Animal Factory Farming: *Killer stats investors can’t ignore*

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## The three stages of truth

<table>
<thead>
<tr>
<th>Stage</th>
<th>Topic</th>
<th>Key Event</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Ridicule</td>
<td>Slavery</td>
<td>“I have endured a great deal of ridicule”</td>
<td>1865</td>
</tr>
<tr>
<td></td>
<td>Women’s Rights</td>
<td>“A women’s place is in her home”</td>
<td>1919</td>
</tr>
<tr>
<td></td>
<td>Global Warming</td>
<td>“Global warming is a scam, perpetrated by scientists”</td>
<td>2005</td>
</tr>
<tr>
<td>II. Violent Opposition</td>
<td>Animal Factory Farming</td>
<td>“I don’t know who asked the sow if she wanted to turn around”</td>
<td>1988 – 2013 – 2015</td>
</tr>
<tr>
<td>III. Acceptance</td>
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Animal factory farming is threatening global sustainability... this is not about vegetarianism
Factory farming is a new phenomenon

**Factory farmed pigs (US, %)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Pigs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>30%</td>
</tr>
<tr>
<td>2013</td>
<td>97%</td>
</tr>
</tbody>
</table>

**Global animal population**

- **1993** – 13 billion
- **2013** – 23 billion (+77%)

On average, there are **3 chickens per person**

- **1980** – 9% of consumed comes from fish farms
- **2013** – 50% of consumed comes from fish farms

These numbers are projected to increase.

**Factory farming has exploded on the world...**

99% of all meat consumed in the US is factory farmed; 63% in the rest of the world

Source: ¹Food and Water Watch, 2012; ²FAO, 2013; ³FAO, 2012
Factory farming has exploded on the world...  
99% of all meat consumed in the US is factory farmed; 63% in the rest of the world.
Threatens Human Health

• **80%** of all antibiotics in the **US** are used on farm animals; **65%** in **Europe**

• **Last Resort Antibiotics: Colistin Resistance Found** Scientists discovered bacteria resistant to the drug of last resort in patients and livestock in China, Europe and US

• Increased **frequency of animal epidemics**

**Sources:** CDC, 2012; The Guardian, 18 June 2015; CDC 2013, FDA.gov; National Resources Defense Council (NRDC); The Alliance to Save Our Antibiotics, 2011; PNAS, 2015

#1 Use of Antibiotics- Worldwide
The livestock sector produces **14.5% of global greenhouse gas emissions**, more than the transport sector (13%); this includes:

- **39%** of methane emissions
- **65%** of nitrous oxide emissions
- **130x more animal waste** than human waste is produced in the US

**The irreversible tipping point of global warming is fast approaching**

Sources: Chatham House, 2014; Chatham House, 2014 and FAO, 2013; Environmental Integrity Project, 2011; World Watch, 2009; United States Environmental Protection Agency (EPA)
The new phenomenon can’t feed the world...

- At least **one third** of the world’s grain harvest is fed to farmed animals
- On average, it takes around **6kg of plant protein** to produce **1kg of animal protein**
- **4kg of wild fish** are used as feed to produce **1kg of farmed salmon**

Protein consumption is crowding out calories for people living at subsistence level; diverting some resources from animals to humans would feed the world

Animals now outcompeting humans for cereals
With roughly the same amount of arable land, cereals have been diverted from humans to animals

Factory farming is a false solution... it cannot feed the world

Source: FAOSTAT, 2015; ICF analysis
Consumes Our Plants Scarce Resources

- Estimated liters of water required to produce 100 calories of...
  - Beef: 1,000+
  - Pasta: 56
  - Potatoes: 38

- Animal agriculture is responsible for up to 91% of Amazon deforestation

Animal factory farming is threatening global sustainability...this is about materiality, not morality
If universities and powerful investors are not on the cutting edge, who will be?

- **As a university / business leader**
  - Influence your *business practices* – for example, Virgin America only serves cage-free eggs aboard their flights
  - Improve your *catering policy* – ensure that no factory farmed food is served for internal catering and events; implement a ‘Meat Free Monday’ policy

- **As an individual**
  - Refine your *donations and speaking engagements policy*
  - As a consumer, make the choice to buy high-welfare meat, eggs and dairy and *reduce your meat consumption*
  - Sign up to the FAIRR newsletter

- **As an investor**
  - Make *impact investments*
  - Review and become a member of the FAIRR (*Farm Animal Investment Risk & Returns*) Initiative ([www.fairr.org](http://www.fairr.org))
What does this mean for investors?

For example, Hallmark/Westland, a California-based meat packing company.

In 2008, evidence of animal cruelty and health concerns forced the company into the biggest meat recall in US history: 65 million kilograms, equivalent to the weight of 195 jumbo jets.

The recall cost $116 million. But the resulting health and safety class-action forced them into bankruptcy in 2012.

And there are large public examples hidden in plain sight...
Investment risks in the fast food industry

**Risks** for investors

Underperformed the MSCI Index by 97%

Sources: Google Finance, Chipotle.com
Investment risks hidden in plain sight

Consumers

- 03.11.2014, Wall Street Journal: Meat companies go antibiotic-free as more consumers demand it.

- 22.09.2016, CNN: Are there too many antibiotics in your fast food meat?

Policymakers


Businesses

- 28.04.2015, Bloomberg: Sales of antibiotic-free & organic chicken have increased 25% & 33% y/y, respectively*


Investors

- Knowledge gap

Consumers, policymakers and businesses are starting to act... Investors should too

*Year-end 2015 as per IRI, Chicago-based Market Research Firm
Investment risks and opportunities in the **poultry and egg industry**

**Risks** for investors

- **$3.3bn** over the first 6 months economic cost due to US avian flu outbreak,
- representing **6%** of the **$50bn** US poultry industry
- Government bill including cleanup = **$700m**

**Opportunities** for investors

- Replacing eggs in mayonnaise **reduces price volatility** in key inputs

**Case studies**

The **world’s largest food catering company**, serving **8 million meals a day** in the US alone, has walked away from the **most commonly sold mayonnaise** in the world.

Sources: Google Finance; National Geographic, 15 July 2015; USDA Agriculture Secretary Tom Vilsack, July 2015; Compass USA press release, February 2015
Impact Investing in **food and materials** technology

- **Clara Foods**
  - Egg whites
- **Perfect Day**
  - Milk
- **Impossible Foods**
  - Meat
- **Memphis Meats**
  - Beef and pork
- **Clear Labs**
  - Food analysis
- **Bolt Threads**
  - Silk
- **Beyond Meat**
  - Beef and chicken
- **Hampton Creek**
  - Mayonnaise, cookies and eggs
- **Kite Hill**
  - Cheese
- **Sunfed**
  - Chicken
- **Gelzen Inc.**
  - Gelatine
- **Modern Meadow**
  - Leather

**Impact investments with the objective of reducing dependence on animals**
Farm Animal Investment Risk & Return Initiative

As investors we care about the bottom line – have we priced risk?

1. A collaborative network by investors, for investors.

2. With an objective to close the knowledge gap.

3. It’s about materiality, not morality.

4. Since launch in December, more than $1.5 trillion of AUM joined the FAIRR network.

By joining, you can be an early adopter to price this risk
Investor Collateral

**Investment risk report**

28 ESG risks

**Benchmark**

Transparency on supply chains

**Case studies**

Practical help by investors for investors

Direct Engagement

**Internal risk management**

- Ask your ESG research providers to identify metrics and provide data on this risk

**Active Stewardship**

- Direct dialogue with company management on these issues
- Collaborative engagement with companies

Bridging the knowledge gap for investors
FAIRR Engagement with Investee Companies (April 2016)

Antibiotics engagement – backed by $1.5 trillion AUM

- Targeting 10 of the largest global fast food companies
- Addressing the excessive use of antibiotics in livestock production
- 60 investor signatories to date, with $1.5 trillion AUM

Current Status

- 8 of the 10 companies have responded and are in direct dialogue with our team
- Companies have already given concrete public commitments:

60 institutional investors with over $1.5 trillion AUM
Antibiotics engagement launch (April 2016) – press coverage

Forbes
‘Food company investors demand antibiotic reduction, now!’

FORTUNE
‘Big investors push McDonalds, Yum! and Domino’s to drop antibiotics’

the guardian
‘Investors urge fast food and pub chains to act to reduce farm antibiotics’

REUTERS
‘Investor group launches campaign to curb antibiotic use’

FT
‘Systemic’ antibiotics crisis troubles big investors’

Daily Mail
‘Investor group launches campaign to curb antibiotic use in food’

52 articles in major publications across 15 countries
Investor Engagement on Sustainable Protein (Sept 2016)

Sustainable Protein Engagement launched

- 40 signatories to date, with $1.25 trillion AUM
- Targeting 16 international food companies
- Addressing the material risks to the livestock industry posed by the four inconvenient truths
- Highlighting the opportunities presented by the growing market for plant-based proteins

Company targets for sustainable protein engagement:

- Kraft Heinz
- Kroger
- Unilever
- Walmart
- Mondelez International
- Ahold Delhaize
- General Mills
- Costco Wholesale
- Whole Foods Market
- Tesco
- Sainsbury’s
- Morrisons
- Ocado
- Marks & Spencer

Mitigating climate risk and building resilient supply chains
Investor Engagement on Sustainable Protein launch (Sept 2016) – press coverage

- **REUTERS**: ‘Investors urge food companies to shift from meat to plants’
- **IPE**: ‘AP funds, Nordea, Folksam take aim at food companies on meat risk’
- **WORLD ECONOMIC FORUM**: ‘We’re addicted to meat. And it’s destroying the planet’
- **THE HUFFINGTON POST**: ‘Global Investors Push For a Protein Shake-up’
- **FORTUNE**: ‘Walmart and others are being asked to stop selling as much meat’
- **BUSINESS INSIDER**: ‘Investors urge food companies to shift from meat to plants’

Sustainable Protein engagement-backed by 40 investors with $1.25 trillion AUM
Bridge the knowledge gap
Reduce risk

Join the FAIRR Initiative

www.fairr.org

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