

A large, realistic brown egg is the central focus, set against a dark, starry space background with a glowing orange and red nebula at the bottom left. Surrounding the egg are several smaller, reflective spheres. Some spheres show a brown chicken, a white chicken, or a cluster of eggs, while others are plain silver or blue.

# Cage-Free Rearing for 500 eggs and more

**Agotzaina Seminar March 17th 2026**

Leon Schouren

Key Account Manager Europe & Global Technical Service

[schouren@hn-int.com](mailto:schouren@hn-int.com)

# Rearing/Production systems Global



**Cages**



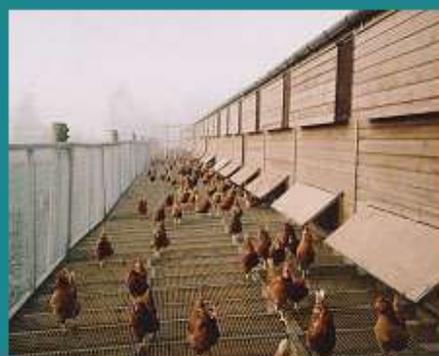
**Enriched cages**



**Barn egg**



**Aviary systems**



**Free range**



**Biological**

## Cage-free management for 500 eggs and more

- We don't have a second management guide, only for long cycle flocks

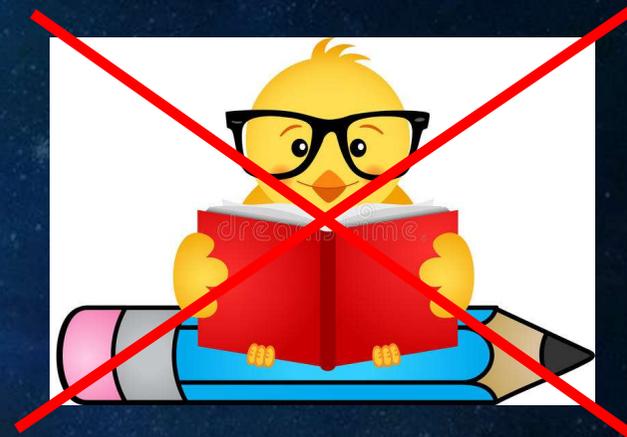
We need to invest in rearing and onset period!

# Cage-free management for 500 eggs and more

The birds (and not only ours!) have one failure: They can't read!

- *No management guide*
- *No lighting program*

Therefore, it is the pulletgrower who has to determine if everything is „on track“



# Cage-free management for 500 eggs and more

## Make a plan before the start of rearing

Determine the strategic road with:

- Pullet grower
- Producer
- Hatchery
- Local veterinarian
- Feed supplier
- Other involved parties



# Cage-free management for 500 eggs and more

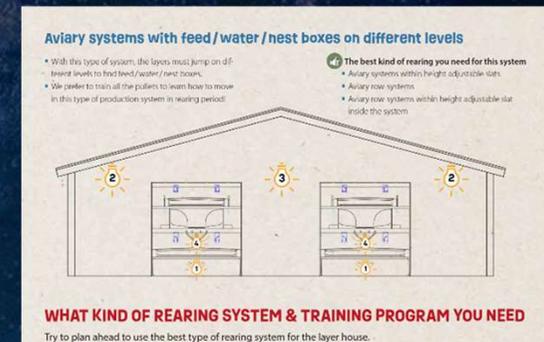
## What do we like to know before we start rearing?

- Production based on number of eggs, Kg of eggs, market needs
- Type of equipment rearing/production
- Daylight influence rearing/production



## CAGE-FREE MANAGEMENT FOR 500 EGGS AND MORE

- Barn system with full litter
- Barn system with full slats
- Barn system with 2/3 slats and 1/3 litter
- Aviary systems with in height adjustable slats
- Aviary row systems
- Aviary row systems with in height adjustable slat(s) inside the system.



**H&N Cage-Free  
Management Guide**  
<https://hn-int.com/>

Cage-free management for 500 eggs and more

Aviary rearing!!!



## CAGE-FREE MANAGEMENT FOR 500 EGGS AND MORE

- ❖ What kind of feeding, and drinking system is used in production?
- ❖ Is feed/water/nest boxes placed on the same level in production?
- ❖ Do birds need to jump on perches to find the different levels?
- ❖ What is the maximum height that the layers need to jump to in the production system?

**H&N Cage-Free  
Management Guide**  
<https://hn-int.com/>

# Cage-free management for 500 eggs and more

## Cage-Free Rearing

- ❖ The more closely the rearing facility resembles the future production system, the easier it will be for the pullets to settle down in their new environment after being transferred to the laying house.
- ❖ With this we can use the complete genetic potential of our H&N breed.



# Cage-free management for 500 eggs and more



Discuss with local veterinarian for best choice.  
Also looking at economic benefits!  
**Try to finish vaccination program before transfer!**

# Cage-free management for 500 eggs and more

## Key messages to achieve 500 eggs and more

- Pre-heating start rearing/production
- Respect feeder and drinker space
- Use Intermittent lighting program
- Good feeding management
- Light intensity rearing/production
- Light stimulation onset period on body weight & uniformity

# CAGE-FREE MANAGEMENT FOR 500 EGGS AND MORE



## STOCKING DENSITY

An adequate stocking density leads to success in rearing chicks. A high stocking density impacts negatively on daily growth, flock uni-

formity and chick development. Furthermore, a high stocking density combined with reduced feeder space will limit feed consump-

tion, which might already be low under certain conditions (e.g. hot climate or poor feed quality) and sufficient access to water.

**Table 2: Stocking density in rearing farms\***

Age	Floor space		Feeder space**		Drinker Space	
	Row-systems	Floor***	Row-systems	Floor	Row-systems	Floor
0 – 3 weeks	140 cm <sup>2</sup> /bird	21 birds/m <sup>2</sup>	2.5 cm/bird	4 cm/bird 60 birds/pan	1.25 trough cm/bird 12 birds/nipple	1.4 trough cm/bird 12 birds/nipple 100 birds/fountain
3 – 16 weeks	285 cm <sup>2</sup> /bird	16 birds/m <sup>2</sup>	5 cm/bird	8 cm/bird 30 birds/pan	2.5 trough cm/bird 8 birds/nipple	2.5 trough cm/bird 8 birds/nipple 75 birds/fountain

\*This table is a general recommendation and you should adhere to your own country's recommendations.

\*\*minimal recommendations

\*\*\* includes all the available space

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Management Guide**  
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# Cage-free management for 500 eggs and more

## Pre-heating

Brooding:

Concrete/Soil >28°C

Chick level >34°C

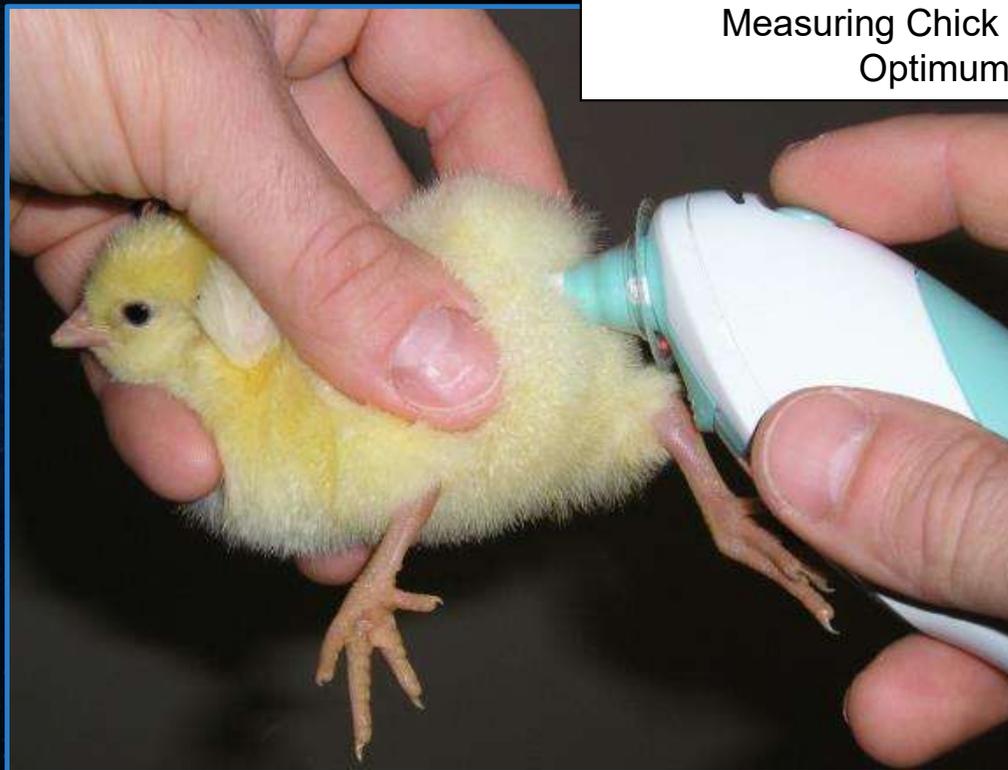
After housing the chicks increase temperatur till:

Body temperature between 40.0 - 41.0°C

Good distribution of ALL chicks



# Cage-free management for 500 eggs and more temperature



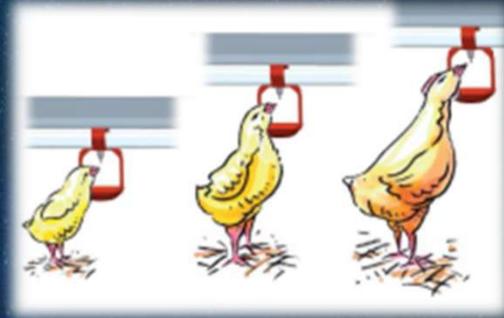
Measuring Chick Body Temperature  
Optimum 40-41° C

Adjust House Temperature according to the Chick Body Temperature!

# Cage-free management for 500 eggs and more

## Drinkers

- ❖ Check the drinker height regularly, especially in first weeks of Rearing
- ❖ Give extra attention with IR treatment!  
360° nipple drinker/cup drinkers



# Cage-free management for 500 eggs and more

## Intermittent lighting

➤ In light-proof houses (< 3 LUX)

Housing chicks till day 7

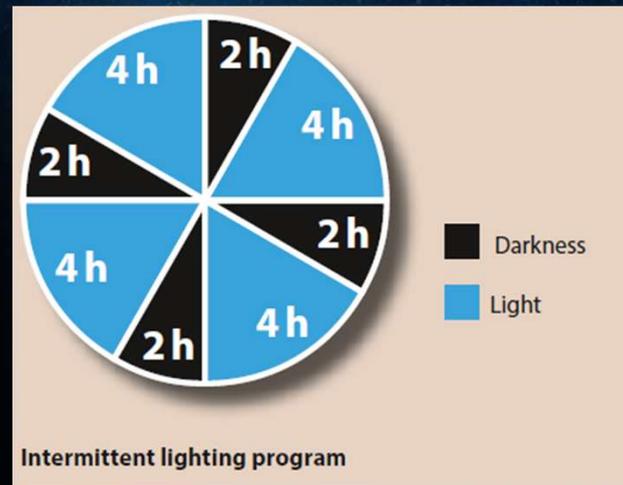
4-2-4-2-4-2-4-2

Day 7 till day 14

8-2-8-6

➤ In open houses (> 3 LUX)

4-2-4-2 during night

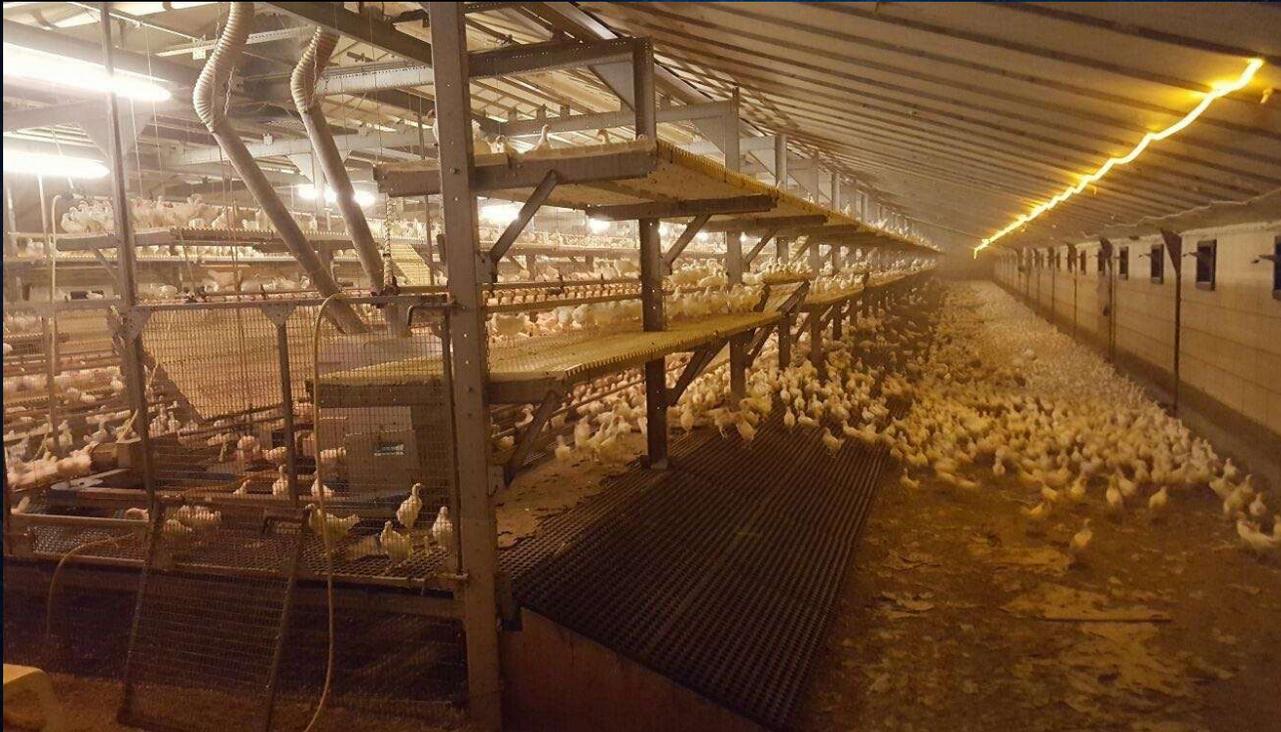


## Cage-free management for 500 eggs and more

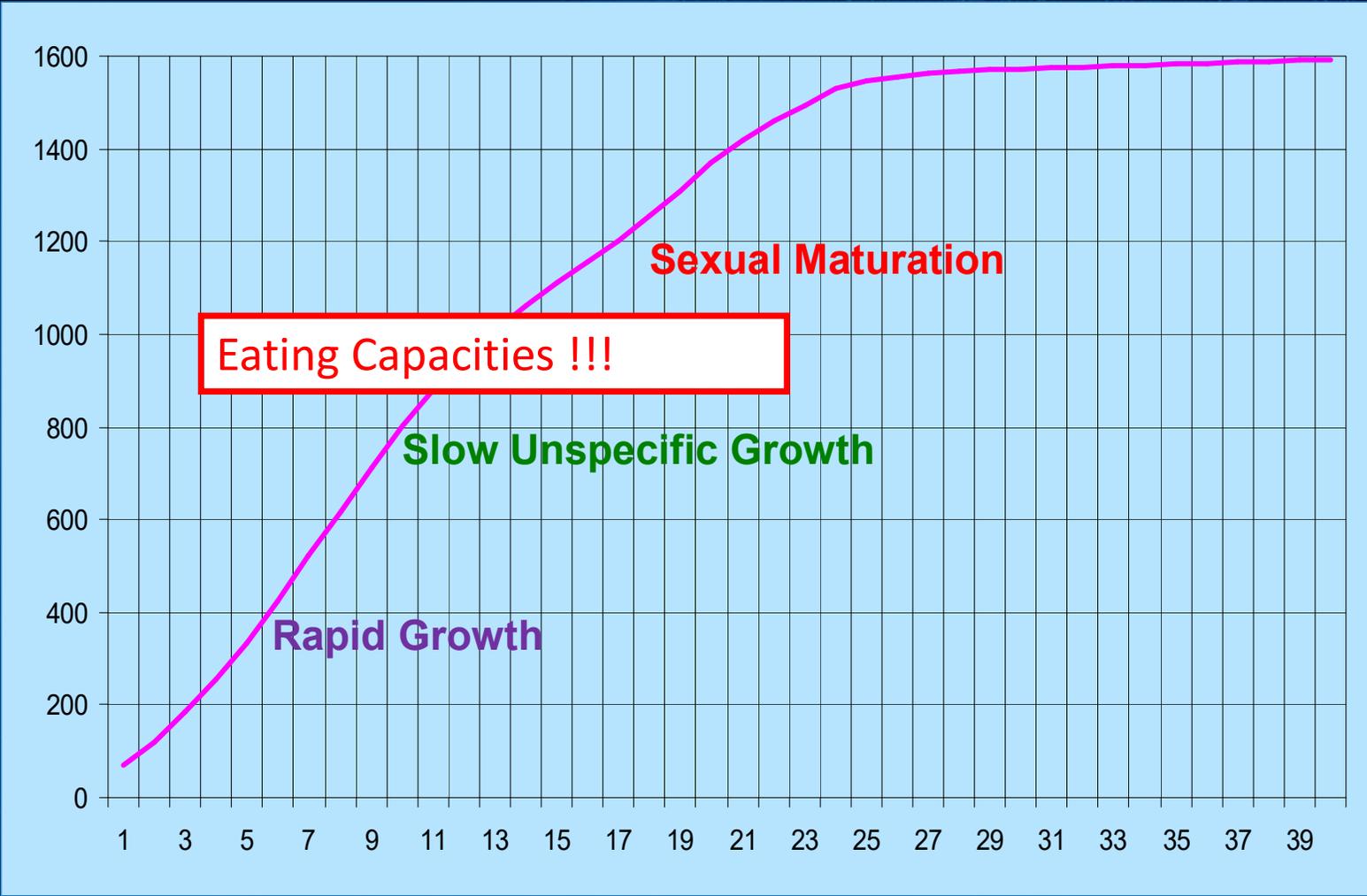
- ❖ Start training with dimming period as soon as possible after ending the intermittent lighting program. (14 days)
- ❖ Let the chicks out of the system a.s.a.p!!!!  
Be aware of situations with paracox vaccinations, recycled paper!!



## Cage-free management for 500 eggs and more

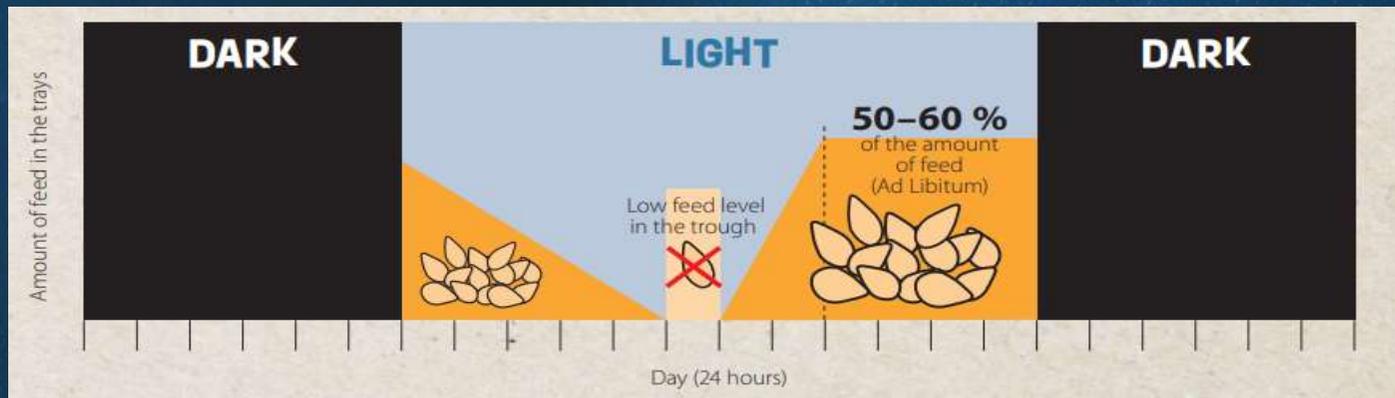


# Cage-free management for 500 eggs and more



# Cage-free management for 500 eggs and more

## Feeding management



**Rearing**

This is just an example: in practice, feed distribution will depend on feeder equipment/space/level, but it needs to follow this schema

# Cage-free management for 500 eggs and more

## When to start feed management?

- In rearing period (age of 3-4 weeks)
- Start to empty the feeders. (Keep an eye on behaviour of the flock)
- We like to empty the feeders once/day!
- **Continue this during whole rearing period!**



# Cage-free management for 500 eggs and more

Measure LUX, and avoid bright light and dark spots.

**15 LUX** for brown pullets and **10 LUX** for white pullets up to 10 weeks



# Cage-free management for 500 eggs and more

## *Light program influencing factors*

- ❖ Latitude/ Longitude: *North/South, East/West*
- ❖ Hatch date: *Year Season, Natural day light*
- ❖ House design: *Closed, light tight, open sided*
- ❖ Target body weight: *Egg size, feed consumption*



# Cage-free management for 500 eggs and more

## Step Down Period

- ❖ Step wise reduction of day length with 2 hours/weekly from placement.
- ❖ Between 3-10 weeks, be extra aware of behavior, and when needed reduce the light intensity. (Temporarily)
- ❖ Don't stick to the lighting schedule!  
If the birds don't reach their bodyweight, don't reduce daylength until they are back on target body weight.



# Cage-free management for 500 eggs and more

## Constant Period

- ❖ The day length during the constant period should not be chosen too short. (9-12 hours)
- ❖ The birds must grow, and need time to eat
- ❖ Never increase the day length during this period. This can induce an advanced onset of lay.



# Cage-free management for 500 eggs and more

## Light stimulation

Light stimulation on body weight and uniformity

Body weight:

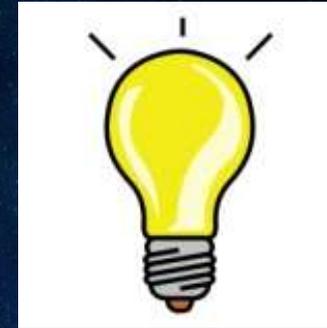
Egg weight profile (KAI)

Uniformity:

<10% birds with body weight 100 gr. below standard (egg weight profile)

First stimulation:

2 hours



# Cage-free management for 500 eggs and more

## Body weight to start lighting stimulation!

Table 1. General correct body weight (and estimated age) to start the light stimulation

Commercial hens	Uniformity	Body weight
Brown Nick	>85%	1,450 g
Super Nick	>85%	1,260 g
Nick Chick	>85%	1,250 g

# FEED MANAGEMENT

- Target to feed ALL the birds the same quantity, and in this quantity the COMPLETE balanced feed.
- To prepare the birds for the big step in feed intake at the start of production.
- To keep up feeding in hot climate areas
- To reduce select feed intake



H&N Cage-Free  
T.T. Feed Management  
<https://hn-int.com/>

# Feed Management

(New) challenges

Does it work in commercial  
rearing/production farms

long feed chains

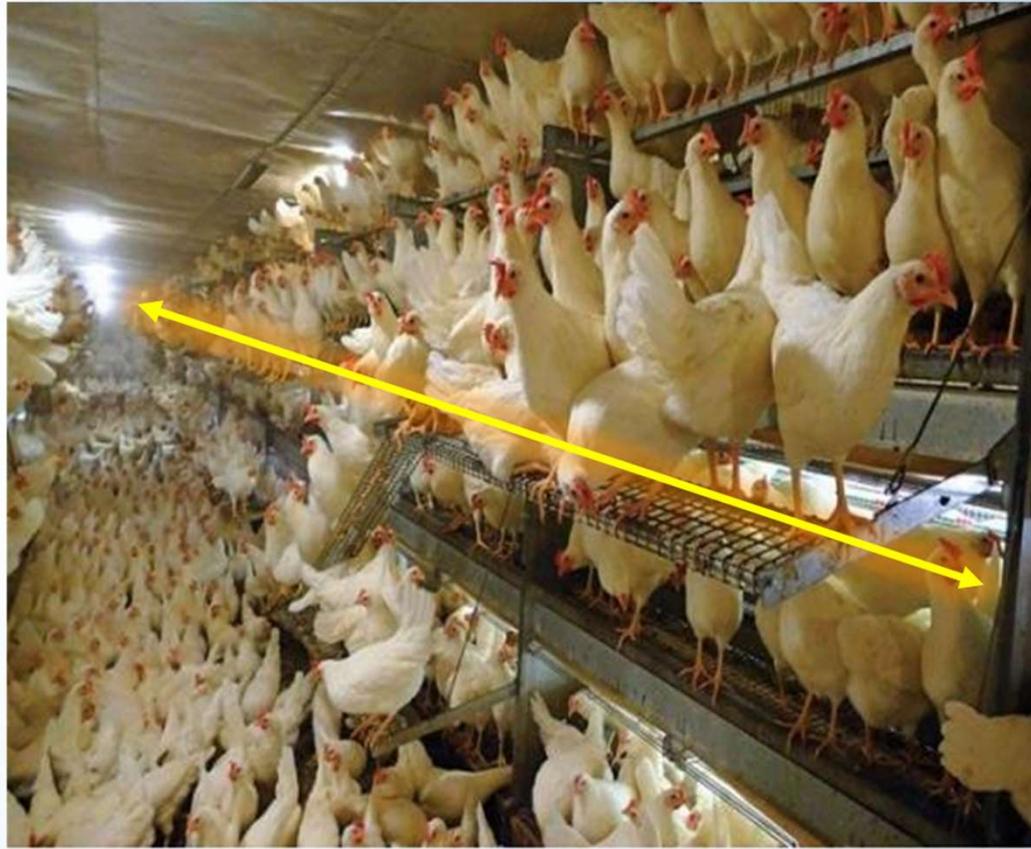
&

Free housed pullets/layers ?



# Feed Management

(New) challenges



# Feed Management

(New) challenges



# Feed Management

## Structure



**Homogenous  
mash feed structure  
the basis  
for good & even feed  
and nutrient intake**

# Feed Management

## Judged by a hen

- ☹️ I don't like hard and sharp granulate
- ☹️ I don't like fine powder mashfeed
- ☹️ I don't like hard pallets ...



Source: G. G. Mateos



# Feed Management

## Structure



Source: G. G. Mateos

# Feed Management

## Structure



# Feed Management

## Structure



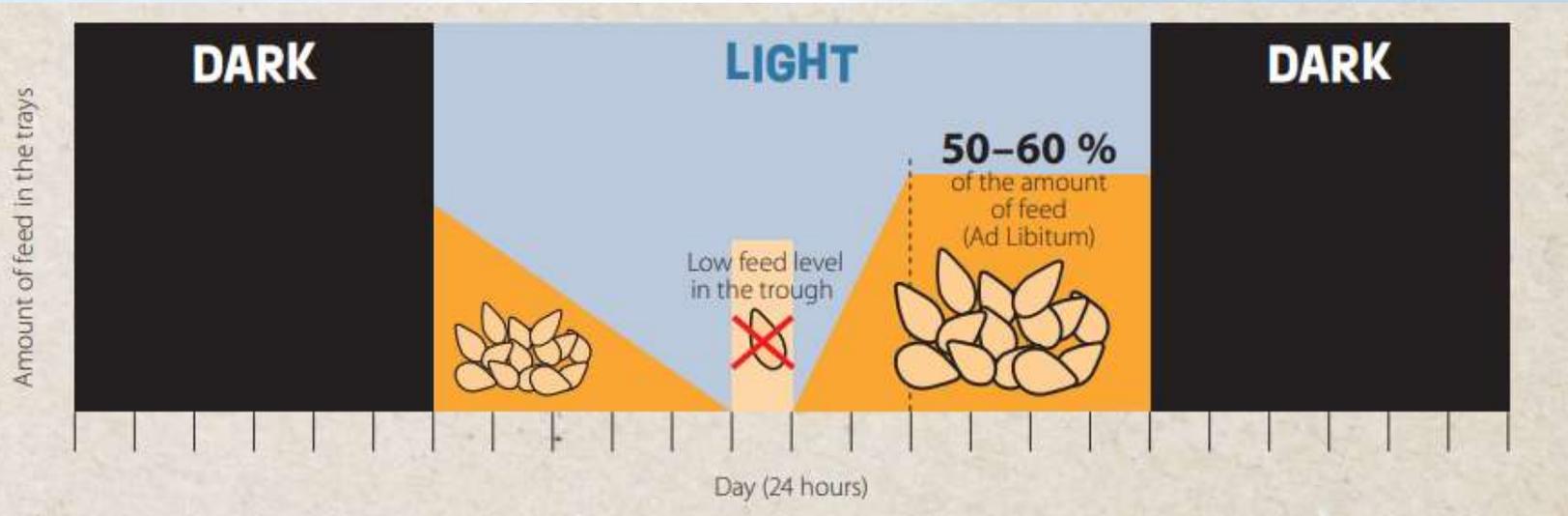
# Feed Management

**And take the profit!**

- feed chain
  - Fast running feed chain (>18 M/Min)
  - Enough capacity for transport augers or feed hoppers
- 
- ✓ **Profit from less to no waste**
  - ✓ **Better feeding behaviour**



# FEED MANAGEMENT



**Rearing**

# Alfalfa (Luzerne)

Use the see if everything running smoothly!



Source: J. Terhorst

# Alfalfa (Luzerne)

To check if everything running smoothly!



- Do we need Alfalfa?
- For what purpose we use Alfalfa?
- When do we use Alfalfa?

# Alfalfa (Luzerne)

Use the see if everything running smoothly!

- We don't use alfalfa to feed our birds!
- We use alfalfa only to give us some information, to see if everything is in good balance!
- **When birds don't take alfalfa, they are in good balance.**
- Advisable to use it during most stressfull periods:  
In rearing 3 till 10 weeks



# Feed Management

## Mandatory Steps

- **From week 3-4** in rearing start to empty to feeding troughs once/day!
- Continue this during whole rearing period, and after transfer in production!



# (Cage-Free) Rearing

## Summarized

- Good feed and feed management
- Observe the birds and they will “tell you”
- Rearing is the key to success



# Please be excellent because ...

*... an excellent manager will still be able  
to perform with acceptable results even when  
circumstances are not perfect*

***But ...***

*A manager with poor skills will  
spoil the birds and the production results  
even in the best circumstances!*

# Thank you for your attention



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