



# Global Food Trends: Opportunities for Profit for Western Australian Agribusiness & Food Companies

Imperial College  
London

Dr. David Hughes

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Mandurah Quay Resort

Mandurah, Western Australia

Thursday, March 9<sup>th</sup>, 2017



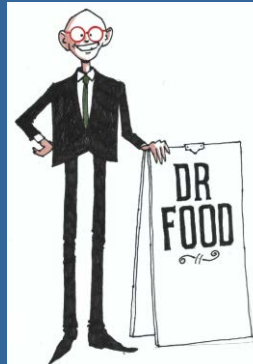
Department of  
Agriculture and Food



@profdavidhughes

[www.supermarketsinyourpocket.com](http://www.supermarketsinyourpocket.com)

[www.drfood.ca](http://www.drfood.ca)

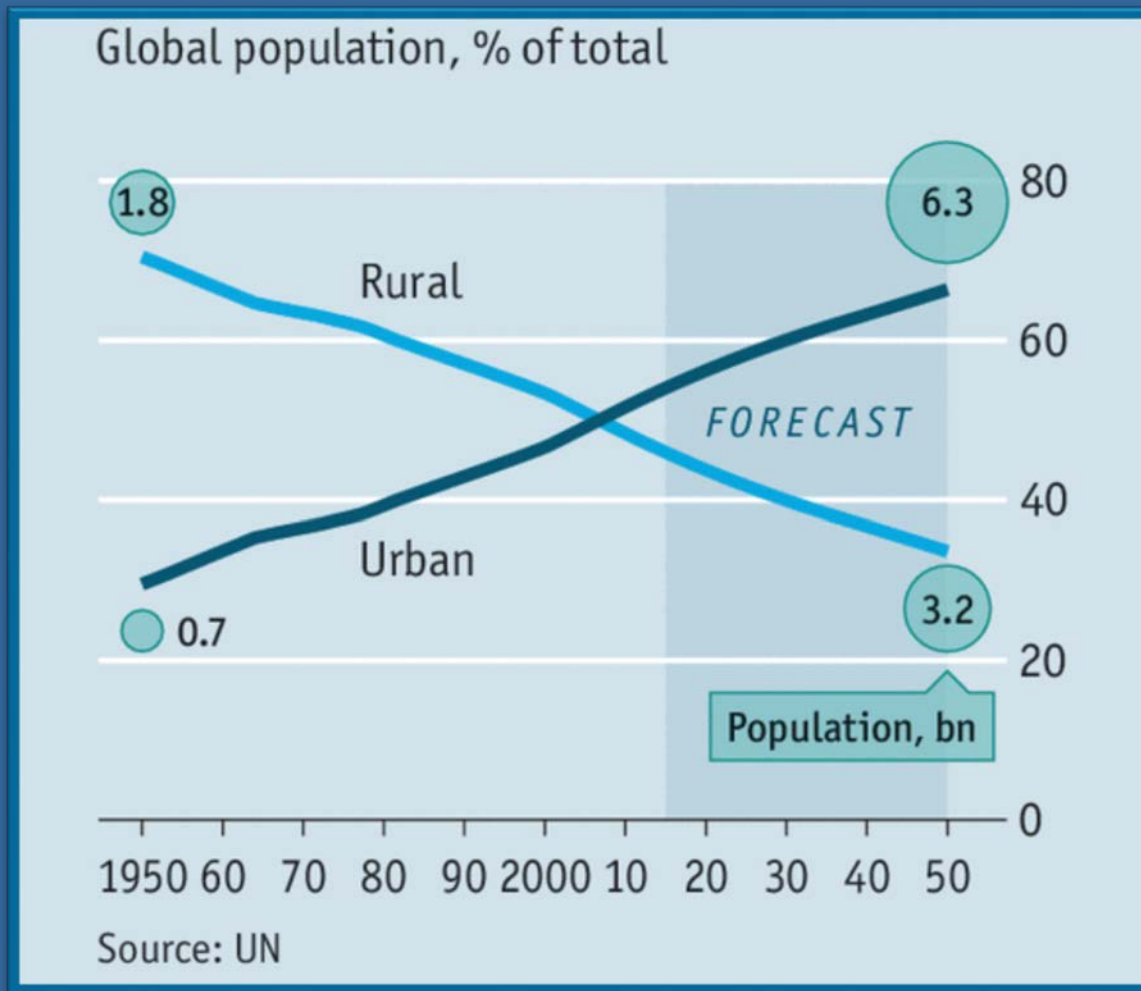


# World Population: Who's Going Up and Who's Going Down?

	2010	2030	2050
	<i>- billion -</i>		
World	6.9	8.2	9.0
Africa	1.0	1.5	2.0
Asia	4.1	4.8	5.1
Europe	0.7	0.7	0.7
LAC*	0.6	0.7	0.8
North America	0.3	0.4	0.5
Oceania	0.04	0.04	0.05

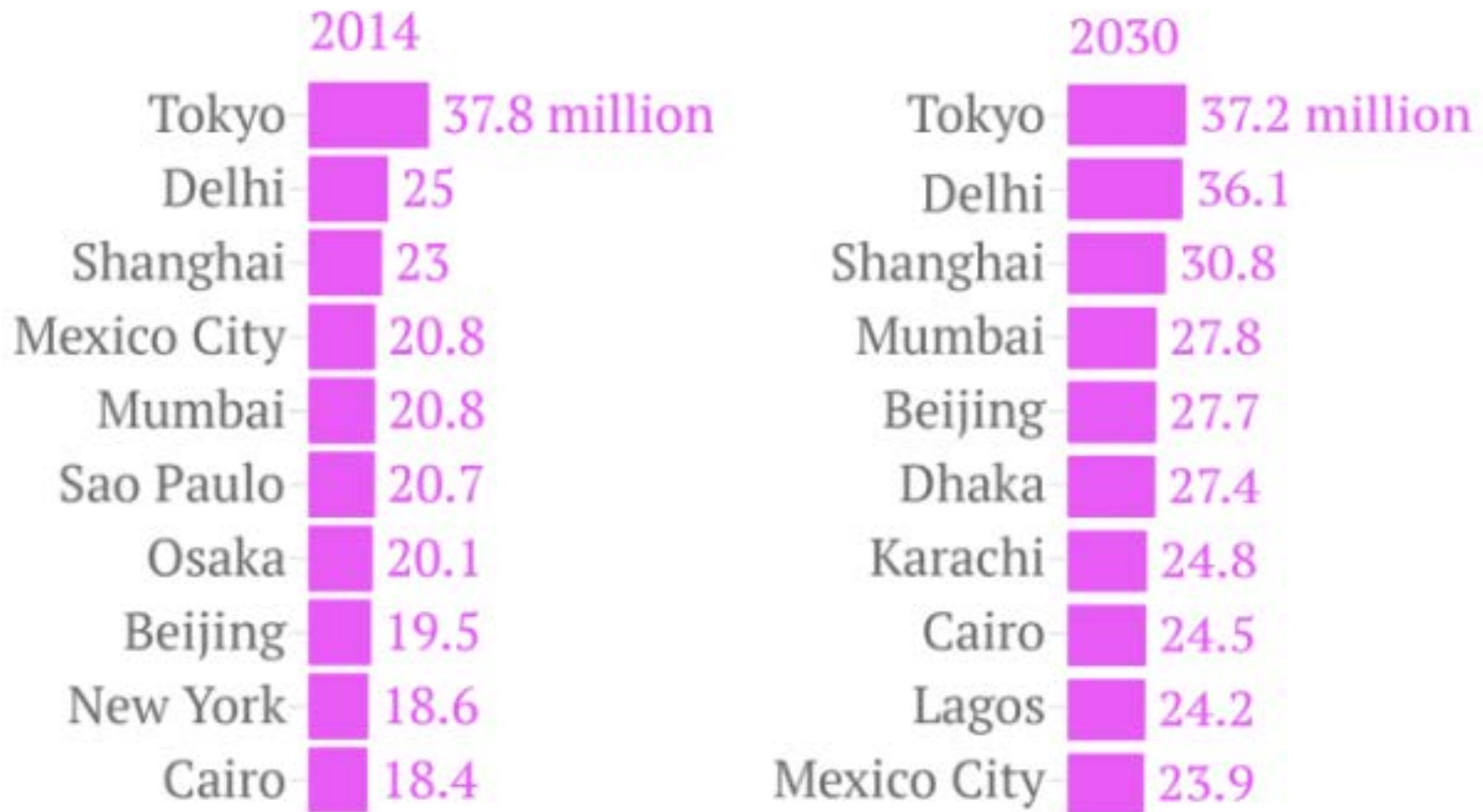
\*Latin America & Caribbean. Source: UN (population scenario planning)

# Gravitational Pull from Rural to Urban Areas



# Asian Mega-Cities Dominate Globally by 2030

## Top 10 mega-cities by population



Quartz | qz.com

Data: United Nations

Image: Quartz



# Chinese Cities and Population with Incomes \$30,000+ in 2015 & 2030

## Number of high-income consumers

(m)

12.0

10.0

8.0

6.0

4.0

2.0

0.0



2015 Additional in 2016-30

12.0

10.0

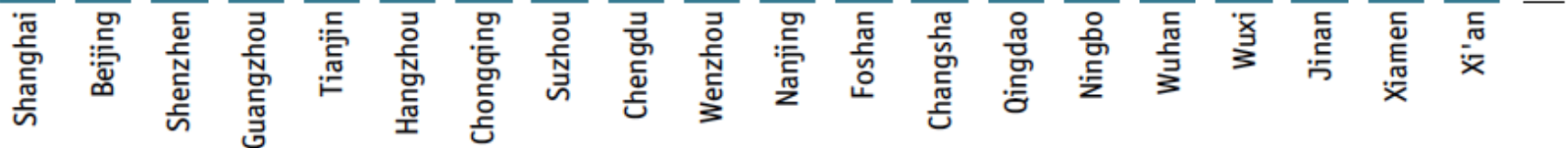
8.0

6.0

4.0

2.0

0.0



Note: high-income consumers refer to individuals with a grey income-adjusted disposable income of above Rmb200,000 per year at 2015 constant prices.

Source: The Economist Intelligence Unit.

# Global stock markets dive on China worries

January 4<sup>th</sup> and again January 7<sup>th</sup>, 2016



## Chinese shares continue to slide

January 11<sup>th</sup>, 2016

### China growth slowest in 25 years

China's economy grew by 6.9% in 2015, compared with 7.3% a year earlier, marking its slowest growth in 25 years.



19 January 2016 | Business



Wall Street has continued the rout on global share markets, with the Dow Jones, S&P 500 and Nasdaq indexes all opening more than 2% down.



**David Hughes** @P...  
Global economy grew 2.6% last 12 months (European contribution -ve). China accounted for 47% of total. What if China stops growing? Aaaaagh!

Reflective Tweet  
mid-2014

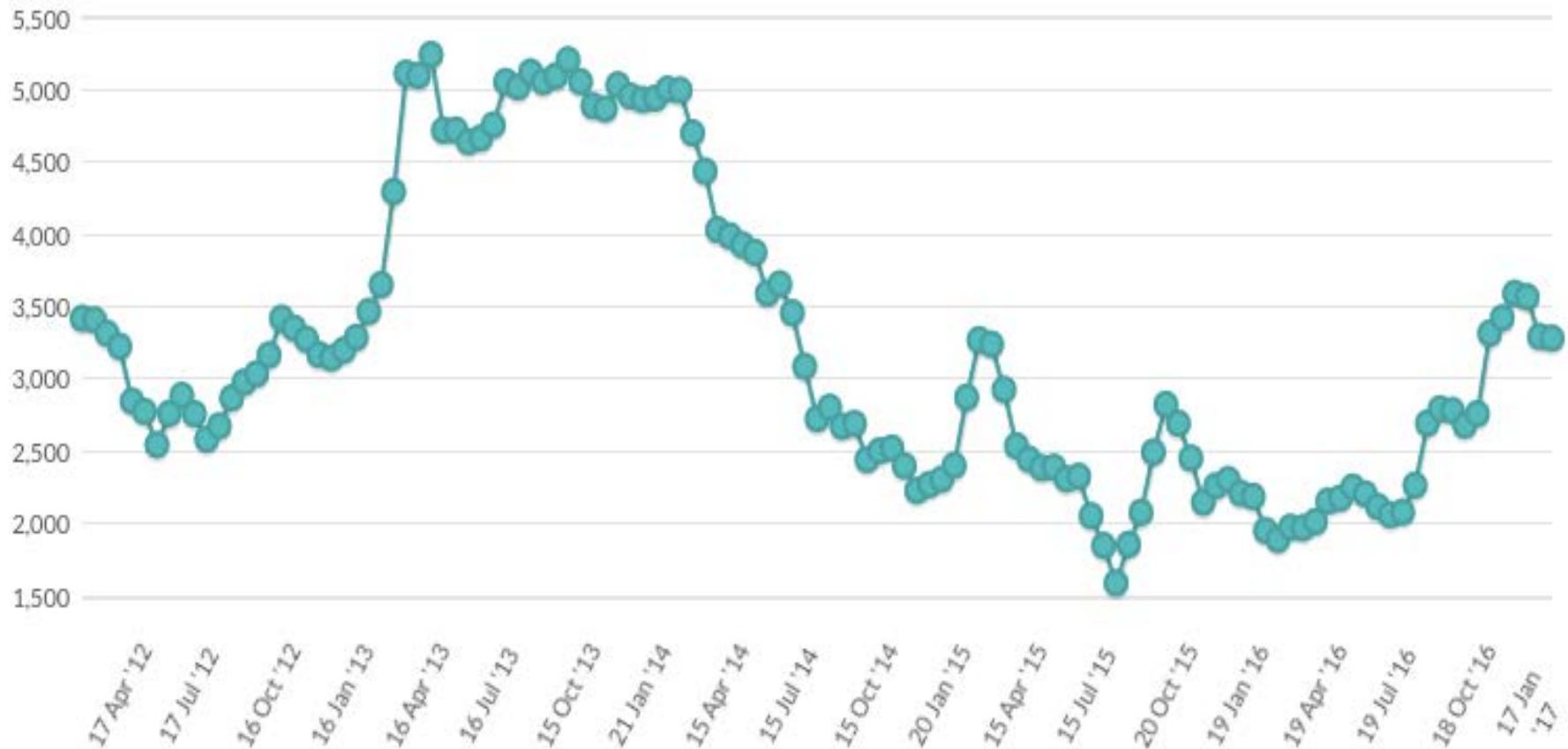
# Global Dairy Trade Index 2006 to 2017



## Whole Milk Powder Prices

12 months

5 years



\* Price data is in US\$ per metric tonne

# Yum Says It's "Full Steam Ahead" After Chinese Spin Off Approved

Email  Print  Share



27 Sep 2016 --- "We are moving full steam ahead," said Yum China boss Greg Creed, as the directors of the US fast food giant approved the hiving off of its Chinese unit.

The owner of Pizza Hut and KFC has sold off a combined \$460m stake in its Chinese operations to Chinese investment firm Primavera Capital and Ant Financial Services Group, an affiliate of the internet giant Alibaba.

Its Chinese unit will begin trading as a separate entity on the New York Exchange in November this year.



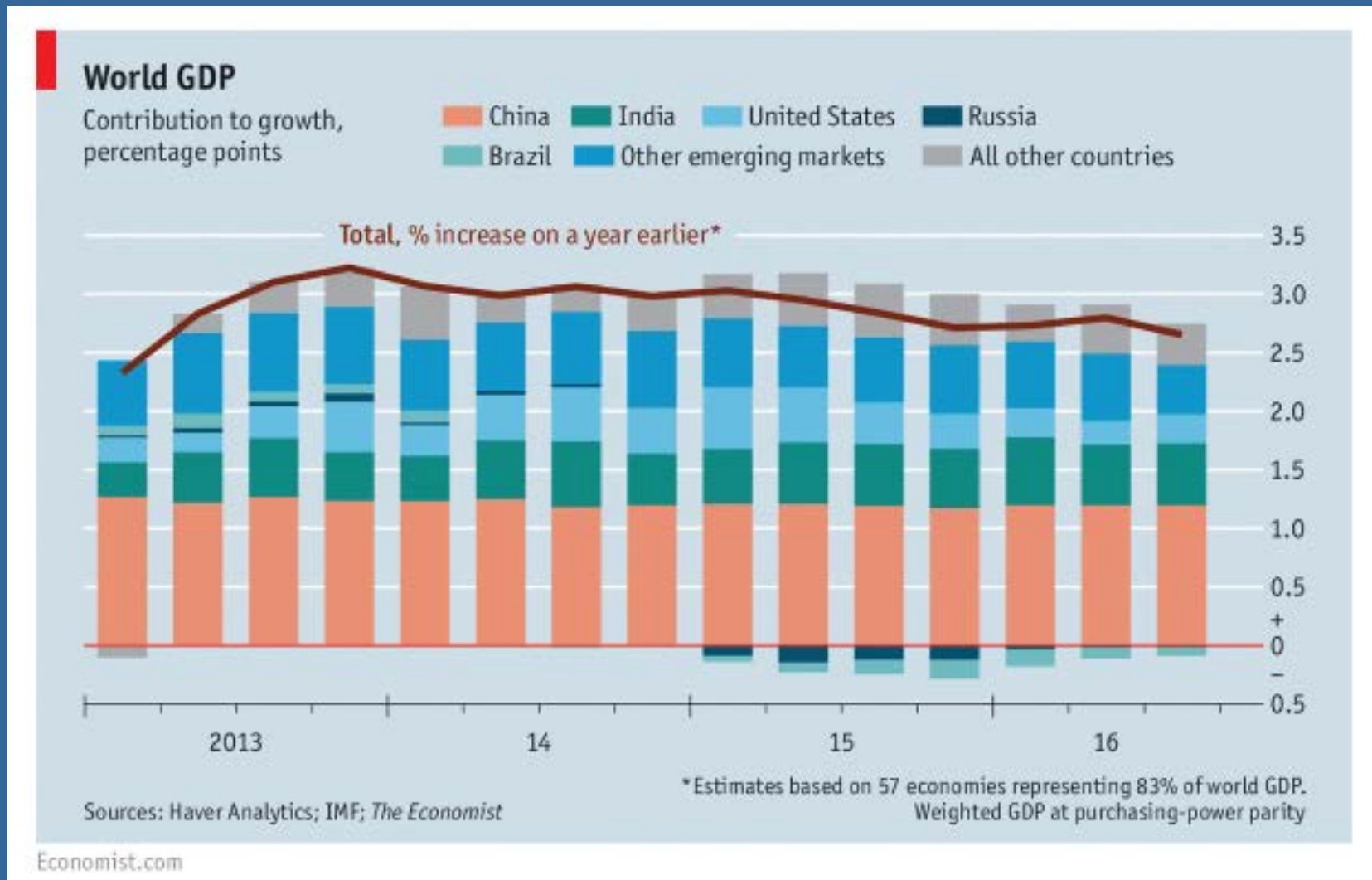
**China: Huge Purchasing Power can Make and Break Markets!**

## McDonald's Sells Control of China Business to Citic, Carlyle



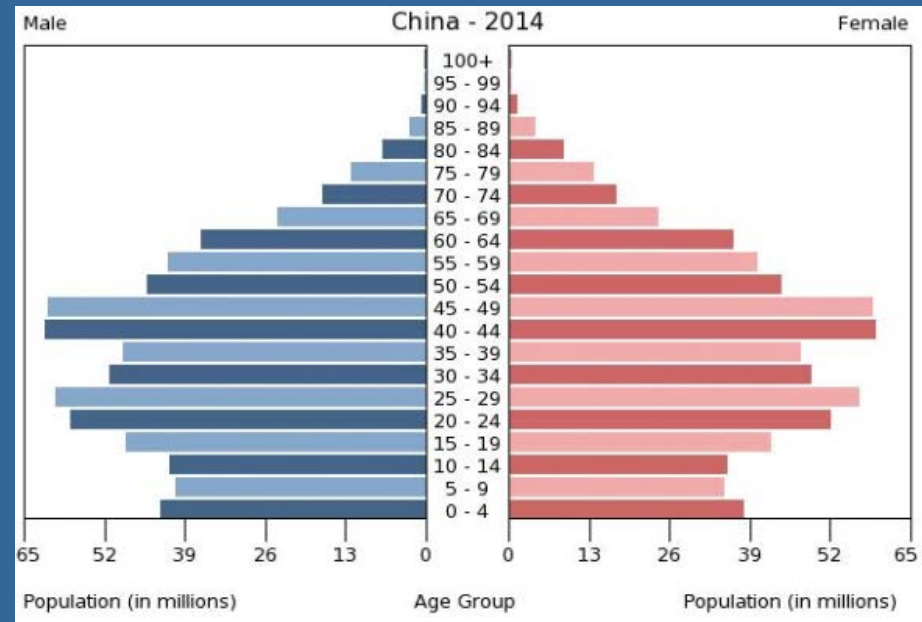
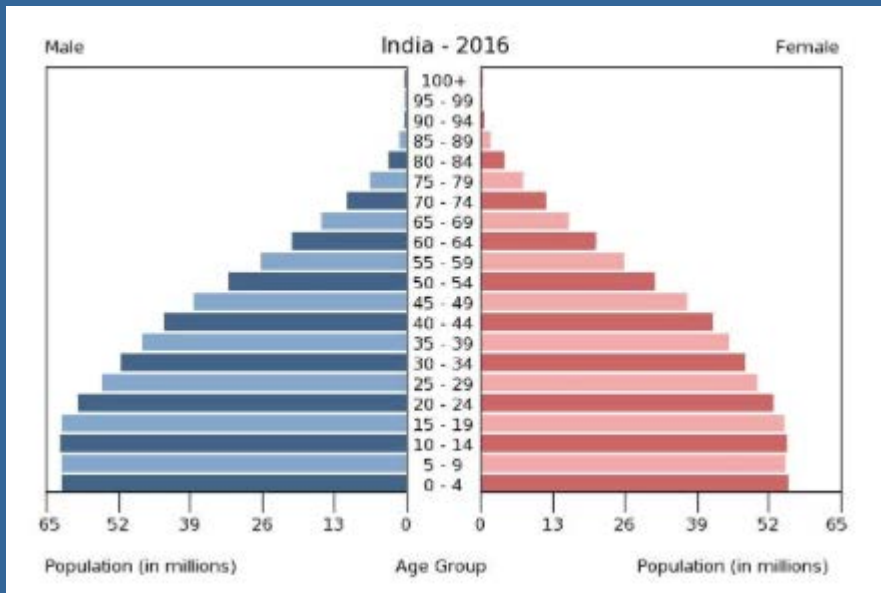


# Two-Thirds of Global GDP Growth Generated by China and India\* What If They Have Hiccups in Their Growth Path?



Source: The Economist, December, 2016

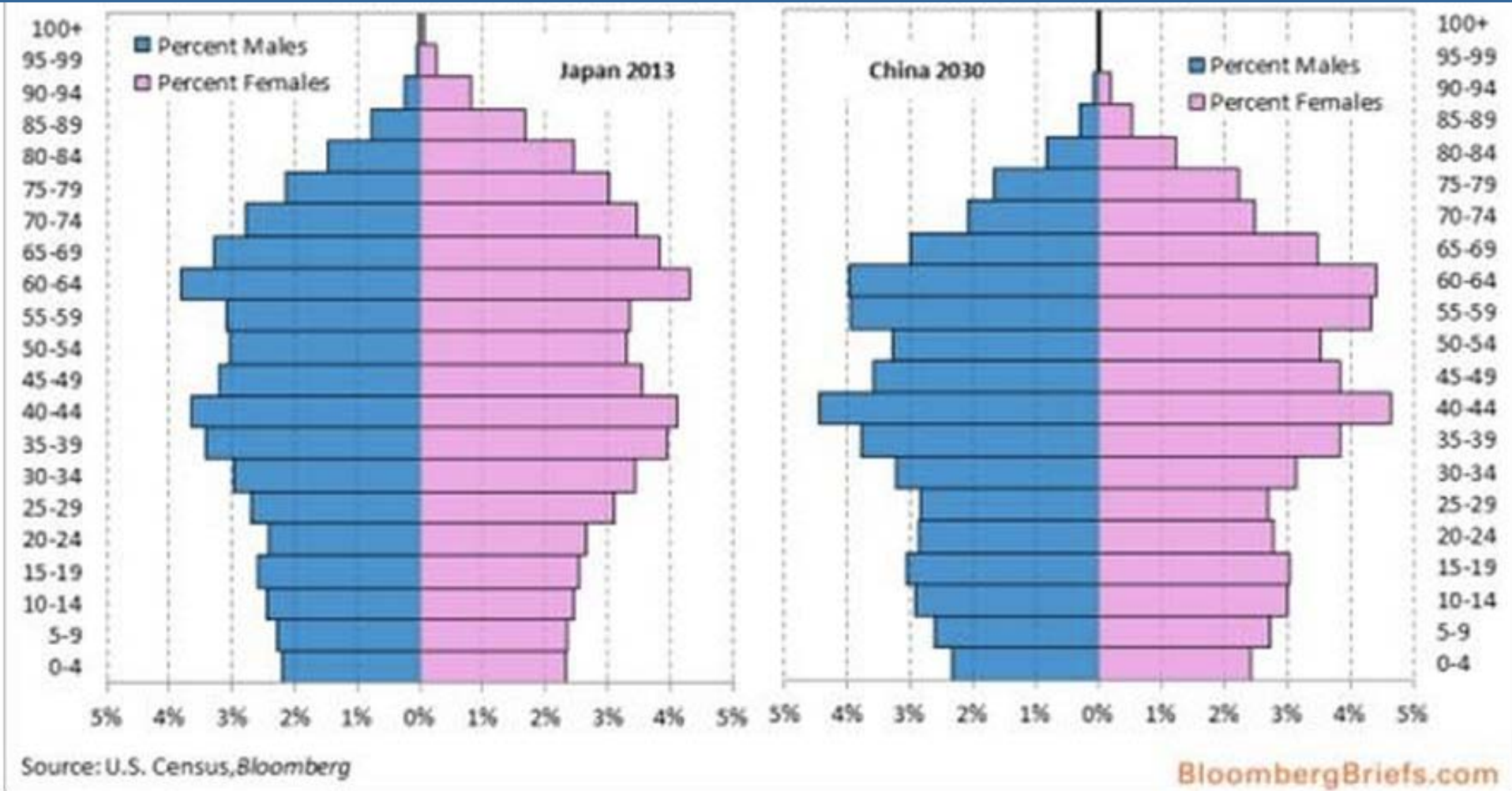
# Population Profiles & Fertility Rates for India and China



Population 2016: India 1.3 bn.  
 Population Growth Rate: 1.26%  
 Total Fertility Rate: 2.3

China 1.4 bn.  
 0.46%  
 1.6

# China 2030 Demographic Profile Strikingly Similar to Japan Profile Now!



China Gets Old Before It Gets Rich (with all the associated social and health problems)

# Asia wants four broad classes of products



## RAW MATERIALS

Raw materials for its own wet markets, farms & factories

Soya beans	Beef
Wheat	Chicken
Maize	Pork
Barley	Milk powder
Soya bean oil cake	Mozzarella cheese
Canola seeds	Cheddar cheese
Grain sorghum	Butter
Brewing dregs	Whey
Lucerne hay	Lactose
Barley	Milk albumins
Beet-pulp waste	Sheep
Dried peas	Malt, not roasted
Soya bean oil/flour	Fish filets, frozen
Canola oil	etc.



## DISTINCTIVE PRODUCTS

Products it cannot or does not produce in quantity

Atlantic salmon  
Clawed lobster (*Homarus sp.*)  
Rock lobster (*Jasus sp.*)  
Some crab species  
Trout  
Cod  
Almonds  
Walnuts  
Pistachio nuts  
etc.



## COUNTER-SEASONAL

Premium, fresh counter-seasonal produce

Cherries  
Kiwifruit  
Fresh grapes  
Blueberries  
Mandarins  
Apples  
Avocados  
Some migratory fish species  
etc.



## STATUS/PROVENANCE

Branded, status products with provenance

Wine  
Champagne  
Brandy/Cognac  
Whiskey  
Virgin olive oil  
Mineral water  
Beer  
Infant formula  
Chocolate bars  
Chocolate, assorted  
Sweet biscuits  
etc.

*This and all of our past research strongly suggests firms should focus here for defensible, profitable, long-term business*



# Gift-giving in China: The Importance of Premium Foods, Nutraceuticals and Health-Giving Gifts



- key signal of value of relationships
- gifting helps to secure future needs (reciprocity)
- gift-giving frequency & value increasing each year
- price and perceived quality hugely important
- super foods are seen as an ideal gift - great practicality and can indicate giving “health” to recipient
- over 50% of gifts given in China are food
- imported foods have built-in gift appeal (may indicate greater respect and sincerity)
- but food safety and supply chain integrity vital

# Market Capitalization of Some Major Food & Grocery Players



\$395 bn.



\$236 bn.



\$205 bn.



\$71 bn



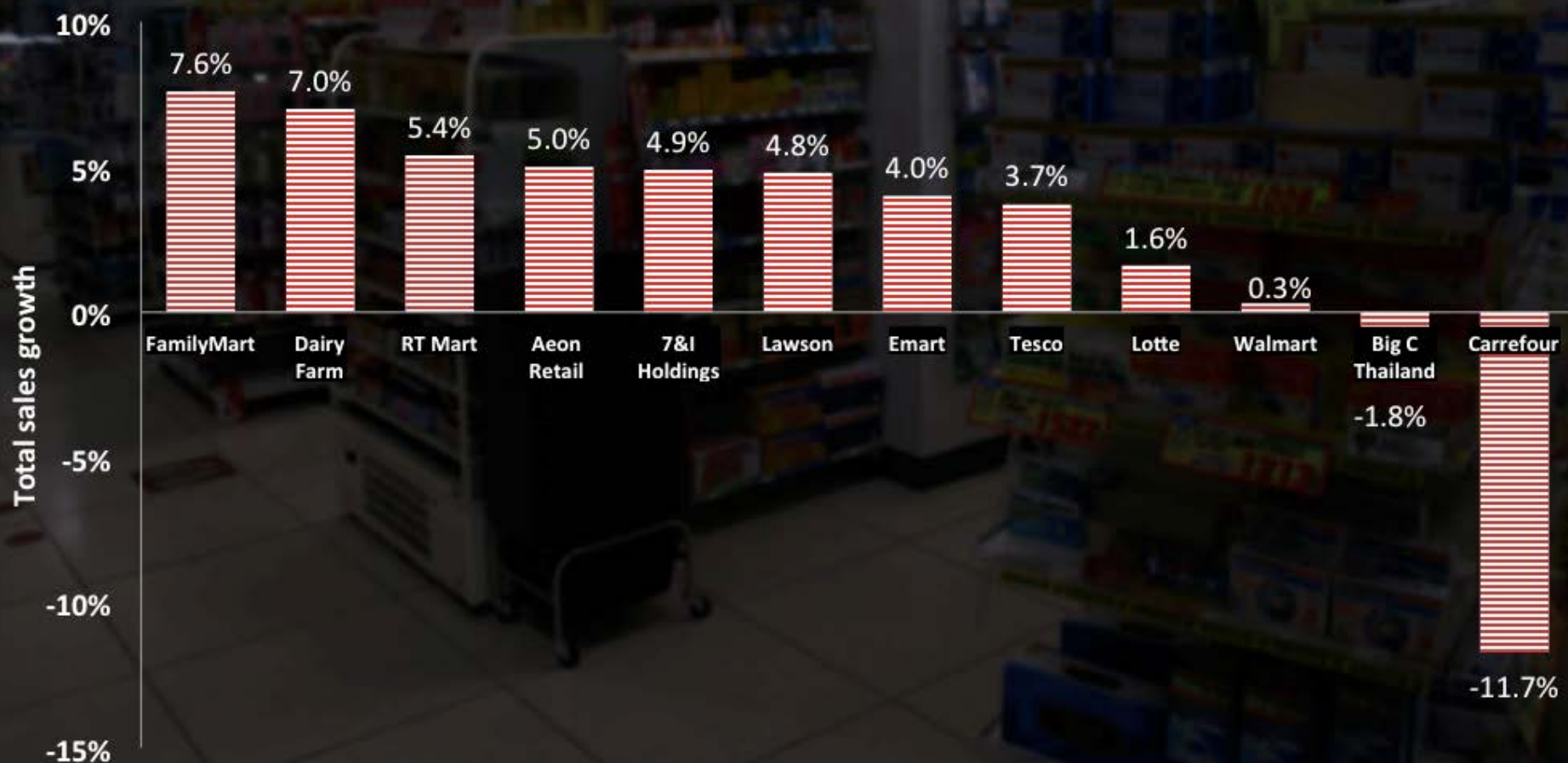
\$17 bn.



\$17 bn.

# WHO'S WINNING IN THE REGION?

Across Asia the leading players have seen mixed performance, with local retailers continuing to outpace the growth of those headquartered outside of the region. Growth via the hypermarket channel remains challenging, however many retailers continue to drive growth through new stores, investment in multichannel operations, a focus on price and improvements to product ranges and existing stores.



# City gives blessing to Unilever break-up



The move would give greater visibility between the higher earnings in its booming home and personal care division, which includes Dove soap, Lynx, Persil and Domestos brands, and its more sluggish food division.

44.56 EUR ↓0.19 (0.41%)

1 day

5 day

1 month

3 months

1 year

5 years

max

46

44

42

40

38

36

**18% Uplift in February**

Dec 9

Dec 23

Jan 6

Jan 20

Feb 3

Feb 17

Mar 3



# “Big Food” Still Struggling for Sales and Profit with “YesterYear” Product Portfolio

## General Mills 3<sup>rd</sup> Quarter 2016 Results: Sales Down 7% Income Down 9%



**Mondelez hails margin progress as 2016 sales, earnings fall**





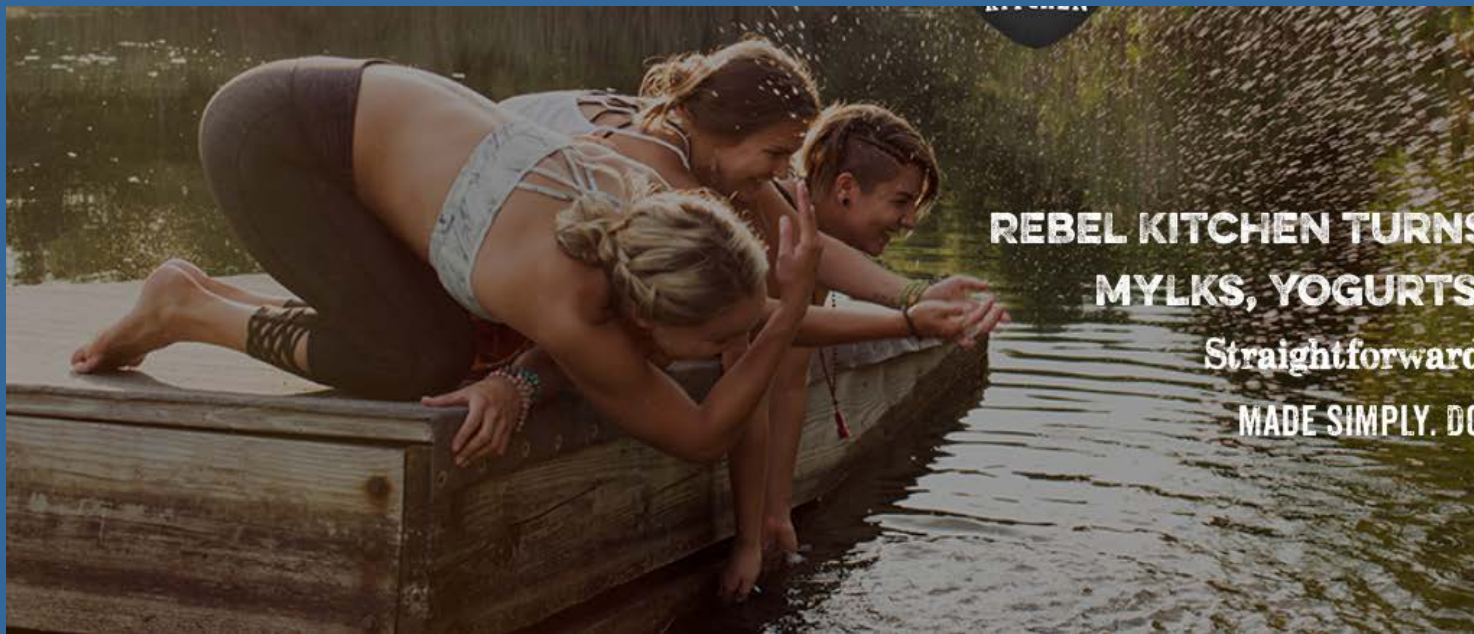
# SIMPLE

**Bold taste**  
**Fewer ingredients**  
**Nothing added**

# &

# RIGHT

**Always organic**  
**Responsibly sourced &**  
**produced**



**REBEL KITCHEN TURNS COCONUTS INTO  
MYLKS, YOGURTS AND WATER.**

**Straightforward snacking.**

**MADE SIMPLY. DONE RIGHT.**

Organic veggies +  
organic chocolate milk =  
lunchbox paradigm shift.



## Sneakz in USA:

\* Stealth Vegetables in Milkshakes

**MILKSHAKES WITH SNEAKY VEGETABLE NUTRITION**  
NOW OFFERED IN TWO DELICIOUS FLAVORS, CHOCOLATE AND VANILLA

 CARROTS	 SWEET POTATOES	 CHOCOLATE MILKSHAKE	 VANILLA MILKSHAKE
 BEETS	 SPINACH		
 CAULIFLOWER	 ORGANIC INGREDIENTS 100% ORGANIC		

SHelf STABLE TETRA PAK      CONTAINS DAIRY

OUR DRINKS ARE FREE FROM THE BAD STUFF  
⊗ no GMOs   ⊗ no Antibiotics   ⊗ no Synthetic Hormones

Learn more at [Sneakz.com](http://Sneakz.com)





Rhythm Superfoods unveiled a new line of Beet Chips at Expo West.



General Mills' 301 Inc. unit recently invested in Rhythm Superfoods and Good Culture.

# Kellogg builds margin but fails to stem sales slide

## Kellogg Mimics Unilever and General Mills and Sets Up Fund to Find Tomorrow's Star Companies



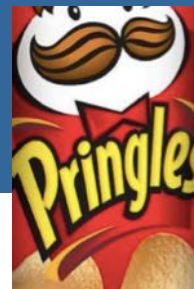
21 Jun 2016 --- Kellogg is following the likes of General Mills and Unilever by launching an investment fund which will invest around \$100m in start-ups, in the hope of identifying the Chobani of tomorrow.

The investment fund, called eighteen94 capital, will make minority investments in companies "pursuing next-generation innovation" including start-ups pioneering new ingredients, foods, packaging and technology.

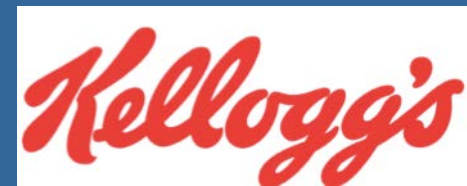




# Dilemma for “Big Food” Kellogg’s: Boxed Sugar \$Billion Brands & New Age Niche Brands



# Kellogg's Kashi acquires Pure Organic bars (June 2016)







## INGREDIENTS

- Vitamin-rich moringa leaves
- Green tea extract
- Natural raspberry flavor
- Lemon juice concentrate
- Sunflower lecithin
- Filtered water
- Tapioca syrup (extracted from cassava)

# BREAKING NEWS KULI KULI RAISES \$4.25M IN INVESTMENT

LED BY KELLOGG'S EIGHTEEN94 CAPITAL

[READ](#)



## Kellogg Spearheads Multi-Million Dollar Investment in Californian Superfood Startup



12 Jan 2017 --- Kellogg is banking on a startup which sells superfood bars and herbal teas being a success of tomorrow. Kellogg has spearheaded a \$4.25m funding in Kuli Kuli, the California-based startup whose superfood bars are all moringa-based products. Moringa is a plant protein which includes all nine essential amino acids.



# Huge Trend to Few, Simple, Natural Ingredients Positive for Farmers Worldwide



Hershey and Nestle Switch To Natural Ingredients

Mars to ditch all artificial colours from its entire global food portfolio





# We let our ingredients do the talking.

You love us for what's inside. So we decided to be upfront about it. First things first, our exclusive, powerful core ingredients: egg whites, fruits and nuts. Our 100% natural flavors. And our one-of-a-kind promise: No B.S. Loud and clear.

**RXBAR<sup>®</sup>**



**ORDER NOW**



**ORDER NOW**



**ORDER NOW**

# Do Asian Consumers Differ From “Westerners” on Trends Relating to Ingredients in Their Food Products? No!: Want to:

- recognise all ingredients on the label/list
- short and simple list
- natural/all natural\*
- no artificial ingredients
- low or reduced fat/sugar/salt
- Asians much more aware of health attributes of food
- including “beauty” ingredients (e.g. Japan – collagen)
- but, simmering concerns about food safety aspects
- “Free From” trend not widespread

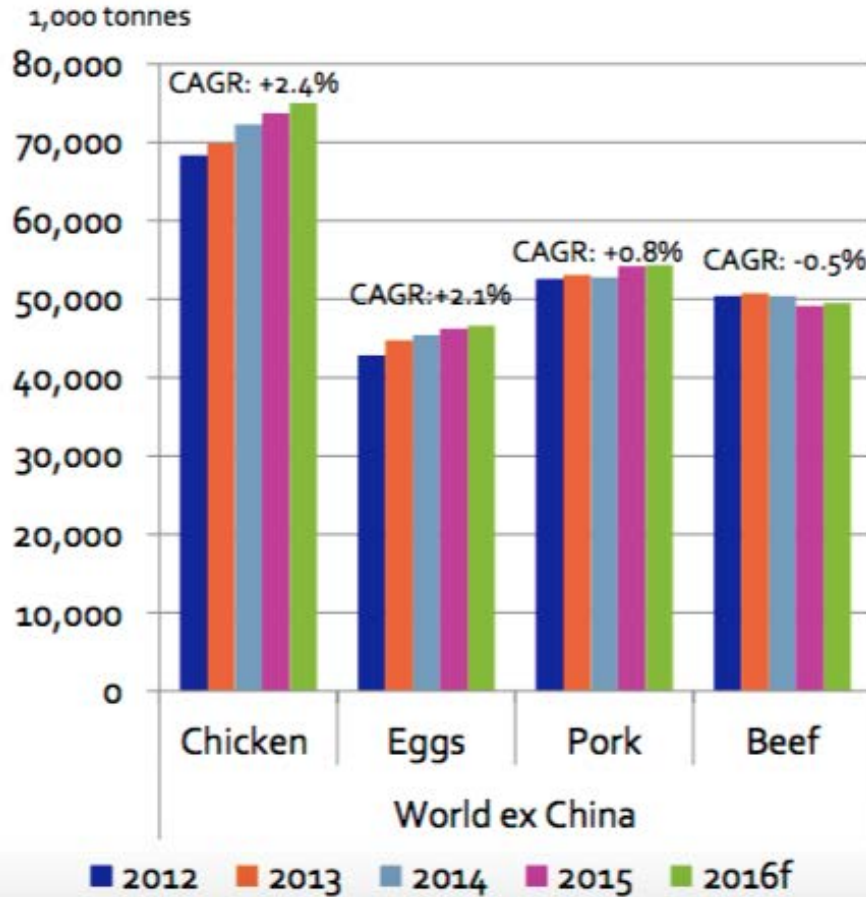
\* natural starch more acceptable than modified starch



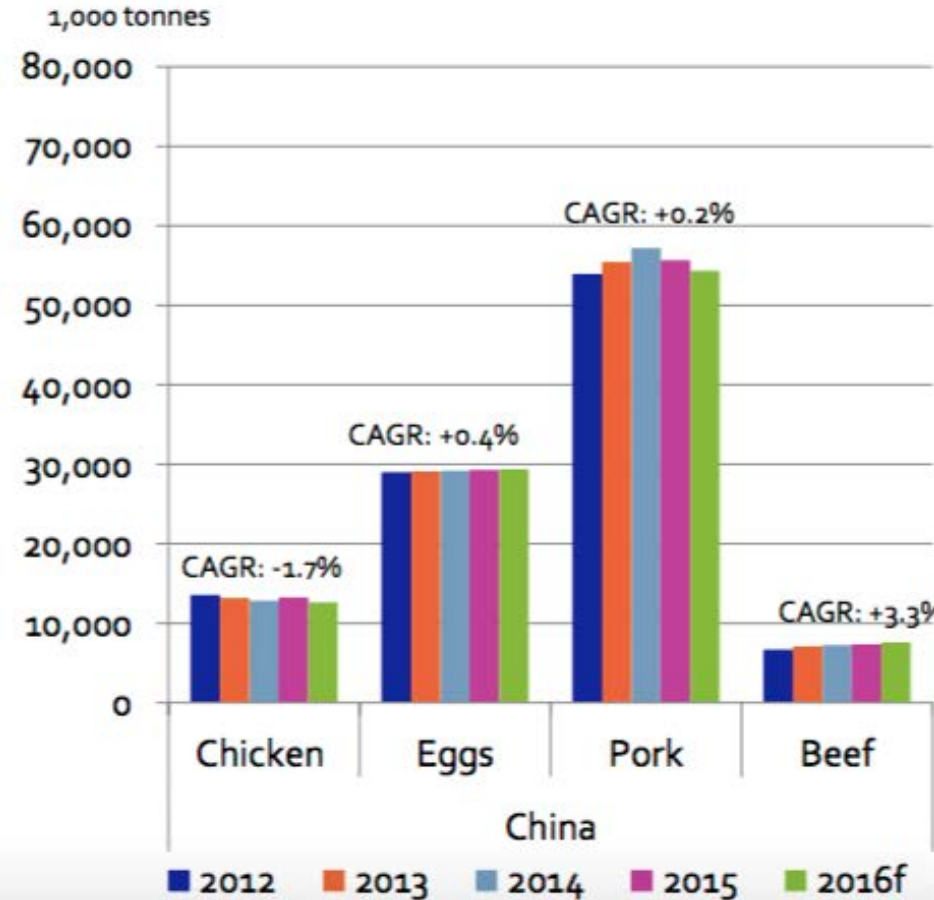
# Chicken is the global winning animal protein, China trends are very different



## Global market excl. China



## China meat and egg market

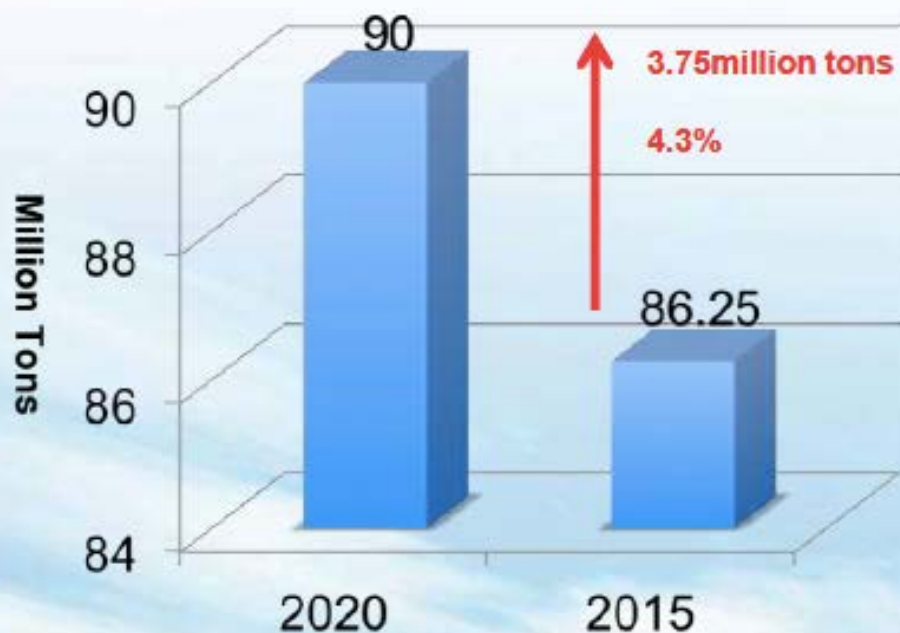


# The Development trend and outlook for the 13th 5-year Plan (2016 to 2020) in the Chinese Meat Industry

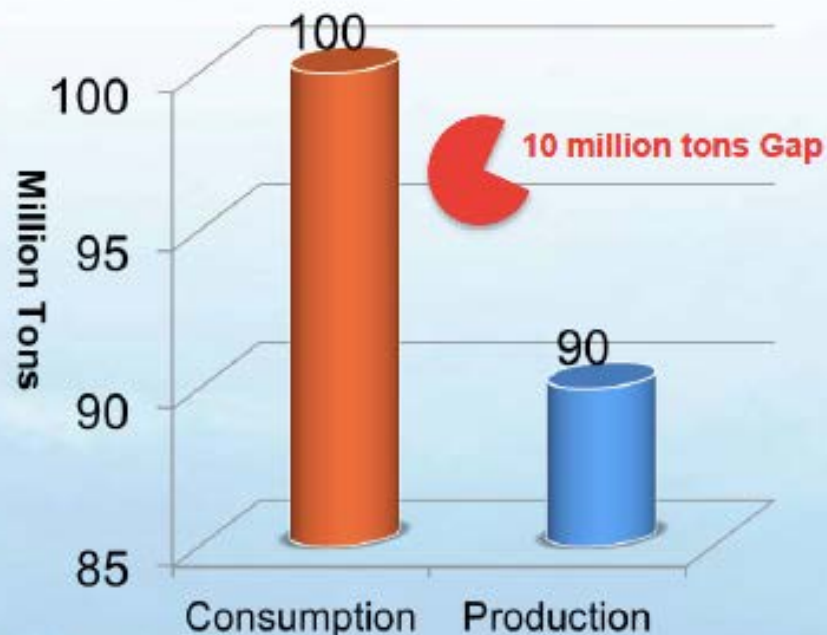


## Trend One: The Meat Supply Is Tight and Import Demand Is Increasing Significantly

### Total Meat Production 2020 VS. 2015



### Gap between Production and Estimated Consumption in 2020



Source:

Li Shuilong  
Executive President, China Meat Association

Imperial College  
London





新鲜真省心  
新鲜真省心

香福至酱肉

省心新鲜  
100%退款

冻鸡大胸  
89 500g

省心新鲜  
100%退款  
89 500g

省心新鲜  
100%退款

冻鸡翅中  
239







# Fish Bratwurst

Bratwurst Ikan



High Protein  
Contains Collagen  
Contains DHA + EPA



Serving Suggestion

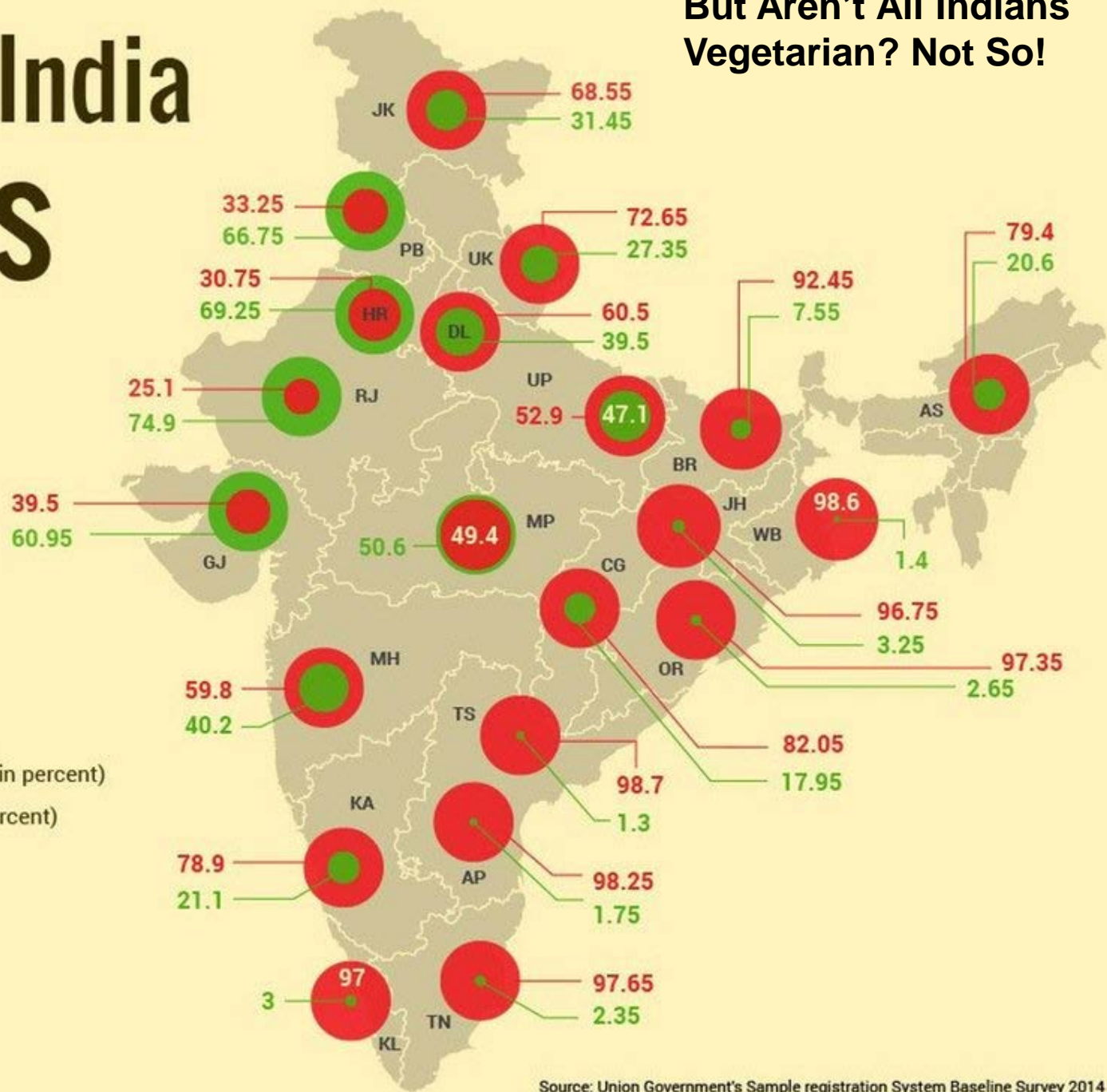


Net Weight  
Berat Bersih **240g**



# How India Eats

But Aren't All Indians Vegetarian? Not So!



For the Global Meat Industry, There May Be Storm Clouds Ahead!



Markets for Protein are MUCH MORE than Meat and Red Meat is in the Firing Line from Messianic Zealots



# Impossible Foods Raises a Whopping \$108 Million For Its Plant-Based Burgers (October, 2015) \$60 million additional funding in mid-2016

IMPOSSIBLE



Bill & Melinda



Li Ka-shing

Backed by Well-Heeled Investors



## THE IMPOSSIBLE CHEESEBURGER

We love meat. We love cheese. And for thousands of years we have relied on animals to make them. Impossible Foods has found a better way. We use plants to make the best meats and cheeses you'll ever eat.



MADE FROM PLANTS!



Impossible Burger Debuts March 2 at Bareburger in New York

**Plant-based Beyond Burger to roll out across Whole Foods: 'The reception has just been remarkable'**

**Tyson Takes 5 Percent Stake in Beyond Meat**



(October 10<sup>th</sup>, 2016)



Two 4oz Beyond Burger patties cost \$5.99 at Whole Foods





Philippines' Monde Nissin buys out UK food firm Quorn for \$831m



# TerraVia's Whole Algal Protein Gains Regulatory Approval from Health Canada

12 Jan 2017 --- TerraVia have announced that Health Canada has issued an approval for its Whole Algal Protein ingredient for food use in Canada. With this approval, TerraVia has successfully achieved regulatory approval for its portfolio of AlgaVia Whole Algae Ingredients, including AlgaVia Whole Algal Protein and AlgaVia Whole Algal Flour, for food use across North America.



"TerraVia continues to achieve regulatory clearance for its algae food ingredients across regulatory bodies and geographies," said Mark Brooks, SVP, Food & Ingredients. "Health Canada's approval of our protein-rich whole algae ingredient provides new opportunities for customers across Canada, Mexico and the United States to respond to consumer demand for food and beverages containing plant-based protein."



Sausage brand Debbie & Andrew's has jumped on the flexitarian trend with a new sausage product it intends to build into an entire range.

The Flexilicious Chilli Con Carne Super Sausage went on sale in Asda this week (rsp: from £2/400g) and contains 40% British farmed beef and 40% vegetables and legumes.

## Debbie & Andrew's launches flexitarian sausage range

*debbie & andrew's*<sup>TM</sup>  
A Real Taste of the Country

Flexitarian Trend:

- part-time vegetarian
- meat-reducer
- driven by health and/or social concerns
- and, economy, too?



# 7-Eleven Stores Will Switch Exclusively to Plant-Based Just Mayo



Dr. Food  
@ProfDavidHughes



Unilever

Nov 2014 Unilever sue Hampton Creek for eggless mayo. Feb 2016 Unilever launch eggless mayo. Big Food on the run; plant-based food on the up



Plant-Based Egg and Meat Analogues Have Market Traction





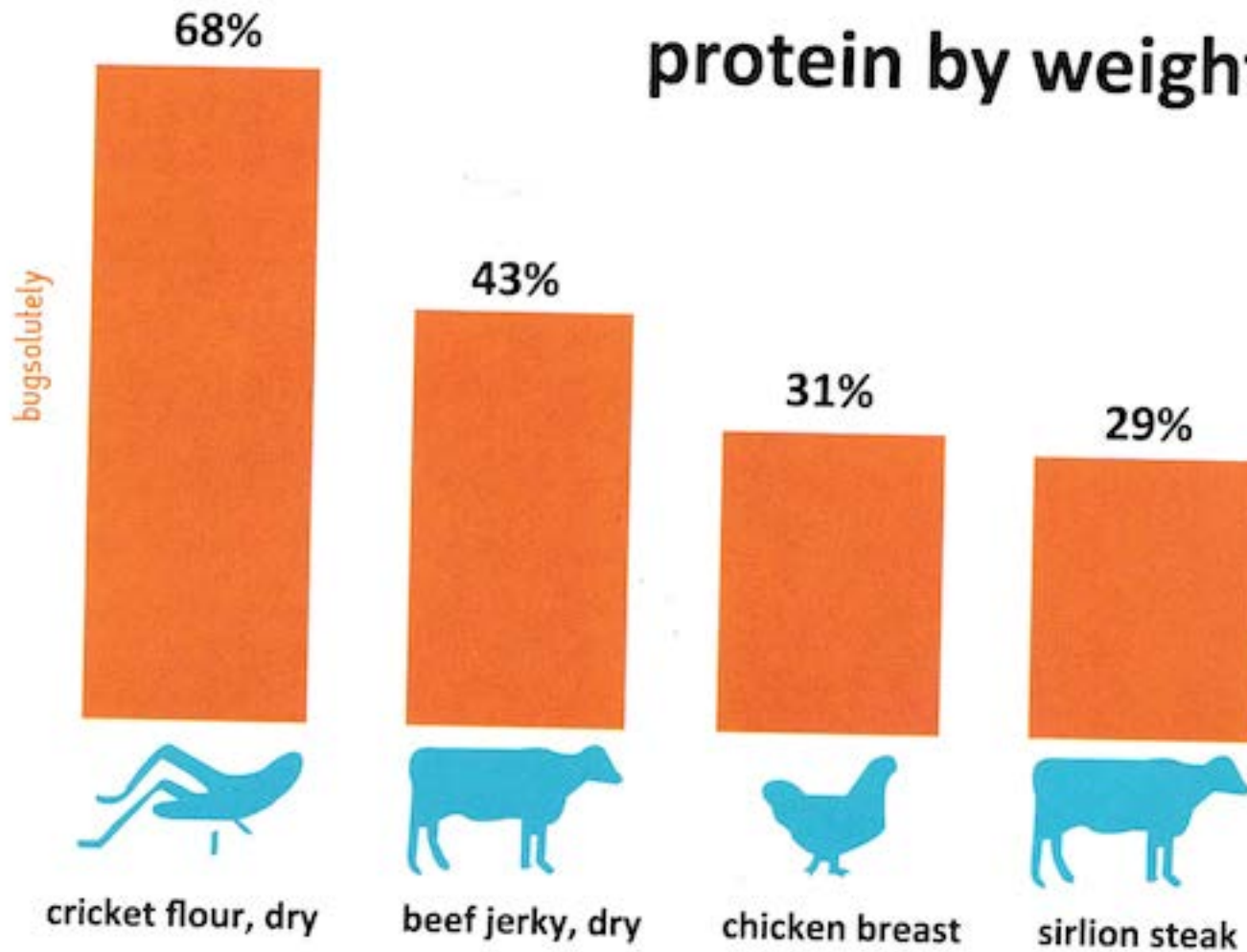
\$10.5 Billion Investment for Danone in Plant-Based “Dairy-Free” Products







# protein by weight



Crickets have about twice as much protein as cows



# And Don't Forget Insect Protein!



**SIX FOODS**

7g of protein | gluten free | GMO free | made with crickets



**EXO**

MADE WITH CRICKET FLOUR

**CACAO NUT**

**PROTEIN BAR**

10g Protein • All Natural

GLUTEN-FREE | NO SOY | GRAIN-FREE | NO DAIRY

NET WT. 2.1 OZ [60G]

**HOPPER BAR**

EAT. THINK. LIVE.

**KALE, SEAWEED and GINGER**

ALL NATURAL ENERGY BAR  
MADE WITH CRICKET FLOUR

NET WT 1.3 OZ (52G)

PROTEIN • GLUTEN-FREE • SOY-FREE • NON-GMO • LOW GL



# The Netherlands' New Dietary Guidelines Take Meat Off The Menu



**Recommends 460 Grms. per Week NOT 460 Grms. for Dinner**



# Discord in Angela Merkel's government after environment ministry bans meat at official functions

Barking Mad: A Case Study  
(February 21<sup>st</sup>, 2017)



Angela Merkel talking with her environment minister Barbara Hendricks CREDIT: [AP/WIDEWORLD](#)




# Vegetarians have much lower sperm counts

A diet rich in fruit and vegetables may harm fertility, say researchers at Loma Linda University Medical School



By Sarah Knapton, Science Editor, at the ASRM conference in Hawaii

5:00AM BST 20 Oct 2014

 Print this article

 Share 2K





**What's the Demographic Scene Like in Some Higher Income "Western" Countries?  
And What are the Implications for the Beef Industry?**

## \* Percent Meals Eaten By

Single diners	42
2 diners	36
3 diners	11
4 or more diners	11



## \* Preparation Meal Time

2015	30 mins
1990	45 mins
1980	60 mins
1950	90 mins

## \* Willingness to Pay More for Food

5% more

For healthy

22% more

For better taste

Considerably more

For ready made meal solution!





# Eating Out of Bowls Now On-Trend. It's Never Been Off-Trend in Asia!



- Chargrilled Chicken (Antibiotic Free)
- Avocado.
- Roasted Corn Salsa.
- Cilantro.
- Lime.
- Pret's Edamame Grain Mix (White & Red Quinoa.
- Black & Green Lentils.
- Edamame.

QUINOA IS THE NEW BIG MAC





Albert Heijn's "One-a-Day"  
Egg Pack. Remember, 30+%  
of Northern European urban  
households are 1 person!

# STIR FRY MEAL DEAL £7

See individual tickets for details. Subject to availability.

PROP10/998750



PROTEIN + VEGETABLE + NOODLES/ + STIR FRY  
PACK RICE SAUCE/SOUP



A\$5-6 Per Person for Dinner/Supper





What Do You Fancy?:

- Chinese
- Indian
- Mexican
- Italian

Meat Type (species)  
NOT Primary Decision  
Driver



## The £10 (A\$16) M&S Meal Deal



MARKS & SPENCER  
  
BRITISH  
**OAKHAM™  
CHICKEN**  
ROTISSERIE  
READY TO COOK  
SERVES 4  
FROM SPECIALLY SELECTED UK  
FARMS WE KNOW AND TRUST  
THIS CHICKEN WAS REARED BY  
  
D. DALZELL  
Co. Berrymore  
Use by 23/06/2016  
PRICE £10.00

MARKS & SPENCER  
**CARROT & SWEDE CRUSH**  
COOKS IN 3 1/2 MINS  
3 for £5  
mix & match  
selected meals  
& sides.  
see price ticket for details  
SERVING SUGGESTION  
Serves 2 - half pack provides  
Energy 396kJ  
4.7g 3.2g 8.6g 1.20g  
5% 7% 16% 10% 20%  
of your Reference Intake  
per 100g Energy 256kJ/62kcal  
USE BY 26/06/2016  
23/06/2016 17:26

MARKS & SPENCER  
EST. 1884  
**SPIRIT  
of SUMMER**  
NEW YORK  
VANILLA  
CHEESECAKE  
SLICES  
USE BY 23/06/2016  
17:26





# Indian Meal for Two: £7 (A\$6 per person)





# Spiralizing: The Transformation of Traditional Vegetables





# CAULI RICE SMASHES CROWDFUNDING TARGET



This week, Cauli Rice's third crowdfunding campaign came to a triumphant end. The food startup has more than doubled its initial target, raising a final figure of £1,053,800 from 596 investors.





ท็อปส์ มาร์เก็ต

# Tops market





เพิ่มเมนูใหม่ ต้องลอง! NEW MUST TRY



ข้าวโรซเบอร์รี่ควินัว  
กับแซลมอนน้ำยำ  
Riceberry Rice and Quinoa  
with Spicy Salmon

159.-



ข้าวแกงกะหรี่ไก่ทอด  
Japanese Curry Rice with  
Fried Chicken

55.-



ข้าวผัดอเมริกัน  
American Fried Rice

65.-



ผัดไทยกุ้งสด  
Pad Thai with Shrimp

55.-

— **Tops** —

**KITCHEN  
DELIVERY**

อร่อย ประหยัด ส่งถึงที่...

FRESH • TASTY • DELIVER

เพิ่มเมนูใหม่ ต้องลอง! NEW MUST TRY!



ข้าวโรซเบอร์รี่ควินัว  
กับแซลมอนน้ำยำ  
Riceberry Rice and Quinoa  
with Spicy Salmon

159.-



ข้าวแกงกะหรี่ไก่ทอด  
Japanese Curry Rice with  
Fried Chicken

55.-



ข้าวผัดอเมริกัน  
American Fried Rice

65.-



ผัดไทยกุ้งสด  
Pad Thai with Shrimp

55.-

☎ สั่งอาหาร / Call to order

• สาขาบีอีฟ / BEE Hive 02-023-3940-42  
• สาขาธัญญาพาร์ค / Thanya Park 02-108-6204-6  
• สาขาปิ่นมณี / Pinnamoni 02-023-3940-42

• สาขาอาร์ ซี เอ / RCA 0-2642-5852 50-55



**Tops**  
market

Imperial College  
London



# MEET THE PRODUCERS

Experts from around Britain who help us bring 100s of fresh ideas to your table

ENGLAND



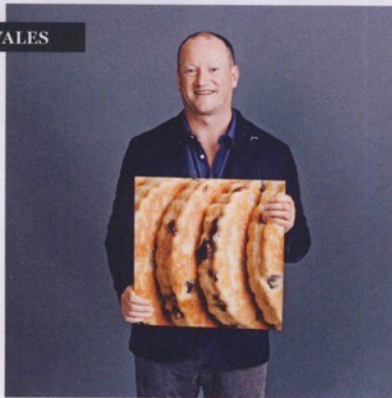
STRAWBERRIES | MARION REGAN  
*Awarded an MBE for her services  
to the fruit industry*

SCOTLAND



ORKNEY CRAB | RONNIE NORQUOY  
*Fishing for 40 years and helping  
us source sustainable crab from  
the wild Atlantic seas*

WALES



WELSH CAKES | ROBIN JONES  
*All our Welsh cakes are hand-  
turned in the bakery*

IRELAND



POTATOES | MICHAEL MCKILLOP  
*Plants new varieties every season in  
nutrient-rich soil for delicious  
potatoes full of goodness*

## “How’d You Like Your Meat?”

### “With Adjectives, Please”:

- free-range ....;
- grass-fed ...
- Mt. Barker ...
- Cape Grim ....
- Wagyu ....
- rare breed ....
- slow-grown ...
- Omega-3 rich ...
- organic .....
- new season ...
- happy ...
- dry-aged
- environmental friendly ...



- BRITISH FREE RANGE -



# PEMBROKESHIRE CORN FED CHICKEN MINI FILLETS

REARED BY THE SCALE FAMILY IN THE PEMBROKESHIRE  
COAST NATIONAL PARK. BIRDS ARE FED A CORN BASED  
DIET AND ARE FREE TO ROAM AND FORAGE ON CLOVER  
PASTURE RICH IN WILD FLOWERS AND HERBS.

SKINLESS  
FRESH CLASS A  
EXPERTLY SOURCED FOR  
MARKS & SPENCER



best of  
British

Origin :UK



USE BY

20/05/2016

WEIGHT

0.297

PRICE/Kg

£ 17.49

PACK PRICE

£5.19

READY TO COOK

KEEP REFRIGERATED 0°C to +4°C



Using Adjectives to  
Make £17.50 (A\$28)/kg  
Chicken

Which Adjectives Do  
My Customers Value  
& Will Pay More For?

# PURE BEEF

## NATURALLY TASMANIAN

CAPE GRIM BEEF, AUSTRALIA'S FINEST GRASS FED BEEF.



EACH FARMER HAS BEEN HANDPICKED IN RECOGNITION OF THE HIGH STANDARDS THEY PRACTICE AND THE PRIDE THEY TAKE IN DOING THINGS THE RIGHT WAY.



Explosion of Premium Beef Brands for Export from Australia

Imperial College  
London



# MEET THE PRODUCERS

Experts from around Britain who help us bring 100s of fresh ideas to your table

ENGLAND



STRAWBERRIES | MARION REGAN  
*Awarded an MBE for her services  
to the fruit industry*

SCOTLAND



ORKNEY CRAB | RONNIE NORQUOY  
*Fishing for 40 years and helping  
us source sustainable crab from  
the wild Atlantic seas*

WALES



WELSH CAKES | ROBIN JONES  
*All our Welsh cakes are hand-  
turned in the bakery*

IRELAND



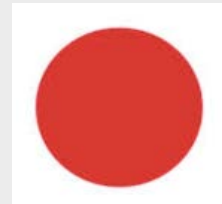
POTATOES | MICHAEL MCKILLOP  
*Plants new varieties every season in  
nutrient-rich soil for delicious  
potatoes full of goodness*

“How’d You Like Your  
Grains/Oilseeds/Pulses?”

“With Adjectives, Please”:

- with high fibre ...
- .. Omega-3 ...
- .. low/no gluten ..
- .. high protein “Tungsten” ..
- .. known provenance ..
- .. farmer-owned ..
- .. single estate ...
- .. Maris Otter (craft beer) ...
- .. Ancient grains ..
- .. non-GMO ..
- .. organic ..
- .. Puy lentils

# Proprietary Grains and Oilseeds with Unique Agronomic and Consumer Benefits

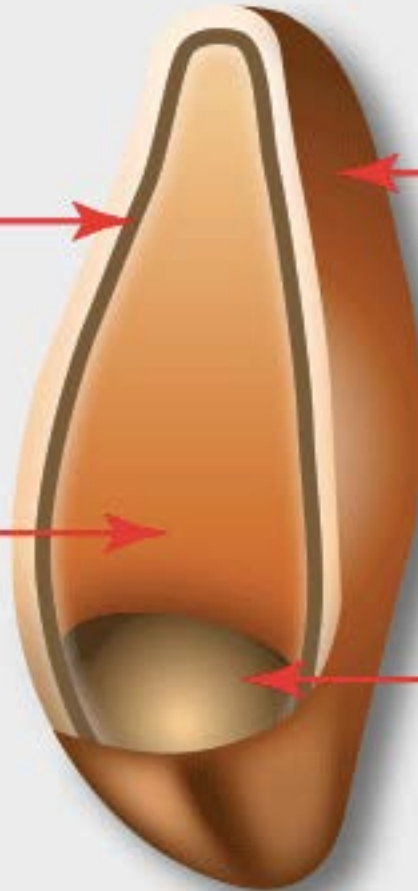


**ALEURONE**  
High protein

**BRAN**  
Increased dietary fibre

**ENDOSPERM**  
Increased levels of resistant starch, beta glucan and protein

**GERM (EMBRYO)**



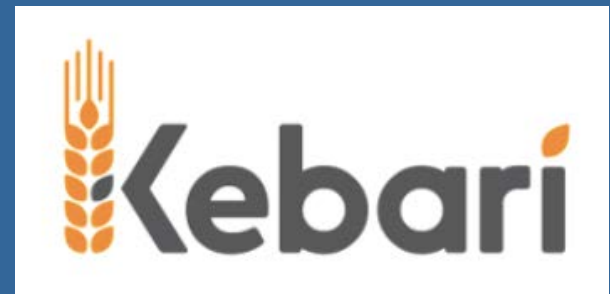
Teijin Group Invests in The Healthy Grain Company

**BARLEYmax™**



# Kebari™: The ultra-low gluten barley

Kebari™ barley is a new grain that meets the World Health Organization's recommendation for classification as gluten-free. The first commercially-produced product made with Kebari grain is Radeberger's Pionier gluten-free beer, now available in Germany.



# Huge Potential in Human and Animal/Seafood Food Markets



## DHA omega-3 canola oil

A collaboration, formed in 2011 between Nuseed, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Grains Research and Development Corporation (GRDC), aims to develop a genetically modified canola that will produce long-chain omega-3 oil at levels equal to that of wild fish.





# But Omega-3 Canola is Not Only “Made in Australia”!



**Dow a step closer to commercializing  
canola oil with meaningful levels of DHA  
omega-3**

# Shorter, Transparent Supply Chains with Provenance and Interesting Stories “On-Trend” for “Big Food” as well as for Artisan Niche Brands



Grown within 50 mile radius of factory.



Warburtons secures new wheat supply contracts with 300 UK farmers

(and 400 Canadian farmers)



## Warburtons commits to five-year plan with growers

Warburtons and its grain supply partner Openfield have agreed to extend their relationship for a further five years thereby giving its farmers the confidence to invest in their businesses.



Our Pork  
shappy

หมู เอสเพียง  
นอนหลับสบาย  
กินอาหารที่มีประโยชน์  
ตรวจสอบคุณภาพสม่ำเสมอ  
ปลอดภัยจากสารเร่งทุกชนิด



S★Pure เอส-เพียง  
ชีวิตที่ดี อยู่ที่คุณเลือก

215 หมู่ 1 ต.บึงสามพัน อ.บึงสามพัน จ.พิษณุโลก 61220  
Tel: 08-85629400, 08-85629401  
Fax: 08-85629402, 08-85629403  
E-mail: Contactcenter@etagro.com

- คุณภาพปราศจากสิ่งเจือปน  
The Purest Quality
- ✓ ไม่มียาปฏิชีวนะ (No Antibiotic Residue)
  - ✓ ไม่มีสารเร่งเนื้อแดง (Beta-agonist Free)
  - ✓ ไม่มีสารเร่งการเจริญเติบโต และยาฆ่าแมลง (No Growth Promoter and Pesticide)
  - ✓ ไม่มีสารเคมีอื่นซึ่งการเจริญเติบโตของหมูที่ได้รับละ-เอียงรา
  - ✓ มีแพคเกจและบรรจุภัณฑ์ที่เป็นมิตร

วิธีการรักษา : แช่เย็น (Keep refrigerated) ที่อุณหภูมิ 0°C ถึง 4°C



สันนอก S-Pure

B 856294 029898

Mfg. Best Before

12.05.15 17.05.15

FDL0231591 111110515C703002S

น้ำหนักสุทธิ : 400 กรัม



Consumers Want Adjectives in Their Meat in Thailand, too!





**20**  
ANNIVERSARY

# Scan me

Scan QR Code  
on products to trace  
our meat & poultry  
back to the source.



**Tops 20**  
ANNIVERSARY

รับรองมาตรฐาน  
ความปลอดภัย  
ของอาหารสดโดย

อาหารปลอดภัย  
FOOD SAFETY  
กระทรวงสาธารณสุข  
Ministry of Public Health

สมาคมความปลอดภัย  
สมาคมความปลอดภัย  
สมาคมความปลอดภัย

ปศุสัตว์  
กรมปศุสัตว์

Intertek

Intertek

ThaiGAP®  
World Safety Standard  
มาตรฐานความปลอดภัย

Tops  
FOOD SAFETY

อาหารปลอดภัย เราใส่ใจทุกขั้นตอน

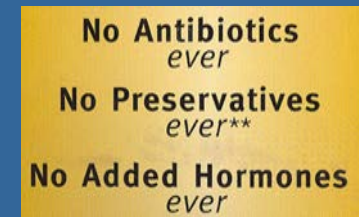


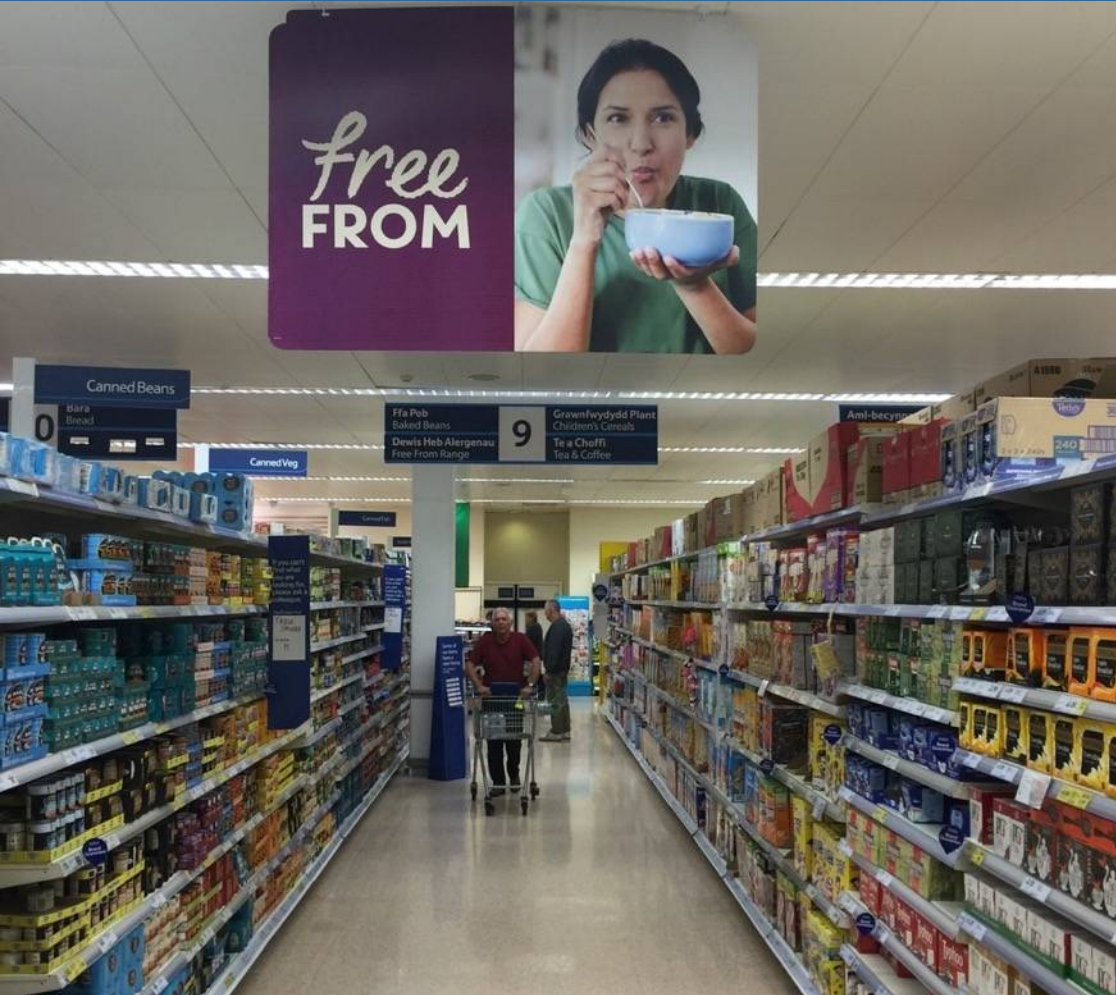


# Consumers Want Their Meat “Free” Across the Globe! And They Want Adjectives Added and Not Additives Added!

(and face a bewildering barrage of logos & claims)

- Antibiotic-free
- Hormone-free
- Additive-free
- Campylobacter-free
- Salmonella-free
- E.coli-free
- GMO-free
- Woody-breast-free
- Free-range
- Gluten-free
- Deforestation-free





It's an Aisle  
Not a Shelf!

- Gluten-free
- Lactose-free

A Tsunami of Consumer Perceived Intolerances  
to Food Present Challenges for Grains & Dairy





We enjoy great relationships with our local growers and our flour is milled in Driffield, making this a loaf that's bursting with honest Yorkshire goodness!

Available in three delicious varieties and now in full and half bloomer sizes.

[www.jacksonschampionbread.co.uk](http://www.jacksonschampionbread.co.uk)



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@ProfDavidHughes

Consumer Blog: [www.drfood.ca](http://www.drfood.ca)

Retail Blog: [www.supermarketsinyourpocket.com](http://www.supermarketsinyourpocket.com)

