New Managment guide Cage-Free

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NEW Cage-Free GUIDE

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Global Cage-Free Production!

Legislation Mandating Changes

- **United states: 10 state laws do/will affect how hens are housed.**
- **Canada: Phase out conventional cages by 2036**
- **European Union: - Bans on conventional cages from 2012**
  - Lobby for ban on enriched cages by 2027

Global housing systems layers

Customer demanding cage free

Where the knowledge comes from?

H&N Team

But … we learn from you!

- **Countries with more than 30 years experience in cage-free rearing/production**
- **Our customers**
- **Commercial cage-free pullet rearers and egg producers**
- **Technical people working in the layer industry**

Challenges when we open the cages

Febr 18th 2022

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Challenges when we open the cages

- Equipment for cage-free rearing/production
- Brooding 1-21 days
- Rearing 3-17 weeks
- Transfer 16-17 weeks
- Onset of production 17-25 weeks
- Free-Range/Organic rearing & production

Equipment for cage-free rearing/production

EQUIPMENT FOR CAGE-FREE PRODUCTION

Aviary systems with feed / water / nest boxes on different levels

- With this type of system, the layers must jump on different levels to find feed/ water / nest boxes.
- We prefer to train all the pullets to learn how to move in this type of production system in rearing period!

The best kind of rearing you need for this system

- Aviary systems within height adjustable slats
- Aviary row systems
- Aviary row-systems within height adjustable slat inside the system

WHAT KIND OF REARING SYSTEM & TRAINING PROGRAM YOU NEED

Try to plan ahead to use the best type of rearing system for the layer house.
Here are a few important questions to think about when making this decision:

What kind of feeding system and drinking system you use in production?

When pullets learn to drink and eat from the same feeding/ drinking system, it would give the less stress after transfer to find and use the feed/ water in production house.

When there is rearing with feeding pans, and production is with feed chain, the bird could be scared to see the feed moving in the feed chain.

Moving pullets from open drinkers to nipple drinkers there would also be a problem because they haven't learned how to use the nipple drinkers.

Do the birds need to move on slats in production house?

When you transfer pullets from full liner to production system with slats that they need to use for sleep, and to find feed, water or nest boxes, you could see some problems because they don't like to walk on slats.

There is more risk of the layers sleeping in the litter area because they are used to doing this in the rearing period. It can increase the risk of floor eggs.

Is feed, water, nest boxes on the same level in production system?

When you transfer pullets to production systems with feed, water, nest boxes on one level keep in mind that you don't have to use a water training program in rearing to force the pullets to find the different levels.

Do birds need to jump on perches, to find the different levels?

Look how the layers jump to the different levels in the production system.

- **When they need to jump on perches to go to another level, the pullets need to be trained also for all the 100 % to jump on a perch!**
- Chicks should have access to perches by 3 weeks of age.
- Provide minimum ~~15 cm~~ perch space per pullet.

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Highlights New MG

- Make a plan with people who are involved.
- What kind of rearing to use for what kind of production
- Best options and second-best options
- 7 step plan to find the best rearing

Brooding 1-21 days

BROODING (1 – 21 days)

WHAT DO CHICKS NEED DURING THE FIRST WEEK?

Temperature

The temperature should be between 34-36 °C for the first few days (see table 3).

- **Correct temperature:** Chicks will be well distributed and active.
- **Low temperature:** Chicks will group together and sound stressed.
- **High temperature:** Chicks will group in the coldest places, are inactive and pant.

Temperature recommendations:
- House temperature: 34–35 °C
- Paper and/or litter temperature: > 32 °C
- Concrete/ground: > 26 °C

Pasted vents may indicate a too high or too low temperature.

After two or three days, decrease the temperature by 0.5 °C every day. **Be aware that the best indicator is chick behaviour and vent temperature.** Check the flock every time you change your settings.

If the house temperature is not uniform, take corrective measures by changing heaters and ventilation parameters.

When housing the chicks, follow these recommendations:
- Place the smallest chicks in the warmest areas on the floor or inside the aviary system.
- Place the youngest chicks in the warmest areas or aviary system (if the flock is arriving over several days).
- Avoid placing chicks in very hot spots (near the heaters) or in very cold spots during the first 10 days.
- If most of the chicks are from a young PS flock (younger than 27 weeks), increase the objective temperature 1 to 2 °C (1.8 to 3.6 °F).

Table 3: Temperature recommendation

Type of brooding	Temperature at chicks arrival	Temperature decrease
Aviary systems	34 – 35 °C / 93 – 95 °F	Reduce 3 °C/5 °F each week until supplementary heat is no longer needed.
Floor	35 – 36 °C / 95 – 97 °F	

Correct temperature distribution | Low temperature distribution | Hot temperature distribution

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Highlights New MG

- Measurements on chick level
- Feeder and drinker space
- Stocking density
- Dimming program

Rearing 3-17 weeks

GROWING (3 – 9 weeks)

TRAINING PULLETS IN CAGE-FREE REARING

Release the Chicks to Litter Area

► With the use of aviary row systems, ²/₃ slats, and aviary systems within height adjustable slats.

- Depending on the height of the system/dropping pit we start to release the chicks from 3 weeks of age.

Don't keep the chicks locked up too long!

- This can cause problems with stocking density.
- The sooner the chicks have access to litter area/material, the less problems with FAD pecking behaviour in second part of rearing period and production!
- Use litter material no deeper than 1 cm in the litter area.
- Use additional ramps/ stairs to help the chicks to find the way inside the system at end of lighting program.
- Open the system/dropping pit 1 hour after start of the lighting program, and let the chicks find there own way out.

Don't release all the chicks out of the system at once!

- Try letting out a few rows of the aviary or one side of the dropping area at a time. This will help limit the number of chicks that will need to be placed back in the system at the end of the day. When this works well after a few days, you can release to other rows, and other side of the dropping pit.
- Settle enough people during the end of the day, at time that lighting program ends.
- With the good use of a dimming program, a lot of chicks will find their way up into the system, or dropping pit by themselves. For sure you need to support them, and help the last chicks up, for the first week every evening.
- In first days, you can use some laser pointers to activate the chicks to jump on the slats, or inside the aviary system.
- Bring the chicks to bed at end of the lighting program!
- Start to provide Alfalfa / Lucerne in the litter area a week after release of the chicks. This gives the farm manager extra eyes to check if everything is on target.
- **When the chicks take this Alfalfa/ Lucerne, you need to check your feeding management (select feed intake) or / and feed formula!**

IMPORTANT

We would like to see 100 % of the chicks up, or inside the system every end of lighting program!

During the whole Rearing Period

- Make sure that all the chicks moving up to the dropping pit, slats, or inside the aviary system during the whole rearing period!
- Reaction on vaccinations or climate can make that during rearing period chicks/ pullets move to sleep in the litter area.
- Advise to check this during whole rearing period!

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Highlights New MG

- Cage-Free training chicks
- Stocking density
- Feeding management
- Light program/intensity

Transfer 16-17 weeks

TRANSFER (16 – 17 weeks)

Light

Use the same lighting program as used in rearing, means same hours of daylength.
When transport and housing of the pullets take more time during the daytime, give some additional hours light in the first day to give them the time to get used to the new environment.
The best way to do the dimming period at the end of the day(s) is manual.
Because of the new environment the birds need some extra time to find their way inside the aviary system, or on the slats.
Discuss this dimming program together with supplier of equipment, and technical adviser.
Look at behaviour of the pullets during this dimming period and switch off the light step by step.
Light intensity can be a little higher during the first week (20 lux) to encourage hens to explore the house and find water and feed.
Avoid "light shock (big step in light intensity between rearing and production) preventing stress and overstimulation.
Achieve a good light distribution to prevent shadow where bird can produce system/floor eggs.

Weight

Weight lost during transport should be recovered in the first days in the house. The birds should continue gaining body weight and maintain a good flock weight uniformity to achieve a good start of production.

Behaviour

Observe the behaviour of the hens during housing, and during dimming period at the end of the day. **Keep an eye on this the first days after housing!**

Litter

Appropriate litter level

Be sure that litter material is there in time the layers start using the litter area in barn/aviary houses.

Different materials may be used:
- Wood shavings
- Cellulose pellets
- Coarse wood shavings

Regardless of the litter material used, it should be hygienic!

A litter level depth of 1–2 cm is sufficient.
Litter material should preferably be distributed after the house is pre-heated, and when the layers have been housed.
This prevents the formation of condensed water between the floor and litter.
Keep the level of litter low and dry during whole production period!

Key Points

- Transfer the birds at least two weeks before the onset of lay to get used to the new environment
- Only transfer flocks that are healthy and in good condition.
- Plan transport in advance and organize it well to ensure optimal comfort for the birds.
- Avoid transferring flocks during high temperatures. Transport by night if necessary.
- Monitor the body weight before and after transfer to guarantee that the flock is developing correctly.
- Closely monitor water and feed consumption during the week after arrival at the laying house.
- In floor houses and aviaries, always check that the number of pullets per partition is the adequate.
- No vaccinations during transfer where possible.

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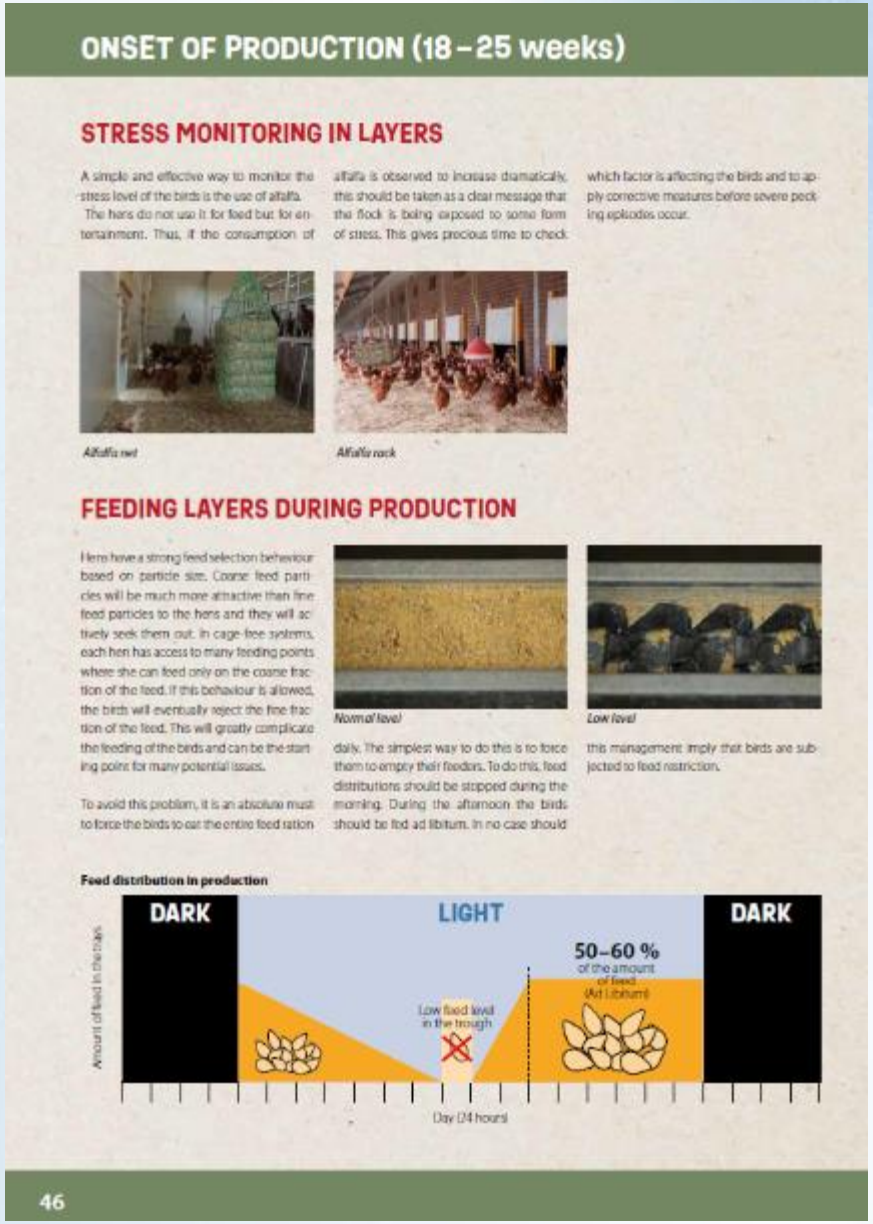
Highlights New MG

- Make a plan with people who are involved
- Vaccination program
- Cage-Free training pullets

Onset of production 17-25 weeks



ONSET OF PRODUCTION (18 – 25 weeks)

STRESS MONITORING IN LAYERS

A simple and effective way to monitor the stress level of the birds is the use of alfalfa. The hens do not use it for feed but for entertainment. Thus, if the consumption of alfalfa is observed to increase dramatically, this should be taken as a clear message that the flock is being exposed to some form of stress. This gives precious time to check which factor is affecting the birds and to apply corrective measures before severe pecking episodes occur.

Alfalfa net

Alfalfa rack

FEEDING LAYERS DURING PRODUCTION

Hens have a strong feed selection behaviour based on particle size. Coarse feed particles will be much more attractive than fine feed particles to the hens and they will actively seek them out. In cage-free systems, each hen has access to many feeding points where she can feed only on the coarse fraction of the feed. If this behaviour is allowed, the birds will eventually reject the fine fraction of the feed. This will greatly complicate the feeding of the birds and can be the starting point for many potential issues.

To avoid this problem, it is an absolute must to force the birds to eat the entire feed ration daily. The simplest way to do this is to force them to empty their feeders. To do this, feed distributions should be stopped during the morning. During the afternoon the birds should be fed ad libitum. In no case should this management imply that birds are subjected to feed restriction.

Normal level

Low level

Feed distribution in production

Highlights New MG

- Lighting program (hours/lux/dimming)
- Feeding management
- Nest management
- Cage-Free training layers

Free-Range/Organic rearing & production

FREE-RANGE & ORGANIC PRODUCTION

FREE-RANGE & ORGANIC PRODUCTION

Pullets

- To prepare the pullets for these types of production systems there are some countries who require that birds are using the range area already in the rearing period.
- Use the right lighting program to prepare the pullets in the right way for the good start in production.
- **Points of attention:**
  - Use of dark rearing house, or with daylight influence
  - Season of the year (daylength)
  - Please look at our light program recommendation.

Paddocks

When local legislation allowed make different paddocks (3–4) to give the layers every 4–8 weeks access to some other paddock to give the other paddocks time to recover. In that time you can clean the empty paddocks, and grass and soil can recover.

Veranda/ Wintergarden

- We recommend the use of a veranda/ wintergarden to make a barrier between the barn and the pasture range area.
- With this there is a possibility to start a small training for pullets/layers to go in and outside the barn in-between, to make the step to use the complete range area.
- This barrier is also useful as shelter for weather conditions which can affect climate and litter quality inside the barn.
- Make a clean entry into the barn/winter garden with the use of material that absorbs moisture and dirt in the first meters of the pasture area. This to avoid the occurrence of mud pools in rain periods.
- For this you can use concrete, stones, or grinds tree roots, with or without drainage in the first 5–10 meters from the barn.

Climate Control

- When rearing/production house is preparing for free-range/organic please look for possibilities to update climate control to keep climate and litter quality good.
- Close popholes during inclement weather, if permitted by local regulation.
- Look for the possibilities to use climate control with equal pressure ventilation, or a day and night settings to control the time's that pop holes are open and closed.

IMPORTANT

Regulations for free-range / organic rearing and production can be different for each country. These regulations are based on:

- Age when layers need go outside
- Divide the range area in 3–4 different areas and use every 4–5 weeks an other range, with this the other areas can recover.
- Amount and position of feed
- Numbers and format of pop holes
- Placement pop holes to pasture range area
- Time to open and close the pop holes during the day
- Separate range areas for maximum numbers of pullets/layers
- Use of trees and shelters in the pasture range area

Clean, concrete, stones, tree roots for entrance barn or wintergarden

Open Pop holes

Closed Pop holes

Under pressure climate control system in free-range barn

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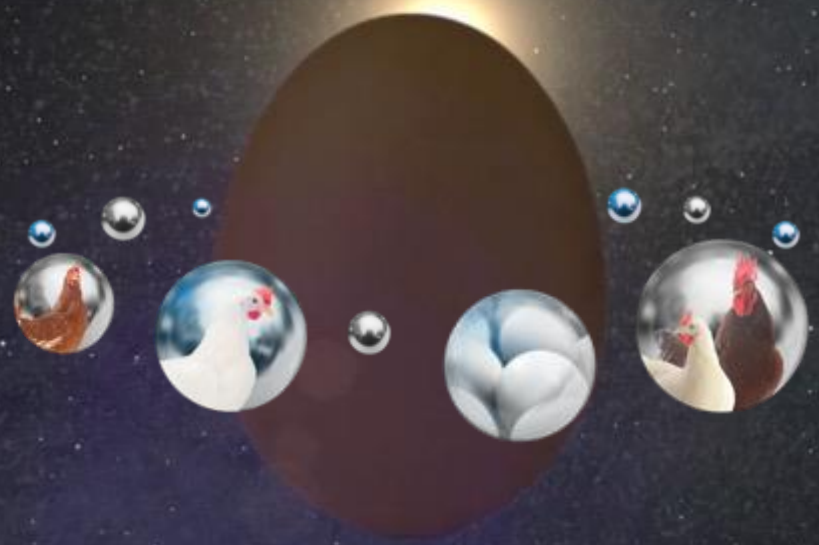
Highlights New MG

- Pasture management
- Feeding management
- Climate control in houses with pop holes
- Control predators

Thank you for your attention!



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