

# Animal Feeds: What we feed livestock matters

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OXFORD  
**REAL**  
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CONFERENCE



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# Feed Compass

A collaboration focused on:

**Accelerating momentum across the animal feed system to act on sustainability.**



[forumforthefuture.org/feed-compass](http://forumforthefuture.org/feed-compass)



**CALYSTA.**



volac



Waitrose





Fresh clearance eating into forest, Bolivia  
Image credit: Mighty Earth





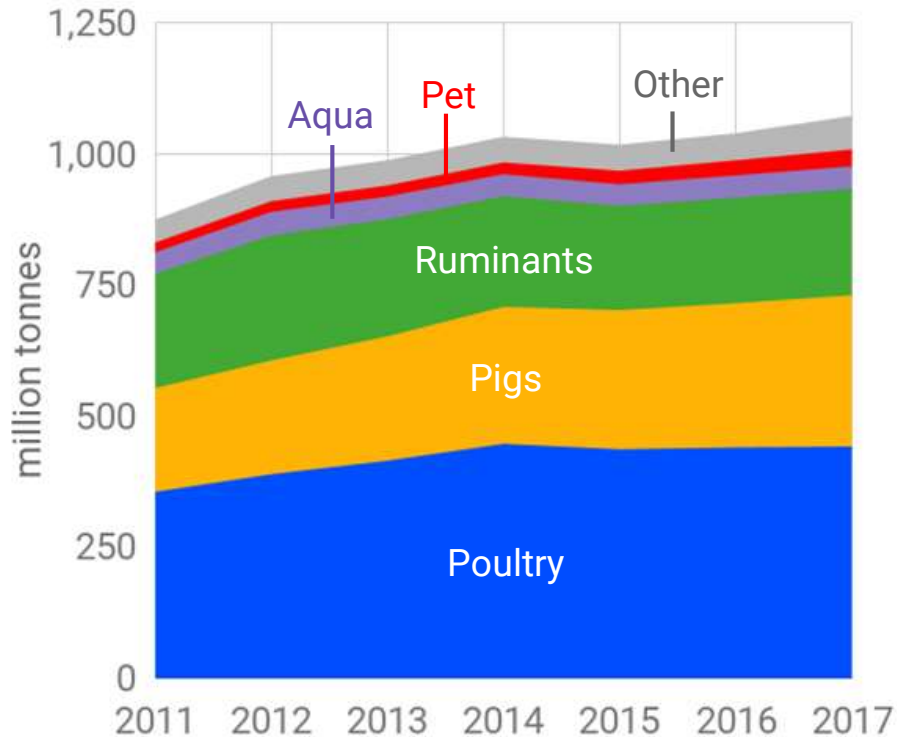






# Global feed production use (non-forage)

Data from Alltech Global Feed Surveys (2011-2018)



Different opportunities and efficiencies for each species.

Plus regional variations in feed production, livestock systems and supply chains.

*Common non-forage feed ingredients:*

- **Cereals:** corn, wheat, barley, oats, sorghum etc
- **Protein meals:** soybean, rapeseed meal, lupins). Often co-products
- Plus fats and oils, minerals, feed additives etc.

## What does mainstream industry focus on?

- 1. Food/feed safety:**  
Reputation / animal health
- 2. Efficiency:**  
Getting the most out of every ounce.  
Precision feed, amino acid supplements.
- 3. Price:**  
Least cost formulation



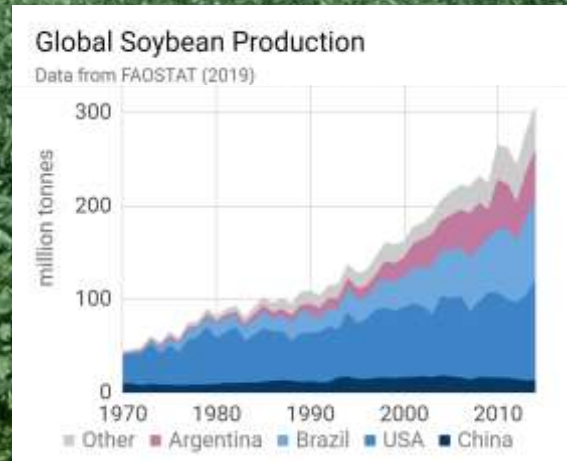
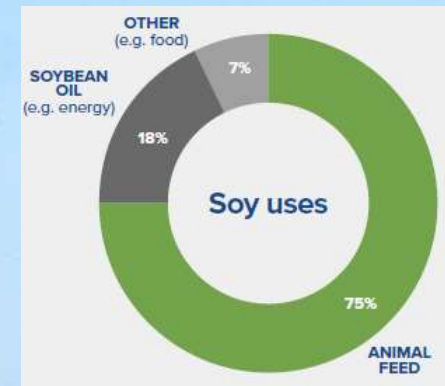


only  
£2.43

## Soy: a troublesome, cheap and useful protein source

Major focus area for UK retailers, but traction is limited.

- A highly efficient source of protein
- 75% of global production goes to animal feed
- Europe imports ~95% of its soy (mostly S. America).
- In UK ~26% known as from regions free from deforestation  
(See *3Keel supermarket supply chain research*)
- Transparency and certification is low.  
Globally only ~1-2% is certified.



# Novel animal feeds

- Insects
- Algae and seaweed
- Single cell proteins
- Amino acid supplements (less novel)
- Biochar

US: Black soldier fly larvae for poultry gets green light



Norwegian salmon producer trials Skretting's insect based salmon feed



## Cows fed charcoal in Grantham to cut emissions

0 October 2019



## US methane reduction project sees \$3m investment in domestic seaweed research

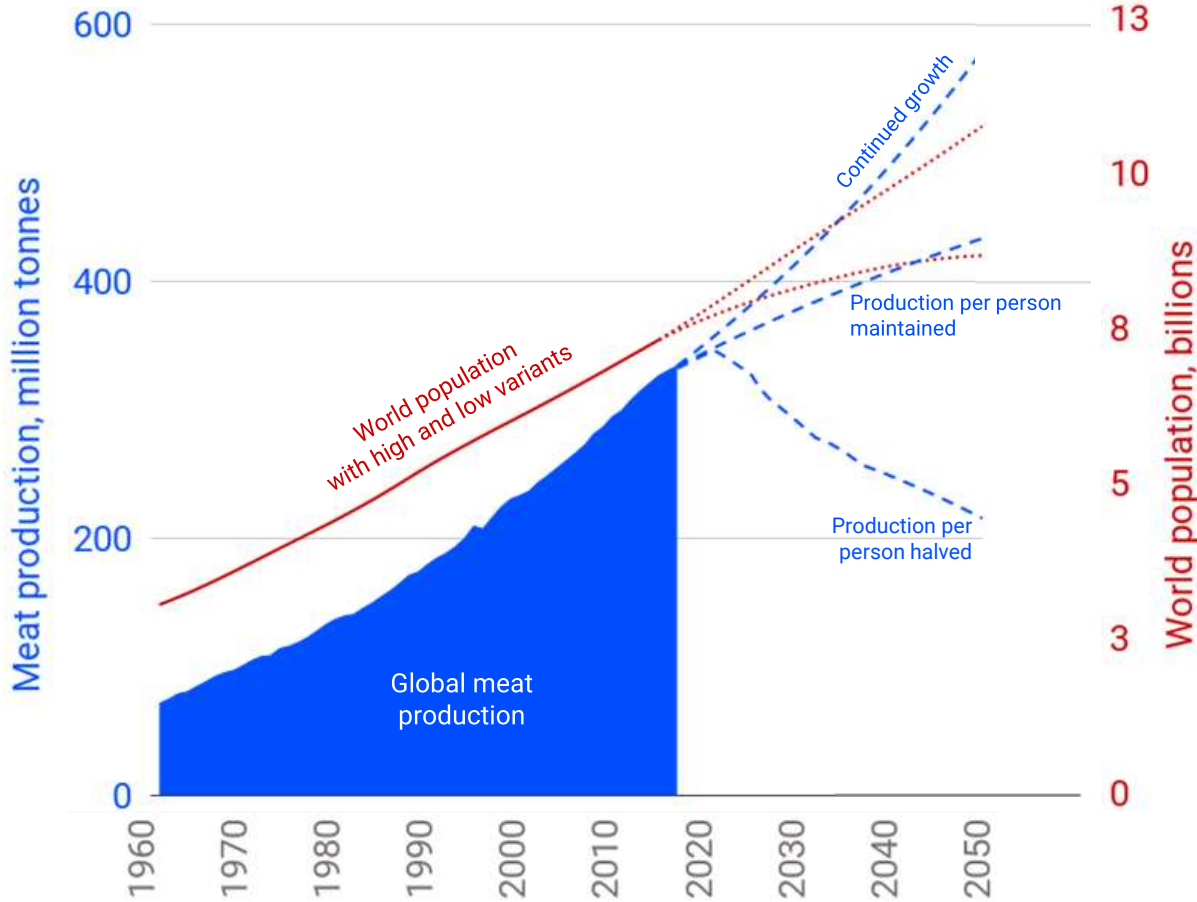
By Aerin Einstein-Curtis

19 Nov 2019 - Last updated on 13 Nov 2019 at 10:27 GMT



# World Meat Production

Examples of Future Scenarios. Historical data from FAOSTAT (2019)



## Meeting future animal feed demands...

~280 million hectares of additional land by 2030

*(this is impossible)*





**Thank you**

Samuel Smith

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FORUM  
FOR THE  
FUTURE



# Towards a Sustainable Animal Feed System



**REDUCE  
FEED  
DEMAND**

“Less and better”  
meat and fish

Optimised feeding regimes

**IMPROVE  
SUSTAINABILITY  
OF EXISTING  
FEEDS**

Feed produced within more  
regenerative farming  
systems

Traceability and  
transparency across the  
feed supply chain

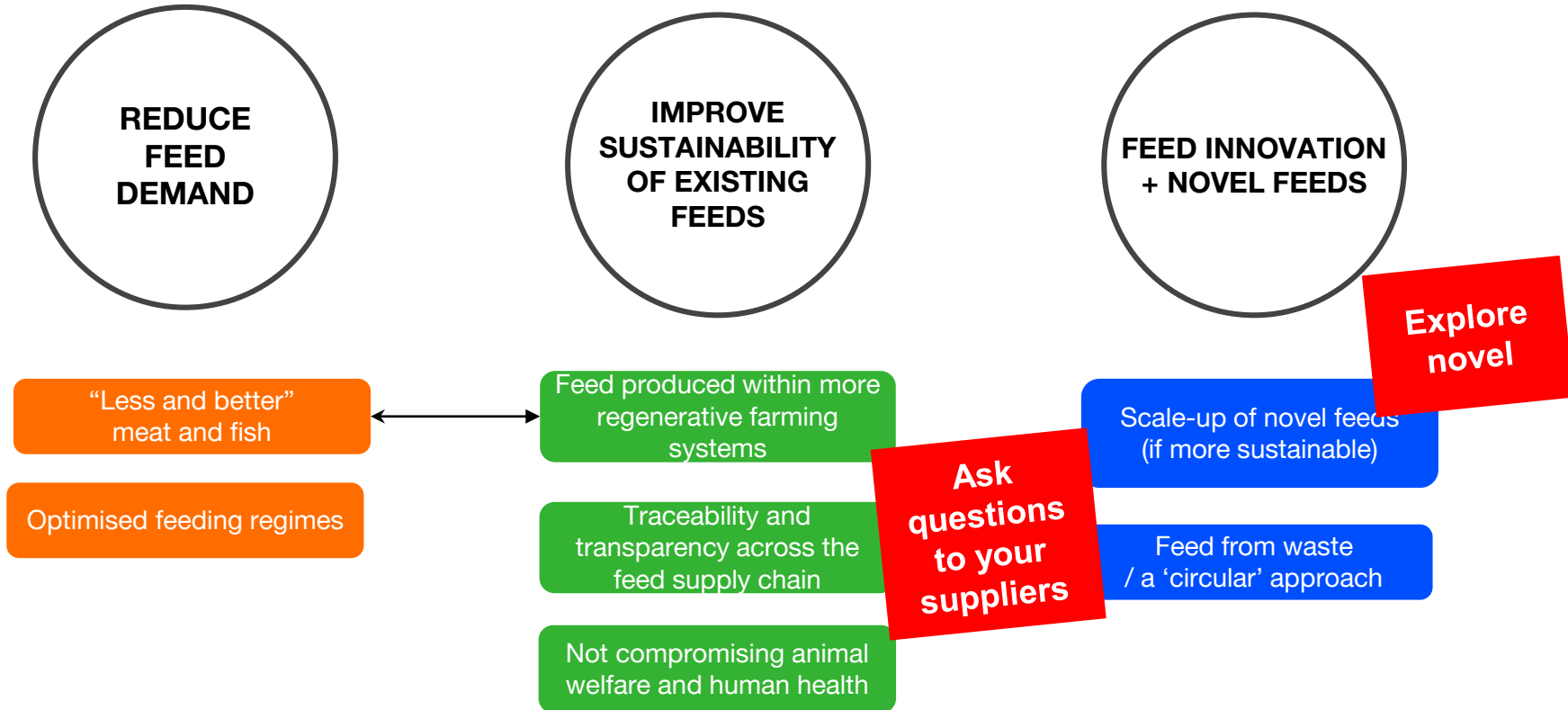
Not compromising animal  
welfare and human health

**FEED INNOVATION  
+ NOVEL FEEDS**

Scale-up of novel feeds  
(if more sustainable)

Feed from waste  
/ a ‘circular’ approach

# Towards a Sustainable Animal Feed System



# Nine Feed Compass Criteria

Qualities of a sustainable animal feed that's fit for the future.



Restorative land use and biodiversity practices



Minimises greenhouse gas emissions



Supports human rights and welfare



Takes a 'circular' approach



Minimises freshwater consumption



Minimises pollution



Promotes animal health and nutrition



Minimises fish stock depletion



Financially viable

## Why animal feed matters

- Can often be the **largest cost** in livestock production
- Major bearing on animal **health and welfare**
- Impacts **nutritional quality** of food
- A major **environmental impact**

