Demand for animal-based food products and sustainability

Dr Diana Bogueva
Global meat production, 1961 to 2018

Source: UN Food and Agriculture Organization (FAO)

OurWorldInData.org/meat-production • CC BY
Meat supply per person, 2017

Average total meat supply per person measured in kilograms per year.

Source: UN Food and Agriculture Organization (FAO)

Note: Data excludes fish and other seafood sources. Figures do not correct for waste at the household/consumption level so may not directly reflect the quantity of food finally consumed by a given individual.
Meat consumption vs. GDP per capita, 2017

Average meat consumption per capita, measured in kilograms per year versus gross domestic product (GDP) per capita measured in 2011 international-$. International-$ corrects for price differences across countries. Figures do not include fish or seafood.

Source: UN FAO; World Bank, World Development Indicators

OurWorldInData.org/meat-production • CC BY
MORE MEAT PER CAPITA → MORE MEAT PER ANIMAL

Since 2000, animal weights have increased:

- **Beef**: 73 lb. or 10%
- **Pork**: 18 lb. or 9%
- **Broilers**: 1.2 lb. or 24%
- **Turkeys**: 5.3 lb. or 21%

Source: https://www.agprofessional.com/article/demand-drivers-livestock
How many animals do we eat each year?

Number of animals slaughtered for meat each year

Source: UN Food and Agriculture Organization, 2017
MORE MEAT PER ANIMAL

Since 2000, animal weights have increased:

- **Beef**: 73 lb. or 10%
- **Pork**: 18 lb. or 9%
- **Broilers**: 1.2 lb. or 24%
- **Turkeys**: 5.3 lb. or 21%

Source: https://www.agprofessional.com/article/demand-drivers-livestock
Global protein consumption rose 40% between 2000 and 2018. More than 50% of this increase was driven by Asia.

Globally, each person was estimated to consume on average 26kg of protein per year. Fueled by the growth of the consuming class, this is projected to grow by 27% to 33kg in 2025.

The highest protein demand growth rates of up to 3.6% per year is forecasted for Indonesia and Sub-Saharan Africa.

In 2018, plant-based proteins accounted for 66% of global protein consumption supply and is likely to remain as the dominant source of supply in 2025.

In value terms, the global protein market could be worth up to A$513 billion in 2025, 40% of which could come from meat proteins.

China is projected to be the largest market across all protein categories, except plant-based proteins. The country alone could account for 35% of global protein market value in 2025.

Source: FIAL, 2019
Trends and consumer demand
ALTERNATIVES TO ANIMAL PROTEIN
PLANT-BASED BURGER
PLANT-BASED SAUSAGES
PLANT-BASED Mince
PLANT-BASED CHICKEN
PLANT-BASED MILK
What consumers want?

• Sustainably produced with low environmental footprint

E.g. Beyond Burger life cycle assessment:

• 99% less water
• 93% less land
• 90% fewer GHG emissions
• 50% less energy

(Source: Heller and Keoleian, 2018)
What consumers want?

- Transparency (ingredients, production etc.)
- Product with awareness of health benefits
- Product with animal welfare consideration
- Superior taste and quality product
- Variety of new flavours to impress the palate
More alternatives to animal protein

- Algae
- Insects
- Cultured meat
Algae-based alternatives to animal-derived food
Insects

Why should we eat insects?

• Healthy
• Sustainable
• Delicious
• Safe
• Traditional

80% of countries and 2.5 billion people already eat them
Cultured Meat
MANY THANKS