“So, What Do You Want With Your Beef?!”

Dr. David Hughes
Emeritus Professor of Food Marketing

Global Conference on Sustainable Beef
The Fairmont Hotel, Banff Springs
Alberta, Canada

Wednesday, October 6th, 2016

@profdavidhughes
www.supermarketsinyourpocket.com
www.drfood.ca
Strong Growth in Global Meat Demand Projected to 2030

Global demand for animal protein

<table>
<thead>
<tr>
<th>Year</th>
<th>Seafood</th>
<th>Eggs</th>
<th>Sheepmeat</th>
<th>Poultry</th>
<th>Pork</th>
<th>Beef</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1990</td>
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<tr>
<td>2000</td>
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<td>2010</td>
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</tr>
<tr>
<td>2020</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Change: 30/14
- Seafood: +20%
- Eggs: +38%
- Poultry: +50%
- Pork: +35%
- Beef: +20%

Source: Nan-Dirk Mulder, Rabobank, 2015
## World Meat Consumption With & Without China, 2016*

<table>
<thead>
<tr>
<th></th>
<th>w/ China</th>
<th>w/o China</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total meat consumption</strong></td>
<td>430 mill.t.%</td>
<td>312</td>
</tr>
<tr>
<td><strong>of which %:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish &amp; Seafood</td>
<td>33</td>
<td>34</td>
</tr>
<tr>
<td>Pork</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td>Poultry</td>
<td>25</td>
<td>32</td>
</tr>
<tr>
<td>Beef</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Sheep/lamb</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Pork and fish/seafood are the dominant meats in China, with chicken a late starter and a slowing rate of growth most recently reflecting safety concerns, dietary preferences, income pressures, etc.

Source: GIRA, FAO and Hughes

* forecast
Sea Quest
Basa Fillets
Filets de pangasius
Skinless • Boneless
Sans peau • Sans arêtes
400 g

Sea Quest
Tilapia Fillets
Filets de tilapia
Skinless • Boneless
Sans peau • Sans arêtes
400 g
CP Fish Bratwurst

Bratwurst Ikan

High Protein
Contains Collagen
Contains DHA + EPA

Best Quality Premium Product

Serving Suggestion

Net Weight Berat Bersih 240g
Peak Meat: Per Capita Meat Consumption Declining in Many Developed Countries

<table>
<thead>
<tr>
<th>Principal Reasons for Meat Reduction</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>58%</td>
</tr>
<tr>
<td>Saving money</td>
<td>21</td>
</tr>
<tr>
<td>Animal welfare concerns</td>
<td>20</td>
</tr>
<tr>
<td>Food safety concerns</td>
<td>19</td>
</tr>
<tr>
<td>Environmental concerns</td>
<td>11</td>
</tr>
</tbody>
</table>

Groups more pre-disposed to reduce meat consumption:
- Women
- Older consumers (65+ years)

Source: NatCen Survey of British Social Attitudes, February 2016
U.S. per capita consumption of beef and pork is projected to rise over the next decade

Source: USDA Projections to 2025 (2016)
What Was Clara Saying Back in 1984?
What Was Clara Saying Back in 1985?

“Where’s the Beef!”

Meat, and Particularly, Beef is in a Different Place in 2016 than it was in the Mind’s Eye of the Consumer & Shopper in the 1980/90s
Wonderfully Dated!
Now, “What’s for Dinner?”:
• Chinese
• Pasta
• Takeaway

Gone .. the way of all flesh!

Or, Increasingly for Millennials “What’s Dinner?”!
WHY PEOPLE ARE WILLING TO EAT LESS BEEF AND/OR LAMB

- Health: 81.9%
- Climate Change: 45.2%
- Animal Welfare: 38.9%
- Reduce Food Cost: 24%
- Fashionable: 4.15%

WHY PEOPLE REFUSE TO EAT LESS BEEF AND/OR LAMB

- Bad Nutrition: 34.5%
- Meat Lover: 30.5%
- Bad for Health: 28.8%
- No Climate Change: 23.5%
- Lifestyle: 4.15%

EATING FOR TOMORROW
HOW CHINA'S FOOD CHOICES CAN HELP MITIGATE CLIMATE CHANGE
Impossible Foods Raises a Whopping $108 Million For Its Plant-Based Burgers  (October, 2015)

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.
Plant-based Beyond Burger to roll out across Whole Foods: ‘The reception has just been remarkable’

By Elaine Watson
30-Jun-2016
Last updated on 30-Jun-2016 at 17:37 GMT

Two 4oz Beyond Burger patties cost $5.99 at Whole Foods
Quorn Merchandised Alongside Chicken in the UK
If you give up meat for just one meal, you would save:

- Enough carbon emissions to boil a kettle 388 times
- The daily water usage of nine people
- Up to 11g of fat, equivalent to two whole teaspoons of butter
- Up to 90 calories, about as much as two rich tea biscuits

**WHY GET INVOLVED?**

We're not asking you to give up meat forever, just for one day, to show how easy it can be, so that you eat less meat throughout the year, and better quality meat when you do eat it. We want to raise awareness of the benefits of eating less meat for a healthier, balanced diet that's better for our planet and fairer to our food systems too. With the population set to rise by over 30% by 2050*, the demand for meat simply cannot be met. That's why we need your help more than ever.
Eating Better is a broad alliance to demonstrate that shifting diets to more plant-based eating with less and better meat is:

- Better for health
- Better for environment, climate change and resource use
- Better for animal welfare
- Better for feeding the world fairly
- Better for sustainable livelihoods and provides business opportunities
50 supporting organisations and partner networks
Scientific Opinion Increasingly Identifies Meat (and, particularly, beef, lamb & goat) As Being Detrimental for Human Health and for the Environment.

Few Consumers Indicate They Will Reduce Consumption for Environmental Reasons, More Indicate They Might for Health Reasons.

However, the overall message is clear: globally we should eat less meat. Global per capita meat consumption is already above healthy levels; critically so in developed countries. We cannot avoid dangerous climate change unless consumption trends change.
A Relentless Deluge of Information and Misinformation Relating to Meat Production and Its Environmental Impact. And BEEF is the Bull’s Eye on the Target!

1,800 gallons of fresh water go into 1 pound of beef.

National Geographic
Dominion Stores would have endorsed the emphasis on meat!
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

<table>
<thead>
<tr>
<th>Single diners</th>
<th>42</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 diners</td>
<td>36</td>
</tr>
<tr>
<td>3 diners</td>
<td>11</td>
</tr>
<tr>
<td>4 or more diners</td>
<td>11</td>
</tr>
</tbody>
</table>

### Preparation Meal Time

<table>
<thead>
<tr>
<th>Year</th>
<th>Time</th>
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<tbody>
<tr>
<td>2015</td>
<td>30 mins</td>
</tr>
<tr>
<td>1990</td>
<td>45 mins</td>
</tr>
<tr>
<td>1980</td>
<td>60 mins</td>
</tr>
<tr>
<td>1950</td>
<td>90 mins</td>
</tr>
</tbody>
</table>

### Willingness to Pay More for Food

<table>
<thead>
<tr>
<th>Type of Pay More</th>
<th>Reason for Paying More</th>
</tr>
</thead>
<tbody>
<tr>
<td>5% more</td>
<td>For healthy</td>
</tr>
<tr>
<td>22% more</td>
<td>For better taste</td>
</tr>
<tr>
<td>Considerably more</td>
<td>For ready made meal solution!</td>
</tr>
</tbody>
</table>
Albert Heijn’s “One-a-Day” Egg Pack. Remember, 30+% of Northern European urban households are 1 person!
A One Person Portion Pack:

- 30+% of many high income households are “solo” (1 person);
- salmon quick to cook and no mess;
- compelling health benefits;
- loved by ageing rich consumers and women;
Three Meal Solutions
For 2 People for £10.
That’s Tues-Thursday sorted for $2.20/person per meal – VERY good value in the UK
Food Retail and Food Service Converge

The £10 M&S Meal Deal
(US$13)
Local favorites, delivered in an instant

UberEATS delivers the best of New York right when you want it. Our curated menu features dishes from the local spots you love. And the ones you’ve always wanted to try. It’s the same cashless payment as an Uber ride. So just tap the app, meet your driver outside, and enjoy.

Wednesday, Feb 3

MIGHTY QUINN’S

Brisket Sandwich with Burnt End Baked Beans

⭐ Featured on the Food Network’s Best BBQ. Ever

Slow smoked beef brisket, sliced on a brioche roll with Mighty Quinn’s housemade BBQ sauce and a side of burnt end baked beans. Served with slaw, pickled cucumbers and chiles.

$12.75
FRESH INGREDIENTS AND DELICIOUS RECIPES DELIVERED TO YOUR DOOR. SIMPLE. HEALTHY. DELICIOUS.

MY FAMILY FOODBAG

Family favourites that'll please the fussiest eaters. Quick, healthy and yummy recipes for you and your little ones.

- 5 recipes every week
- 5 meals for 2 adults and 2 to 3 children
- Auckland, Hamilton & Wellington

$159.00 Per week
Free Delivery

MY CLASSIC FOODBAG

Classic recipes with a twist. Ideal for busy families with older kids who want healthy food and delicious recipes.

- 5 recipes every week
- 5 meals for 4 adults or a family of 5
- Auckland, Hamilton & Wellington

$189.00 Per week
Free Delivery

MY GOURMET FOODBAG

Premium produce and inspiring recipes. Ideal for couples who love fresh food and enjoy exotic flavours.

- 4 recipes every week
- 4 meals for 2 adults
- Auckland, Hamilton & Wellington

$139.00 Per week
Free Delivery
Salmon Serious Competitor for Beef in Premium Global Meal & Snack Markets
Increasing Complexity Driving Food Purchasing Behaviour

It’s About Value & Values Including:

- savvy shopping
- local/national
  - place of production
  - care of local economy
  - local is fresh/healthier
- provenance
- heritage
- sustainability
- animal welfare
- worker welfare

Source: Deloitte Inc. Food Value Equation Survey, 2015 and Hughes
Values: For Shoppers, It’s Not ONLY about Price

**VALUES**

- **PRICE**
- **PROMOTIONS**
- **ETHICS**
- **SUSTAINABILITY**
- **PACK SIZE**
- **PERFORMANCE**
- **PROVENANCE**
- **HERITAGE**

Source: IGD 2012
Ecolabel market to grow by 66%, and will become more powerful than regulation, say Danish researchers

By David Burrows, 28-Sep-2016
Last updated on 28-Sep-2016 at 15:04 GMT

By 2050 consumers won’t even look for an organic label on food; they will simply expect the product to be organic, said Zeuthen. © Copyright/Anula_K
“How’d You Like Your Beef?”
“With Adjectives, Please”

- free-range ....
- grass-fed
- free-from ..
- Aberdeen Angus …
- rare breed e.g. Welsh Black ..
- Aspen Ridge …
- Niman Ranch ....
- Cape Grim ....
- Wagyu ....
- organic ..... 
- Omega-3 rich ......
- dry-aged ....
- bird-friendly ...
Provenance-Protected by EU Regulation!

Distinctive & Unique that sums up Welsh Lamb and Welsh Beef...
Not All Chicken Meat is Inexpensive Meat: Chickens with Adjectives are $23/kg. in the UK!
CAPE GRIM BEEF, AUSTRALIA'S FINEST GRASS FED BEEF.
You’ve never tasted better steak
delivered direct to your door

For Charles Tyrwhitt customers:
Royal Warrant holding butcher
Donald Russell brings you
this amazing offer direct
to your door...

Fabulous meat and extraordinarily good value

Nigella Lawson

Our Guarantee to You
If you’ve ever tasted better, or are not absolutely delighted, we will happily give you a replacement or a refund.

Hans Baumann

ORDER @ www.donaldrussell.com/cht1601 or call 01467 629666 and quote cht1601
Bird- and Biodiversity-Friendly Beef from the Pampas of South America
Did Real Farmers Produce the Meat Product?
Consumers Want Adjectives in Their Meat in Thailand
Coffee with Adjectives at London Heathrow Airport
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
- Free-range
- Gluten-free
- Deforestation-free
Sausages with Free Adjectives!
Scientists, Special Interest Groups, Media Coalesce to Place Huge Pressure on Global Meat Industry

McDonald's pressured to serve up global antibiotics ban  (August 12th, 2016)

Consumer groups press Yum's KFC to tighten antibiotic rules  (August 12th, 2016)
Traceability in Meat: Home plus in South Korea with TV Monitor and Shoppers can Scan QR Codes to Trace the Meat Back to the Farm and Follow the Meat Story
Everything we do goes into everything you taste

At Waitrose, we believe everything we do goes into everything you taste. That’s why we only work with farmers that we know and trust, who share our values and our passion for bringing you great food. But rather than just tell you our standards are high, we want to show you.

That’s why for our new campaign we’re going live with TV ads showing footage from different farms, captured that very same day. No actors, no props – just our real farms exactly as they are, and the delicious food that we produce at them.

We only work with farmers we trust who share our passion for quality food.

Championing British  Treading lightly  Treating people fairly  Living well
Make Sure the Eggs are Free Range, The Beef Grass Fed, Antibiotic- and Hormone-Free, No HFCS, All Natural Ingredients and the Check is $1!

If I had a world of my own, everything would be nonsense

Alice in Wonderland

Dollar Menu
Price Premiums will Increase Food Fraud Around the World!

The Spectre of Food Fraud
Empty Meat Shelves in Tesco
After the Horse Meat Scandal
The cost of Food Fraud

The brands of Retailers, Food Service and Restaurants are reliant on all suppliers sharing the same level of integrity as the person whose brand and reputation is at stake.

"It takes 20 years to build a reputation and five minutes to ruin it. If you think about that, you’ll do things differently." Warren Buffett
Cattle, Cleared Forests, and Climate Change: Scoring Global Companies on their Deforestation-Free Beef Commitments and Practices

September 14th, 2016

Beef is the largest driver of tropical deforestation—and companies that buy beef from tropical countries could be doing a lot more to stop it.
<table>
<thead>
<tr>
<th>Company</th>
<th>Example Brands/Products</th>
<th>Total Score (out of 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walmart</td>
<td>fresh, frozen and processed beef products</td>
<td>52</td>
</tr>
<tr>
<td>McDonalds</td>
<td>burgers</td>
<td>48</td>
</tr>
<tr>
<td>MARS incorporated</td>
<td>pet food</td>
<td>37</td>
</tr>
<tr>
<td>Safeway</td>
<td>corned beef</td>
<td>27</td>
</tr>
<tr>
<td>Nestlé</td>
<td>Purina pet food</td>
<td>23</td>
</tr>
<tr>
<td>Hormel Foods</td>
<td>corned beef</td>
<td>22</td>
</tr>
<tr>
<td>Wendy's</td>
<td>burgers</td>
<td>22</td>
</tr>
<tr>
<td>Jack Links</td>
<td>beef jerky</td>
<td>16</td>
</tr>
<tr>
<td>Subway</td>
<td>sandwich meat</td>
<td>5</td>
</tr>
<tr>
<td>Burger King</td>
<td>burgers</td>
<td>0</td>
</tr>
<tr>
<td>ConAgra Foods</td>
<td>Libby's corned beef</td>
<td>0</td>
</tr>
<tr>
<td>Kroger</td>
<td>corned beef and beef jerky</td>
<td>0</td>
</tr>
<tr>
<td>Pizza Hut</td>
<td>beef pizza toppings</td>
<td>0</td>
</tr>
</tbody>
</table>

- **Strong Deforestation-Free Beef Policies and Practices**
- **Limited Deforestation-Free Beef Policies and Practices**
- **Very Limited Deforestation-Free Beef Policies and Practices**
## Behind the Brands: Food Companies Scorecard

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Score</th>
<th>Land</th>
<th>Women</th>
<th>Farmers</th>
<th>Workers</th>
<th>Climate</th>
<th>Transparency</th>
<th>Water</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Unilever</td>
<td>74%</td>
<td>7</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>9</td>
<td>7</td>
<td>7</td>
<td>52 / 70</td>
</tr>
<tr>
<td>2</td>
<td>Nestlé</td>
<td>69%</td>
<td>8</td>
<td>5</td>
<td>7</td>
<td>6</td>
<td>8</td>
<td>7</td>
<td>7</td>
<td>48 / 70</td>
</tr>
<tr>
<td>3</td>
<td>Coca-Cola</td>
<td>57%</td>
<td>8</td>
<td>6</td>
<td>3</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>40 / 70</td>
</tr>
<tr>
<td>4</td>
<td>Kellogg’s</td>
<td>53%</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>37 / 70</td>
</tr>
<tr>
<td>=5</td>
<td>MARS</td>
<td>49%</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>34 / 70</td>
</tr>
<tr>
<td>=5</td>
<td>Pepsico</td>
<td>49%</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>34 / 70</td>
</tr>
<tr>
<td>7</td>
<td>Mondelez International</td>
<td>41%</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>29 / 70</td>
</tr>
<tr>
<td>8</td>
<td>General Mills</td>
<td>40%</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>28 / 70</td>
</tr>
<tr>
<td>=9</td>
<td>Associated British Foods plc</td>
<td>36%</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>25 / 70</td>
</tr>
<tr>
<td>=9</td>
<td>Danone</td>
<td>36%</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>25 / 70</td>
</tr>
</tbody>
</table>

Updated April 2016. The latest version of this scorecard is available at [http://oxfam.org/behindthebrands](http://oxfam.org/behindthebrands)
HILLSHIRE BRANDS
USA
DID NOT RESPOND

YUM!
USA
DID NOT RESPOND

R&R ICE CREAM
UK
7
9

CAMPBELL'S
USA
2
9

BOOTS
UK
9
9

LOTUS
BELGIUM
9
9
Vote with your wallet
Millions taking action everyday

Trending Campaigns

#FreeKesha and boycott Sony
@zachhalsey • 418 members • Join

Demand GMO Labeling
@Organic Consumers • 473,518 members • Join

Campaign Categories
Animal Welfare • Civil Rights
Criminal Justice • Economic Justice
Education • Environment • Food
Health • Human Rights
Human Trafficking • Immigration
Labor • LGBTQ Rights
Social Responsibility • Veterans
Women’s Rights
Nestlé and Unilever Lead the FMCG Pack on Triple Bottom Line Business Approach

BEYOND CSR

Creating Shared Value
We've made 39 commitments that we aim to meet by 2020 or earlier, to support our long-term goal of Creating Shared Value.

- Nutrition
- Rural development
- Water
- Environmental sustainability
- Our people, human rights and compliance

Nestle's 2015 Creating Shared Value Report outlines the company's advances in improving the nutrition of its food and beverages and identifies specific goals the company has established for achieving nutritional improvement.

Our approach to a brighter future: a better business

Introducing our plan
- Our strategy for sustainable business
- Our approach to reporting
- Improving Health & Well-being
- Reducing Environmental Impact
- Enhancing Livelihoods
Will Consumers Pay for Sustainably-Sourced Food?

Consumer values and preferences are shifting

A rising number of consumers around the world want foods that convey particular values. This includes foods that are produced through certain verified methods or are perceived to deliver specific health benefits.

U.S. consumers

Regularly buy:

- foods labeled as “sustainably sourced” 10%
- organic food 30%
- foods labeled as “natural” 40%

Think about:

- the way their food is farmed and produced 72%
- the ingredients in their food 88%
- the healthfulness of their diet 91%

SOURCE: FOOD & HEALTH SURVEY 2015, INTERNATIONAL FOOD INFORMATION COUNCIL FOUNDATION
Surveys Suggest Some Will but, Increasingly, They Just Expect It.

People are split on whether they would pay more for food and beverage products that are produced sustainably.

Are you willing to pay more for food and beverage products that are produced sustainably?

- Not sure: 34%
- Yes: 38%
- No: 28%

Who is more likely to pay?
- College grads
- Higher income
- Lower BMI
- In better health
- for special meal
- if guests invited*

2016 n=1,003

International Food Information Council Foundation
2016 Food and Health Survey

* see Professor Goddard, University of Alberta
Some Concluding Comments

- long-term global demand outlook for meat looks strong but will be volatile (cf. dairy) in emerging markets
- watch out, there are strong protein competitors about!
- beef a minority, premium meat – celebrate this and distance yourselves from cheap fish and chicken
- red meat consumption in the firing line in developed markets but some consumers will pay more for less!
- the “green bar” is moving up inexorably – increasingly, consumers won’t pay more for green, just expect more
I Think I’ll Buy a New Bike, or a Car, or a Small House!

Second Hand Bike Price Slashed from $24,000 to an Affordable $16,000!

In Food, too, NEVER Underestimate what Consumers Value and are Willing to Pay For!
CONTACT POINTS:

e-mail: profdavidhughes@aol.com

Telephone contact: mobile +44(0)7798 558276

@ProfDavidHughes

Consumer Blog: www.drfood.ca

Retail Blog: www.supermarketsinyourpocket.com