# Egg Industry in Asia: Present Status and Path forward…

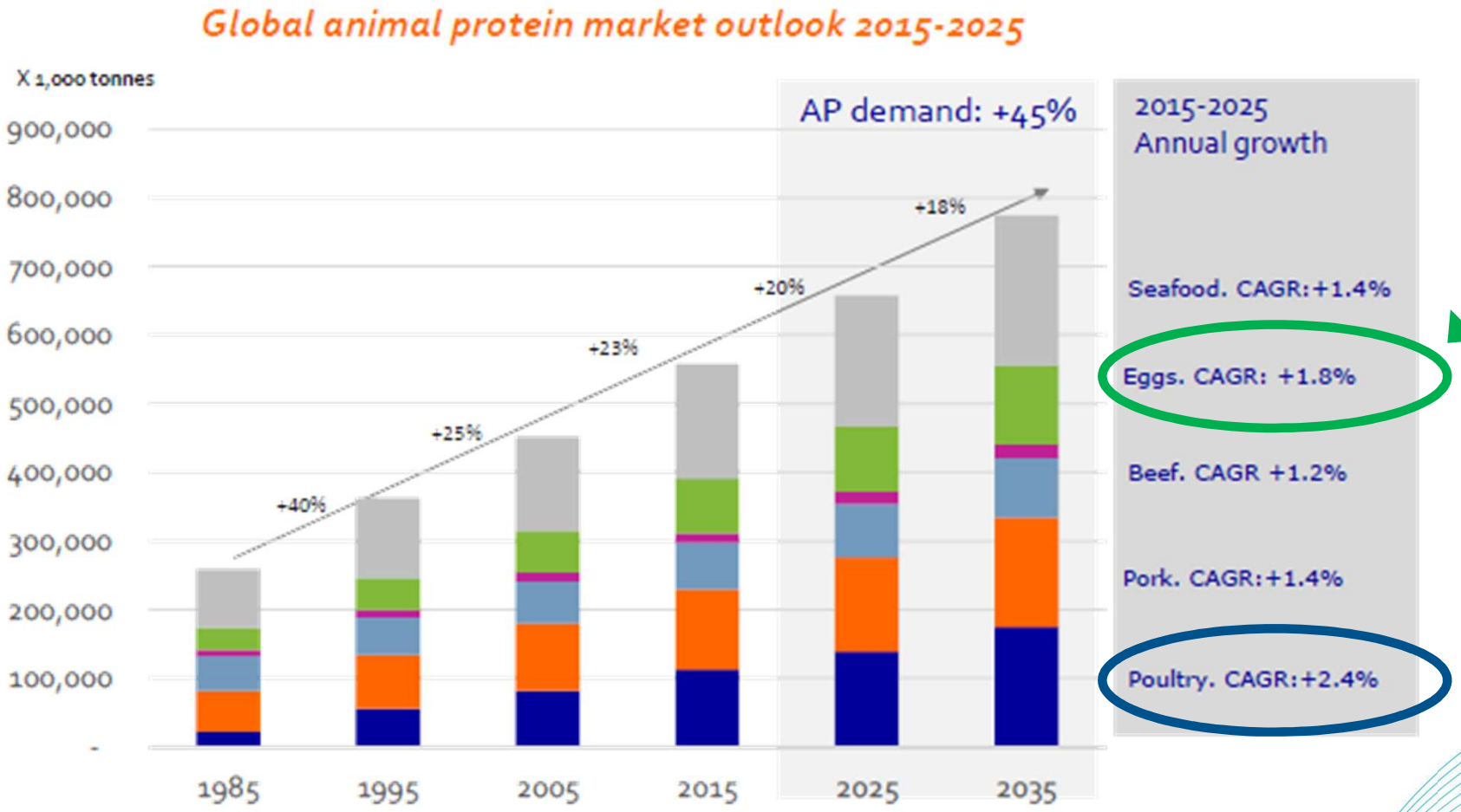
IVPI meeting Bengaluru,

Wednesday 14th August 2019

Benoit Pelé - Hendrix Genetics-Layers

# Eggs are good for humans…

# A positive forecast for Animal Protein in the world!




Source: Rabobank 2018

# Eggs are one of the fastest growing proteins !

- Higher living standards
  - diets become richer and more diverse,
  - proteins become a growing part of people's diet,
  - Eggs are affordable and diverse!

- For the coming 2 decades: more than 50% growth is forecasted !

# Eggs gained back their positive image…

80% of the people think eggs are good for them!

Source: Marketing Clinic 2015 (for EMFA)

Photo credit: unsplash

# Top Health Benefits of EGGS

- Eggs raise HDL (the « Good ») cholesterol
- Eggs improve nutrient adequacy of the diet
- Eggs do not increase blood cholesterol
- Eggs can help to promote weight loss
- Eggs help to promote brain health
- Eggs help to prevent cataracts and to protect eyesight
- Eggs provide the best quality protein
- Eggs can help to protect our bones
- Eggs promote healthy hair and nails…

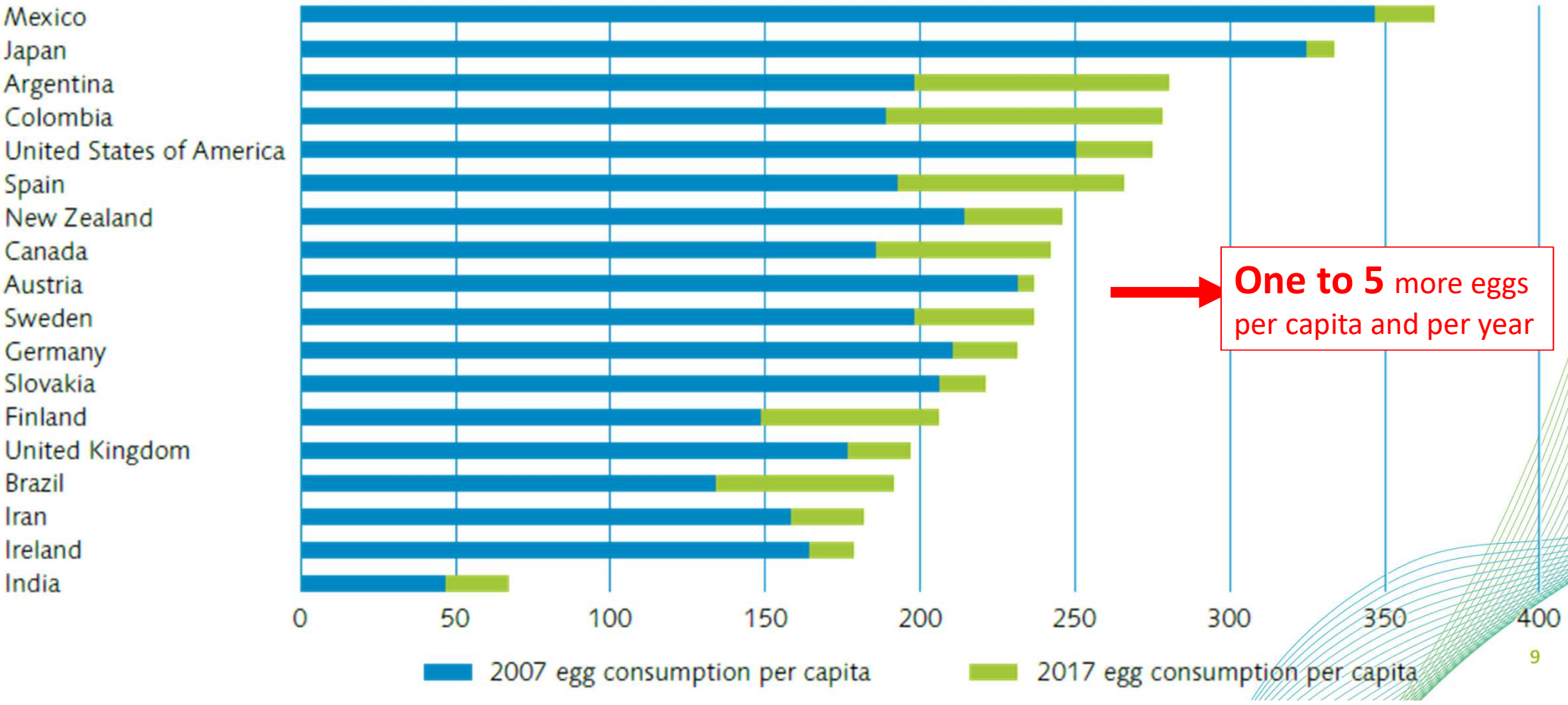
# Pay special attention to:

- The young egg consumers:
  - Millenials (1982 onwards)
  - Generation Z (1995 onwards)

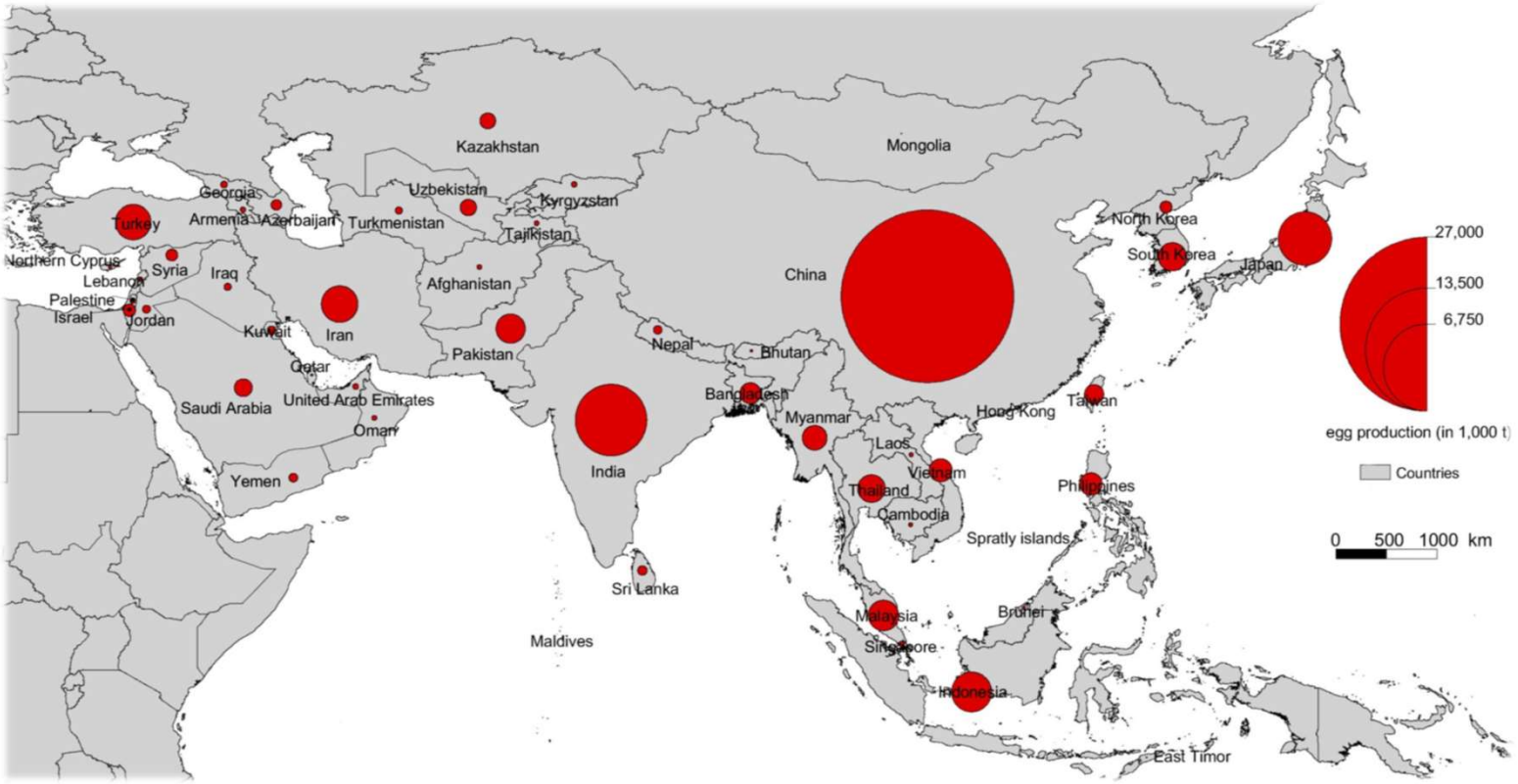
- Together they form the largest generations !
  - Will be the buyers for the future !
  - More visual savvy and environmentally conscious, different focus on animal protein production …

# Egg consumption per person/per year
# → quite variable per country

# Global trends in egg consumption: growth in almost every country



# INDIA: position in ASIA and in the World




Source: IEC

# INDIA: position in ASIA and in the World (in K Tons)

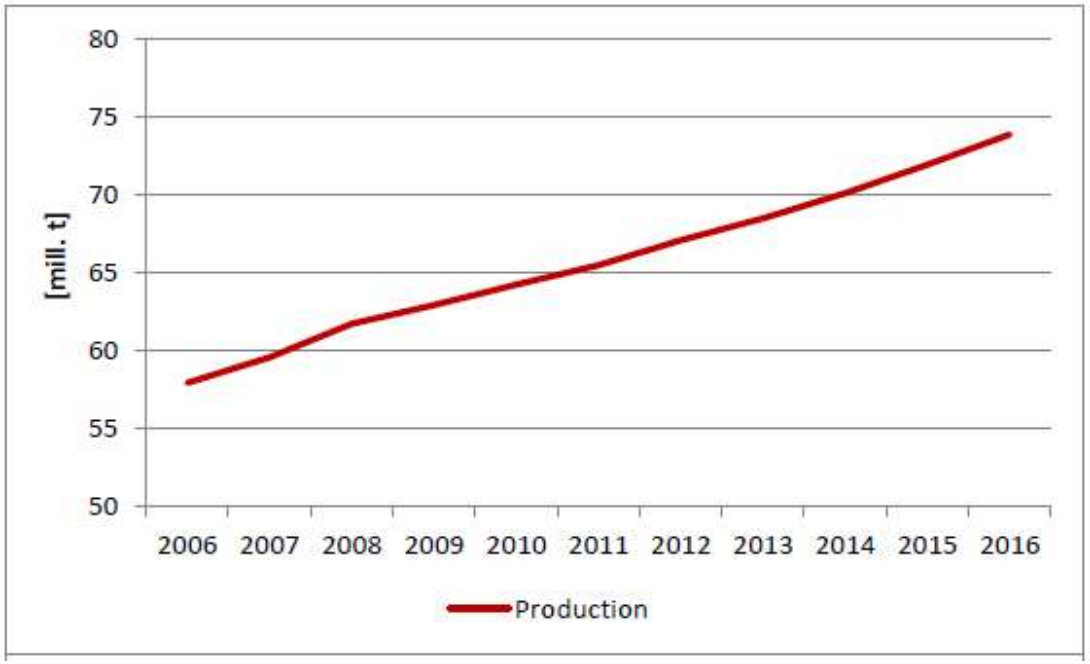
| Country/ Region | 1996 | 2006 | 2016 | Change 2016 vs 1996 | % Share in 2016 |
|---|---|---|---|---|---|
| China | 16,314 | 20,832 | 26,122 | + 60 % | 35 % |
| India | 1,527 | 2,814 | 4,561 | + 199 % | 6 % |
| Japan | 2,567 | 2,488 | 2,562 | - 0.2 % | 3,5 % |
| Asia | 24,857 | 32,924 | 44,500 | + 80 % | 60 % |
| Europe | 9,244 | 10,054 | 10,990 | +19 % | 15 % |
| World | 45,051 | 57,946 | 73,890 | + 64 % | 100 % |

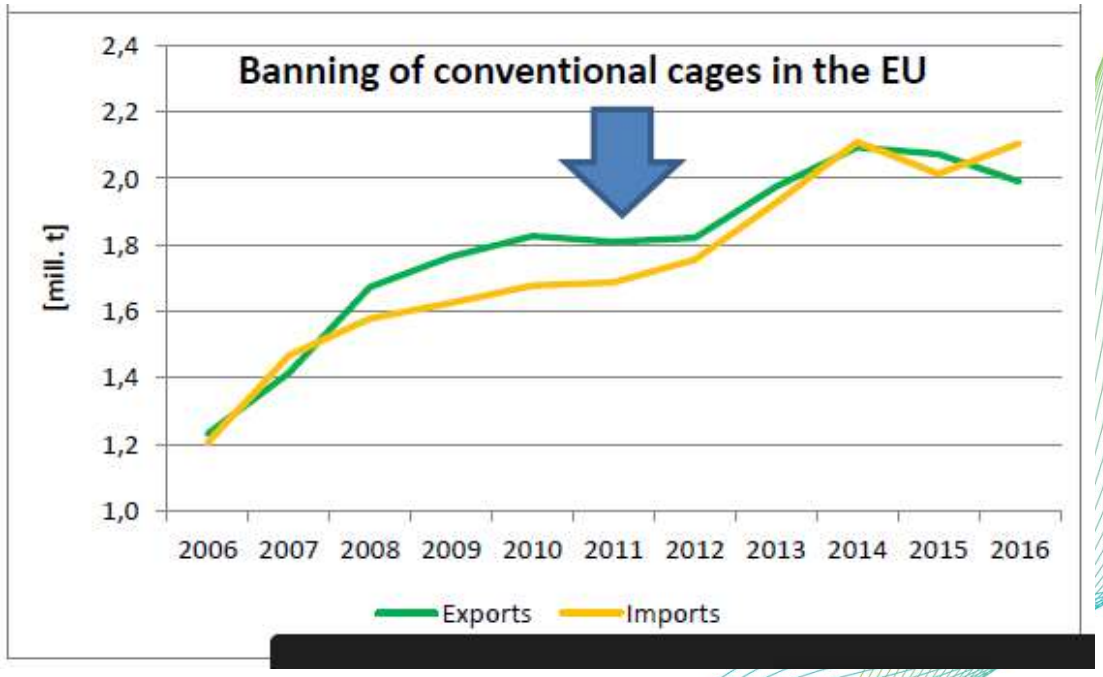
**Notes:**
**The relative growth of egg production is similar in ASIA and in the world.**
**The relative stagnation in Europe is now visible.**

**→ India´s egg industry is one of the fastest growing worldwide.**
**→ India is the N° 3 in 2016 just after China and USA.**

Source: IEC

# Import/Export trade: less than 3% of the Global egg production (and 30% of it is between Germany and The Netherlands) source FAO.



# Import/Export trade : a break-even situation between Import and Export

**The development of global egg production, exports and imports between 2006 and 2016; data in 1,000 t**

| Year | Production | Exports | Imports |
|---|---|---|---|
| 2006 | 57,946 | 1,231 | 1,205 |
| 2016 | 73,890 | 1,991 | 2,107 |
| Change (%) | 27.5 | 61.7 | 74.9 |

**Note: Egg trade grew much faster than egg production**

*FAO*

# Our R&D vision and program

# HENDRIX GENETICS Layers

- Excellent products for different segments and housing systems
- Dedicated global network of distributors
- R&D and production facilities on 4 continents
- State of the art R&D program and facilities
- 6 Strong robust brands

ISA Babcock SHAVER Hisex BOVANS

**BV300 in India**

# Product-Market Combinations in R&D programs

## Important traits in every market:

Maximum number of saleable eggs :

- Egg production / laying persistency
- Livability / behavior / feather coverage
- Shell quality / consumer traits

**> Our objective is 500 eggs per bird without molting in 100 weeks of age…**

**(at 80 weeks of age, about 360 eggs minimum…)**

## Market segmentation:

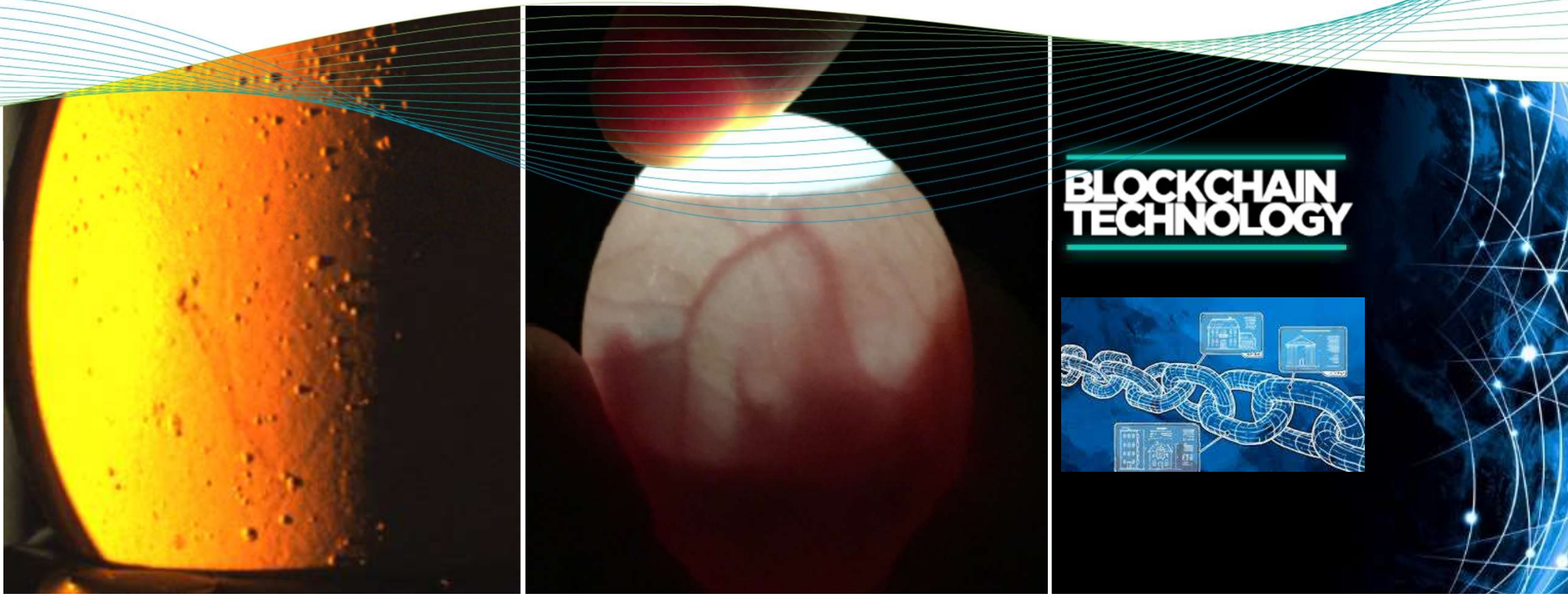
- Preferred egg size (small/medium/large) : **in SPAIN: L & XL / in INDIA: S & M**
- Feed intake capacity/efficiency (robustness – efficiency)
- Behavior (cages – cage free) → Big challenge
- Shell color (brown + white)
- Internal egg quality : Haugh unit + meat and blood spots
- % dry matter (egg processing…)

**1 Chick = 500 eggs in 100 weeks of age**

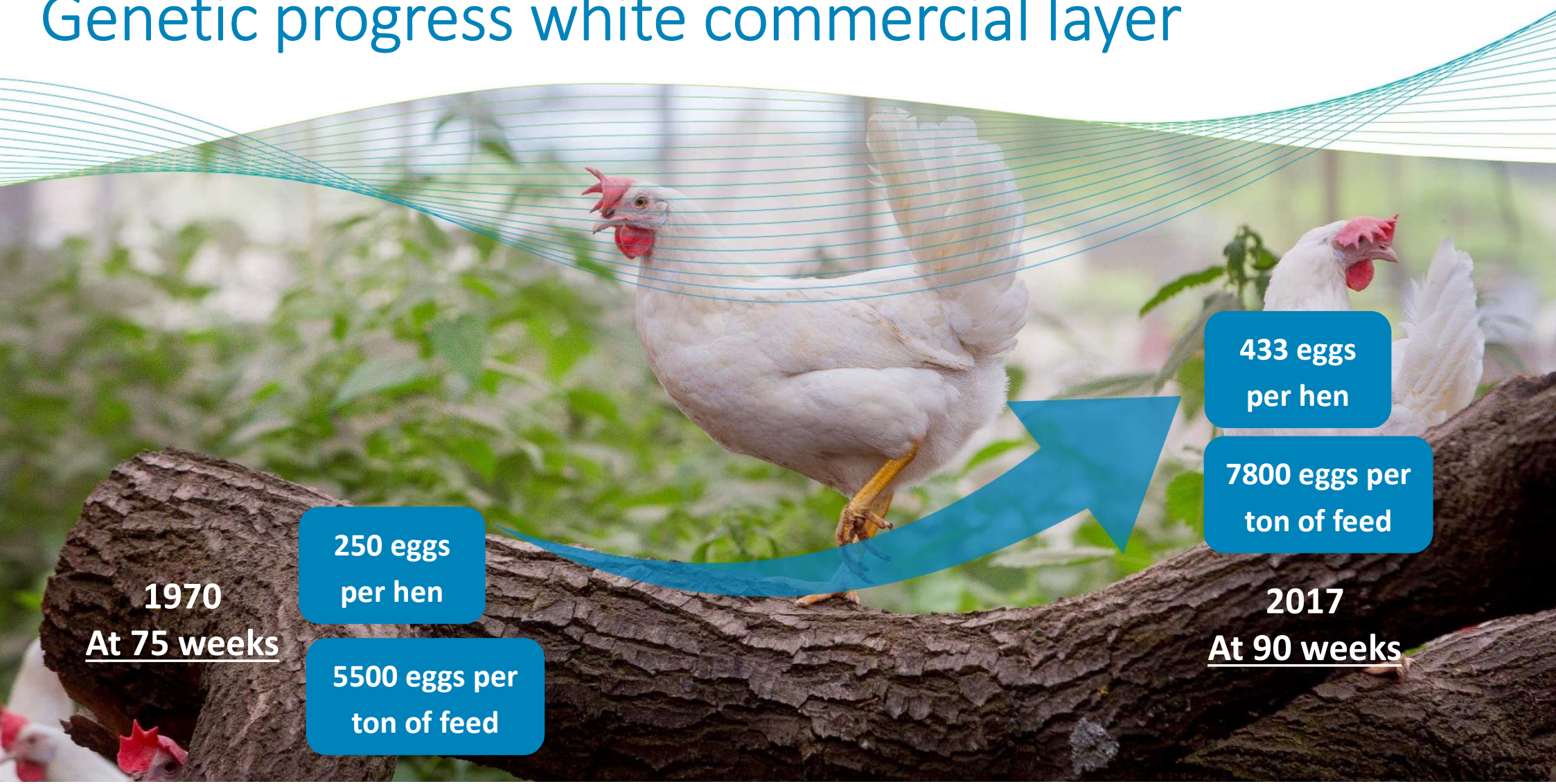
# Breeding for different climates
# by testing birds in different countries

# Using new technologies and solutions

Hendrix Genetics Innovations is actively exploring new technologies and solutions



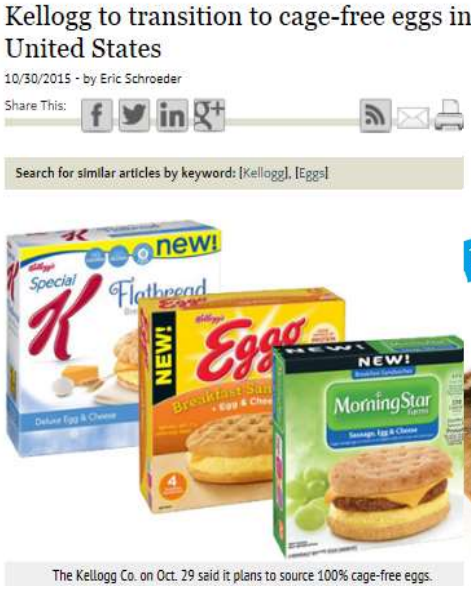
# Genetic progress white commercial layer



# Driven by market needs

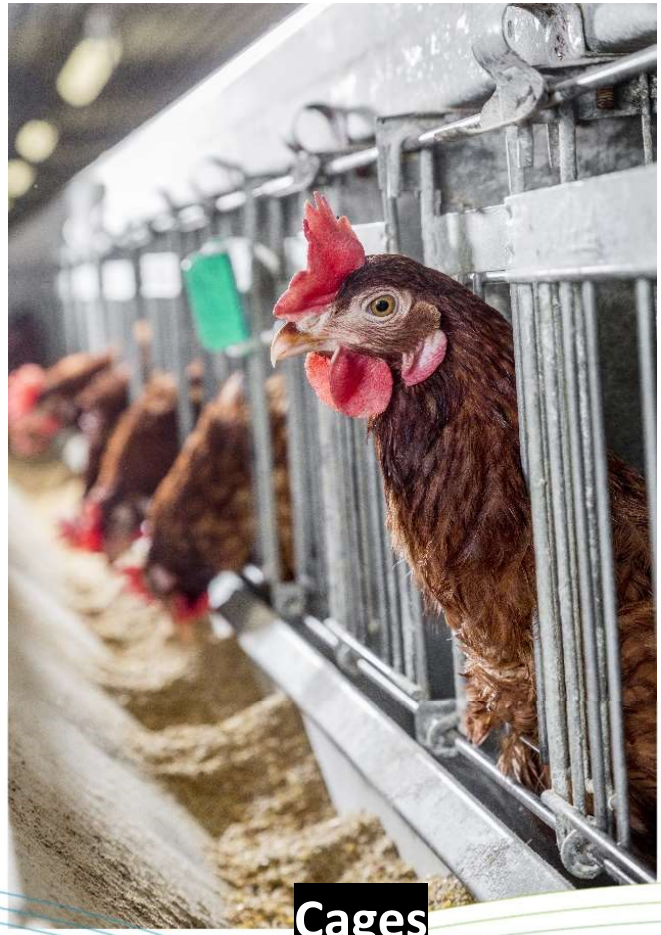
*Consumers demand for greater transparency of production processes is driving the global egg market towards more hen-friendly production.*

## →A market being driven by consumers' preference…



# Changing requirements in Housing Systems



Cages

Aviary in closed barns

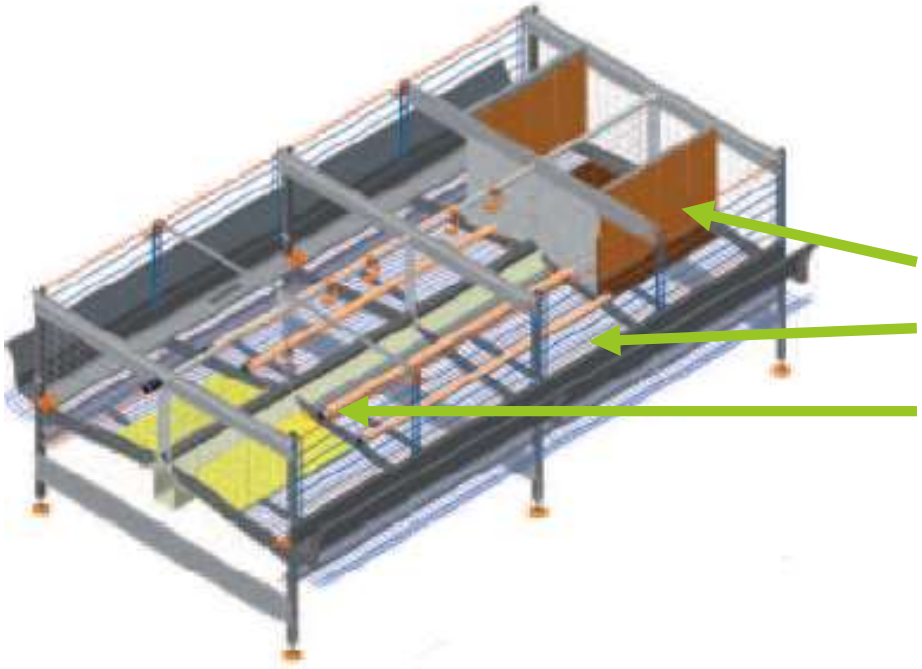
Free Range

# Different systems of keeping the Egg Layers in Europe from 2012

| | CAGES | FLOOR/AVIARY | FREE RANGE | | ORGANIC |
|---|---|---|---|---|---|
| **Production method** | **Eggs from caged hens code 3** | **Barn eggs code 2** | **Free range eggs code 1** | **Label Rouge free range eggs code 1** | **Organic code 0** |
| **Type of animal husbandry** | Closed environment, in cages | Closed environment | Free range | Free range | Free Range |
| **Size of farm** | No maximum size (up to 300,000 hens) | No maximum size | No maximum size | 2 poultryhouses of 6,000 hens maximum | 3000 hens maximum/building |
| **Stocking rate inside the henhouse** | 750 cm² of cage area per hen (13 hens/m²) | 9 hens per m² | 9 hens per m² | 9 hens per m² usable area on the ground (only 1 level) | 6 hens/m² |
| **Outdoor surface area** | - | - | 4 m² / hen minimum | 5 m² / hen minimum | 4 m² / hen minimum |
| **Feed for laying hens** | | | | 50 % minimum cereals | 95 % organic feed |
| **Third-party inspection** | - | - | - | Approved certifying | Approved certifying |

*Itavi from European Commission*

# Enriched Cage (750cm² per bird) in Europe: New regulation from January 1st,2012 with Stop of the traditional cage (450-550cm² per bird):



- 750 cm² space per bird
- 45 cm high
- 12 cm feeder space
- 15 cm space between 2 tiers
- One Nest per cage
- One Scratching area in each cage
- 10 cm perches per bird
- 15 - 80 birds per cage
- 3 to 10 tiers battery…

but already not authorized in Germany and The Netherlands

# Various systems of production: Floor/Aviary & Free Range

- FLOOR with slats without Free range access

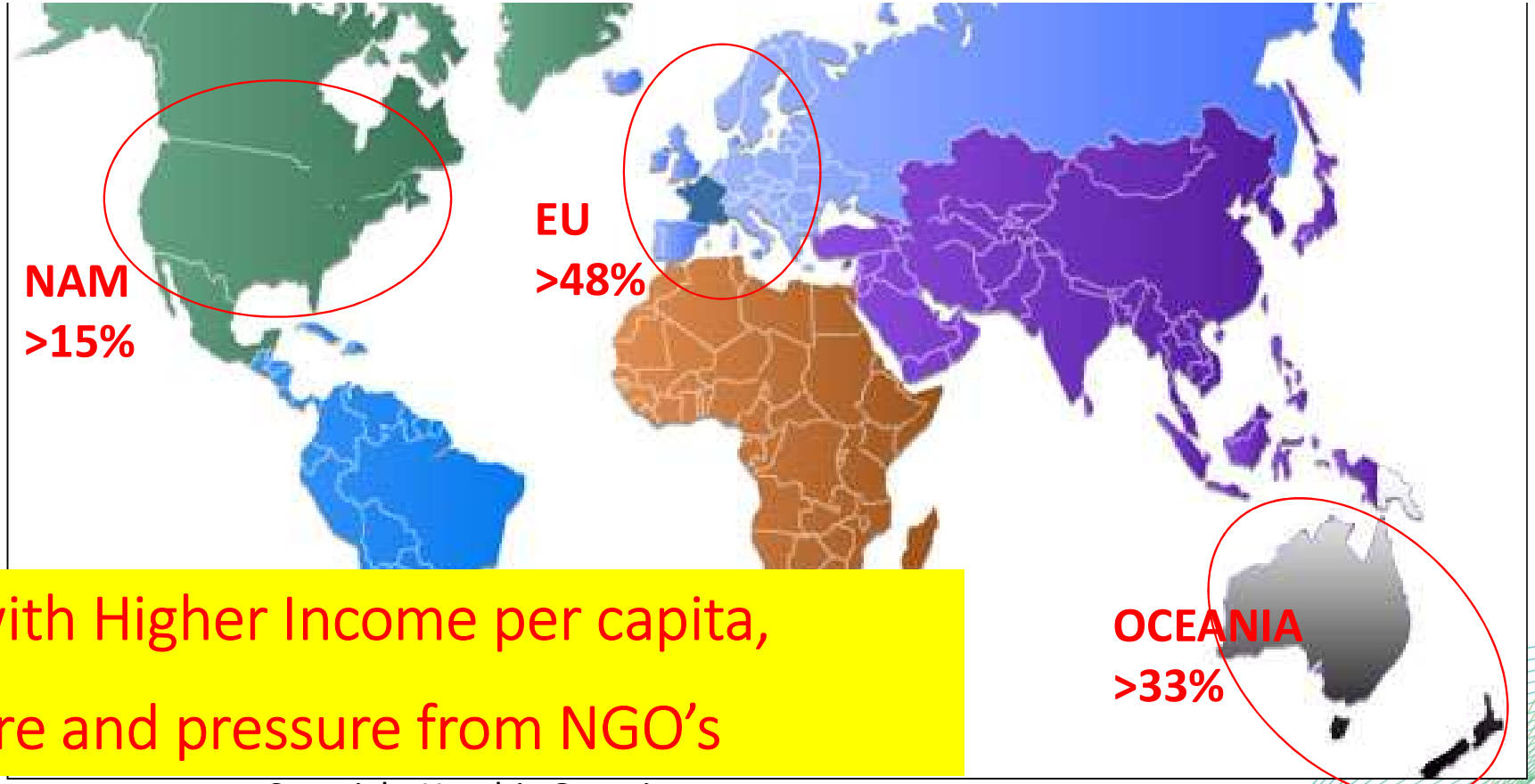

- AVIARY systems without Free Range access

- FREE RANGE access through popholes

# Evolution of egg production systems in Europe and USA…

# Where is the true « alternative/ non-cage » production?

= Aviary, Free Range, Organic → total 212 M Layers (5,5% of the world)




Link with Higher Income per capita,

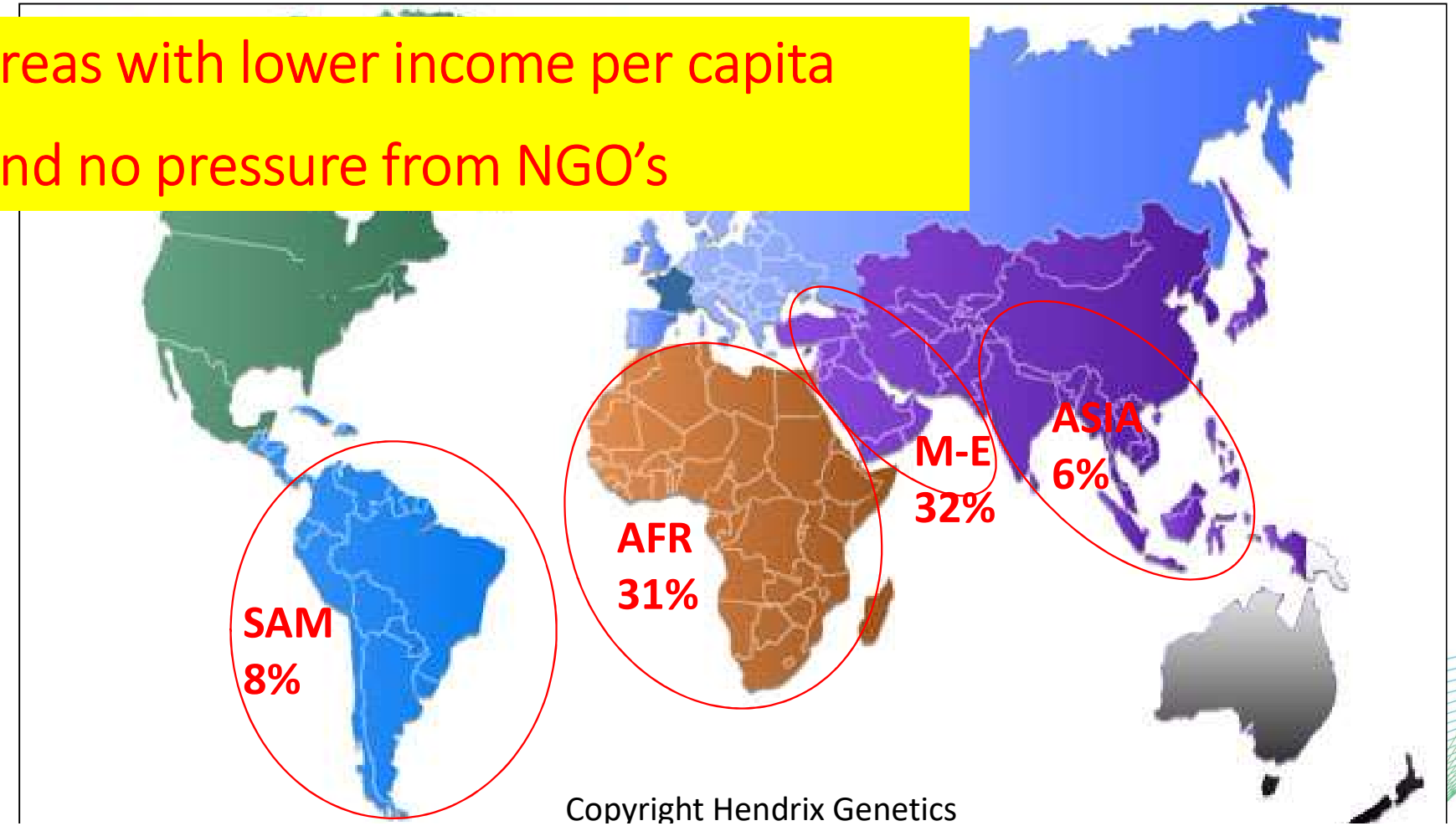
Welfare and pressure from NGO's

# Where is the « non-cage » production because of lower economy?

→ Floor systems instead of cages for a total 243 M layers (6,5% of the world)

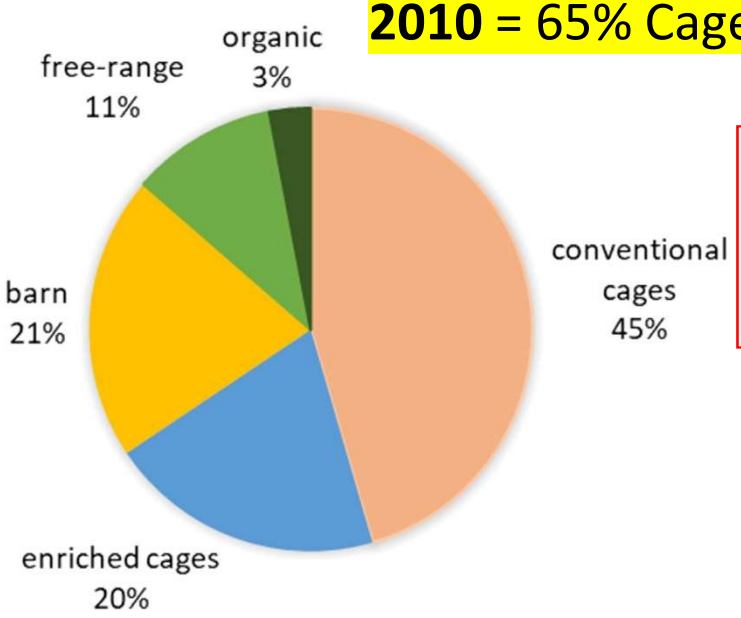
Areas with lower income per capita

And no pressure from NGO's



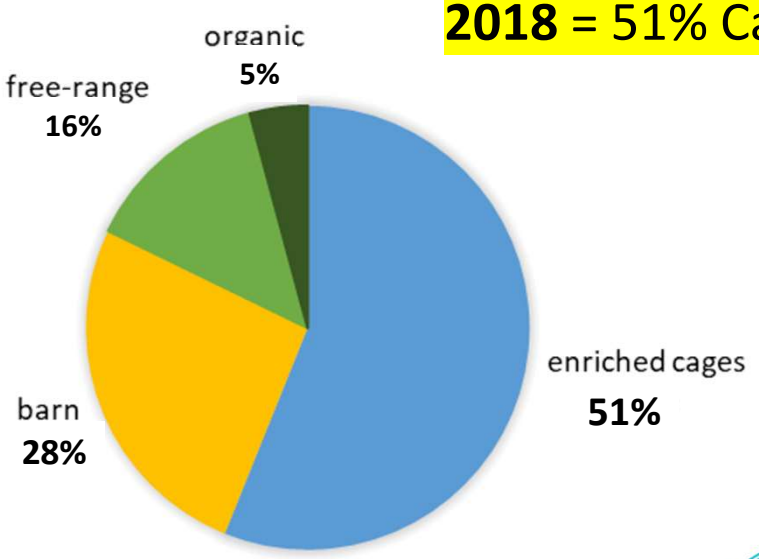
# EUROPE: Impact of changing legislation

**2010** = 65% Cages




**From January 2012: new law with only ENRICHED cages in EUROPE**

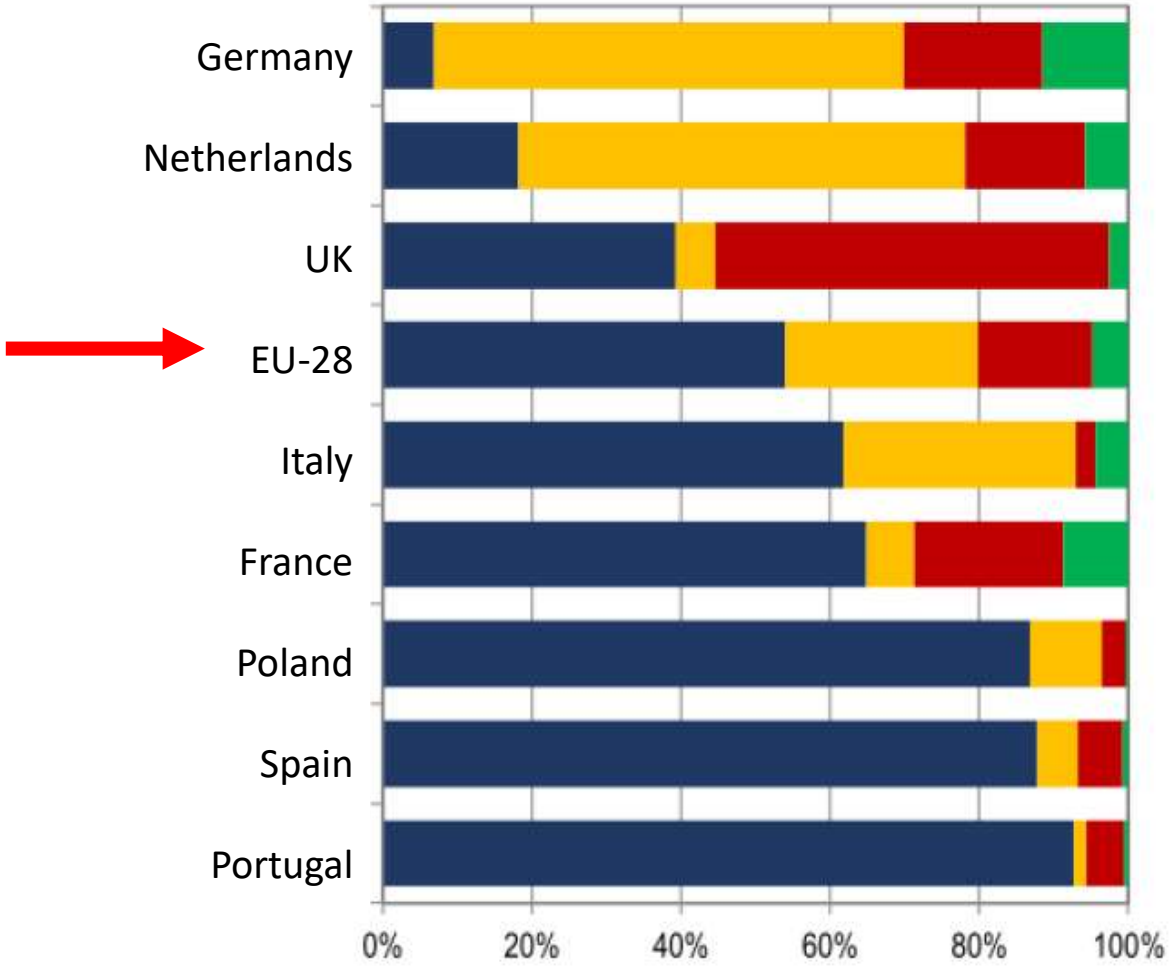
**2018** = 51% Cages




**→By 2020, less than 50% « ENRICHED » cages in EUROPE**

Source: MEG 2016

# EUROPE: Egg layer production systems in 2017




**Quality Products=45%**

Cage Sol Plein air Biologique

Floor FreeRange Organic

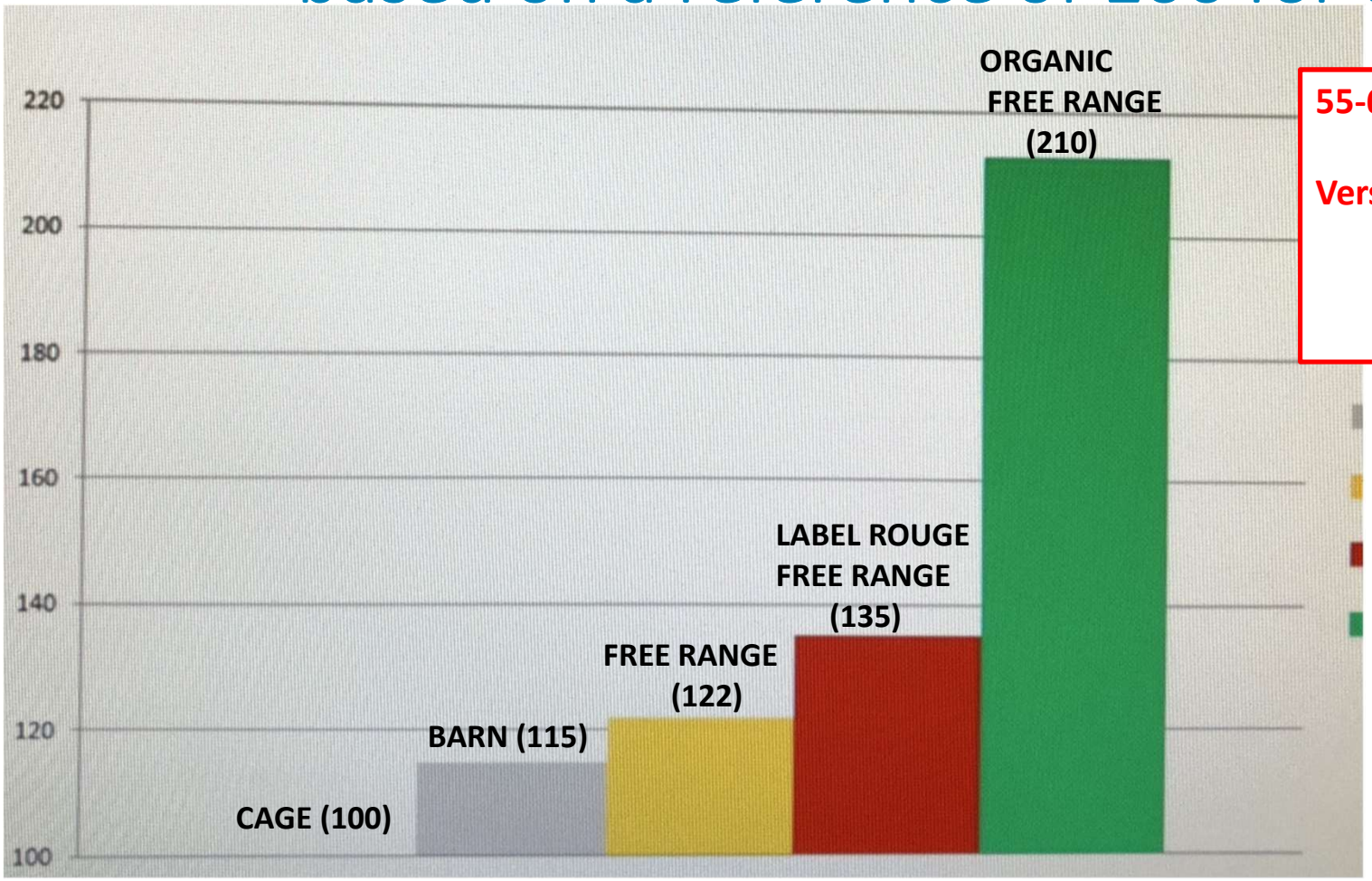
In EU-28: Cage = 51%

Floor= 28%

Free Range= 16%

Organic= 5%

# Production costs per production systems in EU based on a reference of 100 for cage eggs.



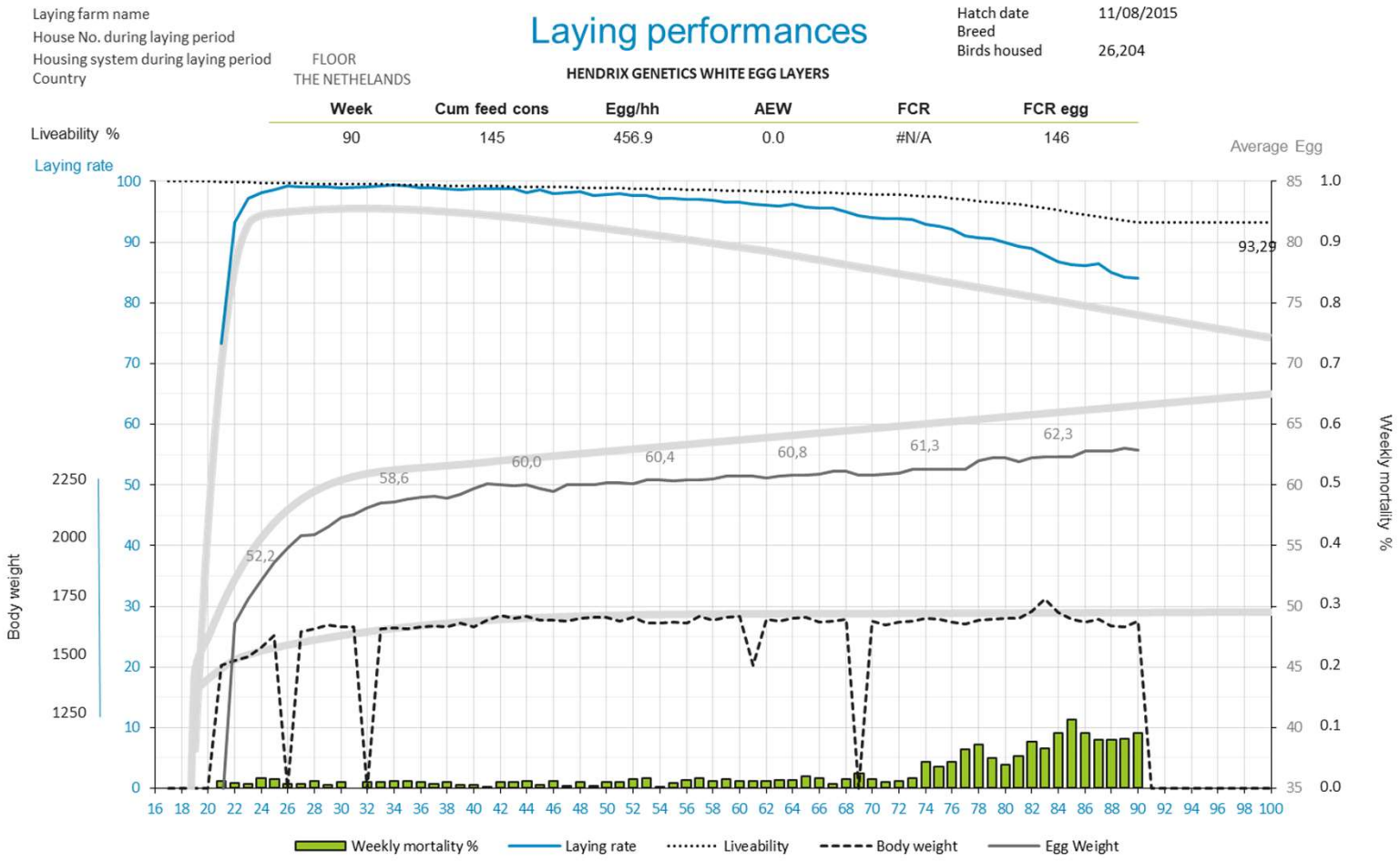

**55-62% of total cost is FEED**

**Versus Enriched cages, the cost is :**

**+15% minimum for Floor/Barn**
**+22 to +35% for Free Range FR**
**3 times more for Organic FR**

# CAGE-FREE Production:

## example of Hendrix Genetics white egg commercials in the Netherlands…

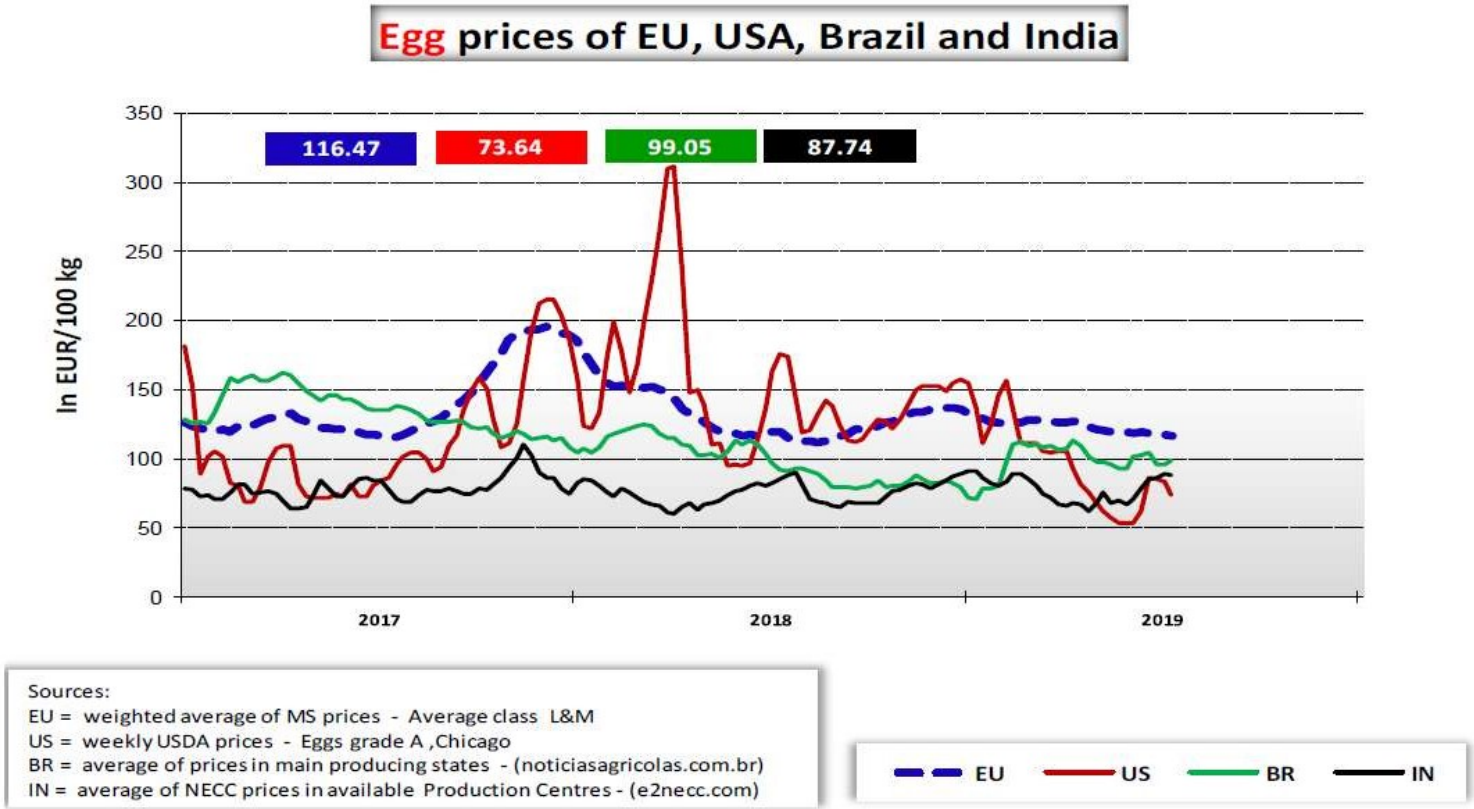



Overall performances on Floor:

- At 75 weeks:
  - 360 eggs
  - 3,4% mortality
  - 21,3 kg egg mass
  - 59,1 g egg weight
- At 90 weeks:
  - 457 eggs
  - 6,4% mortality
  - 26,7 kg egg mass
  - 60,0 g egg weight

!! 60 weeks above 90% Lay

# Egg Prices comparison in 2017-2019




**INDIA is one of the countries with the lowest egg prices:**

**Average prices:**
**→INDIA 87,74 € /100 Kg**
**= 3,9 INR /egg**

**→EUROPE 116,47 € / 100 Kg**
**= 5,6 INR / egg**

**Base:**
**1€=77 INR**
**17 eggs / Kg in India (59g/egg)**
**16 eggs / Kg in Europe (62,5g)**

# The Straits Times / Singapour – 3 August 2019

## Humanity's next test: Feed 10 billion without ruining planet

### Upcoming report on land use will focus on agriculture, inequality and climate change

PARIS • It is a question critical to mankind's survival: How do we grow enough food to sustain our booming population without wrecking our only home and plundering nature's bounty?

Next week, the most detailed sci-

report on land use is expected to warn how industrialised food chains, rampant resource exploitation and even efforts to stave off the worst effects of global warming are all jeopardising our future ability to feed ourselves.

As policymakers from around the world were set to begin poring over the report's draft text yesterday in Geneva, Switzerland, experts said

ciently had long been overlooked.

"When you look at both the effects of the changing climate as well as contributions to climate change, the land sector is incredibly important," Ms Lynn Scarlett, vice-president for public policy at The Nature Conservancy, told

"The effects are extensiv

they aren't way out in the f

They are unfolding right no

are critical to the well-being

Agricultural systems now

third of all land and three-qu

of all fresh water on the planet

With the global population

hit 10 billion by mid-century,

fear that those systems w

stretched to breaking point.

Meat is a major problem, as is

ing to the destruction of

sorbing forests.

An IPCC report in October last

- **10 billion people by mid-century,**
- **30% of all food produced is wasted,**
- **Land use and deforestation,**
- **Use of chemichals,**
- **Climate change…**

# Main challenges for INDIA's Egg Industry (1)

- **The main challenges for India´s egg industry**:
- Indian egg farms have to meet international standards regarding housing systems, quality of feed and water, qualification of the management, hygienic standards…to export to developed countries.
- With the exception of a small number of large vertically integrated companies, most of the eggs are still produced in comparatively small farms with less than 50,000 hens. About 20 % of the eggs are produced in backyard flocks…
- The 10 largest companies only have a share of 5 % of total egg production…
- The marketing of eggs has to be reinforced to meet the growing demand. In 2020-22, 100 eggs per capita consumption is expected (from about 65 eggs now)…
- To meet the additional demand of 25 to 30 billion eggs in 2020-22, egg industry has to expand by a minimum of 30%. Already some investments are taking place…
- But which model of egg production for India??

# Main challenges for INDIA's Egg Industry (2)

**Which model for Indian Egg Industry?** Taking into account your current situation:

- Less land availability…so not possible to accomodate "western" model with Free Range or even Enriched cages…
- Prohibitively high costs of investments in new infrastructure (new cages, new housing…), together with higher costs of energy (electricity)…
- Most of the eggs are produced in conventional cages…

→My intention is to open the debate by showing what is done elsewhere in the world and show the limits of such new systems for India.

→The Egg is a basic food, accessible by most of the consumers due to the lowest costs of food production per g of protein or kcal of energy;
This must be emphasized in your country of India.

# Main challenges for INDIA's Egg Industry (3)

So in a short/medium term, India must find a consensus among all stake holders as producers, consumers, animal welfare organizations and government to:

- Be in line with international regulations; antibiotics, feed additives, sanitary status of the flocks and eggs…
- Find the correct management in terms of animal welfare:
  - Such as bird density in cages to be reduced gradually (+20% more space…), by keeping the current cages when advisable. This has been done in EU (from 450cm² (68sq inch) to 550cm² (84 sq inch) early 2000's, and also in USA/Oceania from 380 cm² (58sq inch) to 550 cm².
  - Such as feeder/water space, with a reduced density so greater feeder/water space…

Then in Long term, new innovation and technics when possible…

I recommend that any change in the Indian production systems shall be by consensus mainly between producers and Government without affecting production efficiency and costs, and not as per the dictating terms of others (NGO's…).

# Conclusions

# In conclusion:

→Positive forecast for Egg and for Broiler consumption…including in India where animal protein consumption is still low

→Large worldwide differences in markets and trends…

- Importance of Promotion of quality of the products… and Food Security information,
- Pressure from NGOs, Governments…
  - Bans of Beak treatment, AGP / Antibiotics, Molt, Male DOC killing…
  - Need to well explain to the consumers…but how?

→Costs of Production is of importance and India is well placed with:

- Lowest costs of production (Estimation egg costs: 25 to 30 % less than in EU-28)
- High level of Corn and Soya production …
- But low purchase power in India compared to developed countries…

→ Indian Egg industry must take its own destiny into its hands…

Hendrix Genetics Layers Breeding program is adapted to market needs.

Hendrix Genetics is ready for the future:

→Breeding for more 1st Quality eggs!

THANK YOU.