

Breeding for your Success

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H&N Layer Academy, Dubai – 11.08.2022

Data Recording

Breeding Farms

Single Cages



Group Cages



Floor System



Data Recording

Field Testing – Commercial Farms

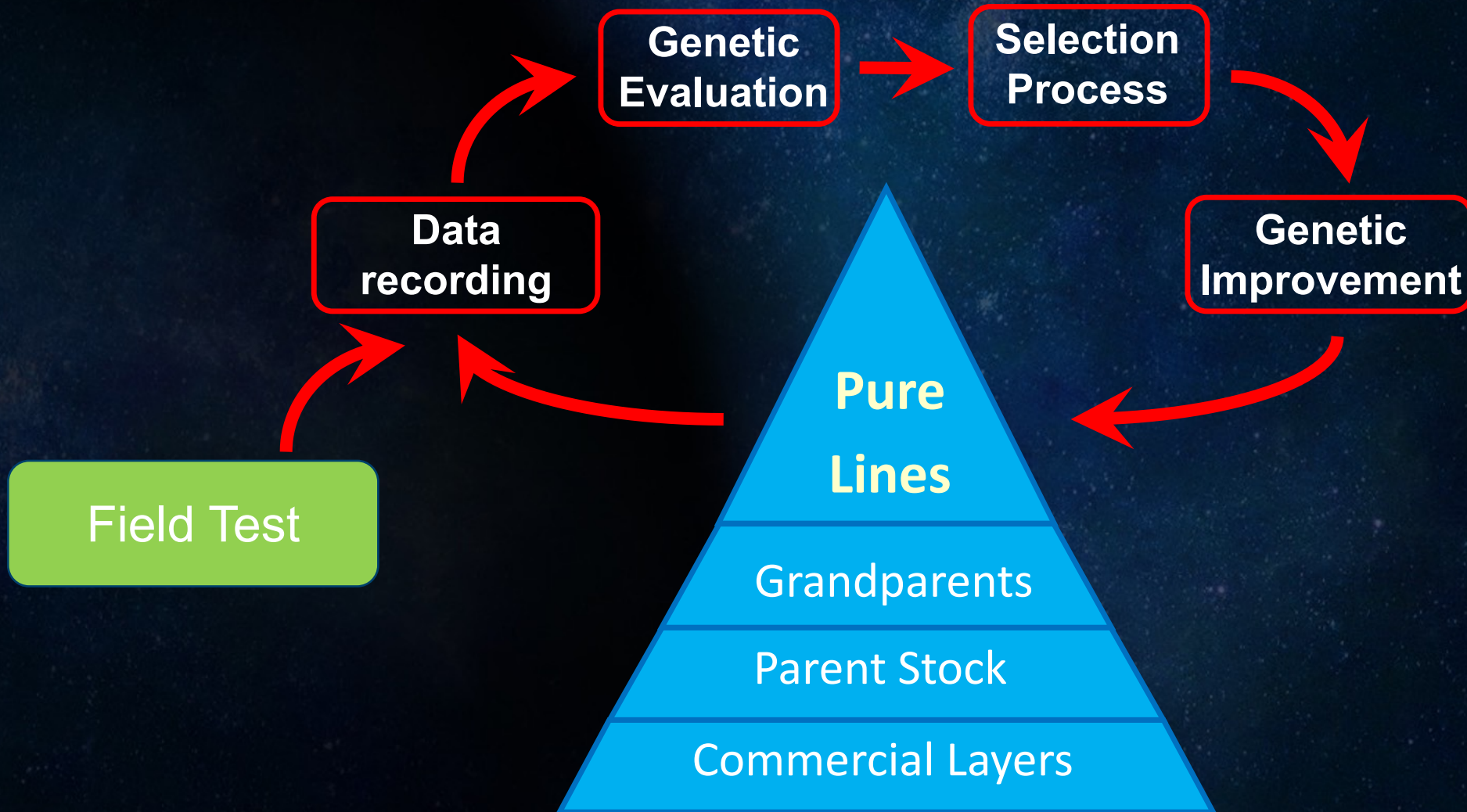
Group Cages



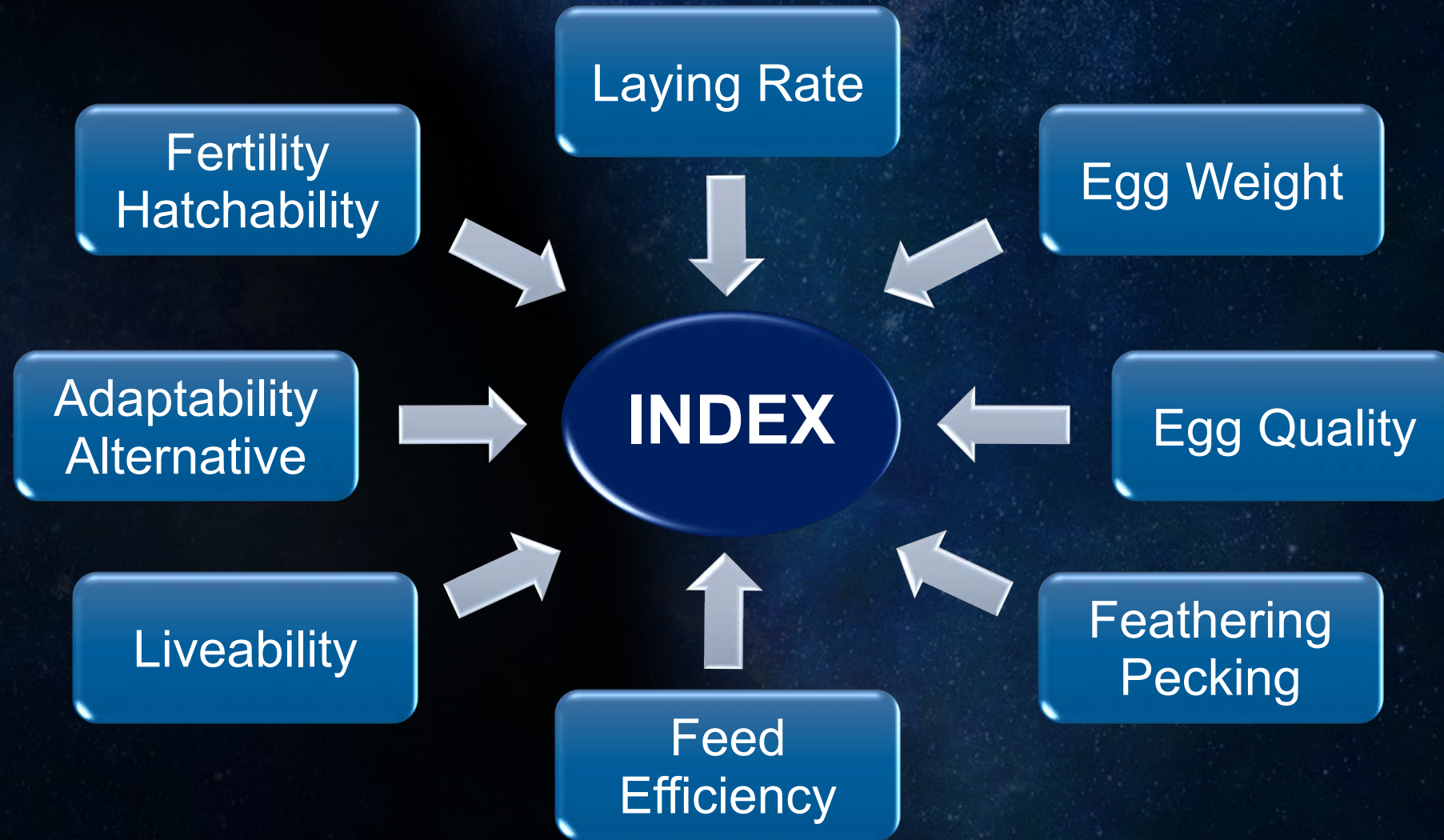
Free Range



Structure of the Laying Breeding

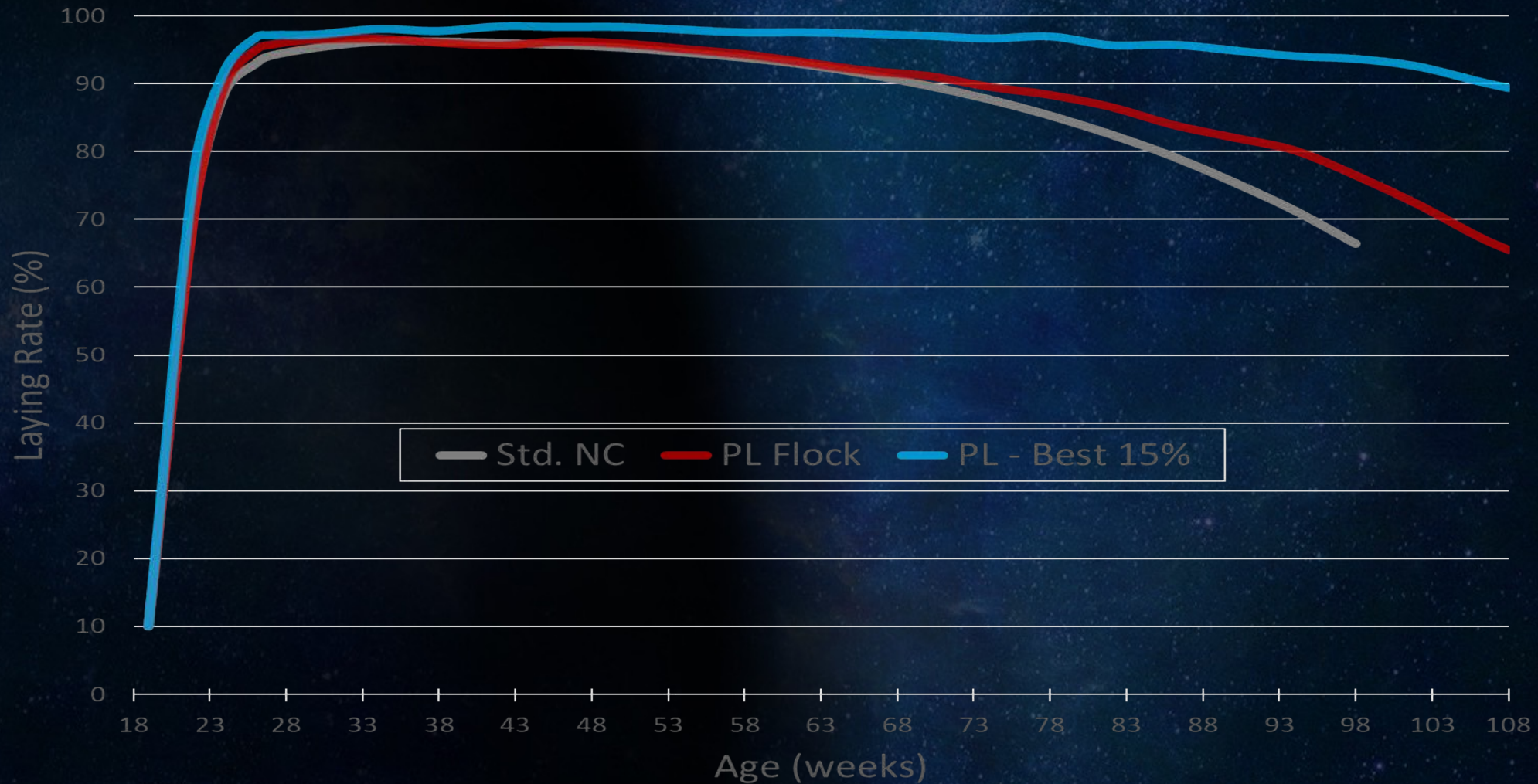


Balanced Selection

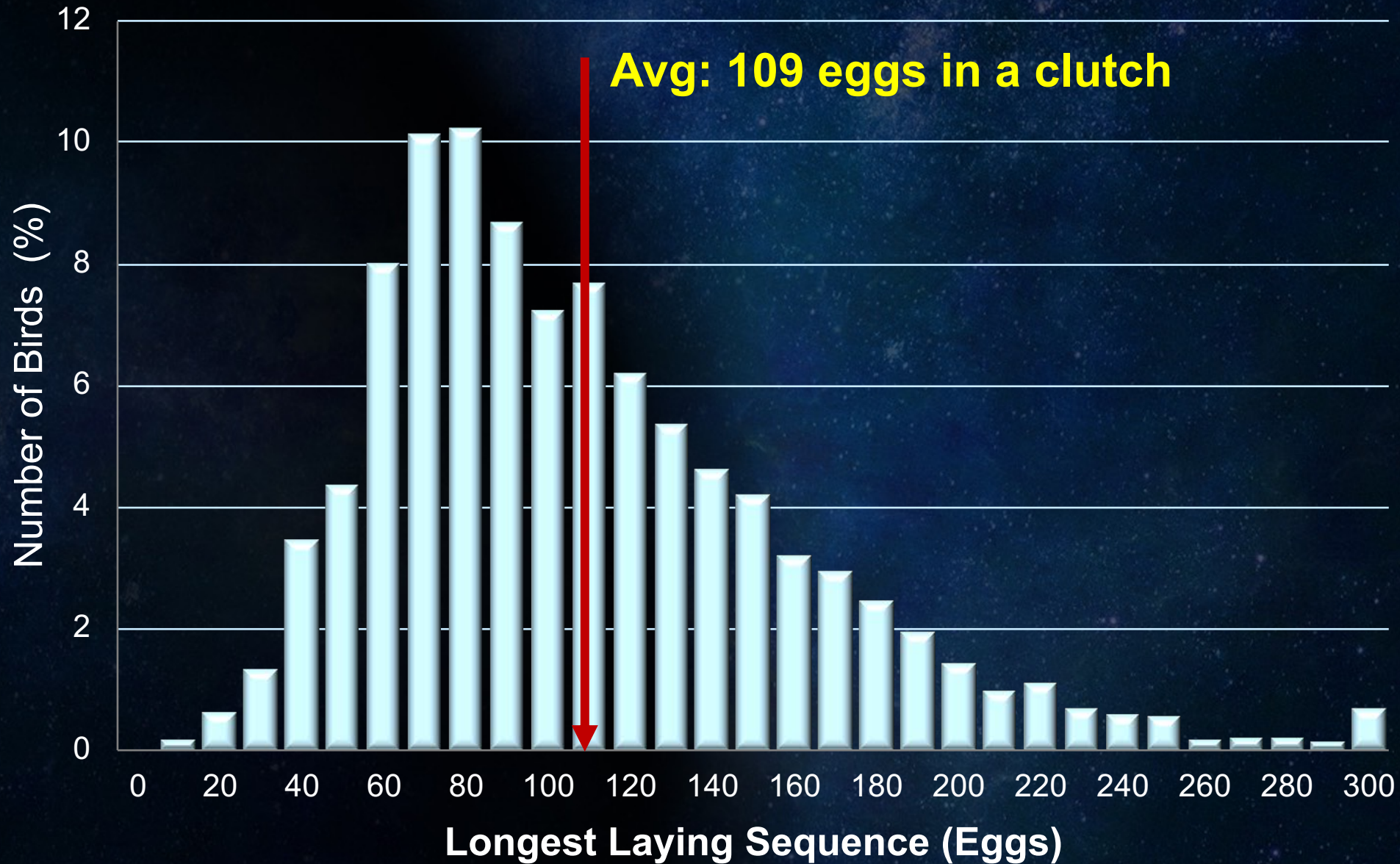


Laying Performance - Persistency

White Pure Line

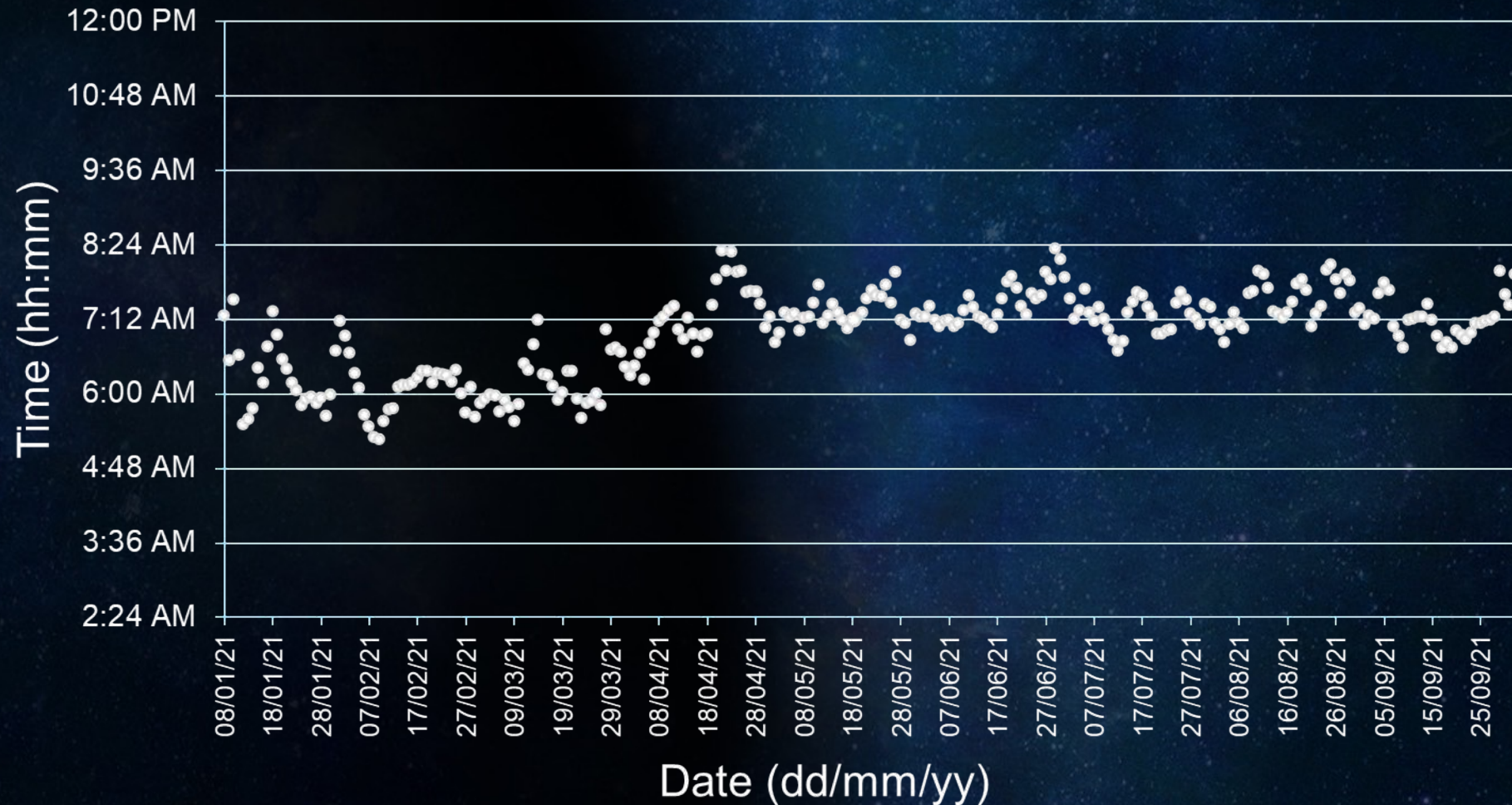


Clutch length



Laying time

White egg hen – 269 Eggs in 269 production days (100%)



Eggshell Strength

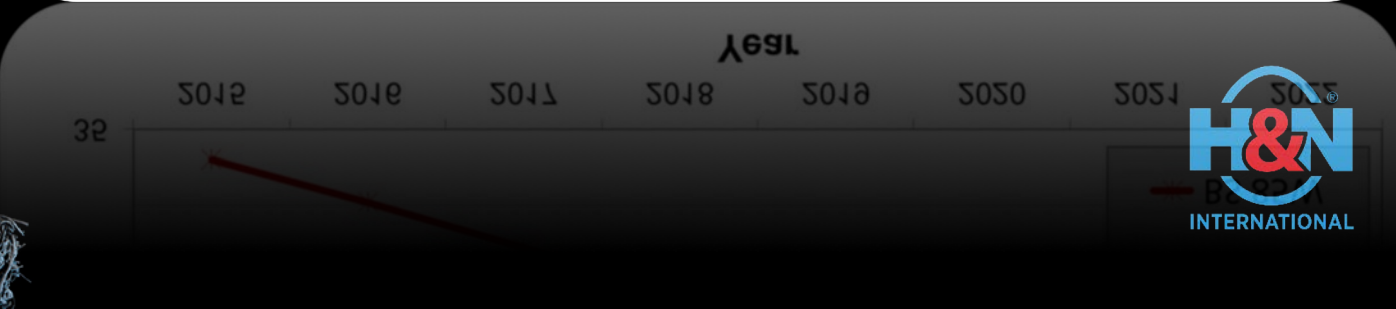
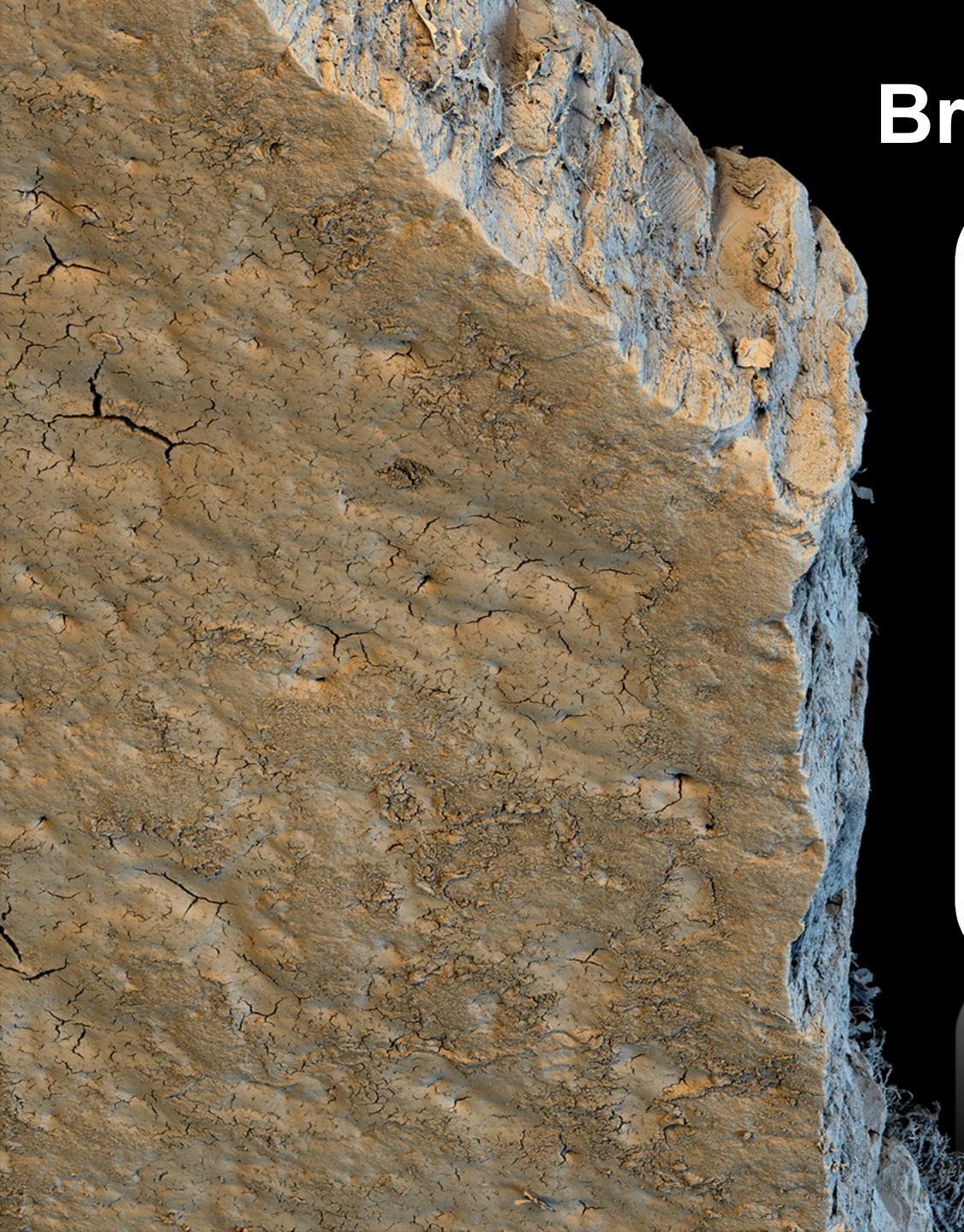
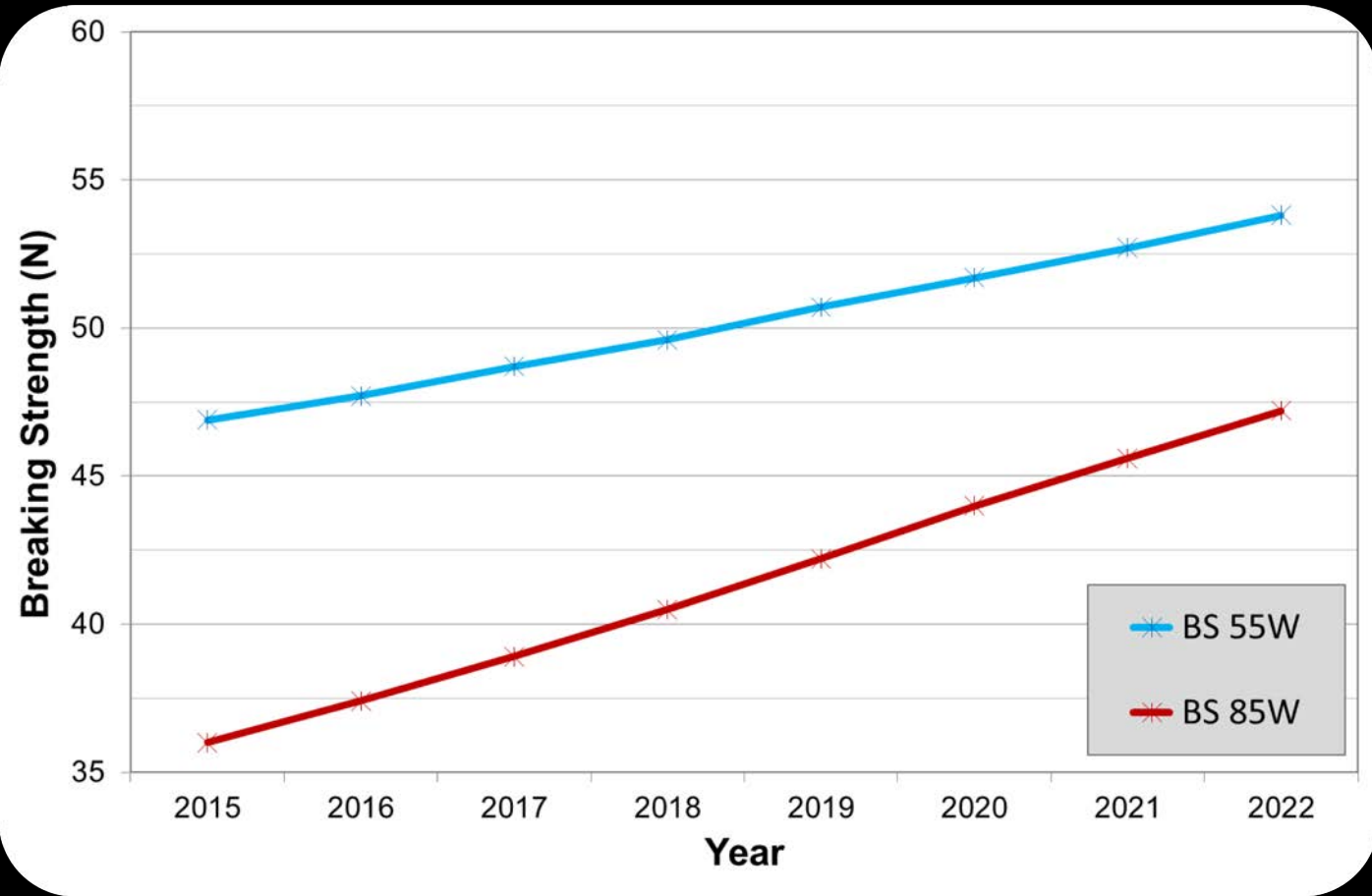
Eggs breaks at the right time!



Selecting for a better eggshell:

- ✓ Reduce waste
- ✓ Decrease contamination risk
- ✓ Extend flock production life

Breaking Strength



Egg Weight



Influencing Factors:

- Light stimulation, Body Weight, Feed
- Genetic – $h^2 \sim 0.6$



Goals:

- Max. N. eggs in desired class
- Fast EW increase at the beginning
- Flat EW curve after 60 weeks

Rearing: An investment for the future

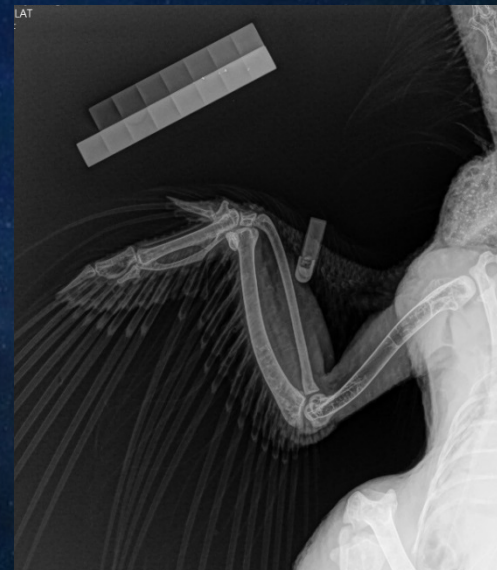
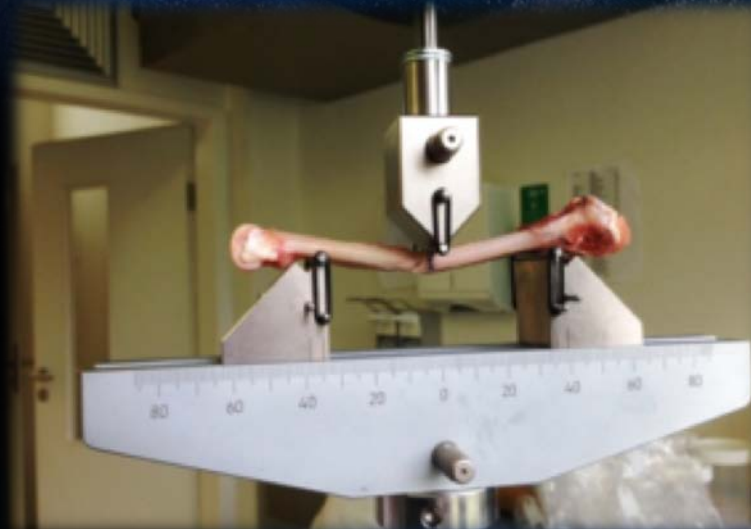
Not only Costs! - BW & Uniformity: The key for success!

Good
Immune
System



Feed
Intake
Capacity

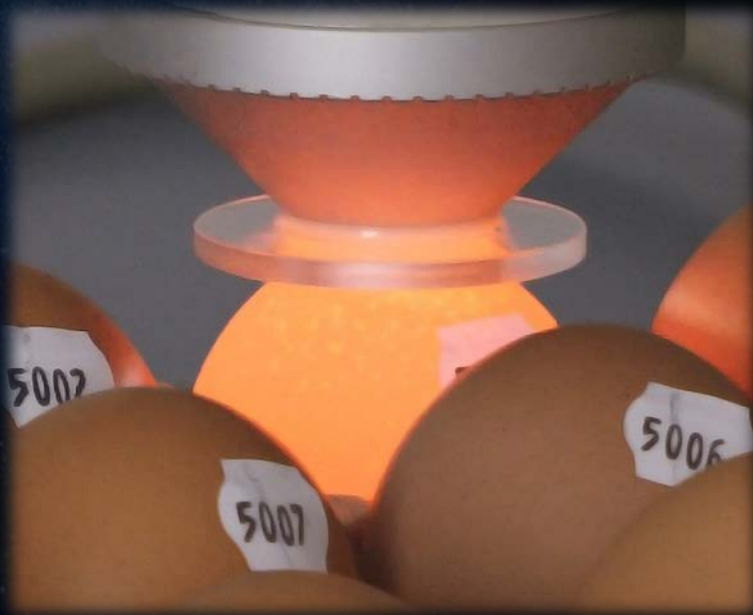
Improve Bone Stability



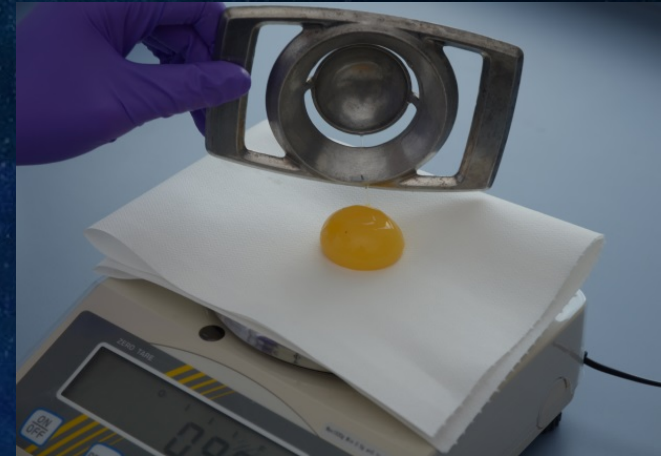
Selection for good eggshell colour

An attractive and uniform brown/cream/white shell colour

Good shell colour until the end of production



Selection for better internal egg quality



H.U.: maintain the aesthetic appearance of a fresh egg

Blood & meat spots: decrease number & size

Yolk %: increase the % solids

Better behaviour

Selection for low mortality, calmness & good feather cover

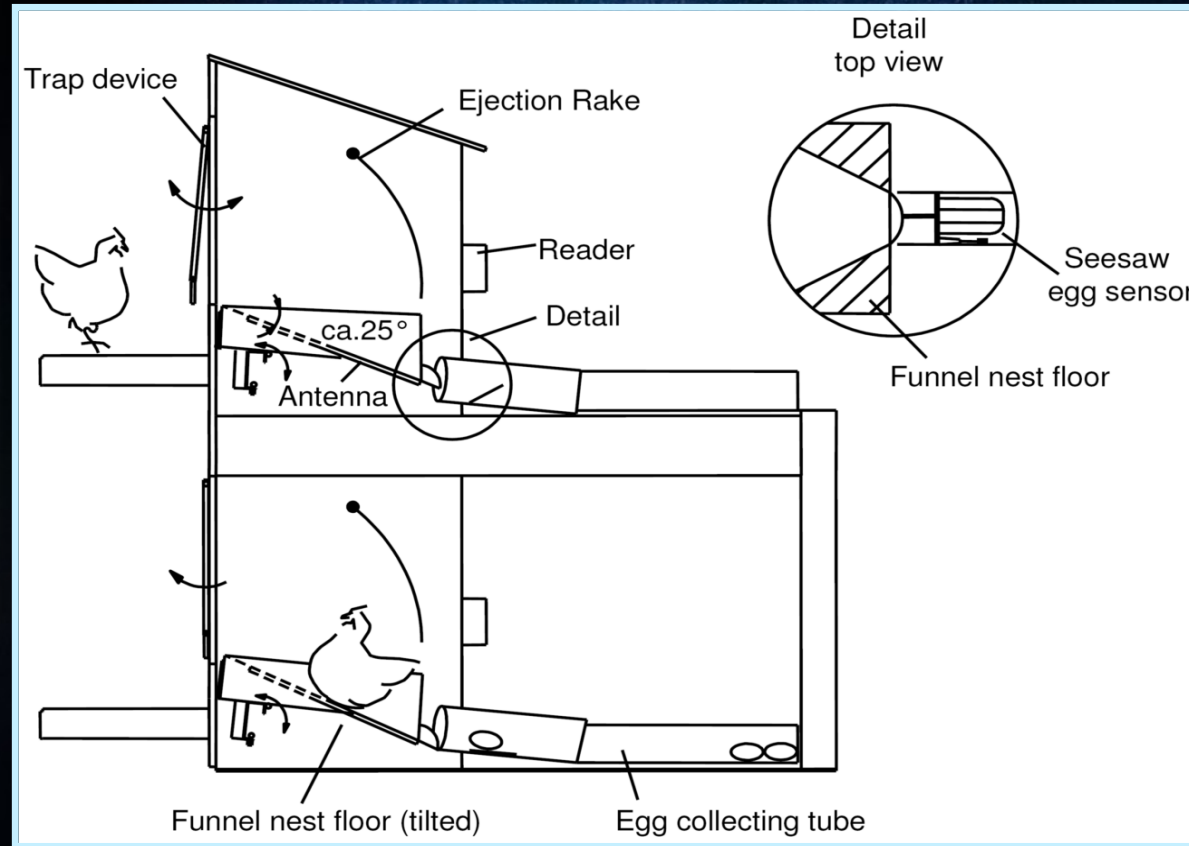


Automatic Trap Nesting

Increase of Saleable Nest Eggs



No more!



Transponder

Adaptability to different environments



Field Test - Performance recording

Birds tested in several continents



Performance Testing:

- ✓ Egg Production
- ✓ Egg Quality
- ✓ Livability
- ✓ Plumage Condition
- ✓ Feather Pecking



Use of Challenge Feed

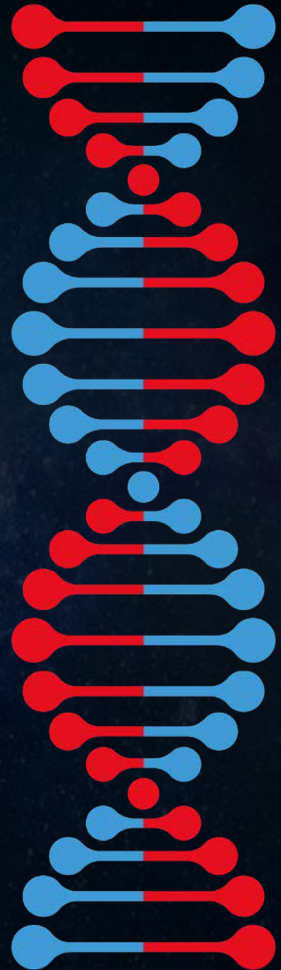
Diluted feed - Lower E, Vit., CP, aa

Breeding Farm: separate silos for group cages

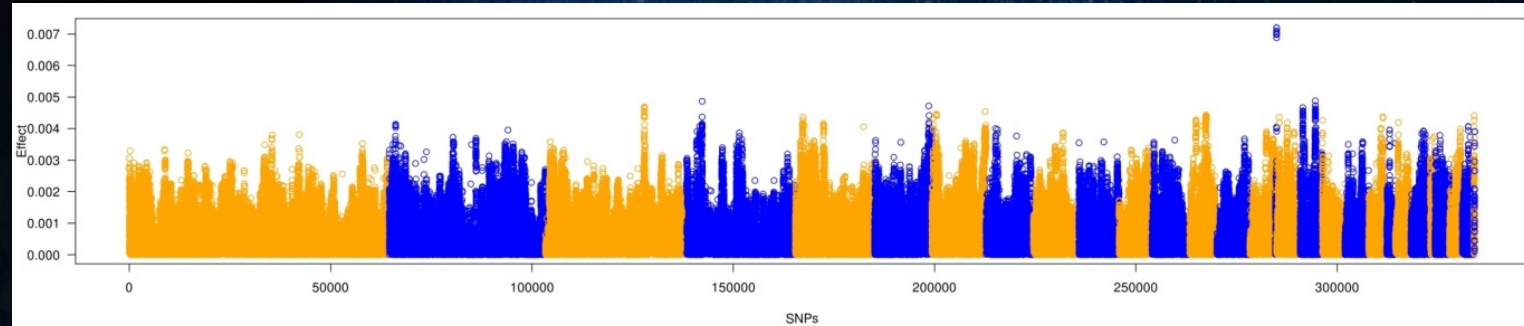
Field Test: Use of two different feeds



Genomic Selection



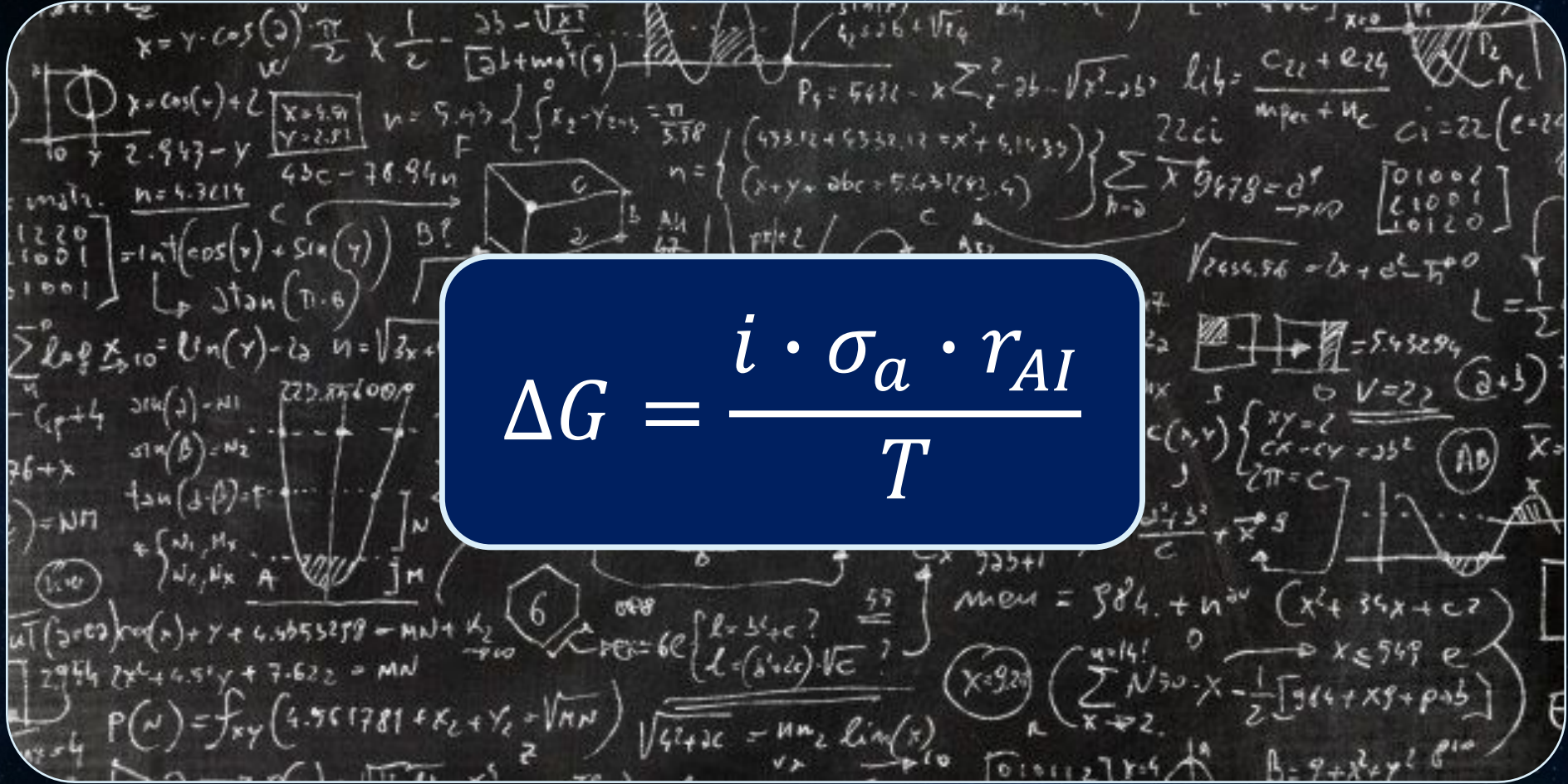
Effects for all markers simultaneously estimated



- MD 50k SNP-Array
- By-product: Pedigree check
- Better use of genetic variation

More Genetic Progress!

Genetic Progress Equation



$$\Delta G = \frac{i \cdot \sigma_a \cdot r_{AI}}{T}$$

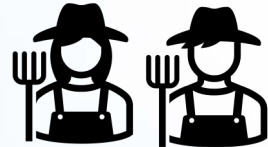
New Traits - Artificial Intelligence



- Automatic data collection
- **Transform data to information:**
 - ✓ Tracking the animal
 - ✓ Activity
 - ✓ Behaviour
 - ✓ Fitness

Added Value Proposition

Sustainability of the Egg Industry



More Production



Better Liveability



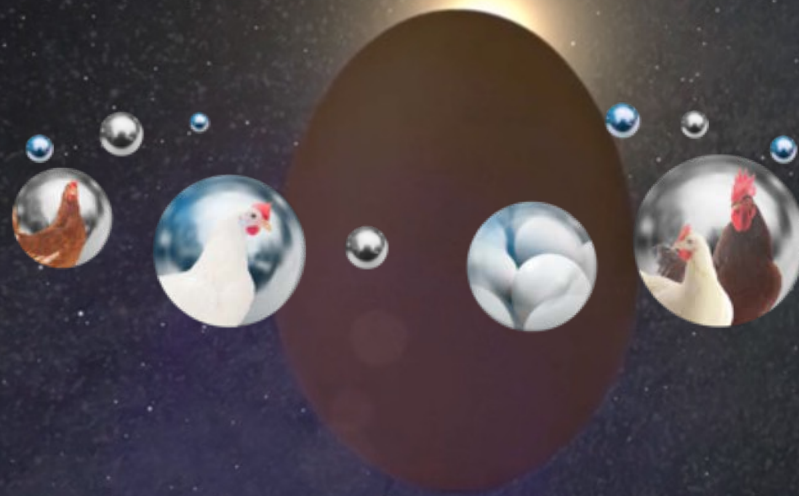
Higher Efficiency



Greater Adaptability



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