



Cage-free Rearing Management for 500 Eggs and More

Hickman's Academy
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Rearing/Production Systems Global



Cages



Enriched cages



Barn egg



Aviary systems



Free range



Biological

Cage-free Management for 500 Eggs and More

What do we like to know before we start rearing?

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



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Make a plan before the start of rearing

Determine the strategic road with:

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



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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.



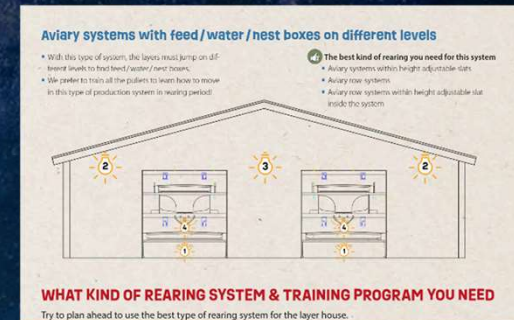
EQUIPMENT REQUIREMENT

- ❖ 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 the layers need to jump to in the production system?

**H&N Cage-Free
Management Guide**
www.hn-na.com

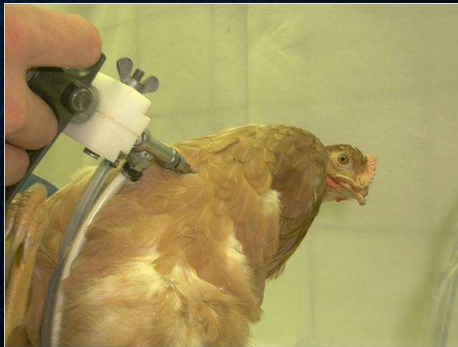
EQUIPMENT REQUIREMENT

- 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.



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Vaccination Program



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

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Lighting - 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*

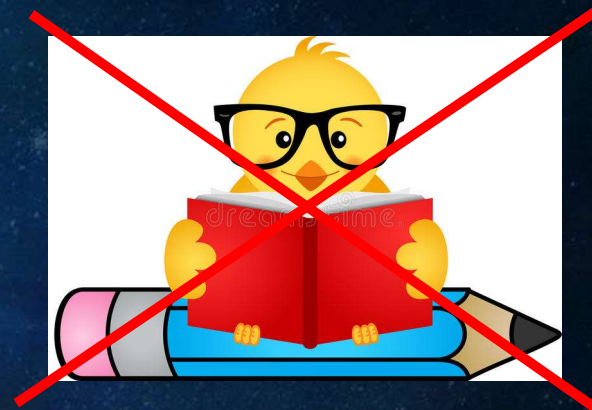


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The birds (and not only ours!) have one failure: They can't read!

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

Therefore, it is the pullet grower who has to determine if everything is “on track”



Cage-free Management for 500 Eggs and More

Key messages to achieve 500 eggs and more

- Pre-heating before housing day old chicks
- Respect feeder and drinker space
- Use Intermittent lighting program first 14 days
- Good feeding management
- Light intensity rearing
- Light stimulation on body weight & uniformity

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Pre-heating

Brooding:

Concrete/Soil >28°C/>82.4°F

Chick level >34°C/>93.2°F

After housing the chicks increase temperature to:

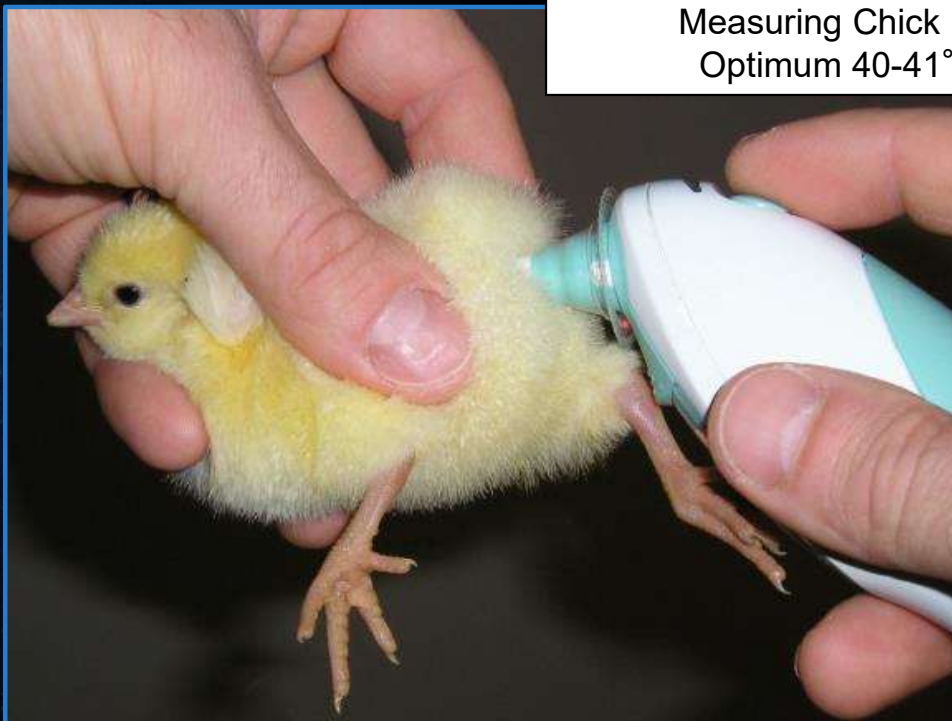
Body temperature between 40.0 - 41.0°C / 104.0 – 106.0°F

Good distribution of ALL chicks



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Temperature



Measuring Chick Body Temperature
Optimum 40-41° C (104-106° F)

Adjust House Temperature according to the Chick Body Temperature!



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 ² /bird	21 birds/m ²	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 ² /bird	16 birds/m ²	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

Intermittent lighting

➤ In light-proof houses (< 3 LUX)

Housing chicks till day 7

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

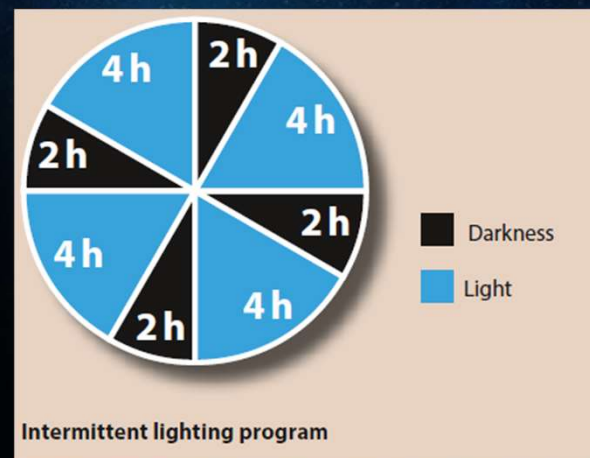
Day 7 till day 14

8-2-8-6

➤ In open houses (> 3 LUX)

4-2-4-2 during night

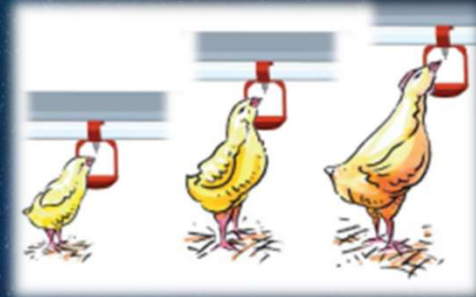
Day 7 till 14



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Water

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



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Development of the chicks

- ❖ 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!!



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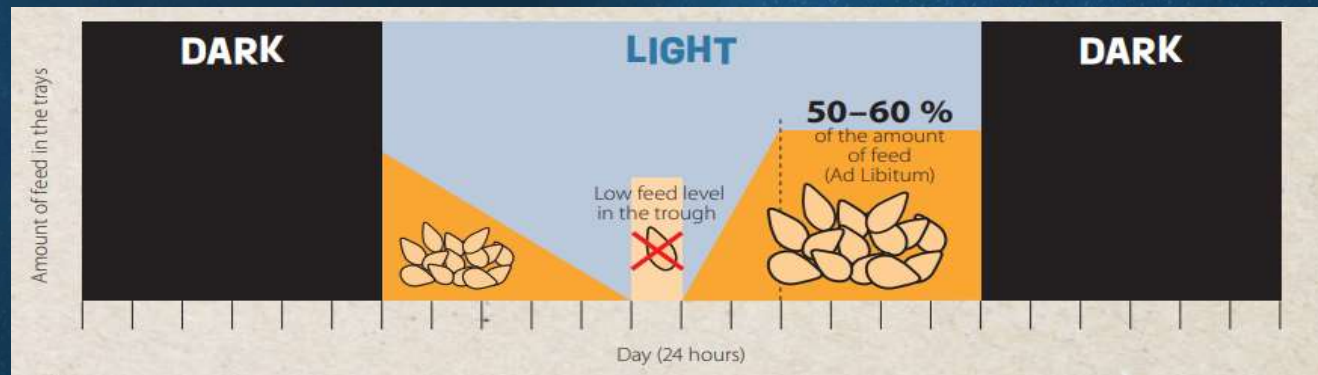
When to start feed management?

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



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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

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Measure LUX, and avoid bright light and dark spots.

1 Ftc for White pullets and **1,5 Ftc** for Brown up to 10 weeks



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Light: Step Down Period

- ❖ Step wise reduction of day length from 14 days with 2 hours/week.
- ❖ 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.



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Light: Constant Period

- ❖ The day length during the constant period should not be chosen to 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.



Lighting Program

Weight for lighting stimulation

Table 1. General correct body weight to start the light stimulation

	Uniformity	Body weight
Brown Nick	>85%	1,450 gram/3.2 pounds
Nick Chick	>85%	1,250 gram/2.75 pounds

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Light stimulation

Body Weight & Uniformity
Egg weight profile (KAI)

Uniformity:

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

First stimulation:

2 hours and start Hybrid-Feed

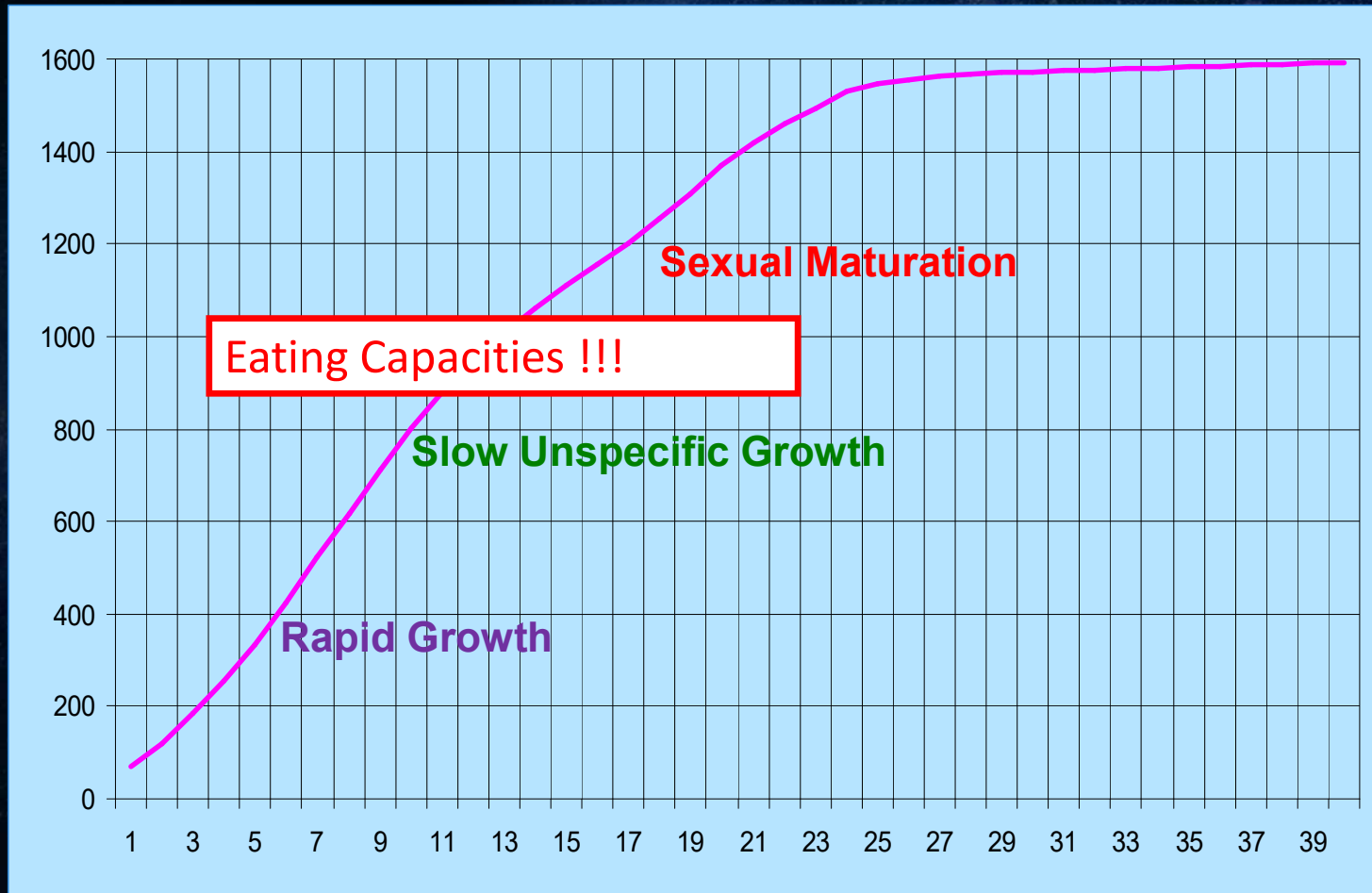


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**Tech-Tip Feed
Management**

<https://hn-int.com/>

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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



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Feed Management

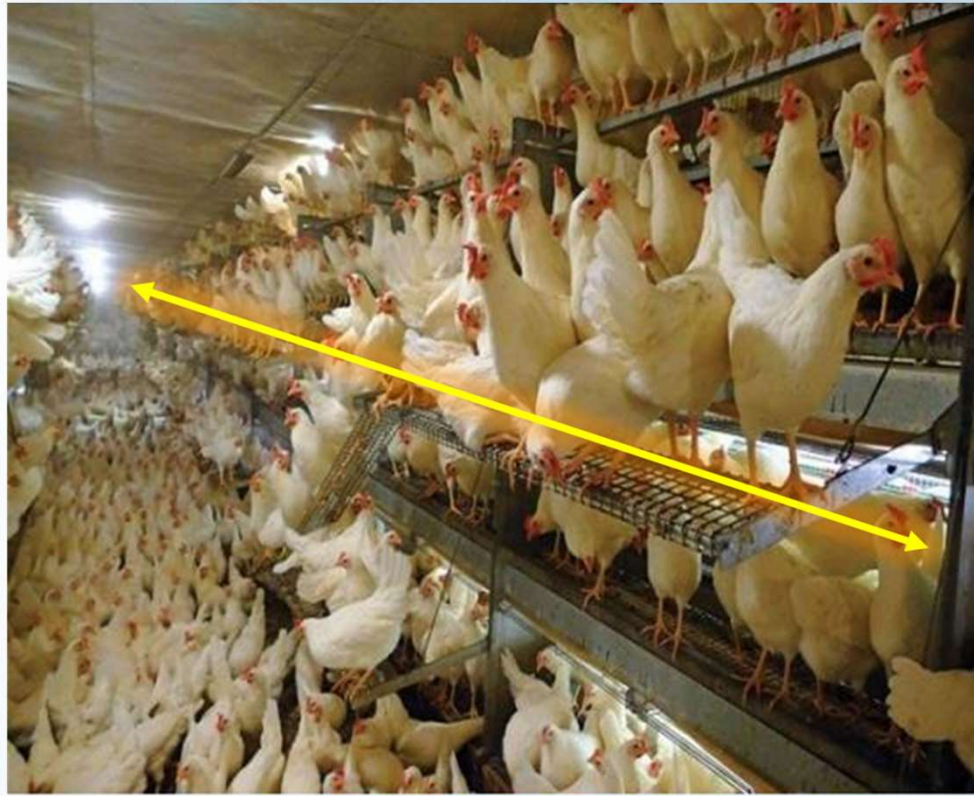
New challenges in cage-free

Does it work in commercial
rearing/production farms
long feed chains
&
Free housed pullets/layers ?



Feed Management

New challenges in cage-free



Feed Management

New challenges in cage-free



IR-treatment



Untrimmed

Feed Management

Feed structure



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

Feed Management

Judged by a hen

☹️ I don't like fine powder mashfeed

☹️ I don't like hard pallets ...



Source: G. G. Mateos

Feed Management

What particle size the birds prefer to eat ?



Source: G. G. Mateos

Feed Management

Easy testing on farm level



Feed Management

Easy testing on farm level



Feed Management

Invest for the right feeding system!

- Feed chain
- Fast running feed chain (>18 M/Min)
- Enough capacity for transport augers or feed hoppers

- ✓ Profit from low to no waste
- ✓ Better feeding and eating behavior



Alfalfa (Luzerne)

Use the see if everything running smoothly!



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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