



INTERNATIONAL

The key to your profit!



Cage-Free Trouble shooting

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TOPICS

- Piling
- Toes Pecking
- Floor/System eggs

Piling

- Why are birds piling?

- *Reasons*

- *Causes*

- Differences:

- *Between white and brown layer type birds (all breeds)*

- *Some are more susceptible (Silver, Amberlink)*

- *Happens at all kind of housing systems*

Piling

- Where in the house is it happening?
 - *In the nest boxes?*
 - *In the scratch area?*
 - *Hardly ever seen on the slats or in aviary systems.*
 - *Near partitions or just in the middle of the house?*
 - *Every time in the same part of the house or randomly?*
 - *The behavior has even been observed in Colony cages? (but no mortality has been seen in those cases)*
 - *never you hear about this in rearing.*
 - *Always same corner(-s) (walking behavior of farmer?)*

Piling

- Very often only seeing that birds are „huddling“ together, without seeing any reason for this.
 - *Climate?*
 - *Sometimes seen that birds are looking for spots with fresh air.*
 - *Influence of light distribution?*
Not always mortality from this huddling.
 - *Influence of the scratch material and thickness of the litter (temperature influence).*
 - *Is it happening in stressy, scary flocks, or also in normal high productive, dossal flocks?*

Piling



Piling



Piling

- Sometimes it has been reported, when there are partitions in the house, only in the last or 2 last compartments of the house.
 - *What can cause it than?*
 - *Feed structure*
 - *In combination with low speed feed-chain.*
 - *Birds where not getting same diets in front and back.*
 - *Most often you see it also at the difference of condition of those birds and there egg weight and bodyweight.*
 - *Feathering and gut health as well.*

Piling

➤ Reasons:

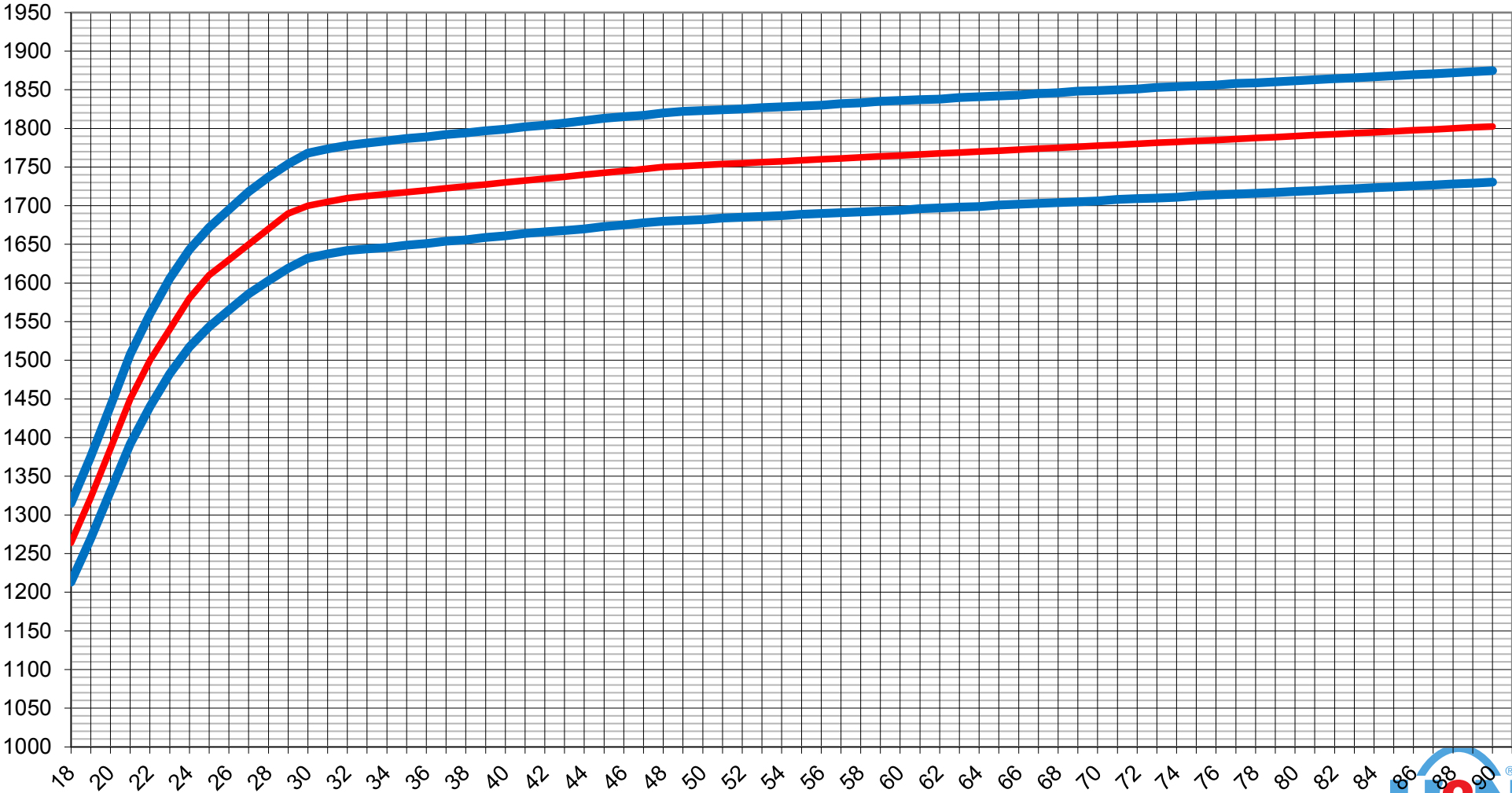
- *Bad climate (old houses, but also new Free Range and Organic houses!)*
- *Light (bad distribution) or shimmering lights.*
- *Birds attracted by noise from specific end of the house*
- *Scared / Nervous flocks?*
- *Feeding strategy*
- *From Germany and Holland, majority of the cases reported, the birds had problems with their gut-health. (and thereby, no good utilisation of (micro?-) nutrients?*

Piling

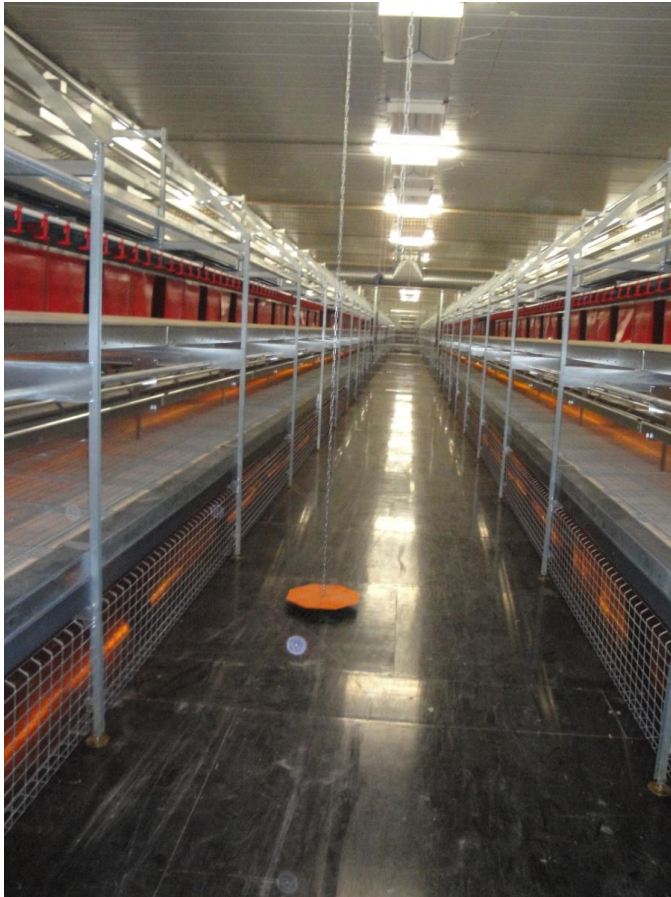
➤ Reasons:

- *In some situations, it has been compared with dairy, after giving birth to a calf, when they run out of gas.*
 - *Negative energy balance?*
- *It starts around the point that the flock reaches their peak of daily egg-mass production.*
- *Almost all cases, it stops around 35 – 40 weeks of age again. (same all of a sudden at it came)*
- *Very often flocks which where low in bodyweight, may be stimulated to early getting into production, although they where not ready for this.*
 - *Especially on cage-free systems, this is not without risks!*

Piling



Piling



Piling

➤ Reasons:

- *Majority of those flocks are showing this problem, as long as they stay behind bodyweight target.*
- *Looks like that the birds „run out of gas“.*
- *Very often, the feed-intake is too low for the production level (and the feed not dense enough for that situation?)*
- *Only seen in flocks, producing far above average standard.*
- *Most often, in those situations, no other reasons could be detected.*

Piling

➤ Solutions:

- *Very depending of the reason of piling..*
- *If in corners, wooden pallets on the floor or avoid ,dead-spot corners‘*
- *Make sure, especially in cage-free environment, the birds have the desired bodyweight!*
 - *Use mid-night-snack if necessary*
- *Add (evtl. preventive) 1% to 2% Fishmeal to the feed.*
 - *Giving them additional, easy digestible nutrients (& sodium)*
- *Prevent light leakage in the house*
- *Shocking wire (Not allowed in CH, D, NL..)*

Piling



Piling



Piling

➤ Solutions:

➤ *Climate system*

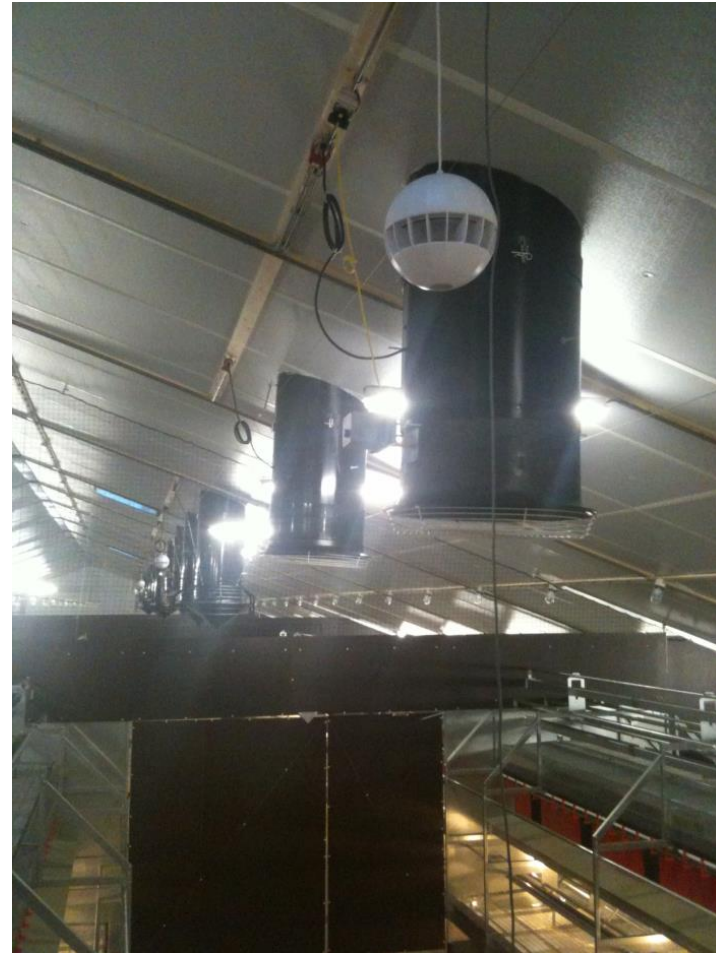
- *for free range and organic houses, but also traditional barn!*
- *Look for temperature differences in the house*

➤ *Improvement of gut health*

- *Don't „push“ the birds into production, especially at cage-free systems. Better for lay-persistency as well*

➤ *Music*

Piling



Piling

- Dutch experience:
 - *Commercial layers reared in 1 rearing house (from 1 PS origin), split into more laying farms, show different behavior*
 - *All with good performances*
 - *What are the differences?*
 - *Management*
 - *Adding light morning – evening*
 - *How fast stimulating*
 - *Feeding (supplier, number of feedings, feeding times)*

Piling

- Dutch experience - solutions:
 - *By changing the feeding program, the behavior was completely gone, within 24 hours!*
 - *Recording the feed intake over the day*
 - *Only possible with good registration of feed intake per feeding time*

Piling



Piling



Piling



Piling



Piling

- Piling in the nest boxes:
 - *Birds have preferences for some of the nest boxes*
 - *Flock has a very short ovi-position time,*
 - *Compared with high nest density (120 birds / m² nest)*
 - *Also can be caused by wrong climate settings: draft in the nest boxes, which makes some of the nest boxes less attractive*
 - *More with center belt nest boxes compared with side belt*
 - *Nest lights (white layers)*
 - *Happens more in nest boxes near de fencing (6000 KAT)*

Piling



Piling

- Piling in the nest boxes - Solutions:
 - *Opening the curtains in front of the nest boxes*
 - *Remove (part of) the nest pads*
 - *Solve climate issues*
 - *Tipping nest floors (center-belt nest boxes)*
 - *More risk on dirty / cracked eggs, eggs won't roll away!*
 - *Take away nest lights*
 - *Close the preferred nest boxes (first and last)*
 - *Shocking wire...*

Piling



Piling

- Piling in the nest boxes - Solutions:
 - *Changing light program*
 - *If all the birds want to go into the nest boxes at the same time, it could be considered to change light program:*
 - *Add light at the morning and the evening*
 - *Be aware, only possible to do in dark-out houses in summertime!*

Piling



Piling



Piling



Piling



Piling



Toes Pecking



Toes Pecking

Where do we see these problems:

- Switzerland
- Netherlands
- Germany
- Finland/ Danmark/Sweden??
- Other countries?

Toes Pecking

- In summer 2017 GD-Deventer starts a research into this.
- This research is in cooperation with Poultry Veterinarians, Hatchery's, Feed suppliers
- Results from 40 flocks, 47 surveys, out of 47 farms in NL.
- Problems in 4 different Breeds!!
- All these flocks are white layers!!
- 39 of these flocks had NO Beaktreatment!!

Source: GD-Deventer 2017



Toes Pecking

Mortality with the cause of Toes Pecking:

- In 50% of these flocks the weekly mortality was more then 0,1% weekly
- In 5% the mortality was more then 0,3% weekly

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Source:GD-Deventer 2017

Toes Pecking

Causes of toes pecking:

- **NO causes found till now!!**

Bacteria, viruses, fungus, parasites, tumors, deviation in blood vessels, toxins.

- **NO direct reference to:**

Feed supplier, Hatchery, type of system, brand of sytem, type of lighting, red-mites, red-mites treatment, select feedintake

source: GD-Deventer 2017

Toes Pecking

Treatments for Toes Pecking:

- Dimming of the light gives the best effect.
- Vitamin C, Choline (No FLS-Mix), Magnesiumoxide gives some positive effects.
- Calcium, Milk Powder, Zinc gives very little effect
- Biotine, FLS-Mix, deworming gives no effect.

Toes Pecking

*Flock has a very short ovi-position time!!!!
Piling in the nestboxes!!!!
Time of collecting eggs!!!!*



Toes Pecking



Toes Pecking



Floor/System eggs

- *Lightingprogram in rearing (LUX)*
- *How many LUX in rearing?*
- *White Layer not < 10LUX*
- *Brown Layers not <15LUX*

Floor/System eggs

- Important when there are floor eggs:
 - *Position of the floor eggs?*
 - *Time that the floor eggs are laid?*
 - *Shade?*
 - *Airstream in the nest?*
 - *Nest density*
 - *Duration – Time lap that floor eggs are produced?*
 - *Progress when the production increases?*

Floor/System eggs



Floor/System eggs



Floor/System eggs



Floor/System eggs



Floor/System eggs

- Light intensity
 - *At placement*
 - *Later on for stimulation and preventing floor eggs!*
- System lights
- Avoiding dark spots / shade
- LED!!!!!!!
 - *Use of LUX meter*

Floor eggs – Watertraining (1)

- ***General: Watertraining shouldn't be the standard!***
 - *There are risks on watertraining: production dips, dry-outs, etc.*
- Depends on type of aviary system (and harmonisation of the rearing)
- Depends on type of laying system (not all systems this is possible!) and where the floor eggs are produced.

Floor eggs – Watertraining (2)

- Rule of thumb:
 - *Start from 50% of daily production onwards*
 - *Be aware WHEN and WHERE floor / system eggs are produced*
- It is very important to have an exact overview from the numbers of daily floor eggs AND the % of the flooreggs!
 - *You have to know what the development is at 50% production!*

Floor eggs – Watertraining (3)

- The day you start, make sure that NO water is in the drinking line on the level you want to „train“.
- In principal, you start with 3,5 days. This all depends, how it goes.
 - *First day, waterintake can be down to 50 / 60% from the normal!*
- After this 3,5 days, ½ day water and close it again in the evening for another 3,5 – 4,5 days
- This can be repeated a few more times. (*but don't start to late!*)

Floor eggs – Watertraining (4)

- It is very important to watch the behaviour of the birds:
 - *Picking against dry nipples*
 - *What is the reaction after the water is put back on (after 3,5 days training)*
 - *„dry-ups“ you will first find after appr. 10 days! Then, it is to late for those birds.*
- Once more: not for all problems with „out of nest eggs“ is watertraining THE solution

Floor eggs – Watertraining (5)

- You **MUST** have a good daily overview of feed and water intake
- It is not a „fixed“ standard. You have to be flexible to work with the scheme and adapt to the effects and the situation.
- Watertraining is **NOT** always succesful!
- Experiences here locally???

Floor eggs – Watertraining (6)

- Preventive watertraining has been experienced in the past (advised by manufacturers from equipment). But with different results
 - *This was done with systems where it was very difficult for the birds to move up and down (1st generation Aviaries)*
 - *For example, as soon the birds drink 100 ml water / day*
 - *This, most often, will cost feed intake, and therewith bodyweight gain, even maybe production.*

Floor/Sytem eggs

➤ Litter removal:

➤ *Prevention off floor eggs and easier to find floor*

eggs

➤ *White- AND brownlayers*

Floor/System eggs

- Also used against floor eggs!...
 - *Special „software program for this application!“*

Conclusion

An excellent manager will still be able to perform with acceptable results although the circumstances are not perfect

but...

A manager with poor skills will be able to spoil the birds (& the results) even in a Situation with the best circumstances!!!

Questions????



Thank you for your attention!

