

15<sup>th</sup> Poultry  
**Kn****wledge**  
**Day** 21 NOVEMBER

# SHAPING THE FUTURE

OF INDIAN POULTRY SECTOR





# Sustainability in Modern Poultry Production

Tim Burnside



# What we will Cover

- Global Trends
- What is Sustainability
- Where the Poultry Sector can Make a Difference
- Aviagen's Top 5 Commitments

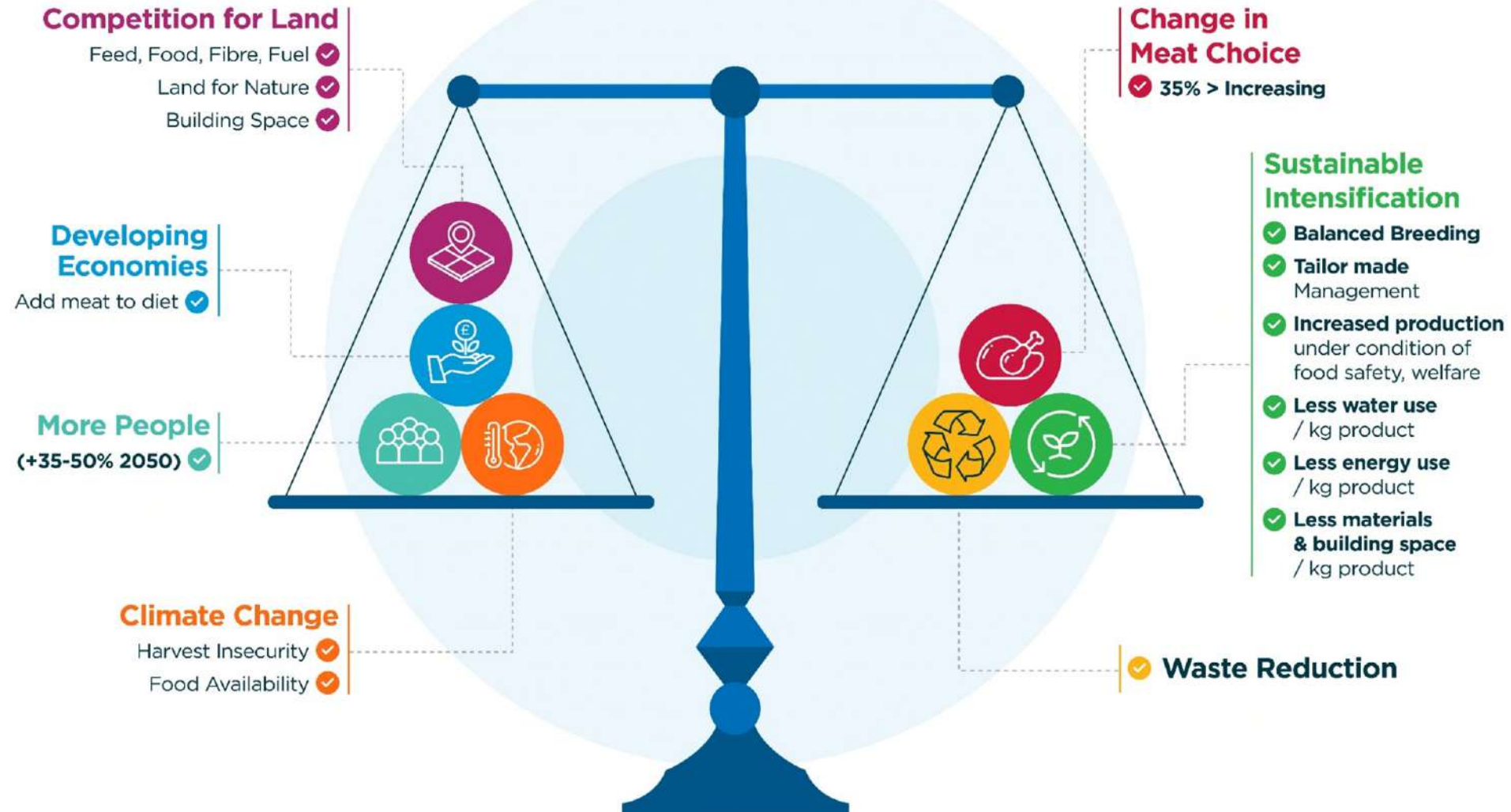


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# Global Trends



# Trend 1: Human Kind Needs More From The Planet



Adapted from: Neeteson, A.M., Appleby, M., Hogarth, G. (2016)

<https://www.dropbox.com/s/7fvyp3gi2efwo61/NeetesonEtAl140726MakingResilientPoultryIndustryEuropeUKWPSAChester.pdf?dl=0>

## Trend 2: From Producer to Consumer Market

- Consumers:
  - distance from farming
  - want choice
  - concerned about the way their food is produced
- Buying and voting power ► **NON-food producers**
  - influence **retail/food service and welfare organisations**
- Welfare **perception** part of **food and goodness box**



Climate Change





# What is Sustainability



# What is Sustainability?



**To meet the needs  
of today without  
compromising the future**

(United Nations Brundtland Commission, 1987)



# Three Pillars of Sustainability



**ENVIRONMENTAL**



**ECONOMIC**



**SOCIAL**



# Where the Poultry Sector can Make a Difference



# The 5 SDGs Prioritized by the International Poultry Council



The IPC represents more than 87% of global poultry production.

FAO-IPC Declaration of Sao Paulo, August 2019: The IPC identified the 5 SDGs where the poultry meat industry can make the most difference.

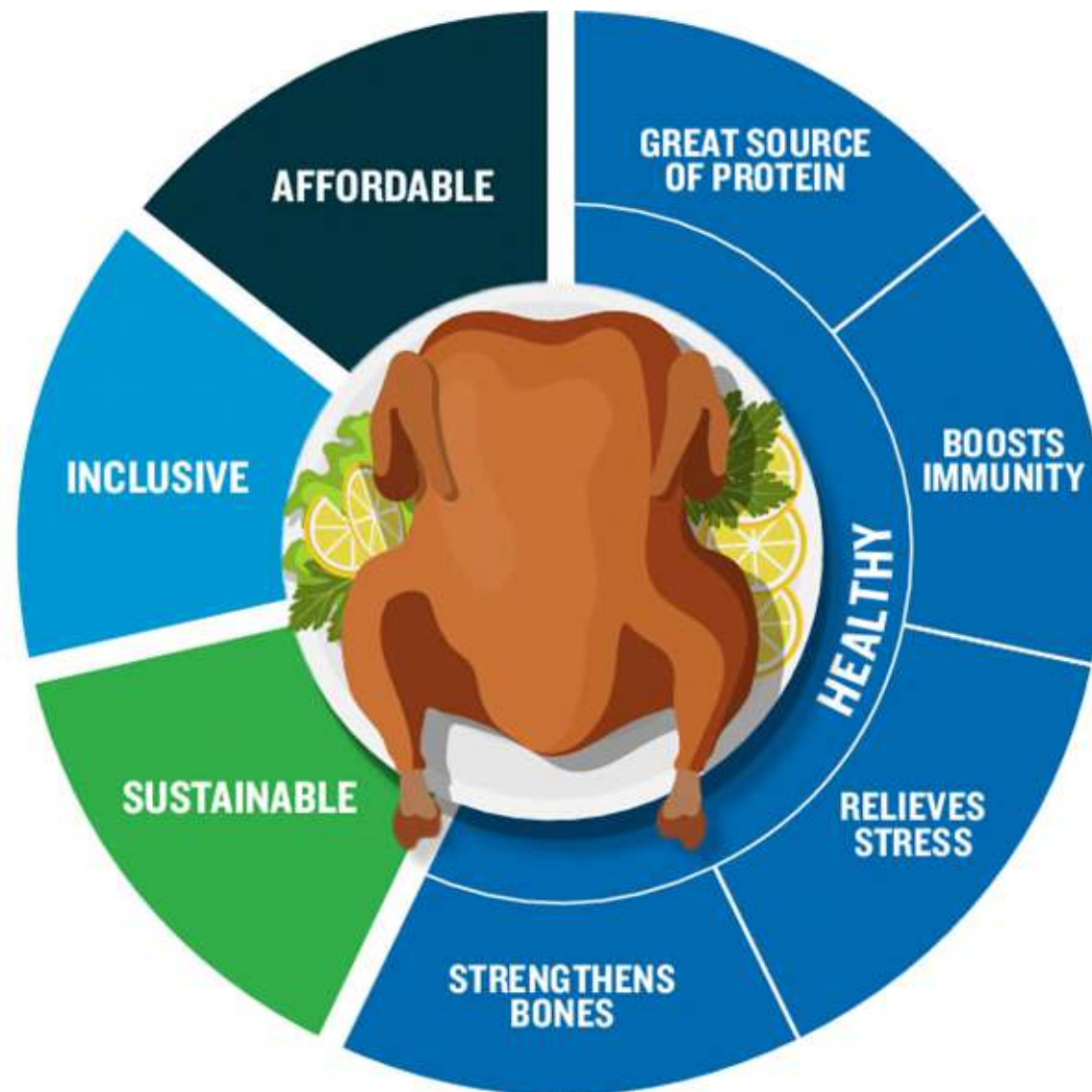




Zero  
Hunger =  
Feeding  
The World

## Poultry meat is

- Affordable
- Religiously considered as neutral
- Sustainable
- Healthy and nutritious
  - High-quality protein





Zero  
Hunger =  
Feeding  
The World



A world without hunger - YouTube x +

youtube.com/watch?v=Y497fi9t9oo&feature=youtu.be

YouTube BE Search

*For a world without hunger*

0:03 / 2:12

A world without hunger

606 views • May 7, 2019

5 0 SHARE SAVE ...

International Poultry Council - IPC  
7 subscribers

SUBSCRIBE

The video shows how poultry promotes food security and provides healthy nutrition while being a sustainable protein source.



Contributing  
to Good  
Health

- Colombian poultry association Fenavi organised a successful Facebook campaign around World Poultry Day
- They announced that for every Facebook like on that day the poultry sector would donate a kg of poultry meat to a Colombian food bank.
- The producers provided poultry meals for 2000 children getting meals from foodbanks for whole year. Fenavi organised the producers - each of them got a 'time slot' – a practical solution, and much appreciated.
- There was positive coverage including at the national tv and radio levels, and including famous people.





With/From  
Better  
Quality  
Education

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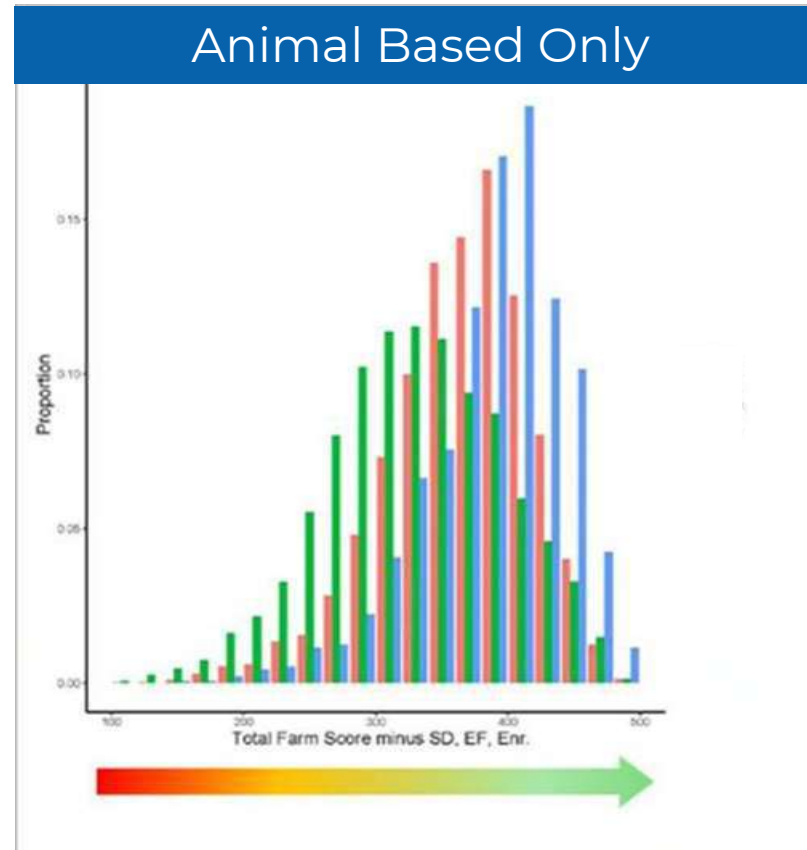
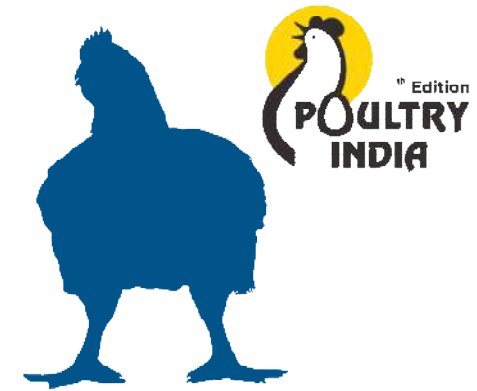
15 <sup>th</sup>	7+	2	25+	1500+
Edition	Speakers	Sessions	Countries	Delegates



# Management Skills **Key** to Welfare Outcomes

Overlap between different farming systems

**Mostly about management if resource based “bonus” not included**



Animal Based: mortality, footpad, hockburn, breast irritation, scratches  
Resource/System Based: stocking density, early feeding, enrichment

De Jong et.al., 2022. Differences and variation in welfare performance of broiler flocks in three production systems. Poultry Science. <https://doi.org/10.1016/j.psj.2022.101933>

# Key Welfare Indicators (KWI)



## International Poultry Welfare Alliance

- Live Production, Retail/Food Service, Suppliers/Allied Industry, Associations, Research, Non Governmental Organisations
- **Key Welfare Indicators**

Need for a comprehensive list of KWIs with standardized instructions for the measurements that can be used in different poultry species and at different production stages.



Via Industry,  
Innovation and  
Infrastructure  
ensuring Good  
Animal **Welfare**  
and **Health**



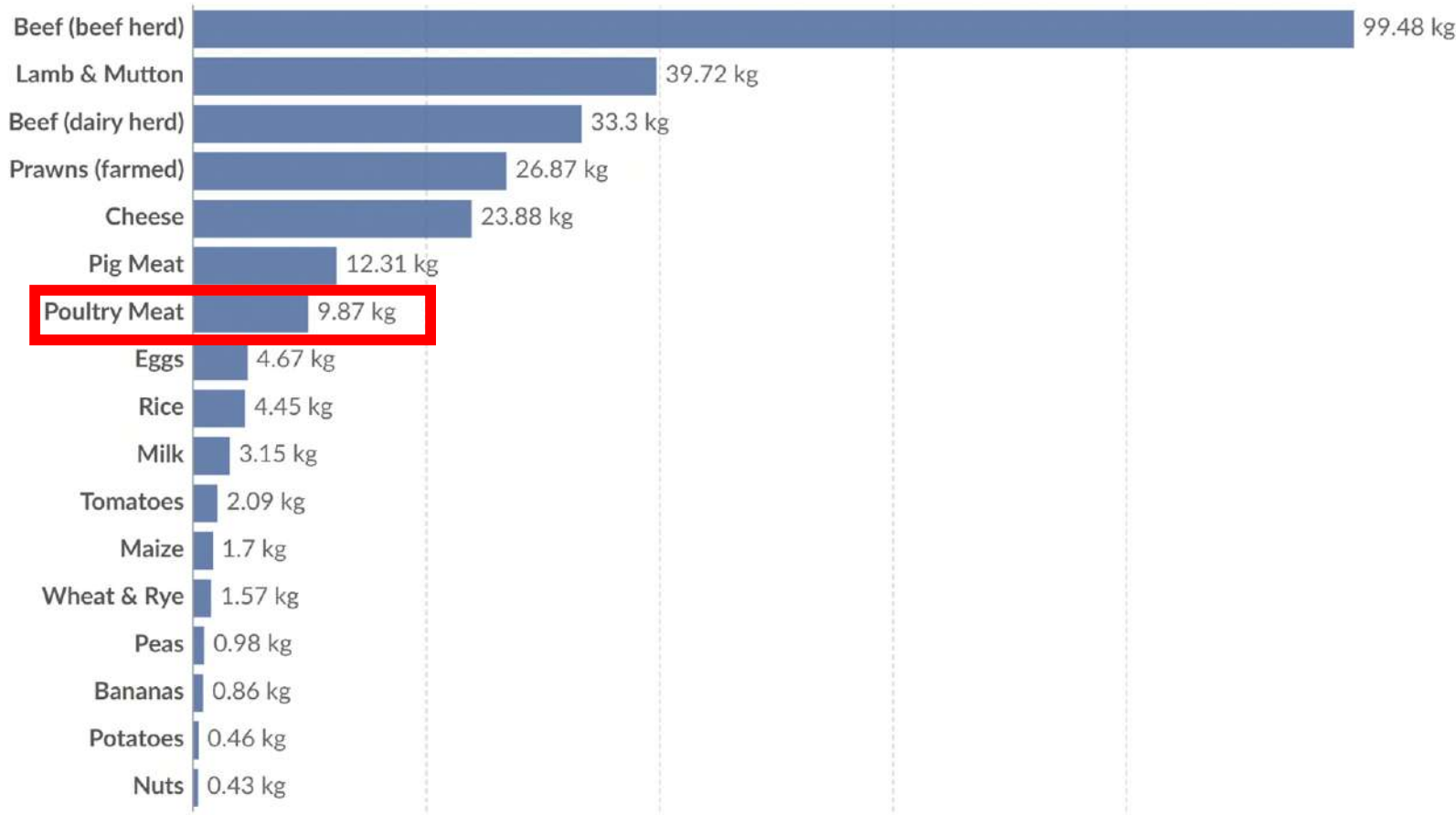
# Contribution to Lowering Carbon Footprint

With Low Impact on the Planet

## Greenhouse gas emissions per kilogram of food product

Our World in Data

Emissions are measured in carbon dioxide-equivalents<sup>1</sup>. This means non-CO2 gases are weighted by the amount of warming they cause over a 100-year timescale.



Data source: Joseph Poore and Thomas Nemecek (2018).

[OurWorldInData.org/environmental-impacts-of-food](https://OurWorldInData.org/environmental-impacts-of-food) | CC BY



# Aviagen's Top 5 Commitments



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# Aviagen's Top 5 Commitments

Our Top 5 Commitments align with and contribute to the 5 Priority SDGs selected by the IPC.



COMMITTED TO...

# HEALTH, FOOD SAFETY AND FOOD SECURITY

We apply multiple strategies to secure a safe global supply of healthy birds to poultry growers around the world.

GLOBAL SECURITY  
OF SUPPLY



STRONG  
VETERINARY  
SUPPORT



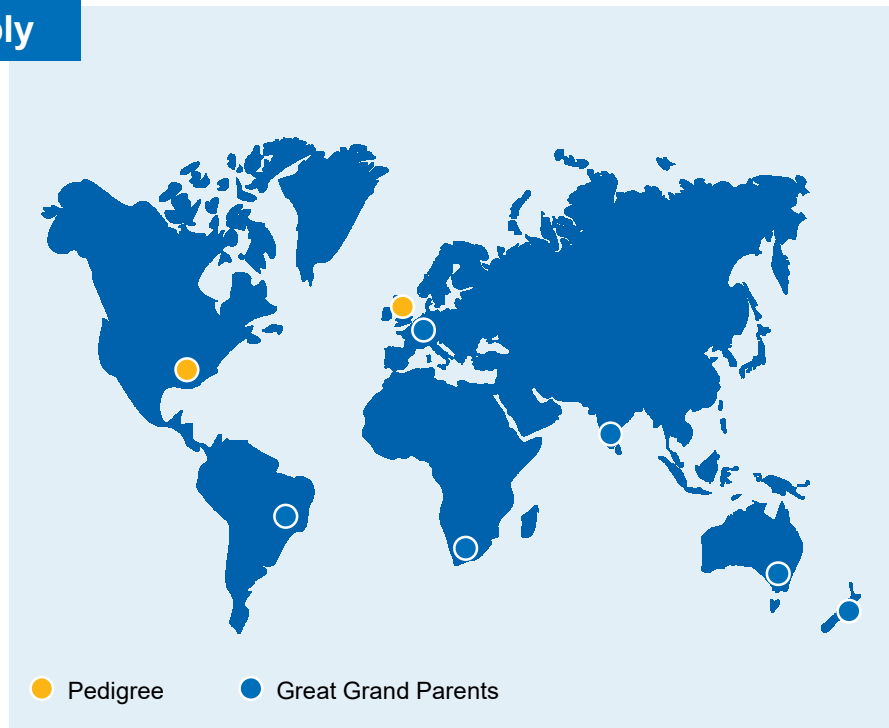
EXCELLENT  
BIOSECURITY



# Heath, Food Safety and Food Security



**Global  
Supply**



**Compartmentalization**



COMMITTED TO...

# BIODIVERSITY

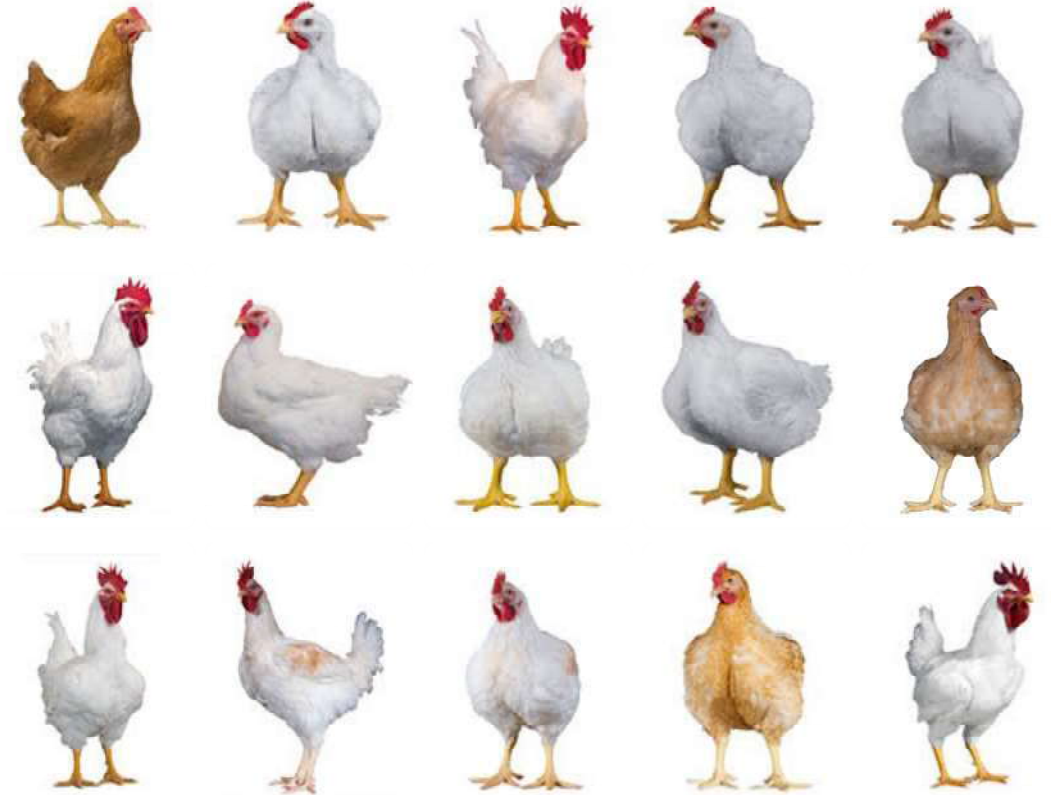
Our diverse gene pool enables a wide selection of poultry lines, so producers can provide the right bird for the right market, offering a choice to our customers around the world – now and for the future.



# Biodiversity



A sustainable supply  
of breeding stock  
from parallel breeding programs  
with large diverse gene pools.



**>30 Lines**  
Unselected controls  
Colored  
Slow growing

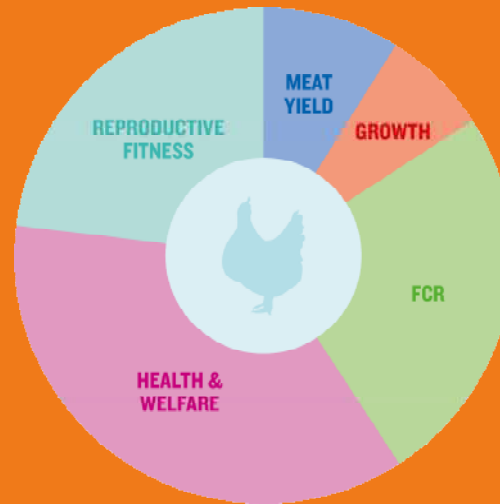
The importance  
of **CHOICE**  
for consumers  
and markets

COMMITTED TO...

# BALANCED BREEDING

We provide leading performance for environmental and economic sustainability along with health and welfare traits.

Combining scientific advances with traditional selection techniques and stockmanship to give the optimum genetic progress across a range of important characteristics.

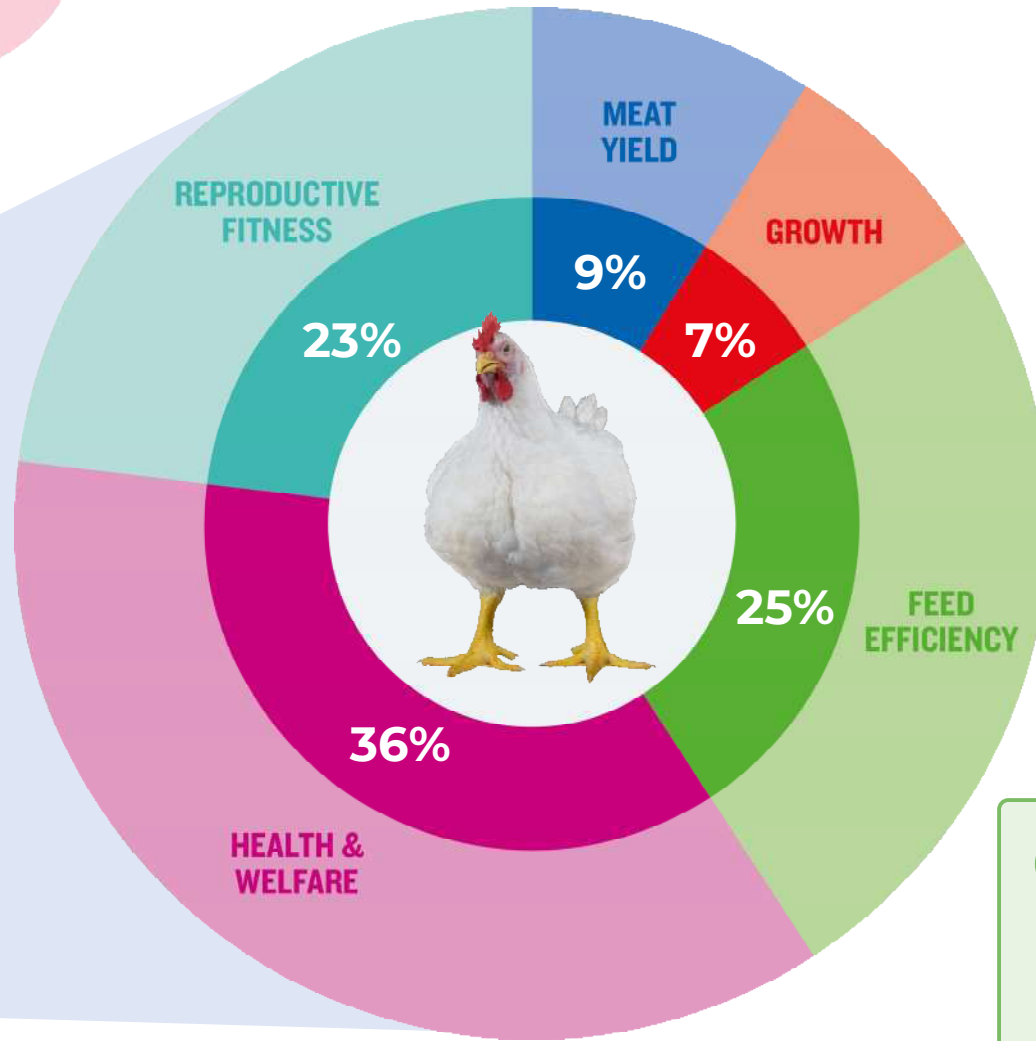


# Balanced broiler selection

Modern broilers are already selected for **welfare** & **health**

## MAIN SELECTION PRIORITIES

- ✓ 1. Health and Welfare
- ✓ 2. Feed Efficiency
- ✓ 3. Breeder Performance



### Example

Ross 308

The Standard Breed in EU



Selected for more than **40 characteristics**



**Continuous increase** in health, welfare and support characteristics over last 20 years and ongoing

# Delivering improvements in health and welfare

**Direct selection  
for leg &  
cardiovascular health**

**Innovative selection  
techniques**

- ✓ Gait scoring
- ✓ Medical imaging
- ✓ Pulse oximeter

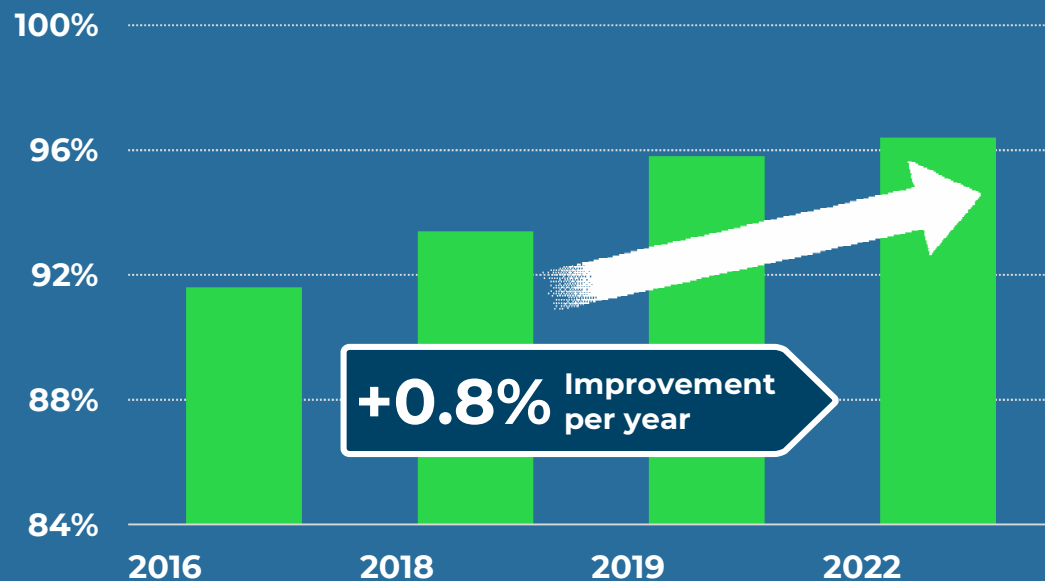


# Ross 308 Improving in Welfare through **Balanced Breeding**

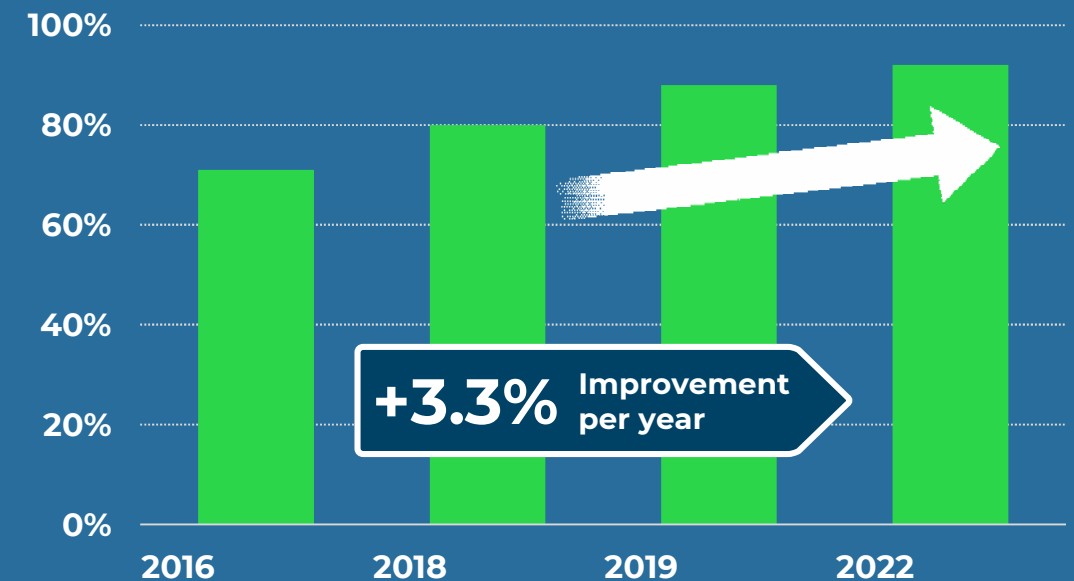
Aviagen internal broiler trials shows **clear improvement in leg health** through our **direct selection** for defect freedom and improved gait score



## % DEFECT FREE – ROSS 308

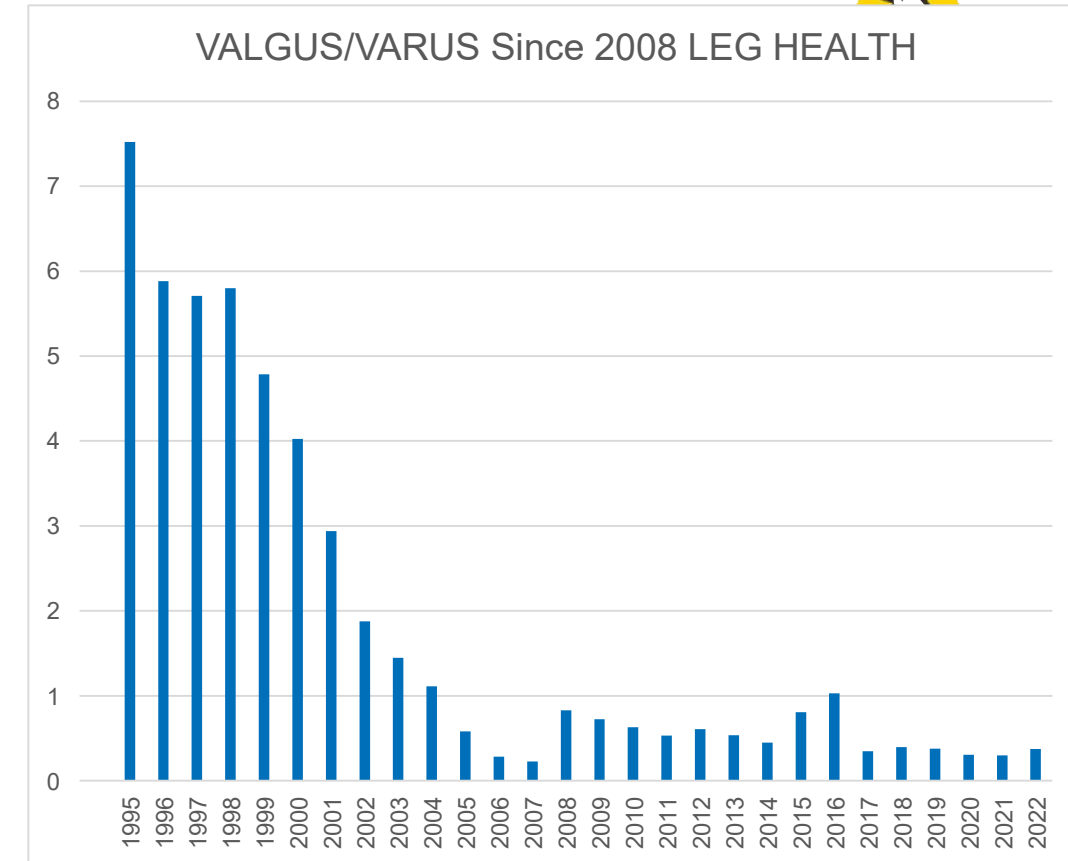
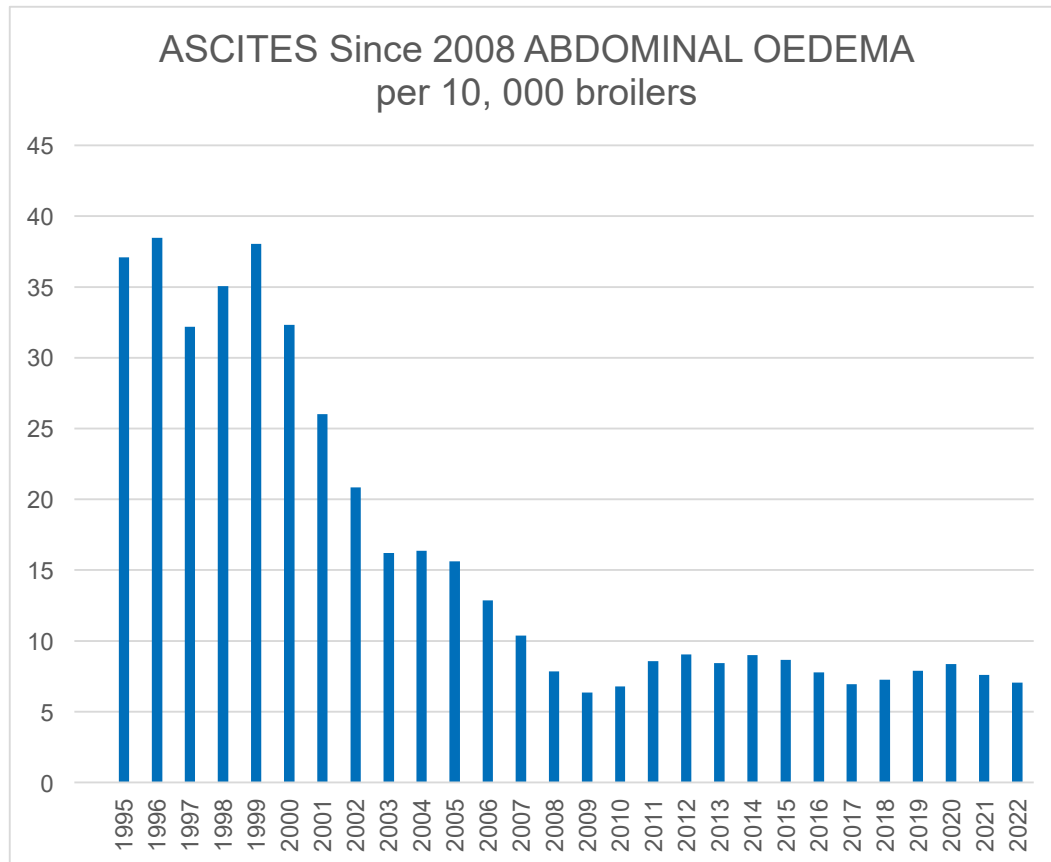


## % GOOD GAIT SCORE – ROSS 308



# Breeding improvements in the Field

Source: Canadian Food Inspection Agency,  
1995 - 2023



Ascites and abdominal oedema are indicative  
for heart and lung strength

# Delivering improvements in feed efficiency

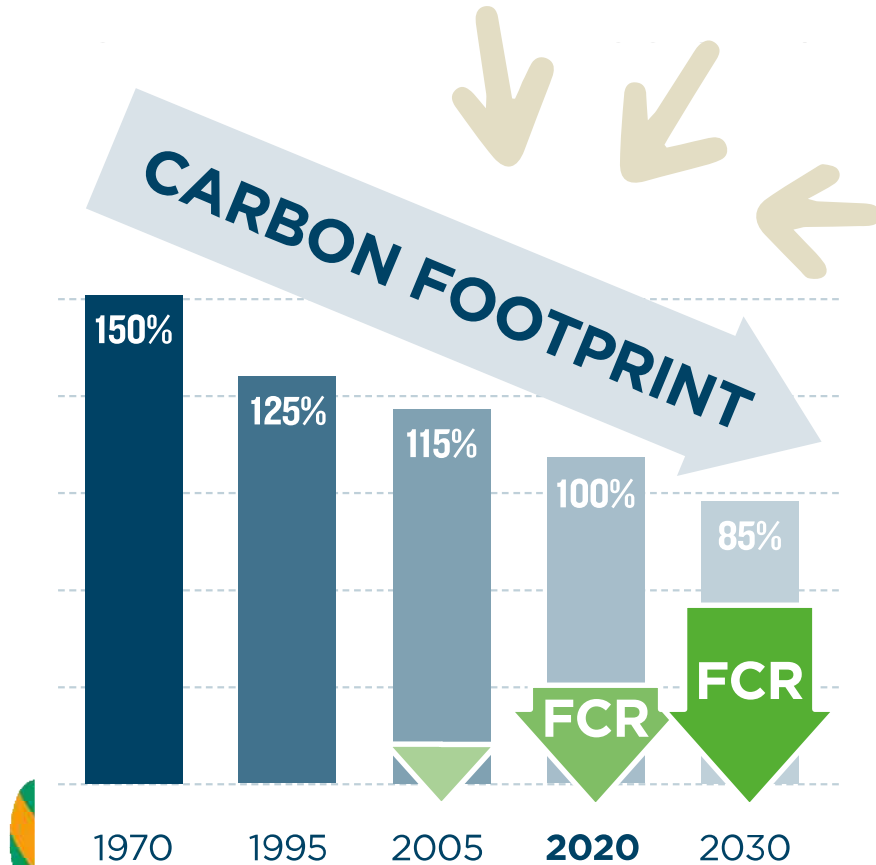
## Radio –Frequency Identification (RFI) Transponder Technology

- ✓ Accurately record  
feed intake and  
behaviour



# Contribution to Lowering Carbon Footprint

Improvement in FCR major driver for  
Environmental Sustainability



Year on year  
we're expecting a...

**1%**

Reduction in  
poultry carbon  
footprint

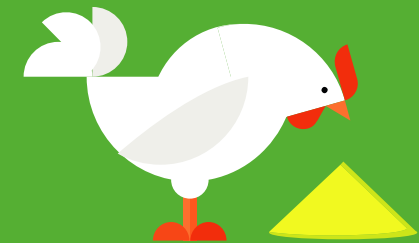
AS A RESULT OF A

**1.5 - 2 POINTS**

per year

**IMPROVEMENT**

...in FCR through  
balanced breeding



# Delivered Breeding Improvements

over last 20 years

The modern broiler is...

- ✓ **more efficient**  
than 20 years ago

while...

- ✓ **improving** liveability
- ✓ **improving** health
- ✓ **improving** welfare

at the same time



## IMPROVED FEED EFFICIENCY

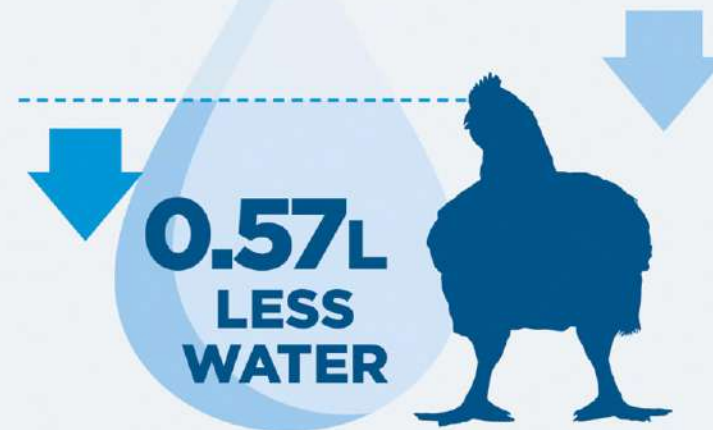
= a 2.5 kg broiler **now** consumes...



### LESS FEED MEANS...



## WATER USAGE

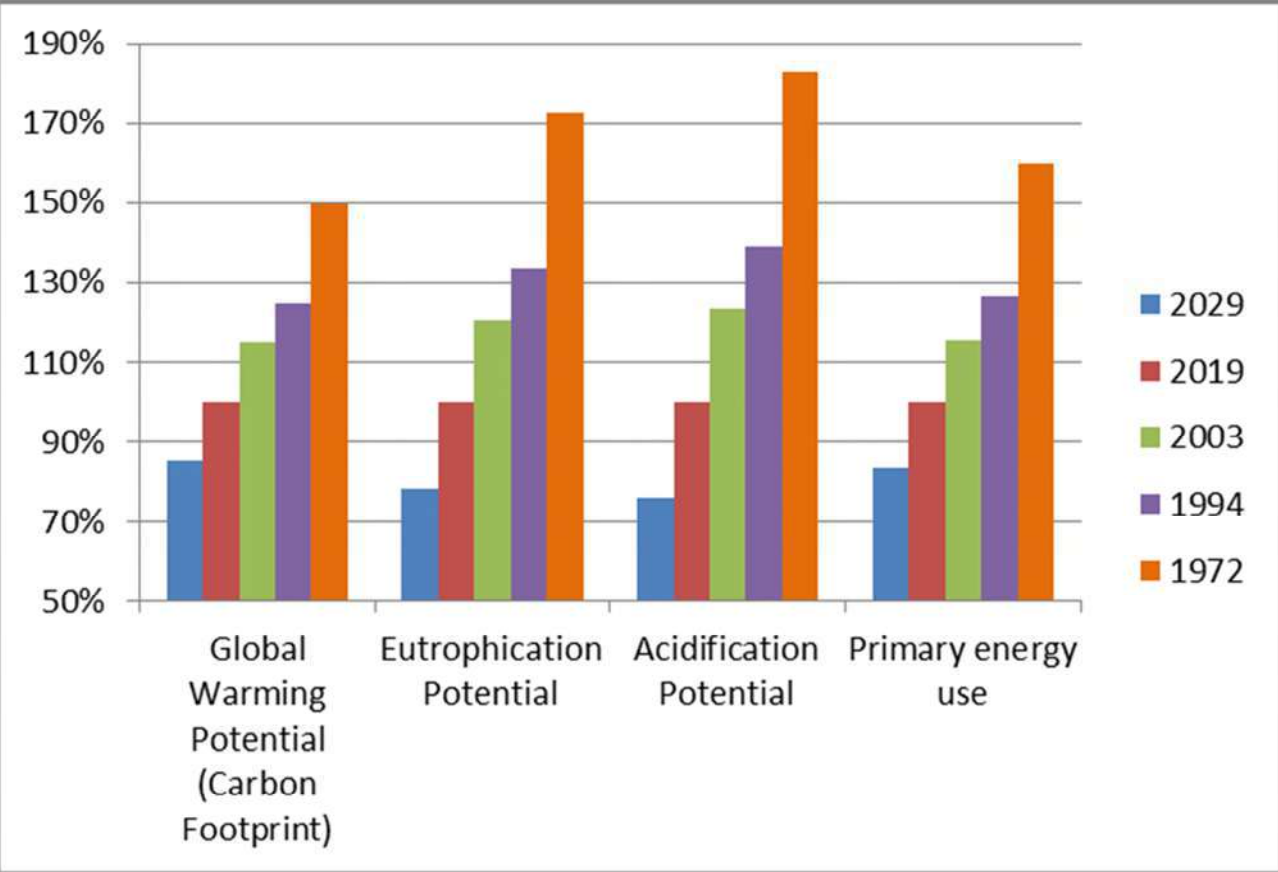


required **per 1.0kg broiler**

### BETTER WATER INTAKE =

- ✓ **Better** gut health
- ✓ **Better** litter quality
- ✓ **Better** footpad health
- ✓ **More efficient/sustainable**  
water use

# Improvement Poultry Environmental Impact 1972 – 2029 (predicted)



Rates of Yearly Decrease (%)	2019 vs 1972	2029 vs 1972
Global Warming Potential (Carbon Footprint)	-1.1%	-1.1%
Eutrophication Potential	-1.5%	-1.7%
Acidification Potential	-1.8%	-1.9%
Primary energy use	-1.3%	-1.3%

- We have tools to calculate Environmental Impact of different broiler production systems and broiler genotypes



Acknowledgement: Santiago Avendaño



COMMITTED TO...

# IMPORTANCE OF MANAGEMENT AND STOCKMANSHIP

We work hand-in-hand with our customers, sharing the latest best management practices to help them get the best from their birds.



# Importance of Management and Stockmanship



**Extensive management support and education since management factors influence 70-90% of the health, welfare and performance of a flock.**

- Best practice management
- Greater success through knowledge sharing
- Integrating bird welfare



## Best Sensor on the Market

### Hearing

Listen to the bird's vocalization, breathing, and respiratory sounds. Listen to the mechanical sounds of fan bearings and feed augers.

### Smell

Keep notice of smells in the environment such as ammonia levels. Is the air stale or stuffy?

### Sight

Observe behaviour such as bird distribution in the house and a number of birds feeding, drinking and resting. Observe the environment such as dust in the air and litter quality. Observe bird health and demeanor such as positive, alertness, eyes and gait.

### Taste

Water and feed quantity.

### Touch

Handle the birds to assess crop fill and check the bird's general condition. Take notice of air movement across your skin. Is there a draft? What does the temperature of the house feel like?



# Importance of Management and Stockmanship



Management  
and stockmanship  
**impact**  
**70-90%...**

# Importance of Management and Stockmanship



COMMITTED TO...

# TRANSPARENCY, COMMUNICATION & ENGAGEMENT

We are committed to engaging with stakeholders through active, transparent communication and close cooperation with customers, associations and the wider society.

The education of future poultry professionals is one of our key priorities.



# Transparency Communication and Engagement



**Engage with stakeholders through active, transparent communication and close cooperation with customers, associations and the wider society.**

- Developing close relationships through the entire chain: transparency, collaborations, education of future industry professionals, strategic alliances, product research and development



International Poultry Council (IPC)



International Poultry Welfare Alliance (IPWA)



US Roundtable for Sustainable Poultry & Eggs (US RSPE)



British Poultry Council (BPC)  
and their local equivalents  
around the world



Animal Transport Association (ATA)



European Forum of Farm Animal Breeders (EFFAB)



# Summary

- Sustainability is about ensuring there is a positive legacy to pass on.
- It is not just about the environment, but this plays a major role.
- FCR is the major driver for environmental sustainability.
- Welfare is an integral element of social sustainability.
- Being able to continue into the next generation is an essential element of economic sustainability.



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