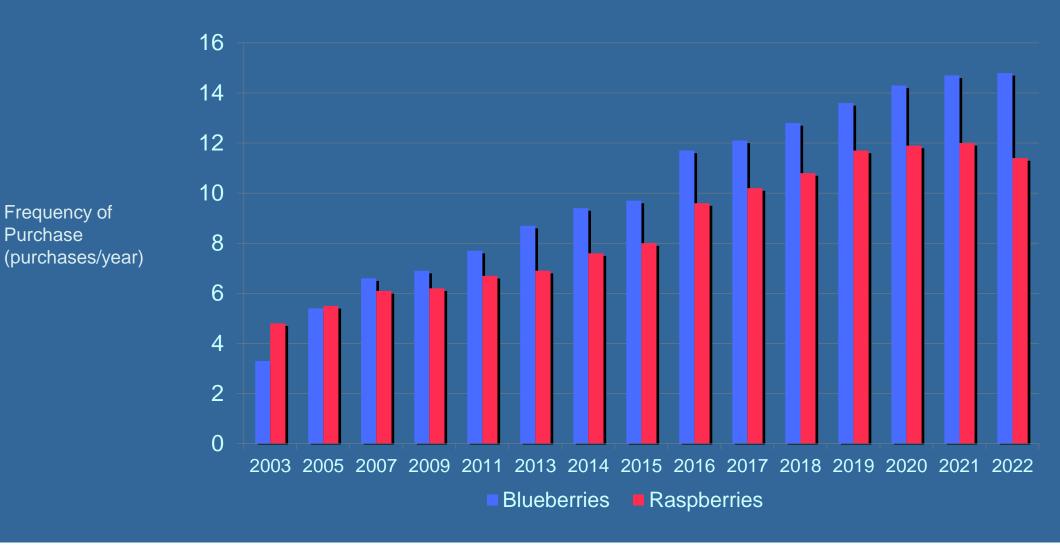
## Growth in Retail Sales of Strawberries, Blueberries & Raspberries UK Market 2003-2023, £ Million



## Growth of Blueberry and Raspberry Market Penetration UK Retail Market, 2003-2022



### Frequency of Purchase of Blueberries and Raspberries, UK Retail Market, 2003-2022



Purchase



#### Blueberries for "The Haves" and "The Have Nots"





**Tesco Blueberries 350G** 

Write a review

Rest of shelf

£2.50 £7.14/kg \$9.06



**Tesco Blueberries 250G** 

Write a review >

Rest of shelf



Offer valid for delivery from 27/06/2023 until 17/07/2023

£3.00 £12.00/kg \$9.60 **\$9 to \$22/kg range** 



**Tesco Finest Blueberries 150G Class 1** 

Write a review

Rest of shelf

£2.50 £16.67/kg \$21.17



**Tesco Organic** Blueberries 150G

Write a review >

Rest of shelf

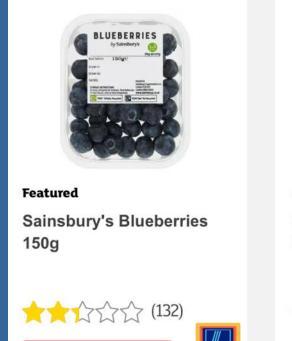
£2.60 £17.33/kg \$22.00



#### Blueberries for "The Haves" and "The Have Nots"



#### No Product Attributes Communicated on Regular "Blues". Limited on Premium "Blues"











Indicative Price range/kg: frozen blues \$8; regular \$11.40; premium \$19.40

**ALDI PRICE MATCH\*** 

£1.59 £10.60 / kg

In the UK, "Premium" Blueberries are Crisp, Plump (size) & Sweet or Hand-Picked on "Select Farms"!







#### Regular "Blues" are Just Regular!







"Have/Have Not" in USA, Too **Little or No Communication** on Fresh Blueberry Attributes

#### **Indicative Price Range/kg:**

- \$9-9.50 larger frozen packs
- \$10.26 larger pack regular
- \$23.47 small pack organic



In USA, most premium blues are private label



\$549

EBT SNAP EBT

Fresh Blueberries

18 oz 510 grms.



\$349

EBT SNAP EBT

Fresh Blueberries

1 pt 340 grms.







\$8.98/kg



\$9.50/kg

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\$399

EBT SNAP EBT

Simple Truth Organic<sup>™</sup> Fresh Blueberries

170 grms.



EBT SNAP EBT

Simple Truth Organic<sup>™</sup> Fresh Blueberries

18 oz 510 grms.

**Kroger Online** June 27<sup>th</sup>, 2023







\$7.84 16.3 ¢/oz

Great Value Blueberries, 48 oz (Frozen)





\$8.66 21.7 ¢/oz

Great Value Frozen Wild Blueberries, 40 oz





Frozen Blues in Walmart Online June 28th, 2023

The frozen blueberries provide a great "value" alternative to fresh during a cost-of-living crisis!

If you're cooking a pie or making a smoothie, why wouldn't you choose frozen?



What's More, the <u>Branded</u> Blues SHOUT about Their Health & "Green" Advantages Relative to "Ordinary Blueberries"!



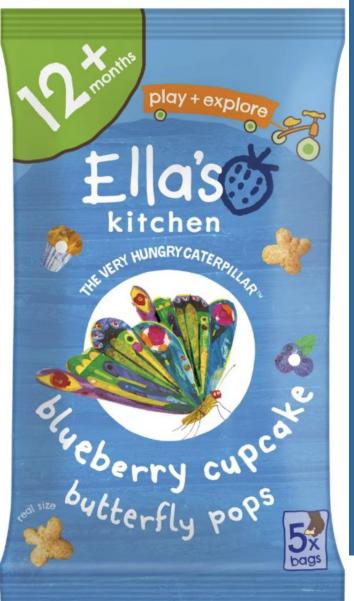




#### **INGREDIENTS**

Ingredients: Enriched flour (wheat flour, niacin, reduced iron, vitamin B1 [thiamin mononitrate], vitamin B2 [riboflavin], folic acid), corn syrup, high fructose corn syrup, dextrose, soybean and palm oil (with TBHQ for freshness), sugar, bleached wheat flour. Contains 2% or less of wheat starch, salt, dried blueberries, dried grapes, leavening (baking soda, sodium acid pyrophosphate, monocalcium phosphate), dried apples, citric acid, modified wheat starch, gelatin, yellow corn flour, natural and artificial flavor, xanthan gum, soy lecithin, caramel color, cornstarch, turmeric extract color, red 40, blue 2, blue 1, color added.

Processed Food with "blueberry ingredients" (<2%!)
Ride on the Coat-Tails of Your Health Credentials
(which you are too shy to talk about!)



#### ingredients

and loads more good stuff...

Organic maize flour 67% | Organic rice flour 12% | Organic vegetable oil (sunflower, rapeseed) 10% | Organic dried bananas 4% | Organic quinoa flour 3% | Organic dried blueberries 2% | Organic dried apples 2% | Natural flavouring\* <1% | Natural vanilla flavouring\* <0.1% | Thiamin (Vitamin B1)\* <0.1% | Other stuff 0% I may contain gluten, milk + soya

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#### Average Retail Price for Fresh Strawberries, Blueberries & Raspberries in UK 2012-2023\* (£/kg)





For 10+ Years, Retail Blueberry & Raspberry Prices have been as Flat as Pancakes! However, UK Field Labour & Other Key Costs have Increased by over 50%.

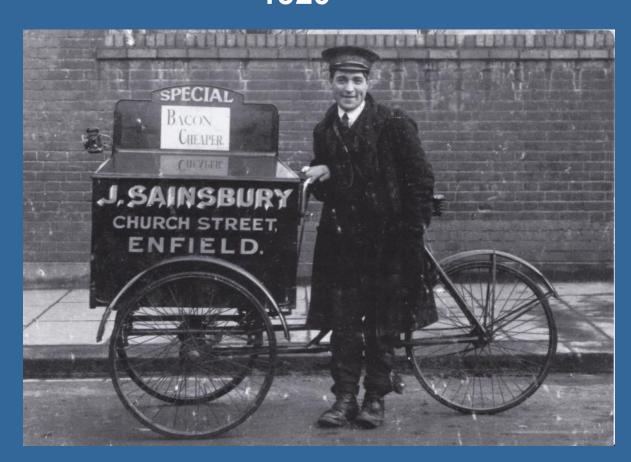


**Over-Cooked Global Supply?** 



# The Wheel of Grocery Retailing Continues to Turn! 1920 2020s







Online Shopping Behaviour Different to In-Store? More Likely to Repeat Purchase and Less Likely to Browse. Not Exposed to the Theatre that Fresh Fruit Merchandising can Create which Encourages Impulse Purchases

















#### Emerging, and Sometimes Stumbling, New Routes to the Food & Drink Consumer

Delivering: Restaurant Meals, Groceries and More





**Meal Kits and "Ready Meals"** 



freshprep









"Super Fast" Guys











HelloFresh achieved new quarterly revenue high of \$3bn in 1st Q 2023

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## A brand that delivers









Offset Guilt of Cookies with Innocence of Blues!













Our cult brand meaningfully connects with a highly attractive demographic through delicious, craveable and creative products

Our digital ecosystem powers our brand and delivery core competency allowing us to reach 100+ million with warm, delicious cookies Our best-in-class unit economics provide the blueprint for efficiently scaling our business throughout the US and beyond

~50% 18-24 Age ~80% Sales after dark ~50% Digital Revenue 30 minutes or less

~1 Yr Payback

~30% 4-wall Margin

KRISPY KREME INVESTOR DAY

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#### **Distillation of 2023 Global Consumer Trends**

- Budgeteers Redefining Value: affordable & healthy supportive of "my values"
- "Unpuzzle" Health: Adding Positives Rather Than Just Removing Negatives
- Transparency Traceability Sustainability Authenticity
- Eco-economy (on food waste, plastic, energy, water, etc.) Positively Imperfect
- Consolidation of Hybrid Working (negative impact on food service)
- Quick Quality and Convenience
- Here and Now Revenge Spending (guilt-free indulgence)
- Trusted Traditional ..... but Excite Me!
- Generational Push looking after Digital Natives Gen. Z (on issues & digital)
- Simplified Plant-Based (i.e. NOT multi-ingredient, over-processed fake meat!)



### **Consumers seek moments of happiness**

are seeking everyday moments of happiness they can enjoy

are choosing smaller everyday treats to consume

3 in 5 say snacking boosts their emotional wellbeing



Source: Innova Consumer Trends 2023 Report - Balancing Priorities, Innova Snacking & Healthy Snacking Survey 2023







#### Changing attitudes to health

2 in 5

Consumers say the desire to 'feel well' has driven them to seek a healthier lifestyle

61%

Say healthier living means following a healthy, nutritious diet



Younger groups more likely to use food for positive health and mental wellbeing



Source: Innova Consumer Trends 2023 Report - Balancing Priorities

8



Top-Tier Considerations When Choosing Which Food and Beverage Products to Buy

The Hartman Group's Brand Ambition: Food and Beverage Private Brands & Beyond report finds that consumers consider **taste**, **price and quality** as the first-tier criteria when choosing which foods and beverages to buy.

#### **Top Five Selection Drivers**

(Among Category buyers, Average across 8 profiled categories)







Low price



On sale or in promotion



32%

**Brand I love** 



To choose a product, consumers want to know how it will satisfy taste expectations, whether it is offered at an acceptable price point, the product makeup and provenance.

Brand plays a supporting role, often standing in for a constellation of properties consumers seek, including distinctive taste experiences.



Source:
Brand Ambition: Food and Beverage Private Brands & Beyond report



#### And don't forget:

- Convenience
- Health (if I remember)
- Values-related issues (when they're affordable)

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## On the Rebranding of Driscoll's Berries August 2016

#### **An Interview with Soren Bjorn:**

"We interviewed consumers all over the world and what we wanted was to find out from them if there was anything special about berries. ..... What came back was surprising .. you couldn't tell where the consumer was – you would literally have a consumer in Shanghai writing about berries and you couldn't tell that it wasn't somebody from Bondi (Australia), Amsterdam or New York. Most associations with berries had to do with Summer, joy and bringing people together. Berries make people feel happy!".

#### Comment:

As a relatively new fruit in many markets, blueberries are MUCH LESS seasonal in demand and, so, don't share that "best in Summer" perception that strawberries do. Also, blueberries substantially outperform other berries on perceived health benefits. YET, they carry the same fun loving/friends together aura that other berries do. Brilliant!



#### **Attributes of "Sweetest Batch":**

- Deep blue colour
- Crisp with a "pop"
- Perfectly snackable size
- Well-rounded aroma
- Extra sweet flavor
- Family and fun

Pre-Covid Launch (later-2019).
Now, Family Health Benefits
would have Higher Profile?
For Sure. Certainly in China.

#### In the USA, Academic Research Indicates the Following Preferred Attributes of Blueberries\*:





- Juiciness
- Sweetness for some, tartness for others
- Intense blueberry flavour
- Texture crisp (not mushy)

Demographic Profile of "Heavier" Purchasers in USA\*\*:

- Older (50+ yrs.) driven by health concerns
- Higher income
- White and Hispanic
- 2+ children in family

Blueberry health benefits are many: positive but complicates messaging!

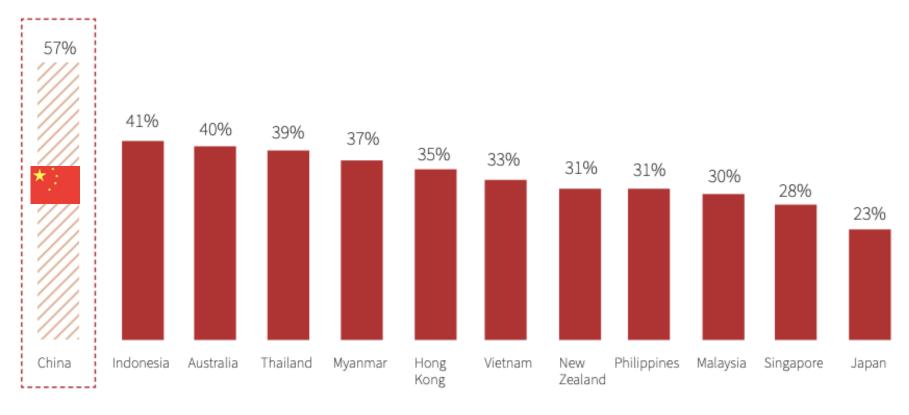
Specific Health Concerns Should be Addressed to Specific Consumers:

- Skin health (ALL women)
- Eye health
- Lowering blood pressure/heart concerns
- Managing diabetes
- Cancer risk reduction
- Weight loss
- Healthy digestion
- Improving mental health



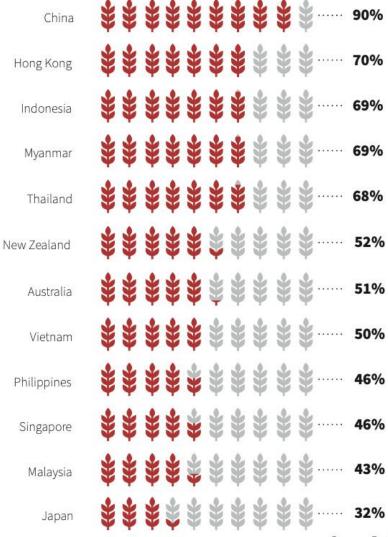
### More than half of Chinese consumers check a product's nutritional values and potential impact on health before making a purchase

% of people who chose to check nutritional values and potential impact on health



Source: PwC Survey 2020

#### Consumers likely to pay a premium for better quality healthier food in the next 12 months



Source: PwC Survey 2020

And, in Some Markets, "The Haves" will have Ability & Willingness to Pay. Mind you, it would be VERY Helpful if We Told Them Why Our Products Deserved a Substantial Premium Other than being Just Pricier!

Don't be Shy about Promoting the Many Attributes of Fresh Blueberries.





<sup>11</sup> International Diabetes Federation. (2019). IDF Diabetes Atlas.

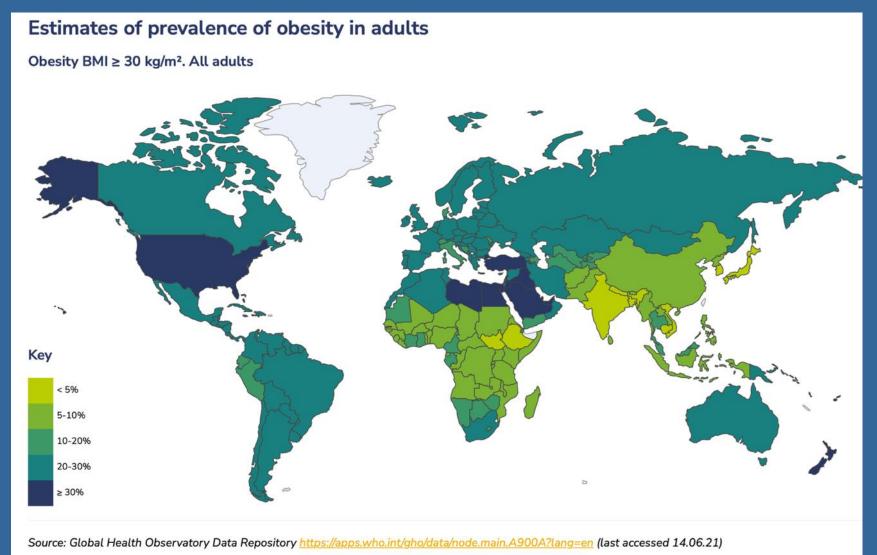
<sup>12</sup> OECD. (2020). OECD-FAO Agricultural Outlook 2020-2029. OECD

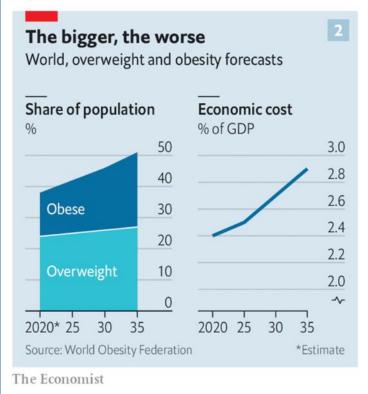
<sup>13</sup> Pisuthipan, A. (2019). The problem of Thailand's sweet tooth. Bangkok Post

<sup>&</sup>lt;sup>14</sup> Ministry of Health. (2019). MOH TO INTRODUCE MEASURES TO REDUCE SUGAR INTAKE FROM PRE-PACKAGED SUGAR-SWEETENED BEVERAGES; Khalik, S. (2019) War on diabetes: Unhealthy label for high-sugar drinks, total ban on ads to be introduced in Singapore. The Straits Times

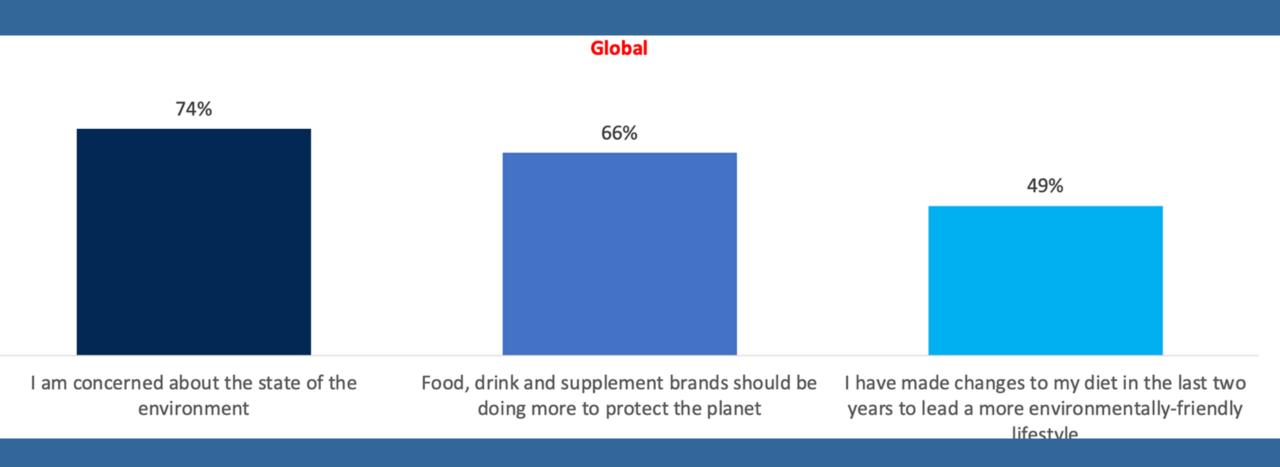


## THE POWER IS ON YOUR PLATE





#### The proportion of consumers who say the following.











# LE B.A.BA du mieux MANGER





### Carrefour and Colruyt Introducing Nutri-Scores On Private Label Products



**How Would** 



Score?

**Brilliantly!** 





- The majority of Nestlé's traditional food and drinks do not meet a "recognised definition of health."
- Just 37% of its consumer food and beverage products meet international health standards.
- The global food company acknowledged the issue in an internal presentation seen by the Financial Times.



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#### Don't Be Shy: Shout About Your Product's Health Benefits!













Fresh Produce with Immunity Benefits But Too Shy to Make Claims

# Chobani doubles down on probiotics as consumers seek immunity-boosting products December 15th, 2020

The dairy giant is debuting a line of yogurt cups and drinks that spotlight the microorganisms, as well as an extension geared toward children.













Cheat death.

The antioxidant power of pomegranate juice:

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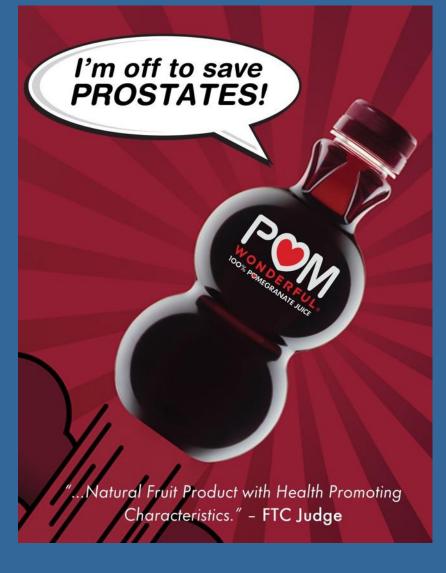
POM Wonderful. The Antioxidant Superpower.



# Life support.

The antioxidant power of pomegranate juice:





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The A to Z of economics Economic terms explained to you in plain English



The Intelligence
Our daily podcast considers unrest in Sudan











# The super simple superfood





### Shanghai Filmgoers Enjoy New Blue Pop Movie Snack with Blueberries from Chile January 28th, 2019

















#### And Eco-Scores are Next Up!

LIDL TO HELP CONSUMERS GO GREENER WITH NEW ECO-SCORE TRIAL IN SCOTLAND





What will be Your Enviro-Score?









02 Feb 2023 --- A myriad of so-called eco-labels are being rolled out across various F&B products, but with no gold standard or strict rules governing precisely what the logos mean and what methodology is behind them, concerns are growing that they will confuse consumers and ultimately be counterproductive.





### Fresh Del Monte Produce announces launch of carbon neutral pineapples



December 6<sup>th</sup>, 2022











**July 9th 2021** 

#### SIIM hails Zero Carbon pineapple

French importer SIIM has announced the first 'Zero Carbon' pineapple, from its plantations in Ecuador to its Rungis facility in France



rench importer SIIM, a subsidiary of Omer-Decugis & Cie, has announced the world's first 'Zero Carbon' pineapple.

By measuring and offsetting the carbon emissions from its plantations in Santo Domingo, Ecuador, to its platform in Rungis International Market in Paris, the Terrasol pineapple has been certified as carbon neutral by TUV Rheinland in the first half of 2021.



Source: Del Monte

It is a new product line extension from the Del Monte Gold, HoneyGlow and Del Monte 'The Original' pineapple varieties, grown in Costa Rica

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#### PepsiCo's Net Water **Positive Vision**

Reduce Use + Replenish More



#### **Efficiency**

Achieve best-in-class<sup>1</sup> or world-class<sup>2</sup> water-use standards t all company-owned and third-party facilities by 2030

Over 11 billion liters of water a year avoided 50% reduction<sup>4</sup>

Nearly half



#### Replenishment

Replenish more than 100% of water used at all high-water-risk sites by 2030



#### Safe Water Access

Provide 100 million people with safe water access by 2030



#### Alliance for Water Stewardship Standard

Adopt in high-water-risk areas where PepsiCo operates by 2025





We're crafting the foods + beverages you love with less water than ever.





#### Have a paper-wrapped break with *KitKat*January 11th, 2023





So, What Took You So Long?!

Smarties becomes the first global confectionery brand to switch to recyclable paper packaging

**January 26th, 2021** 

### Mars bar plastic wrapper swapped for paper May 2023

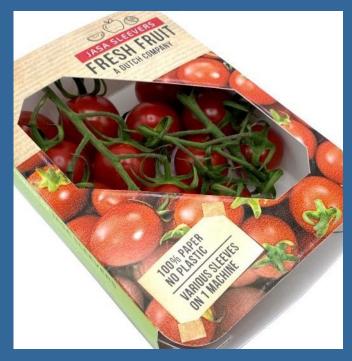


Mondelēz's Cadbury chooses recycled plastic over paper for new Dairy Milk chocolate wrappers

September 20th, 2021







Cardboard Recyclable



FSC-certified Compostable Recyclable



Recycle with Paper



Recycled PET reduces CO2 Footprint



Home Compostable Film





#### "How'd You Like Your Blueberries?" "With Adjectives, Please"!

- Jumbo
- Varietal name
- Brand name
- Local
- Sweet or Tart
- Provenance
- Antioxidant-rich
- Organic
- Pesticide-free
- Carbon-zero
- Hand-picked
- Biodegradable (packaging)
- Cheap! (many of the income "Have Nots")

The adjectives should be important to YOUR target market customer and most powerful if unique to your product.

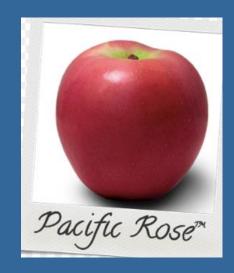
























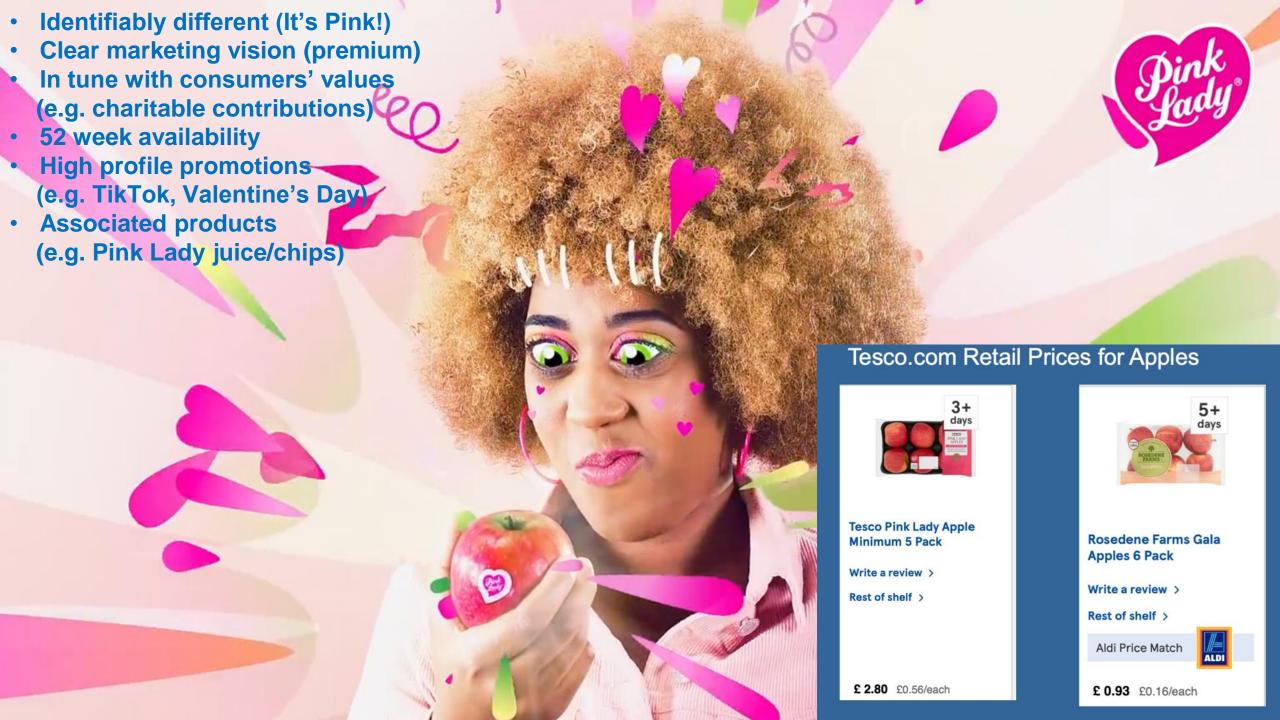






#### Best in Class:

- R&D partnership with PFR to produce unique varieties that appeal to consumers
- Brand development globally
- Consumer focus on health in Asia
- Supply chain management excellence
- 52 week availability



#### Jazz apples partner with DreamWorks Animation's new movie

April 13, 2021



Jazz apples are part of an exclusive new partnership with the new DreamWorks Animation movie, Spirit Untamed.

The movie, which arrives in theaters June 4, 2021, is the next chapter in DreamWorks Animation's franchise that began with the 2002 Oscar-nominated movie Spirit: Stallion of the Cimarron and includes an Emmy-winning TV series.

Apples are core to the story narrative of Spirit Untamed, which will hopefully encourage children and families to eat more healthy produce. With retail partners nationwide this spring, Jazz apples will promote the movie with custom package artwork that depicts two of the movie's heroes: Lucky, a headstrong girl, and the wild stallion Spirit, whom she befriends. In the artwork, Lucky rides a galloping Spirit while holding an apple.



















Marks & Spencer online: Cotton Candy \$10/kg Green seedless \$4.75/kg

> Imperial College London



# Coca-Cola takes Minute Maid into fresh fruits with Frutura licencing deal April 20th, 2023





The agreement also includes Coca-Cola's Simply brand and covers the US and Japan.

Both brands will be "exclusively deployed" by Frutura company Dayka & Hackett (D&H). Founded in 2005, D&H imports, sells and markets table grapes, citrus, stone fruit, mangos and avocados to US retailers.

Under the deal, Minute Maid and Simply will no longer be confined to the beverage category; the brands will be found in the produce aisle on fresh citrus and grape products. The Simply brand is entering the produce category as Simply Select with D&H citrus in the US. Minute Maid will be used on D&H grapes in the US and D&H fresh citrus and grapes in Japan.





The

Trust

Report

2022

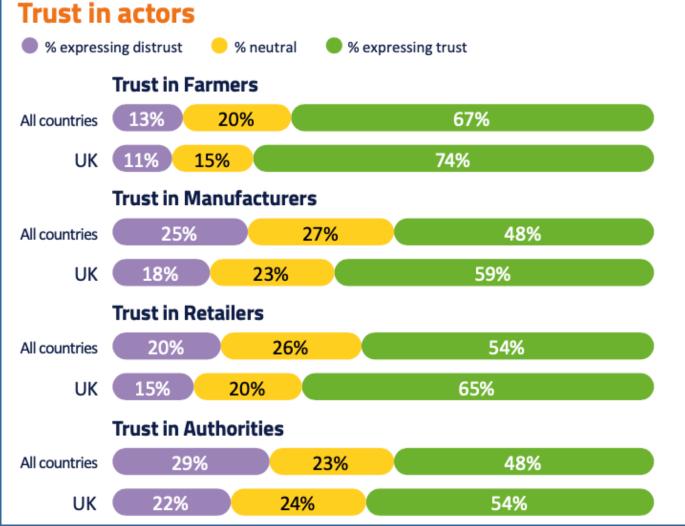
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#### Who Do Consumers Trust Most When Thinking About Their Food Across Europe?



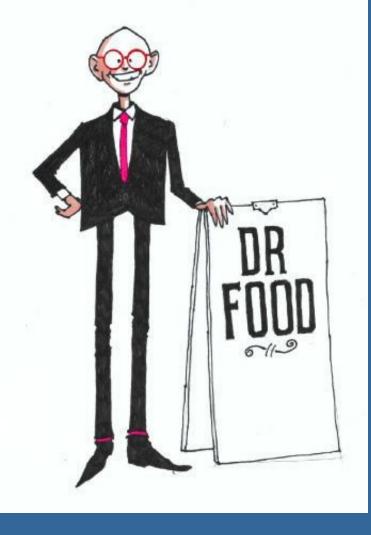








**UK and EU Consumers Trust Farmers More than Other Actors in the Food Industry.** 



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