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Some Food Industry Trends and Their Implications for UK Horticulture

Dr. David Hughes
Emeritus Professor of Food Marketing

West Sussex Growers' Association Autumn Dinner

The Vicars' Hall, Chichester, Sussex UK

Friday, 29th November, 2019



@profdavidhughes

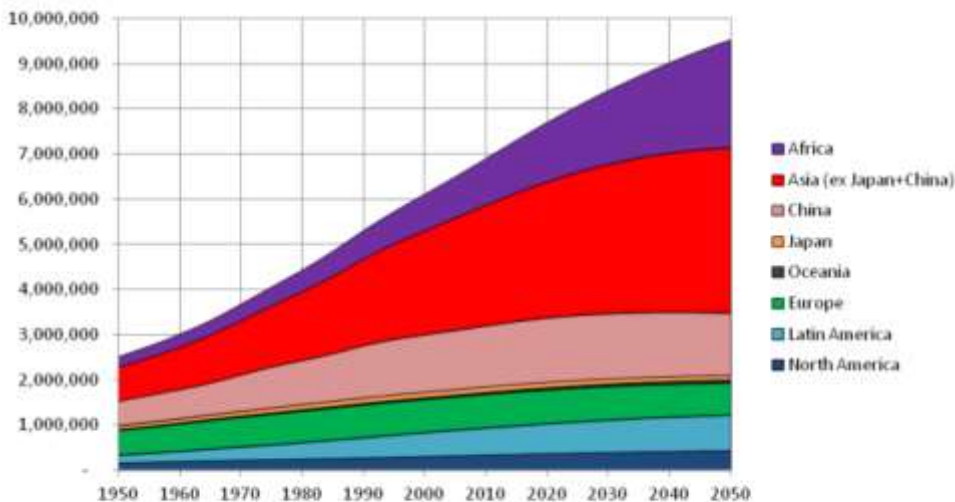
www.supermarketsinyourpocket.com



Heading for 10 Billion by 2050!

World Population

Source: UN



We're Adding 2 Billion
By 2050. Evenly Spread?

Africa population to double

1.5 Bn. Hindu or Muslim

Africa & Asia pop. by far
the majority in 2030

USCM pop. to increase
by 100+ Million by 2050
**whereas (EU incl. UK)
to decline by 20 Million**

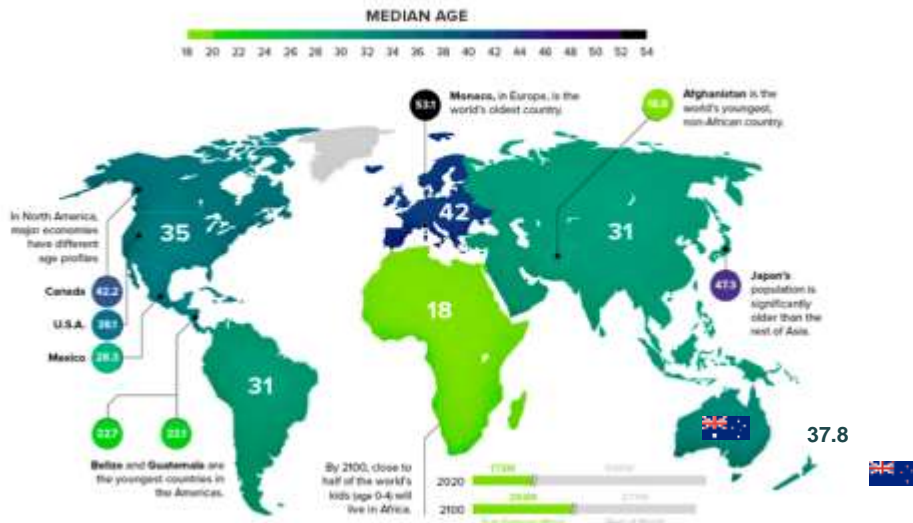
Population of UK 2019?
What about in 2050?

Graphic: deconstructinguk.com

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THE MEDIAN AGE OF CONTINENTS

Africa has the world's youngest population, with a median age in the teens

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Annual Letter

BY BILL & MELINDA GATES



SURPRISE #3

**We will build
an entire New
York City every
month...**



...for 40 years! The world's building stock will double by 2060.

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Number of Brits eating roast dinners alone increases by 5%

August 17th, 2019

Men over the age of 55 are the driving force behind the trend



The “Sorrowful Sad Bastard Meal for One” Is Firmly On-Trend in The UK!

But, 1 and 2 Person Households Can't Spell the word “ingredient”. They seek Snack and Mini-meal Solutions – Food-to-Go.

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Solo Karaoke-ing It's a Slippery Slope!



- East Asia's number of single households is rising faster than many other regions
- Growing interest in Japanese Dohorisama style cultures (“doing it alone”) driving demand for solo activities
 - Services capitalizing on this – foodservice for one, solo gyms
- M-Bar karaoke boxes cater to single consumers
 - Start-up based in China, expanding into Asia
 - Low cost ‘snacking’ on karaoke

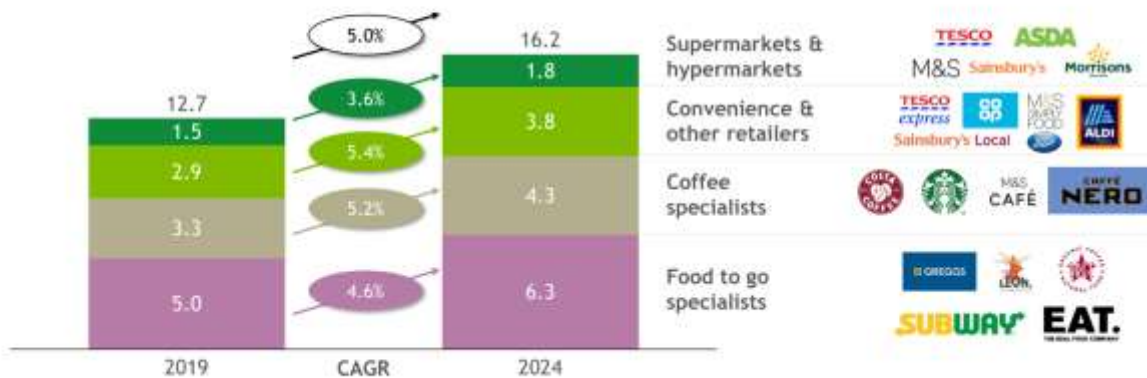
EUROMONITOR
INTERNATIONAL

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FOOD TO GO MARKET – DIVERSE, ATTRACTIVE, GROWING



Food to Go market size, by channel: 2019-2024 (RSP, £bn)



Source: IGD UK Food-to-Go 2019, Market landscape and future growth outlook; excludes QSR channel where we have no presence currently

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Ocado invests £17m in 'vertical' farms

June 11th, 2019



Establishing "Farms"
In/Next To RDCs

Kroger to offer in-store living
produce farms November 2019



M&S joins forces with Infarm to bring urban farming to
its stores September 17th, 2019

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London, UK



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Plenty
Inside Plenty, a Silicon Valley-based urban farming startup that scored the largest ag-tech investment in history.

- In the largest agriculture-tech funding round in history, vertical farming startup Plenty attracted \$US200 million
- Plenty will use the investment to build more farms around the world
- Some experts say the investment could make the indoor farming industry more viable as a whole



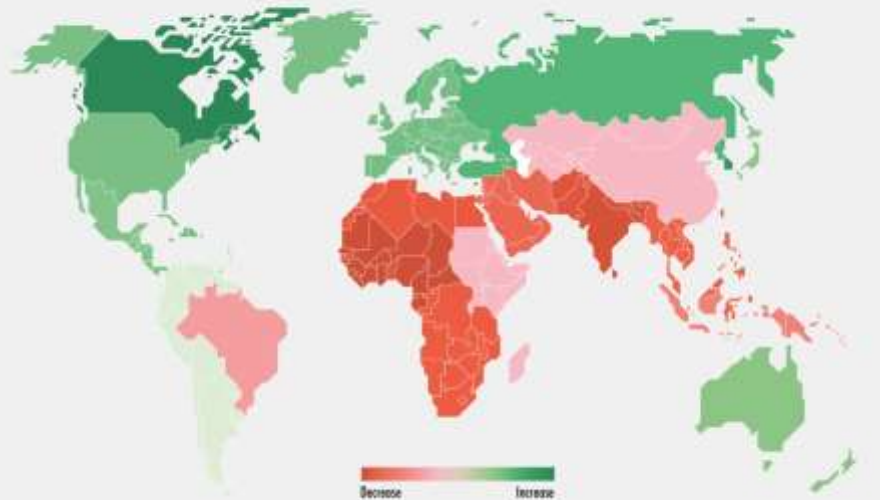
Urban Farming Attracts
The World's Wealthiest
Investors



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CHANGES IN AGRICULTURAL PRODUCTION IN 2050: CLIMATE CHANGE RELATIVE TO THE BASELINE



Dr. Food @ProfDavidHughes

Climate change-induced declines in agricultural production forecasted for Africa & much of Asia by 2050 (FAO). Hmm, those are the same regions which will see the lion's share of the anticipated 2 bn. extra people in our world by then! Good news for some big commodity exporters.

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This Picture MUST Change Over The Next 20 Years

Maize yield, tonnes per hectare



Lead Stories on Agriculture
Becoming Increasingly Common
In the International Media

**'Not enough pork in the world' to deal
with China's demand for meat**

With hundreds of millions of pigs dead from swine fever, pig farmers are struggling to fill the gap. Pork prices are rising.

The Guardian

Bureaucratic herbicide

India's farmers must be warned, says a report. The report says that the use of herbicides in India is increasing rapidly, and that this is leading to a loss of biodiversity and soil fertility. It also says that the government should take steps to regulate the use of herbicides and to protect the environment.



The New York Times



The
Economist

September 27th, 2019

The New York Times

October 3rd, 2019

The Notion of "Climate-Friendly Diets" Is Gaining Substantial Traction. Just Ask Your Children/Grandchildren!

Surely, There's a Global Opportunity to Position F&V as Quintessential Climate-Friendly Products?



Global "Climate Change Strikes"
Friday, September 20th, 2019

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UEA students ban beef from union outlets November 13th, 2019



The University of East Anglia has become the latest UK educational institution to ban the sale of beef from its student union outlets in a bid to become more environmentally friendly.

Goldsmiths bans beef from university cafes to tackle climate crisis August 12th, 2019



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This Lot are a Nightmare



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Frantic Plant-Based
Activity in the World
of Fast Food in 2019





Vegan Beyond Burger Launches in 1,000 Carl's Jr. Restaurants Across The US

The patty is part of a veganizable sandwich featuring cheese, lettuce, tomato, sliced onion, dill pickle, special sauce, and mayonnaise



January 2nd, 2019

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Dr. Food @ProfDavidHughes

In Alberta, Canada last week. Beyond Meat plant-based burgers sold out in A&W outlets & in Whole Foods supermarkets. Got one in Red Deer: looks/tastes like a decent regular burger although the "meat patty" is a little softer than the real thing. @ £4, 15% price premium over beef.

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MCDONALD'S LAUNCHES MEATY 'BIG VEGAN' BURGER

April 27th, 2019

McDonald's Germany is adding a vegan burger to the menu, featuring Nestlé's meat-like Garden of Eatin' "Incredible Burger".



McDonald's Germany is introducing a vegan burger.




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September 26th, 2019



McDonald's tests plant-based burger in Canada

The "P.L.T." sandwich will be tested in Southwestern Ontario



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IMPOSSIBLE[™] WHOPPER[®]

Launching nationally in USA
May 31st, 2019



And, like all other Impossible Foods products, the Impossible Whopper is made from a blend of plant-based ingredients. Impossible is a trademark of Impossible Foods Inc. © 2019 Impossible Foods Inc. All rights reserved.

The Rebel Whopper: Burger King and Unilever's The Vegetarian Butcher unveil plant-based burger across Europe

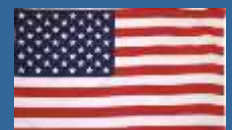
November 12th, 2019



12 Nov 2019 --- Burger King is strengthening its foothold in the booming market for plant-based foods served in restaurant chains by partnering with Unilever's The Vegetarian Butcher on the launch of its Rebel Whopper. The fast food giant is rolling out the meat-free version in over 2,500 Burger King restaurants across 25 countries in Europe. Financial terms of the deal have not been disclosed.



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August 27th, 2019



KFC tests plant-based chicken in partnership with Beyond Meat

KFC has teamed up with meat substitute company Beyond Meat to trial a new plant-based chicken, available as both nuggets and boneless wings.

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NEW MEATY VEGAN GARLIC WRAPS LAUNCH AT SUBWAY



Subway UK has introduced vegan Signature Wraps



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McDonald's joins the Veganuary craze by offering its first ever vegetarian Happy Meal for children

January 3rd, 2019

- The new Happy Meal features a breaded red pesto goujon wrap instead of meat
- A similar wrap will also be available on the adult menu as a Spicy Veggie Wrap
- The meals were created with the help of campaign group the Vegetarian Society



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Pizza Hut is testing plant-based 'Incogmeato' sausage toppings and round boxes

October 22nd, 2019

'Incogmeato?' Kellogg is the latest to introduce plant-based burger

September 6th, 2019

**"Pulled Jackfruit"
Copying "Pulled Pork"**



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Unilever, Owner of “The Vegetarian Butcher”, Announces a £8 million Spend to Support the Marketing Programme for the Launch of New Products in The UK Alone!

Unilever buys meat-free food company The Vegetarian Butcher December 19th, 2018

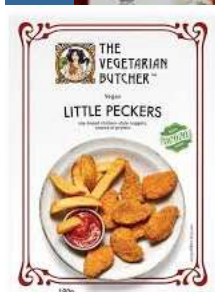
Acquisition of Dutch brand highlights scramble to tap into meat substitutes market



Dr. Food @ProfDavidHughes

Fresh meat cos. are “supply push”, plant-based protein cos. are “demand pull”. In last 5 weeks, 4 of page 1 ads. in The Grocer have been for plant-based products. This week Unilever's The Veggie Butcher promises £8m. promo. campaign. For meat “to fight back” be consumer-focussed!

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And the Products
Are Irritatingly Cool!

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September, 2019

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ITV and Veg Power launch
campaign to get kids eating
vegetables after 'adults
failed'

January 25th, 20019

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UK: "Wicked" chef creates plant-based dishes for new Tesco meal range



One of the 20 new vegan dishes in the Wicked Kitchen range is 'Tartar' head-on which contains mushrooms and other vegetables

It's Much Easier and More Exciting to be a Vegetarian in the UK NOW than in the 1970s!

Tesco to launch 'affordable' plant-based range into meat aisles

September 23rd, 2019

TESCO'S NEW PLANT CHEF IS A VEGAN RANGE FOR FAMILIES



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Tesco doubles Wicked Kitchen range to include 26 brand new vegan products October, 2018



EAT IN COLOUR



DRESS, SHAKE & ENJOY



BOL SALAD JARS

#SHAKEITTOGETHER

BOL

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So is this good news for all produce categories?

Some vegetables are more reliant on meat than others...

More likely to be eaten in **meat free** meals



Combined growth +5%

More likely to be eaten in **protein** meals



Combined decline -1%

KANTAR

Kantar, Marketpanel Division / Usage / Meat consumption / Total vegetable growth Q3 vs August 2018 vs August 2015

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Rethinking Protein

Unleashing the Potential of Canadian Crops

What is Protein Industries Canada?

Protein Industries Canada (PIC) is an industry-led value chain consortium of small to large-sized enterprises involved in food and food ingredient manufacturing, agriculture and food-related services, research and development, technology, economic development, finance and investment, education and training.

PIC is a not-for-profit corporation guided by a board comprising industry leaders and supported by Ag West 500 and regional partners.



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The shoppers of the future have five key features How are they relevant in your world...?



Source: IGD UK, 2019

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Snackified Eating



Traditional eating patterns built around three "square," structured meals a day has given way to modern eating styles. 50% of all eating occasions are now snacks.



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Qukes by Perfection Promoted Via Social Media and 30 Seconds TV Slot



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Is Your Product Snackable? (Be it on your own head if NOT!)



August, 2019

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Snack Lettuce © wins Innovation and Entrepreneurship Award at Fruit Attraction



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Chilean Blueberry Invasion Reaches Chinese Cinemas as 'Blue Pop'



February 6th, 2019

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Value Share of the UK Retail Fruit Bowl 2007 versus 2019

Retail Fruit Value 2007 £3,671 million		% of Total	Retail Fruit Value* 2019 £5,816 million	
Apples	18.7	Berries	25.8**	
Berries	18.3	Apples	15.7	
Bananas	15.7	Citrus	14.2	
Citrus	14.2	Grapes	13.8	
Grapes	12.5	Bananas	10.3	
Tropical Fruit	9.2	Tropical Fruit	9.9	
Stone Fruit	6.8	Stone Fruit	6.7	
Pears	4.6	Pears	3.6	
Average Weekly Household Spend £2.81		Average Weekly Household Spend £4.00		

Source: Kantar Worldpanel, UK

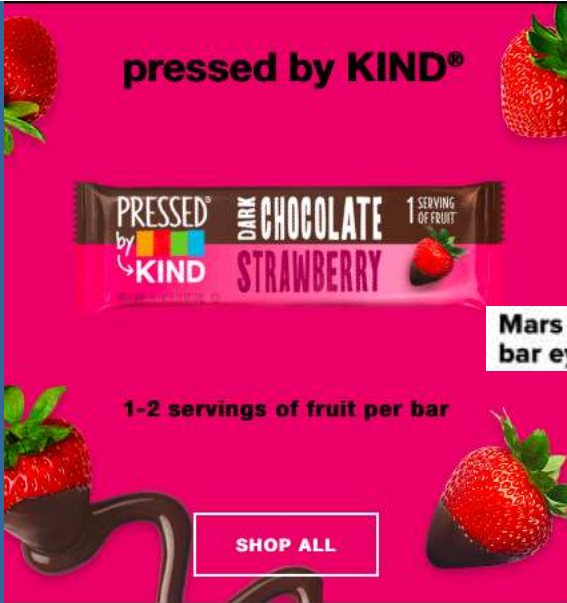
• * Does not include cut fruit £420 million 2018

• ** 19.6% of total retail fruit spend in USA

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pressed by KIND®

PRESSED by KIND DARK CHOCOLATE STRAWBERRY

1 SERVING OF FRUIT

1-2 servings of fruit per bar

SHOP ALL

Mars takes stake in Kind Bar as nut bar eyes international growth

Daniel Lubetzky, founder and CEO of KIND, is on a mission to make the world a little kinder one snack and act at a time. Maker of delicious and nutritious foods, KIND created a new healthy snacking category with the introduction of its first fruit & nut bars in 2004.

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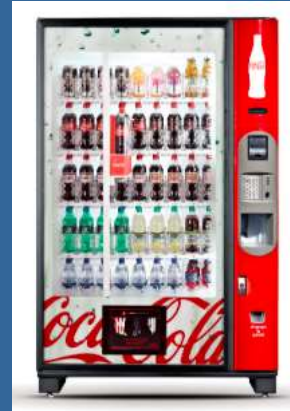
From smoothies to snacks: PepsiCo launches Naked fruit, nut and veggie bars

February 2018



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PepsiCo to Launch Hello Goodness Healthy Vending Machines



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Canada's
food guide

Eat well. Live well.

Eat a variety of healthy foods each day

Have plenty
of vegetables
and fruits

Eat protein
foods

Make water
your drink
of choice.

Choose
whole grain
foods

Discover your food guide at
Canada.ca/FoodGuide

Health
Canada

Canada



The Livestock & Meat Guys
NOT Well-Pleased with
Canada's New Food Guide!
But Fruit & Veggie Folk are
Ecstatic!

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KANTAR W^{ORLD}PANEL

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Nestle to adopt Nutri-Score labelling scheme in five European countries

November 26th, 2019



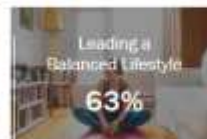
Ingredients:
Tomatoes

**Put The Nutri-Score Label
On EVERY Fresh F&V Pack!**

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Food products will be tailored to personal priorities

Different lifestyle
approaches to health
and wellness...



... may lead to
different personal
nutrition needs and
wants ...

Digestive Health
Energy / Fuel
Muscle Building
Performance

Weight Control
Hunger Control
Skin / Beauty
Anti-Aging

Purity
Digestive Health
Stress Reduction
Sleep Enhancement

Heart Health
Disease Prevention
Allergen Free
Immunity Building

... and different
solutions



ATKearney

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Professor Chris Tomazou's DNA Nudge device uses Smartphone technology to advise consumers whether particular food products are healthy for them or not.



A screenshot showing 'green' and 'red' items in shopping basket

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Actimel rolls out cultured shots containing fruit and veg

August 14th, 2019



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And, Then There's The Business of Cannabis*!



Apart from Excellent Market Prospects, Cannabis Businesses Will Compete Directly For High Value Hort. Trained//Experienced Labour

*Hemp Emerges as the Quintessential 21st Century Sustainable Crop?

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AB InBev and Tilray invest \$100M to study cannabis-based drinks

December 20th, 2018



Cannabis-Infused Ice Teas

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Canadian cannabis giant eyes Europe with Bridge Farm deal

July 12th, 2019



A flower supplier chaired by Morrisons chairman Andy Higginson has been bought by a Canadian cannabis giant as it looks at European expansion.

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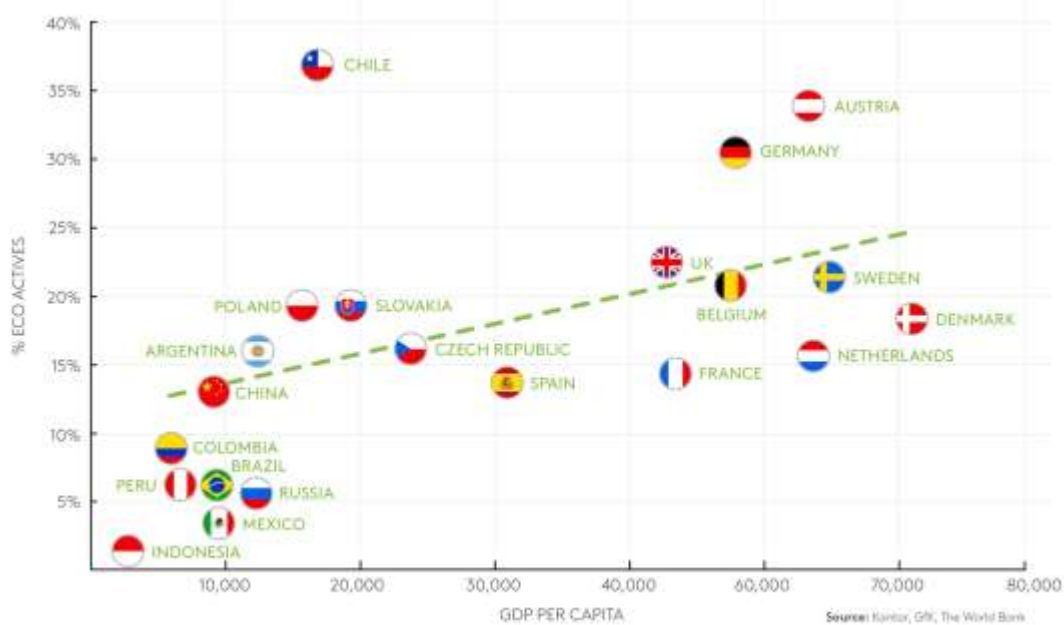
The shoppers of the future have five key features



These Features are As Relevant in Emerging Markets as They Are in Mature Economies Like Oz



The Link Between Eco-Active Consumers and Per Capita Income: "The Rich Can Afford to be Green"!



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SOY SCORECARD

Assessing the use of responsible soy in animal products

[CHECK THE SCORES](#)
[ANALYSIS](#)
[RECOMMENDATIONS](#)
[WHY A SCORECARD?](#)
[METHODOLOGY](#)

DO YOU REALLY KNOW WHAT'S BEHIND THE MEAT, EGGS AND CHEESE YOU EAT?

Most soy is grown in South America, where too often it comes at the expense of amazing natural ecosystems that are home to spectacular wildlife like jaguars and giant anteaters.

WWF has scored 133 companies on their use of responsible soy, grown without damaging the environment and harming people. The results show that many of these companies are doing far too little to protect irreplaceable habitats, wildlife, and people.

Take action!
for responsible soy

Check out how companies scored

Anything Hidden in High Tech Horticulture?

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Social Pressures Dictating Choice Remind Me Again What We Can't Eat?:

- Anything with palm oil as an ingredient
- Livestock that's been fed soy from Brazil
- Chicken that has been "forced to grow too fast"
- Shrimps caught by slave labor in Asia
- Seafood that has despoiled mangrove forests
- Cod when "black-listed" for over-fishing
- Beef that has destroyed the Amazon
- Pork from hogs contained in stalls
- Anything with GMOs
- Anything in a non-recyclable pack
- etc.

What Social Issue Skeletons Do We Have Lurking in the Cupboard?

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Or, More Positively, Remind Me Again Why
I Love to Buy Your Food Brand/Product?



PHOTO: Catherine Kaefer-Smith is one of many Australians on the autism spectrum who was unable to find work. Autism and Agriculture program. (Supplied: SunPark Farms).

**The Australian pig farm benefitting from
employing people with autism**

**It is not easy for people on the autism
spectrum to find work, but an Australian
piggery is trying to change that.**

SunPark Farms is part of an initiative called
Autism and Agriculture which is aiming to develop
career paths for people on the autism spectrum in
animal care roles.

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France to tax non-recycled plastic packaging

French government plans to make products packaged in non-recycled plastic more expensive than those using recycled packaging



Plastic bottles at a recycling plant in France. Photo: AFP

August 13th, 2019

France plans to introduce a penalty system that would increase the costs of consumer goods with packaging made of non-recycled plastic, part of a pledge to use only recycled plastic nationwide by 2025, an environment ministry official said Sunday.

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Recycleable Product Package is a Big +



Compatible with
Climate-Friendly
Diet



Made From Left-Over
& By-Product F&V

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Cucumbers Wrapped in Shrink Film Made From Horticultural Plant Waste



BIOVEGE project

Spain: Biodegradable films and vegetable nets

The Spanish BIOVEGE project has resulted in new biodegradable films and nets for horticultural products, as well as food colourants and additives from waste products from the fields of Almería.

In Andalusia, about 500,000 tons of fruit and vegetable by-products are produced that cannot be recovered, so they are landfilled. From this waste, the BIOVEGE project has made possible the extraction of substances of high value for the packaging and food industry.

Here are some elements developed from sugars obtained from melons and watermelons:

- Different biodegradable films with a thickness of 23 μm to be used as shrink film for packaging cucumbers and the manufacturing of bags for weighing all kinds of agricultural products.

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Nestlé and Carrefour increase food traceability through blockchain
April 16th, 2019

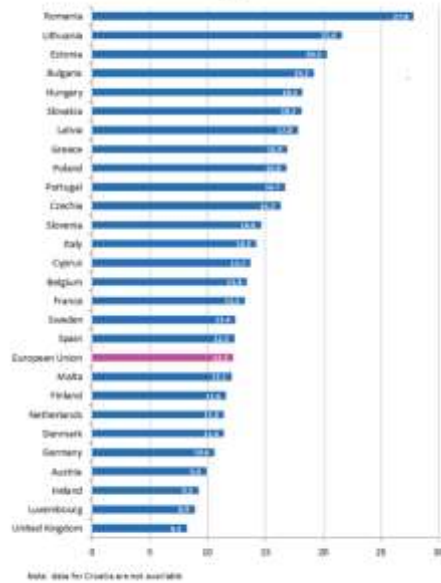


Nestlé and French retailer Carrefour have partnered to offer consumers the ability to trace the origin of Mousline mashed potato products using blockchain technology, in a move to increase transparency in the food supply chain.

The pilot scheme will test the blockchain platform through Mousline purée products over the next few months, and the pilot will help both companies understand the impact and scalability of the technology.

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Share of total household expenditure spent on food and non-alcoholic beverages, 2017 (%)



ec.europa.eu/eurostat

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MARKS & SPENCER



One Impact of Hard Discounters in The Fresh Produce Market is to Place Downward Pressure on Retail Prices



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The Impact of Hard Discounters

<50p for vine toms, mangoes, apricots, peaches, Jersey Royal potatoes



Good or Bad for Fresh Produce Folk?

TESCO

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Premium Produce reached £782M in the latest year, up £38 million



538K
New
shoppers

More
Often
+£25M

Lidl post
the
strongest
Growth

What's the Story Underpinning the Premium Price?

KANTAR WLD PANEL

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The Shopper Excitement was at Fever Pitch!



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Wherever the Market,
Great Merchandising
& Theatre Promotes
Sales.
Fruit Smoothie Seller
San Pedro Market
Cusco, Peru
March, 2019



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Kuala Lumpur, Malaysia

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SUSTAINABLE DEVELOPMENT GOALS

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Unilever's sustainable brands are the fastest growing part of its business

May 10th, 2018



Unilever's investment in social good is paying off for the business, with the FMCG giant saying its sustainable brands have grown 46% faster than others in its portfolio over the past year.



Danone's U.S. arm DanoneWave gets B-Corp environmental certification

April 12th, 2018

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Unilever warns it will sell off brands that hurt the planet or society

Marmite and Magnum among vulnerable brands as firm puts focus on sustainable business



Unilever CEO Alan Jope: 'We'll dispose of brands that don't stand for something'

June 2019

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Pepsi Issues \$1 Billion in Green Bonds to Fund its Sustainability Initiatives

October 14th, 2019



PepsiCo, Inc. today announced that it has priced the company's first ever green bond. The net proceeds from the \$1 billion green bond offering will fund a series of key initiatives to advance PepsiCo's sustainability agenda.

NAB builds animal welfare into lending practices

November 19th, 2019



THE move by one of the big four banks to build animal welfare principles into its lending practices and risk assessments has not taken Australia's beef industry by surprise.

National Australia Bank, which finances one in every three dollars lent to agribusiness in Australia, has released principles across five domains which will guide its lending practices for customers involved in animal businesses. They cover nutrition, environment, health, behaviour and mental state.



Environment body calls for innovative 'rice bonds' to support sustainable production

November 24th, 2019



Earth Security said rice is the source of 10% of global anthropogenic methane emissions, while cultivation of the commodity in one of the world's major growing areas of south-east Asia accounts for up to 25-33% of the region's methane emissions, and between 10-20% of its overall greenhouse gas emissions.



Big Food turning to regenerative agriculture to meet sustainability goals

May 13th, 2019



Companies such as General Mills and Hormel Foods are embracing the practice to help their businesses and respond to consumers who consider environmental stewardship in their buying habits.



Consumers care about sustainability now as much as ever, according to new survey data from Nielsen. Almost half of U.S. consumers (48%) are likely to change what they buy to meet environmental standards.

Nielsen reported that Americans spent \$128.5 million on sustainable fast-moving consumer goods — a 20% growth in sustainable product sales. Nielsen expects the market to continue to grow rapidly and predicts that consumers will spend up to \$150 billion on sustainable products by 2021.



December, 2018

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How Do You Communicate Value for Money?

Two Coffees £6: Routine Daily Purchase.
 “I’d Buy More Fruit & Veg. but it’s a Little Expensive”!



Many City Workers Spend 3 Times More on Coffee Purchases than on Fruit & Vegetables for Their Entire Household!

Av. Weekly Household Spend on Fruit & Vegetables £8.00* in UK.

* Via supermarkets/grocery outlets – maybe £10 with out-of-home produce purchases

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@ProfDavidHughes

Retail Blog: www.supermarketsinyourpocket.com



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FOOTPRINT SUSTAINABILITY TRENDS REPORT 2019

Foodservice's guide to a more sustainable future

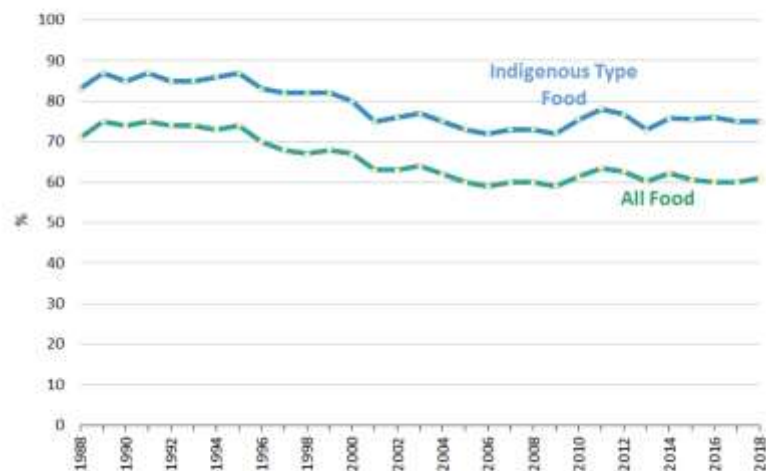
- Sustainability – woven into the business
- Legislation driving industry action - e.g. sugar, plastics
- Sustainable diets - the notion of “climate-friendly”
- Waste not want not – 2nd nature to Boomers!
- Blockchain & others - traceability and transparency
- Ethical certification but streamlined
- Active (not passive) customers (“*eco-active*”)
- Communicate about “the journey” (not greenwash)
- Fairness to employees – living wage, gender equality
- Business values compatible with society's values



and Hughes



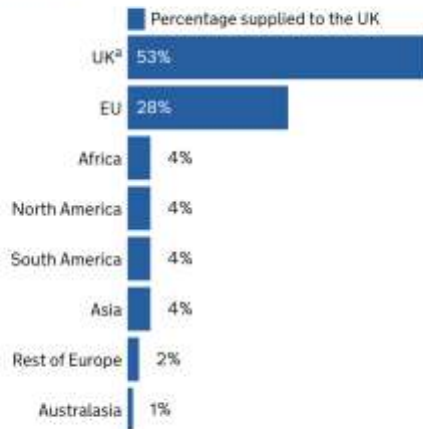
defra UK Food production to supply ratio 1988 to 2018





Origins of food consumed in the UK 2018

[Change between chart and table](#)



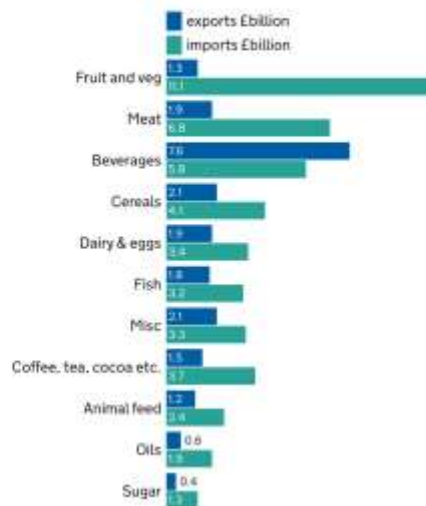
^a UK origin consists of UK domestic production minus UK exports.

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UK trade in different food groups, 2018

[Change between chart and table](#)



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