

# POULTRY NEWS

1/2018

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Update Technical Tools

## CUSTOMERS & EVENTS

BULGARO 97 AD 20 years  
anniversary – a story of success  
to be continued

## TECHNICAL

A story of success – a new  
nutritional approach in feeding  
LOHMANN BROWN in UK

**"SKILL COMES WITH PRACTICE"  
A REPORT OF MASTERING  
ALTERNATIVE EGG  
PRODUCTION FROM DENMARK**



**LOHMANN  
TIERZUCHT**



## Layer management – not just a question of the latest technology!



*In past issues of LOHMANN Poultry News, we concentrated on technical aspects and innovations such as our online ordering system, various apps, e-guides and other tools that make life easier for our customers. In this edition, we'll limit ourselves to a quick update of our technical tools. A fact we must never neglect is that despite the high-tech nature of our business, we work with live animals and must never lose sight of this basic aspect.*

*We also know that today, not only but especially in Europe, animal welfare is becoming an increasingly important factor in the poultry industry. This poses new challenges for us as a breeding company, and above all for you, our customers. Alternative housing systems are on the rise. However, no matter which kind of management system is used, you need two things: 1) a goal and 2) a plan to achieve that goal. The goal is easy to define: you want to have full feathered birds until the end of production, the highest number of saleable eggs and low mortality. But how do you manage this "perfect" performance? What you need, above all, are top-quality day-old chicks, which are essential for a good start. Rearing these chicks perfectly is the key factor for profitability during egg production.*

*But what else? Go back to the basic and rediscover your passion for working with live animals, try to understand your successful "products". Take 10 minutes to sit and observe their behaviour e. g. inside/outside the house. It is amazing to see how much is happening. Be patient. You can almost get your pullets or layers to do whatever you want them to or they can become accustomed to almost every environment. They just need to be trained!*

*So we should never forget the basic principles behind layer rearing and egg production: understanding, patience and passion. Together with our latest technologies, that makes an unbeatable combination and a winning team.*

*So enjoy reading our latest LOHMANN Poultry News covering these "alternative" aspects.*

Kind regards,  
Javier Ramírez Villaescusa  
Managing Director

*Javier Ramírez Villaescusa*



**19** Producing eggs on the top of the world; LOHMANN's success in Nepal

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# "Skill comes with practice" – A report of mastering alternative Egg production from Denmark

How can you manage 83% layers in alternative production systems? Take a look behind the scenes of the Danish egg production sector, together with the commercial hatchery LOHMANN Denmark and their Managing Director & Technical Advisor Mr Christian N. Nielsen.



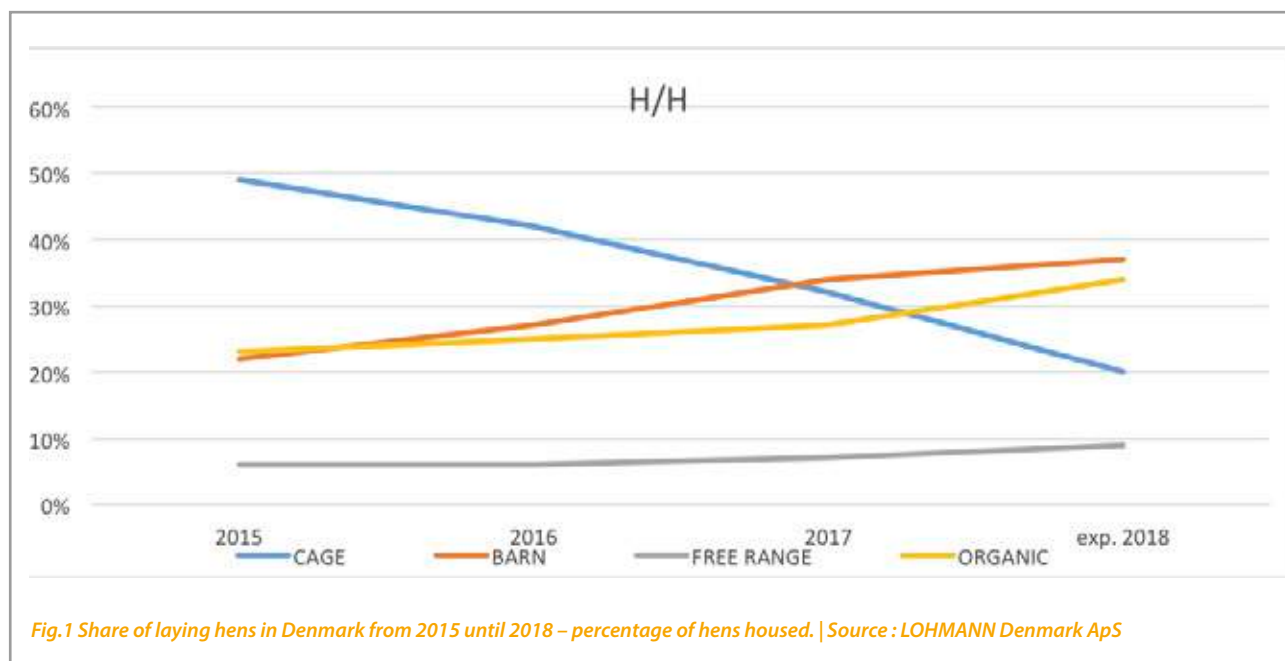
*"If you are planning to write a book or start producing a new product, you typically need two things before you start : 1) a goal 2) a plan to get where you want to ... we also need these things with our alternative egg production system."*

Denmark has a population of 5.7 million inhabitants. Each person eats on average

246 eggs (incl. egg product) a year. Imports of eggs are low, but exports are a growing market. The total number of laying hens in Denmark for table egg production is about 3.7 million - with a share of about 80% of white birds and 20% of brown birds (LSL LITE and LB LITE).

Of the 3.7 million hens in production, 15% are from enriched cages, 40% from

barn systems, 10% from free-range production and 35% are housed in organic systems. These birds are kept at about 110 farms in total. Egg producers in Denmark are paid per egg, with the highest prices for medium and large, slightly lower prices for extra-large and the lowest price for small eggs. Typical flock size in Denmark for barn and organic production is around 20.000–30.000 hens.





Our goal in Denmark is similar to that in most other countries: we want full feathered birds until the end of production, the highest number of saleable shell eggs in medium/large (89-91%) and low mortality. But how do we achieve this?

In the last five years, alternative egg production has grown tremendously in Denmark. I would like to share the key tools we have learned to use to achieve success in this production system. Different tools might be used in organic, free range and barn egg production.

## You need a plan!

Rearing is a key factor for your profitability during egg production, so a plan for this period is required. What time of year do your layers go into production? Do you want eggs at an early or late age? Do you want large or small eggs? What is the feed strategy during rearing? What is your vaccination schedule? We have achieved huge success by

planning all these factors before the chick is a day old. We call this “a customised road map”, and it should fit onto a single A4 sheet of paper. The hatchery is the main driver of this plan which is drawn up in cooperation with the rearer, egg producer, feed mill and veterinarian.

Once the plan has been established, it is vital to follow the details of the plan. The approach may also need to be adapted if rearing has not proceeded as planned. The factors to achieve success and the tools we use are listed below:

- ➔ Top quality day-old chicks are essential for a good start. Average 1st week mortality below 1% is preferable.
- ➔ Bodyweight and uniformity at 5 and 10 weeks must be in line with the standard or above (skeletal and brain development), since it is impossible to make up for any deficiencies later (the bird is primarily gaining fat during weeks 12-17).

- ➔ Adapt the lighting intensity as a preventive measure, especially from week 3-4 onwards.
- ➔ Inspect feather cover daily. Hold the birds in your hands. Sit down for five minutes and watch your flock's behaviour and listen to the sounds they produce.
- ➔ During long summer days, rearing which takes place outdoors must follow a daily light routine. That means, for example, stimulating the flock to become active at midday (12.00 hrs) and to sleep in the evening at 22.00 hrs (10 hours of activity). It is important to ensure the house is daylight-proof, so the flock sleeps until midday.
- ➔ During the rearing period, the gizzard and intestines develop. It is important to provide your birds with coarse feed; coarse oats are a highly valuable source of structure. Furthermore, we normally provide lucerne (alfalfa). This helps develop their digestive system

[illegible]

function, but also encourages the birds to peck at the lucerne as a distraction. We also provide the birds with 2 grams of small stones (2.00-3.55 mm) for the gizzard every two weeks from one-day old until the end of production. This grit acts like a grinding stone in the gizzard. Organic and free range birds typically source this grit in their outdoor rearing area as natural gizzard stones. The image below shows an autopsy of a 30-week old organic LSL. Approx. 30% of the gizzard was filled with natural gizzard stones.

- ➔ Feed intake at the end of rearing should be at least approx. 70 g per day at age of 16 to 17 weeks. We consider feed intake of 60 g as too low. A high stocking density or high temperatures can cause a low feed intake. Not providing the flock with coarse feed, roughage or similar, can cause insufficient feed intake.



Source: <http://www.hartog-lucerne.com/en/>



Source : LOHMANN Denmark ApS

Too low feed intake at the end of rearing often results in a too low feed intake at the start of production. Therefore, this is one of our key focus areas.

We tend to see a much better feed intake in organic production at transfer.

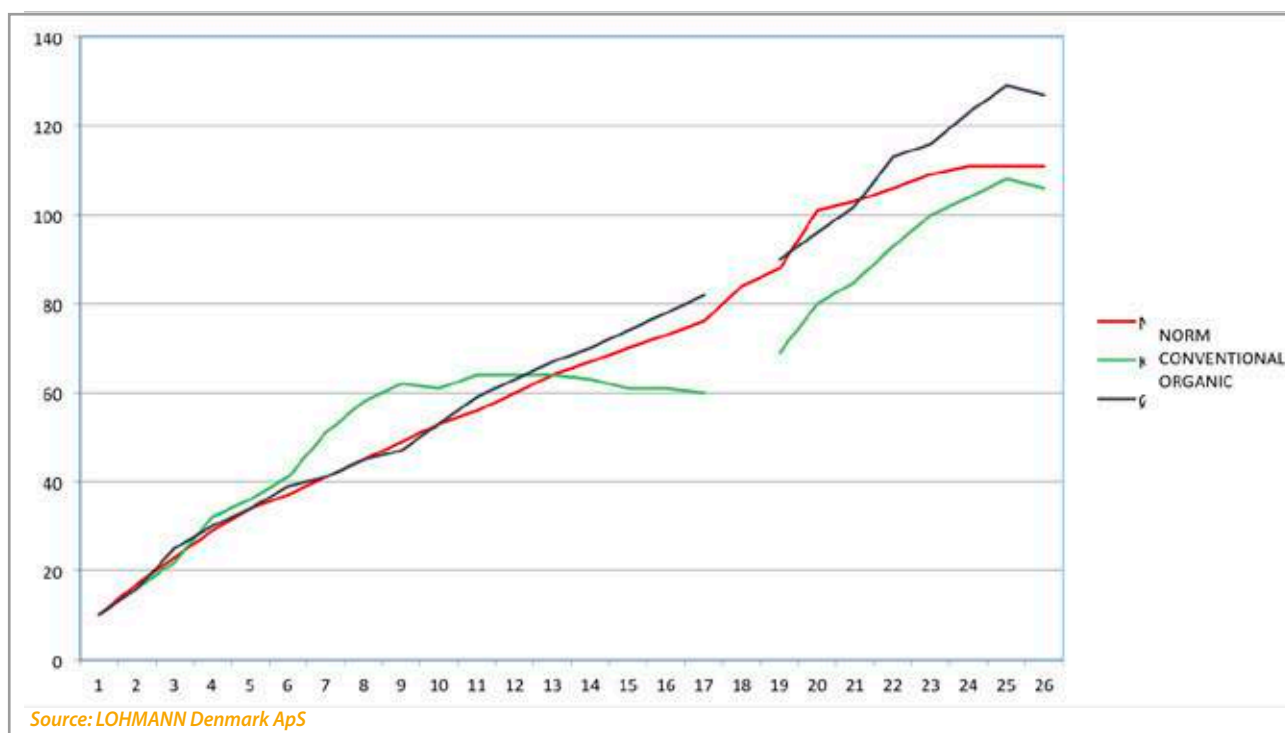
### What have we learned during the production period?

Our most successful production is organic production. Free range and barn egg production could learn from this production strategy. So what is behind the success of organically reared flocks? The birds also have outdoor access during rearing. On average, maybe 75% of the birds venture

outside the house, so the stocking density indoors is lower. The birds can exhibit their natural behaviour outdoors. Take 10 minutes to sit and observe their behaviour outdoors – it is amazing to see how active they are. Continuously searching and scratching – they are always on “a voyage of discovery”. Outdoors they can also eat grass, worms, stones, etc. If they are unable to go outdoors, how can we provide the same opportunities indoors?

**Our general recommendations are very BASIC – but, please listen to these basics – they are crucial!**

Always keep floor/litter material dry. Birds



Source: LOHMANN Denmark ApS

exhibit their natural behaviour on the floor (not in the system, apart from eating, drinking and sleeping). They search and scratch and clean their feathers. We recommend keeping a distance of at least 2 m between aviary systems, so the birds are forced to use the floor instead of jumping or flying from system to system. You might prefer to place more aviary systems in your house so more birds can be kept, but please be aware that this will decrease the chance of optimal results. Birds are supposed to sleep in the system and use the floor for activity. Keep your floor/litter dry **AT ALL TIMES!**

The most fundamental piece of advice: use COARSE feed. Do NOT grind the raw material into fine particles or dust: for several reasons. Coarse feed slows down the speed of passage through the digestive tract, gizzard and intestines. It provides birds with a feeling of being satiated and helps to continuously develop the gizzard and intestines. Numerous trials have proven the positive effects of a large, well developed gizzard and how the enzymes work in this.

Coarse feed often also produces drier manure. If the manure is too wet, the hens are often more dirty. Dirty hens frequently have poorer feather cover or are more



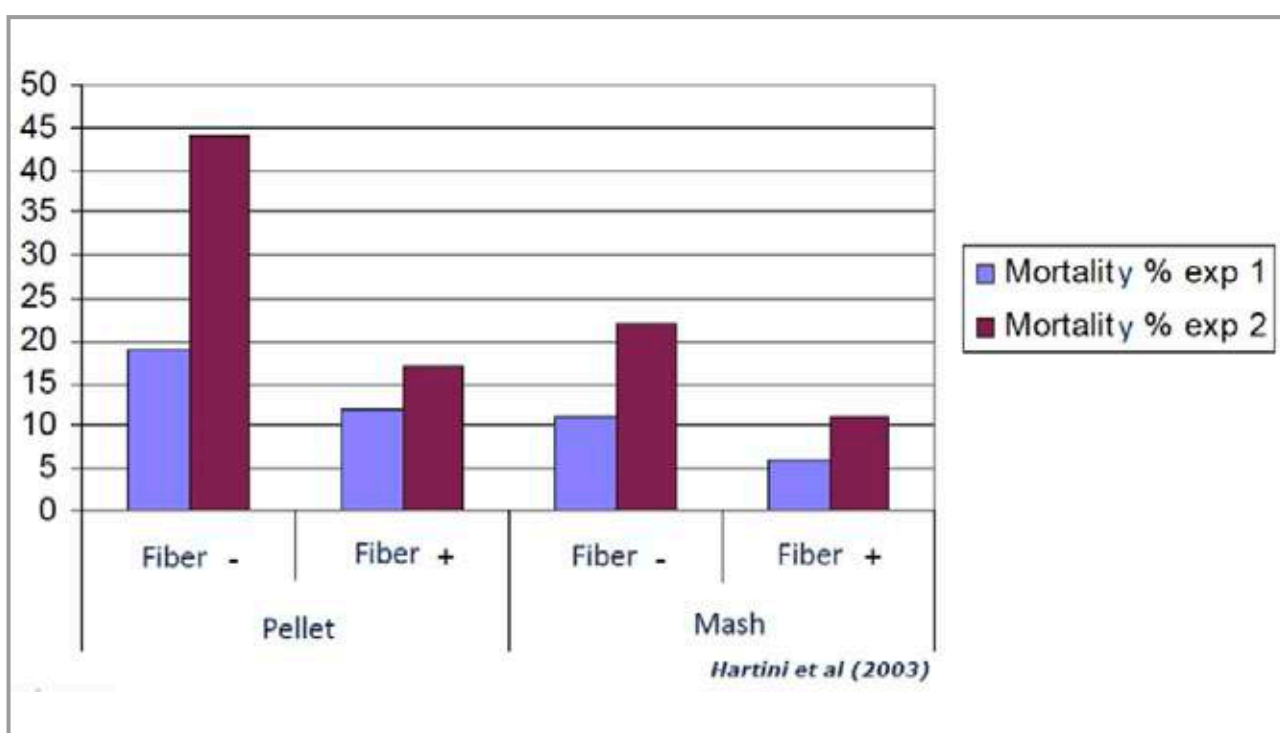
likely to be pecked by other birds. Wet manure is also a sign of sub-optimal functioning intestines – digestion is not optimal and insufficient nutrients are absorbed.

If the intestines are not functioning optimally, hens will often start to eat feathers – a typical sign - before they start to peck each other. What can we learn from this? Always keep the intestines in optimal condition (think about yourself – how do you feel when your manure is wet and your stomach is not working optimally?)

We also balance amino acids in our feed, according to the guide provided by the genetic company. The amino acids are balanced according to the feed intake.

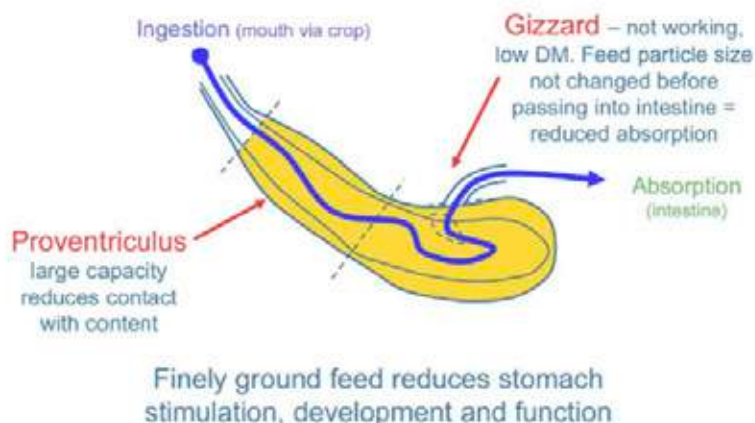


Source R. Pottgüter, LOHMANN TIERZUCHT GmbH





## Feeding fine versus coarse particles - gizzard yield → too fine feed

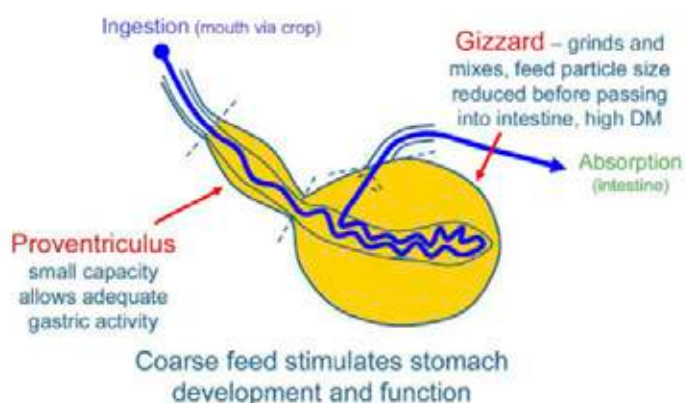


source: nutreco

Adapted by R. Pottgüter, LOHMANN TIERZUCHT GmbH

Rodgers, N. et al (2005)

## Feeding fine versus coarse particles - gizzard yield → good & coarse feed



source: nutreco

Adapted by R. Pottgüter, LOHMANN TIERZUCHT GmbH

Rodgers, N. et al (2005)

A great tool to maintain a good intestinal balance is oats – **COARSELY** ground oats!! We have learned this from Sweden and Finland, but also from our own results. We find that our birds are kept calm by being given 10-15% of coarse oats (including the oat hulls). We always have a lot of feathers on the floor and the birds maintain good feather coverage. Trials have been performed that demonstrate how oats can reduce the number of feathers found in the birds (gizzard).

Oats are very rich in fibre and magnesium. Magnesium also contributes to providing calcium and is beneficial to relax the muscles and reduce tension.

Similar to during rearing, using a good light plan as a preventive measure is important. Do not apply too high light intensity at the beginning. From week 25 when floor eggs have stabilised below 1%, we normally reduce the light intensity as a precautionary measure. We recommend a warm white light of 2700 kelvin.

During production we also recommend providing lucerne, gizzard stones, pick stones, etc. Organic egg producers are obliged to supply roughage. They typically supply roughage comprising maize/corn/peas/lupine or a mix, generally at a dose rate of 10-15 g/bird/day.

Another basic: **COARSE CALCIUM**. Please don't neglect this!! Try to find a way of supplying coarse limestone at the right time of the day (when it is needed). A few Danish egg producers only have 2% calcium in their feed. During the afternoon (last 8-10 hours of the day), they add +6% of coarse limestone (approx. +2% calcium) to the feed. Trials run by a nutrition company visualised the birds' behaviour and when they specifically need calcium. The results show that a bird primarily eats calcium eight hours after waking up.

In Denmark, we often perform an autopsy at approx. 13.00 hrs in the afternoon. At this stage the egg for the next day is ready, but still has a very soft shell. When we move our fingers over the egg surface we can feel that the shell is starting to be formed on the outside – this supports the trials and the understanding of the birds' behaviour.

Our focus is also shell stability/elasticity during the entire production period. Elasticity comes from protein and protein comes from the liver. In other words, we always need a healthy liver.

We continuously observe the number of worms (worm eggs in manure) and also when we perform an autopsy. We have observed that worms cause our birds a lot of stress – so worms are a critical factor!! Due to this the birds are given regular worm treatments.

## What do we achieve?



Source : DLG

76 weeks	CAGE	BARN	ORGANIC
Egg per H.H	375	359	359
Egg Mass kg H.H			
(Cumulative)	24.1	22.7	22.6
FCR kg/kg	1.90	2.05	2.04
FCR g/egg	121	130	128
Large/Medium	89.0	88.9	90.1

Source : LOHMANN Denmark ApS

Christian Nielsen



	Control diet	Control diet+ fine Oat Hull	Control diet+ coarse Oat Hull
Gizzard Contents excluding feathers, g DM	0.53	1.22	3.56
Feathers in gizzard, g	0.47	0.46	0.02

Metland et al (2005) - control of feathers in gizzard day 3, 7, 14

Egg shell is around 10% of the total egg weight:

CALCIUM CARBONATE	94,7 %
MAGNESIUM CARBONATE	1,0 %
CALCIUM PHOSPHAT	1,0 %
PROTEIN	3,0 %
FAT	1,0 %

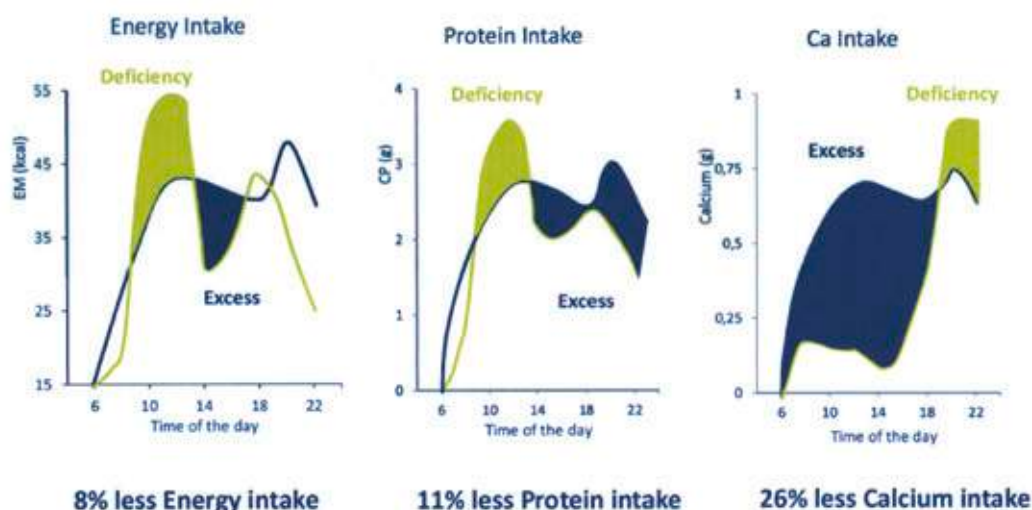
→ Protein is responsible for the elasticity of the shell, which needs a healthy liver

Source: R. Pottgüter, LOHMANN TIERZUCHT GMBH

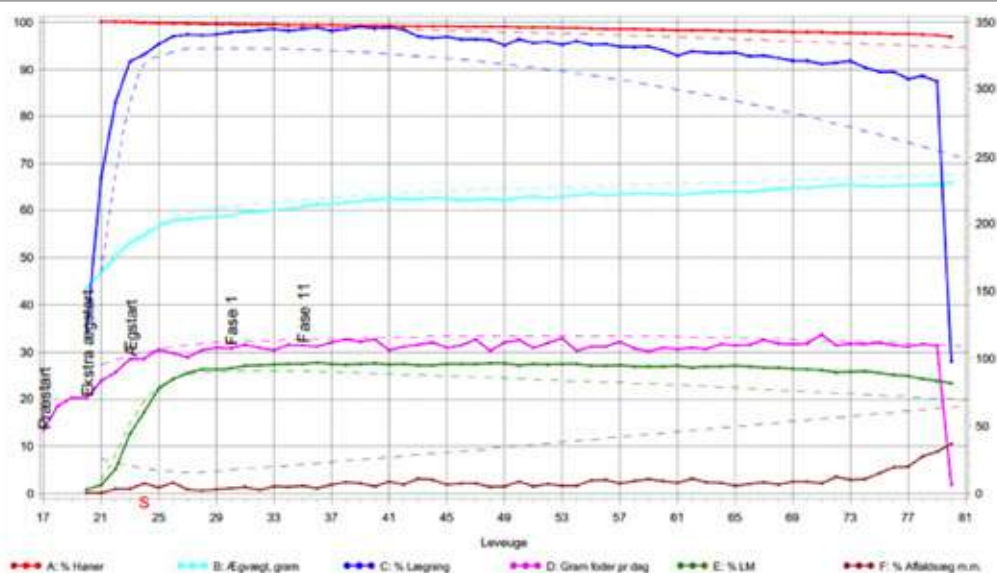
Eggshell formation & importance of a (healthy) liver



Adapted by R. Pottgüter,  
LOHMANN TIERZUCHT GmbH



Source: nutreco



Source: Efficient Control, Denmark – example

# FOR EVERY MARKET THE RIGHT EGG, FOR EVERY MANAGEMENT SYSTEM THE RIGHT HEN AND FOR EVERY ENVIRONMENT THE RIGHT TRAINING!

Established expertise | Practical orientation | Individual advice



*June 25<sup>th</sup>–29<sup>th</sup> 2018*

**LOHMANN SCHOOL 2018  
in Cuxhaven**



*October 15<sup>th</sup>–19<sup>th</sup> 2018*

**LOHMANN HATCHERY  
COURSE 2018 in Cuxhaven**



The combination of informative presentations, exchange of experience and a mini cruise



*September 26<sup>th</sup>–29<sup>th</sup> 2018*

**56<sup>th</sup> FRANCHISE DISTRIBUTOR  
MEETING CRUISE TOUR**





# 20 YEARS

## HAVE FLOWN BY MICHAEL SEIDEL IN RETIREMENT



*Michael Seidel joined LOHMANN TIERZUCHT in 1998. He started as assistant to the then Senior Sales Manager Mr Klein, with special responsibility for the marketing department which was still very much in its infancy.*

### Sales Director with success

The focus of the position was in fact an introduction to his tasks as successor to Mr Klein. Mr Seidel spent many successful years as Sales Manager for LTZ. Following the restructuring of the sales department in 2015, as Director Business Development he became responsible for special projects. After almost 20 years, the final whistle has now sounded on his career, at the end of 2017.

What remains are many Memories and innumerable trips to all corners of the globe, which were both enjoyable and sometimes stressful. Trips to Europe, Asia, the CIS countries and continental America, with their very different cultures and characteristics, have left behind a set of varied experiences that will never be forgotten.

### Steady growth of LOHMANN

Michael Seidel looks back on the steady growth of LOHMANN with considerable pride, growth that he achieved together with his initially modest and as the years went by ever larger sales team; pride also in having overcome some difficult periods thanks to AI and other export restrictions.

### Time for enjoyment

After so much professional success, it seems unlikely that work will be missed following retirement; rather it will be a time for enjoyment.

We would like to express our gratitude for the wide ranging and successful support and cooperation!

*Nicole Rehse*

# UPDATE TECHNICAL TOOLS

In our new section "Update Technical Tools", we would like to inform you about digital innovations, which should make the application of our numerous apps, programs etc. even more comfortable and informative for you.

## Update Website

From now on you can have a look at the latest Field Data Results on our website. On the menu bar you will find a respective sub-item under the heading Parent Stock or Layers. We prepared the Field Data Results as a digital flip catalog. As you already know from our first e-guide, we convey the impression of a conventional book on a digital platform. However, we limit ourselves here only to the simple visualization of the data and provide no additional multimedia content. Nevertheless, we hope that you are confident with the presentation of the data and that you can make use of this information.

## Update Online Order System

60 more days until delivery! What happens there? From now on you will receive an automatically generated e-mail containing a link that will lead you to your order and all associated documents that exist for your order up to that point. You no longer need to contact us, requesting that we should send you specific documents. A simple download of the desired document and you have it and can process it as desired, e. g. making printouts etc. You will also find a link to the FSP (Flock Surveillance Program) and we would again ask you to please fill it in after shipment.

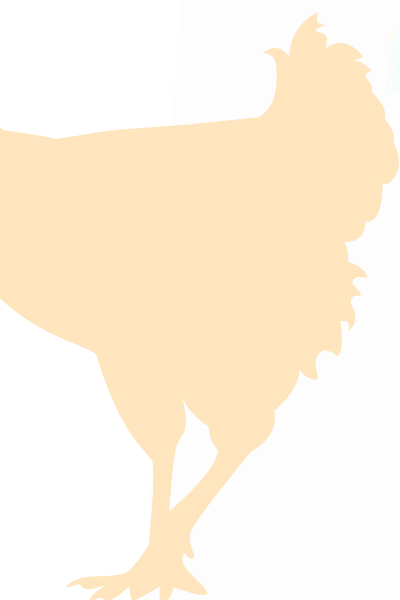




**FDM APP**

Anyone using the FDM app on the mobile phone has probably noticed: the layout has changed. We have adjusted it and hope to create a feeling of joyous anticipation of the great event to come: our 56th Franchise Distributor Meeting in September. We are really looking forward to welcoming you on board!

*Jan Kraßmann*

**TECHNICAL  
TOOLS**

# BULAGRO 97 AD



## 20TH ANNIVERSARY A STORY OF SUCCESS TO BE CONTINUED ...

BULAGRO 97 AD was established in 1997 to breed layers for commercial egg production. The foundation of the company's success is its well-equipped farm, modern hatchery and the competent and motivated team.

### Meet the goals of success

Years of experience and the pursuit of a high level of automation determine the strategy for the development of the

company's facilities. Production is organised to meet the goals of perfect quality, excellent working conditions, high productivity, environmental protection and high energy

efficiency. Implementing innovation, narrow specialisation, competent service and high-quality customer assistance are the keys to our success.





### Partnership with LOHMANN for 20 years

The beneficial partnership between BULAGRO 97 AD and LOHMANN TIERZUCHT GmbH provides excellent results - quality day-old layers for the production of premium eggs. In terms of the free market and high competition, BULAGRO 97 AD has shown constant growth in sales over the last 10 years. Premium eggs are an indispensable part of the food industry and a crucial component of a healthy diet. This is why high-productivity hybrids are irreplaceable in the modern poultry business. For 20 years, BULAGRO 97 has contributed to the development of the poultry sector in the Balkan region and has been distribu-

ting LOHMANN TIERZUCHT GmbH hybrids in an impressive way. In recent years, the market share of the LOHMANN BROWN CLASSIC hybrid has been dominant and the results achieved by farmers have been impressive. An example for this is the more than 20% increase in egg production in Bulgaria in the last three years.

### Company's 20th anniversary

In September 2017, an international poultry conference was organised in Sofia by BULAGRO 97 AD to celebrate the company's 20th anniversary. Poultry companies from Bulgaria, Greece, Serbia, Macedonia, Montenegro and Kosovo took part in the conference. The presentations

that provoked the greatest interest were Prof. Dr Rudolf Preisinger's 'Latest innovation and future advances in genetics at LOHMANN TIERZUCHT' and László Kőrösi's 'Serious health issues of commercial layers - MD, IB, ND, and IBD and different possibilities for vaccination in the hatchery'. The participants were shown the organisation of production at BULAGRO 97 AD and the ambitious investment programme of Mr Ivaylo Galabov's company.

*With the friendly assistance  
of BULAGRO 97 AD*













## LOHMANN TECHNICAL PRESENTATIONS TO CUSTOMERS OF ATLANTIC POULTRY INCORPORATED

In November 6<sup>th</sup> - 8<sup>th</sup>, 2017, Atlantic Poultry Incorporated (API) held three technical sessions for their customers in the Canadian provinces of Newfoundland and Labrador, New Brunswick and Nova Scotia.

**L**OHMANN representatives Thomas Abdo Calil, Karel Brak and Matheus Alvez gave presentations to the groups in the three provinces. Thomas presented information regarding the future direction of LOHmann genetics and where efforts are being focused to provide customers with a quality layer. Matheus explained techniques and processes to brood successfully and grow a healthy pullet. Karel discussed the peri-

od of time a layer producer has to guide a pullet through the production cycle. He explained management practices that can be applied to enable LOHmann layers to reach their genetic potential. Karel also reviewed challenges which may present themselves such as fatty liver syndrome and the methods used to mitigate these issues.

In total, 25 layer customers of API participated in the presentations. Many ques-

tions were asked and much discussion was had. It was an excellent opportunity for customers to not only gain new knowledge, but also to exchange information mutually. Customers made many positive comments about the quality of the presentations and the knowledge of the LOHmann representatives.

*Gerry Kennie and Thomas Calil*







## TECHNOLOGY EXCHANGE AVICOLA ANDINA (CHILE) AND COUVOIR OVO (CANADA)

As part of a modernisation process at Avicola Andina, our distributor in Chile, our America team joined forces with our customer Couvoir Ovo and promoted a technology exchange by means of technical visits to Couvoir's facilities in Quebec, Canada.

### New, state of the art hatchery

Dr Alexis Pavez, the Chilean veterinarian in charge of PS farms and hatcheries could see and experience the outstanding results achieved by the new, state of the art hatchery which incorporates a series of new technologies, such as single stage incubation, automation and full climate control with remote access and a reporting system.

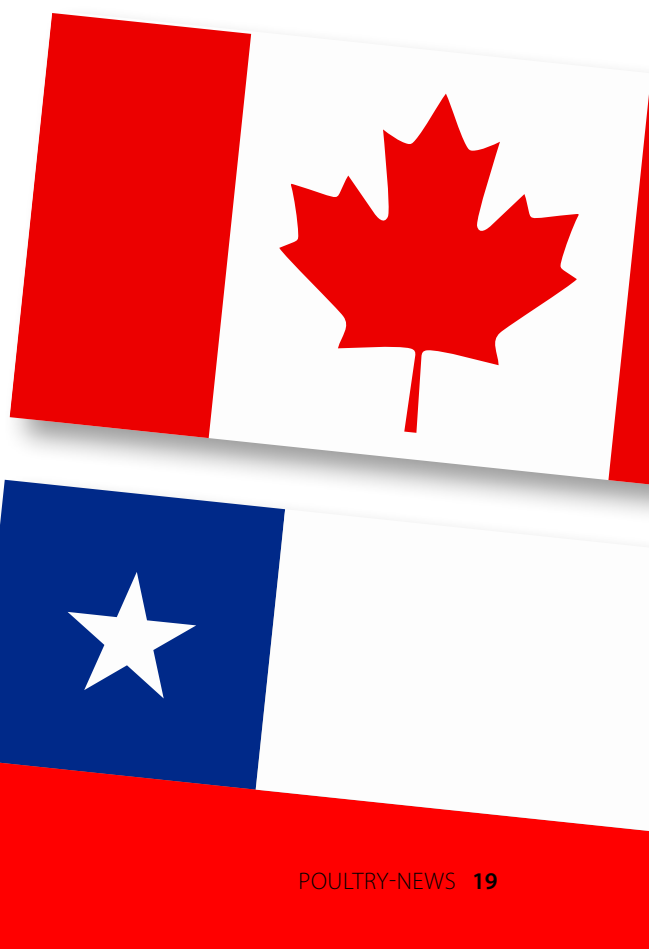
### Shiftvv from floor to full slat system

Visits were made to rearing and production farms. This informed Avicola Andina that is about to undergo a complete shift from floor to a full slat system with automatic nests and was the perfect occasion to boost their confidence regarding this modernisation process.

### Information sharing makes visits successful

Besides the undoubtedly fruitful knowledge acquired, the series of visits were marked by the warm hospitality of the Couvoir Ovo crew, who openly shared all the information Avicola Andina needed. Special thanks to the Board of Couvoir Ovo, as well our colleagues Alvaro Sanchez, Jimmy Aldana, Patrick Poulin and Rene Rivas.

*Thomas Abdo Calil*







# LOHMANN ACQUIRES PLANALTO POSTURA IN BRAZIL



## February 2018

We are proud to announce the acquisition of Planalto Postura in Brazil, which has now become another major LOHMANN product distributor in that country.

## Planalto Postura

Planalto Postura has been a respected layer supplier to the Brazilian market for several years. The growth of Planalto Postura over the years has been sustained by a close relationship with its customers

throughout the country backed up by a high level of confidence in its local sales and service teams.

## Maintaining the leading position

In response to trends in Brazil, LOHMANN has reconfirmed its commitment to the market by offering another choice to the suppliers of the right egg for this market and will consolidate the leading position it has acquired in recent years.

*Thomas Abdo Calil*



## PRODUCING EGGS ON THE TOP OF THE WORLD

# LOHMANN'S SUCCESS IN NEPAL

### Nepal Egg Producers Association (NEPA)

In Nepal, commercial farming is an activity in 64 out of 75 districts, with an estimated total of 21,956 commercial farms, of which 1,337 (6.09%) are medium to large layer farms. According to NEPA, Nepal has started producing eggs in line with the domestic demand and with the targets previously set by the government in 2014 as part of their objective to make the country self-sufficient in egg production.

### Increase in annual egg production

According to NEPA, annual egg production has increased substantially up to 40% over the last three years thanks to concerted efforts of the government and the country's egg producers. NEPA also states that egg production is growing continually and is at present sufficient to cater to the domestic demand for eggs. "With the government prioritising the

poultry business, farmers have been attracted towards commercial poultry farming recently, which has contributed to increased production of both chickens and eggs."

Egg production has been increasing in the country for the last three years. According to NEPA statistics, 859 million eggs (only commercial poultry eggs) were produced in the 2014-15 financial year. This figure increased to 866 million in the 2015-16 financial year with a further increase recorded to 1.3 billion eggs in 2016-17. Commercially run poultry farms have an annual turnover of NRs 33.72 billion, which is equivalent to 1.5% of the country's economy according to a survey commissioned by the Central Bureau of Statistics (CBS).

### LOHMANN TIERZUCHT and the booming poultry sector

The poultry sector in general, and the layer segment in particular, is booming in Nepal

and has been consequently leading the country towards self-reliance in chicken and egg production. Current chicken meat consumption in the country stands at 4.1 kg per capita. Likewise, 44 eggs are consumed per person per year.

LOHMANN TIERZUCHT GmbH is well represented in Nepal, with a market share of about 50%. Through the continuous efforts of LOHMANN and its customers, LOHMANN BROWN layers enjoy great popularity amongst farmers. With the present status and future inputs, 15 to 20% growth is expected this year, which will continuously grow according to the market trend. We as LOHMANN and our esteemed customers are committed to grow and remain number one.

*Dr Manoranjan Sharma*





# SAMUNDRI CHICKS (PVT) LTD HATCHERY INAUGURATION CEREMONY AND SEMINAR

## 22nd February 2018

To meet the different needs of the Pakistani egg industry, Samundri Chicks Pvt Ltd is the sole distributor of LSL-ULTRA LITE. Samundri Chicks Pvt Ltd has worked hard to establish a prominent and steadily increasing presence for LOHMANN layers in the Pakistani market since 2005. Currently they are the biggest parent stock layer company in Pakistan with a capacity of about 140,000 parent stock hens which are housed in a brand-new family cage system supplied by Kutlusan Turkey.

## New state of the art, single stage hatchery

To expand the layer chicks business, Samundri Chicks Pvt Ltd recently completed construction of a brand-new, state of the art, single stage hatchery in collaboration with EMKA of Belgium. This facility has a capacity of 2.5 million chicks per month and is located near the town of Samundri about 20 km from the parent stock farms.

## Inauguration ceremony

The hatchery inauguration ceremony was performed by the chief guests Mr Javier Ramírez, managing director of LOHMANN TIERZUCHT GmbH and Dr Muhammad Sadiq, CEO of Sadiq Poultry Pvt Ltd in the presence of renowned farmers from the Pakistani poultry industry. The ceremony was followed by a seminar.

## Seminar

About 150 progressive commercial layer farmers and veterinarians from across the region participated in the seminar. The welcome address was delivered by Mr Muhammad Anees, director of Samundri Chicks Pakistan Pvt Ltd. Mr Ron Eek, Regional Sales Manager Asia Pacific, delivered a very informative presentation about LOHMANN LSL parent stock performance.

Mr Javier Ramírez thanked Samundri Chicks Pvt Ltd and the audience on behalf of LOHMANN and later on he presented a souvenir to the staff at Samundri Chicks as

a token of honour. The chief guest of the seminar was Dr Muhammad Sadiq, CEO of Sadiq Poultry Pvt Ltd. The chief guest thanked Samundri Chicks Pakistan Pvt Ltd and LOHMANN TIERZUCHT GmbH Germany for providing a unique opportunity to layer farmers to adopt a scientific approach in modern poultry farming. He also emphasised the need to educate people regarding the consumption of eggs per capita as this can be a way to help eliminate hunger and poverty in the country.

The vote of thanks was given by Dr Shahid Iqbal, CEO of Samundri Chicks Pakistan Pvt Ltd. All the guests were entertained with a lavish lunch after the seminar.

*Dr Sohail Habib Syed*





# JAPFA COMFEED VIETNAM A SUCCESS STORY!!!

Vietnam, or as it is officially known: the Socialist Republic of Vietnam, is a country that occupies the eastern and southern part of the Indochinese peninsula in south east Asia. It has a subtropical monsoon climate with a total land area of 325,361 sq km. In 2017, it had estimated population of 96 million inhabitants. Vietnam is known for its rich culture and delicious food. With a coastline of 3,200 kilometres, many beautiful beaches and bays with white sands and clear blue waters abound in Vietnam.

## AI – facts and figures

A paper by N.V Duc and T.Long on Poultry Production Systems in Vietnam, stated in December 2003 that the poultry industry in Vietnam was severely affected by avian influenza: 38.3 million heads of poultry were destroyed and died. This accounted for 15.1 percent of the total poultry population, of which 50 percent were chickens, 30 percent ducks and 20 percent other bird breeds (Anh, 2004). By March 2004, bird flu was under control (Anh, 2004). Although the poultry population decreased by 14.13 percent in 2004 compared with 2003, it is still 0.78 percent higher compared with 2005. In 2007, the poultry industry began to recover with another increase in the population of 5.31 percent compared with 2006 (Statistical Yearbook of Vietnam, 2007). Although avian influenza was, and still is, a concern in the country, the Vietnamese poultry industry proved to be resilient and is here to stay.

## Vietnamese layer industry

Today, for the layer industry, there are an estimated 30 million layers in the country. Per capita consumption of eggs is around

110. The Vietnam market is dominated by brown egg layers although duck eggs are also preferred. In 2016, there were 14 companies importing layer parent stocks. In 2017, three companies failed to import bringing this figure to a total of only 11 companies. This led to a decrease of PS layer imports from 345,000 to 300,000.

## Japfa Comfeed Vietnam

One of the leading companies that supplies quality layer DOCs in the Vietnamese market is JAPFA Comfeed Vietnam. It is part of the Japfa Group from Indonesia. Japfa Group was established in January 1971 under the name of PT Java Pelletizing Ltd as a joint-venture between PT Perusahaan Dagang & Industri Ometraco and Internationale Graanhandel Thegra NV of the Netherlands, operating in the fields of food production, breed provision, processing of beef products, milk, marine aquaculture and processing. JAPFA stands for Java Pelletizing Factory (the first bran pellet factory on Java Island). Since its establishment in Indonesia at the beginning of the 1970s, Japfa Group has had its members located in many countries such as

India, Vietnam, Myanmar, Sri Lanka, China, Australia, Singapore, etc. (reference: [www.japfavietnam.com](http://www.japfavietnam.com)).

## JAPFA & LOHMANN – a long-lasting business relationship

JAPFA Indonesia has already been a LOHMANN BROWN grandparent customer of LOHMANN TIERZUCHT for a long time. In April 2016, a contract between JAPFA Vietnam and LOHMANN TIERZUCHT GMBH was signed for the Indonesian company to be the distributor of LOHMANN BROWN in Vietnam. On 21 April 2016, the first batch of LOHMANN BROWN parent stocks was delivered from Cuxhaven Germany to Ho Chi Minh City, Vietnam. From that time on the partnership between two companies has continued to grow.

## LOHMANN BROWN – a breed to be reckoned with

The superior technical know-how, experience and dedication of JAPFA personnel combined with the excellent genetic potential of the birds has made the LOHMANN BROWN a breed to be reckoned with in Vietnam. The traits of LOHMANN





BROWN such as efficient production with high peak and long production periods coupled with a uniform dark brown egg colour, good shell strength and superior internal egg quality, makes it the breed of choice of many Vietnamese layer farmers. JAPFA's customers also like the trait that the spent hens are a bit heavier than the competitors. JAPFA supplies day-old chicks in Vietnam and spent hens are also a source of income for the layer farmers. Unlike some of their competitors in Vietnam, JAPFA does not have its own commercial layer farms. They focus on producing and selling quality day-old chicks. Marketed paired with JAPFA's commercial feeds and together with good technical support and after sales service, the survival and correct growth of the chicks they sell are guaranteed. This results in efficient production during the laying period. Today, JAPFA Vietnam is continuing to expand with a new parent stock Farm with a sizable capacity in Dong Nai Province. The farm is strategically located as although it is in a secluded site, JAPFA'S feed mill is located not far away.

**LOHMANN TIERZUCHT's** Regional Area Manager for Asia Ron Eek, on tour during construction of the new farm in March 2018



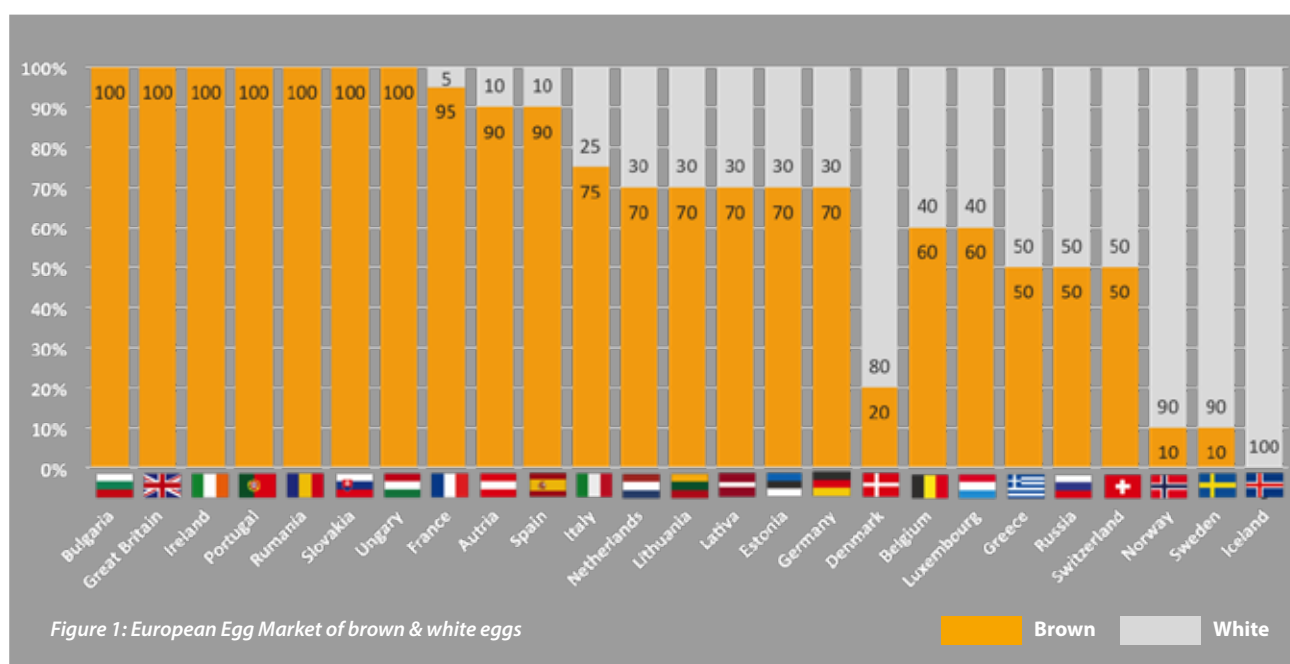
Inside one of the houses being constructed



*Dr Gilbert Cervantes*



# WHITE OR BROWN, THAT IS THE QUESTION!



**A** top quality egg is characterised by internal values as well as the external shell quality. This means the shell must be clean and enough strong to survive handling and transportation procedures, especially during the last weeks of production. In addition to these primary shell quality criteria and adequate egg weight, the shell colour also matters to consumers.

Eggshell colour varies considerably between different poultry breeds and is determined by pigments. These pigments are secreted from the oviduct in last stages of egg formation. There is no major difference in internal egg quality between white, brown or tinted eggs.

Consumer groups in different countries in the world, however, show distinct preferences for a particular eggshell colour. These preferences seem to be more defined by the traditional and cultural habits of individual countries.

For instance, whereas consumers

in North American countries or Mexico prefer almost 100% white eggs, the consumption of brown eggs in African countries is about 90%.

The situation in Europe is more or less similar. Many countries in Europe such as Portugal, Great Britain or Bulgaria consume almost 100% brown eggs. An exception is Scandinavian countries with the greatest demand being for white eggs. Consumers in other European countries such as Russia, Germany, the Netherlands or Greece eat eggs with both shell colours. (Figure 1)

This situation changes completely when we consider the major egg producers in Asia such as China and Japan. In China nearly 70% of total egg production is brown eggs and only about 5% is white eggs. The remaining 25% of total egg production in China is tinted eggs. It is interesting to note that China's tinted egg production alone is more than the entire egg production in the United States of America.

It is important to be aware that these statistics for different countries change over time and are therefore not constant. Nevertheless, the fact remains that the proportion of white and brown eggs consumed worldwide is roughly 50:50. (Figure 2)

## Egg market in the Middle East

The egg market in Middle Eastern countries has been influenced by different crises and challenges for many years.

Conflicts in this region, besides outbreaks of diseases such as avian influenza or Newcastle disease, are among the main challenges facing this large egg market. The main players in the Middle East market are more or less always the same and include Turkey, Iran, Saudi Arabia and Pakistan. Of these countries, Turkey exports 30% of its production to neighbouring countries. Almost 80% of egg production in Turkey is accounted for by brown eggs with the remaining 20% being white eggs.

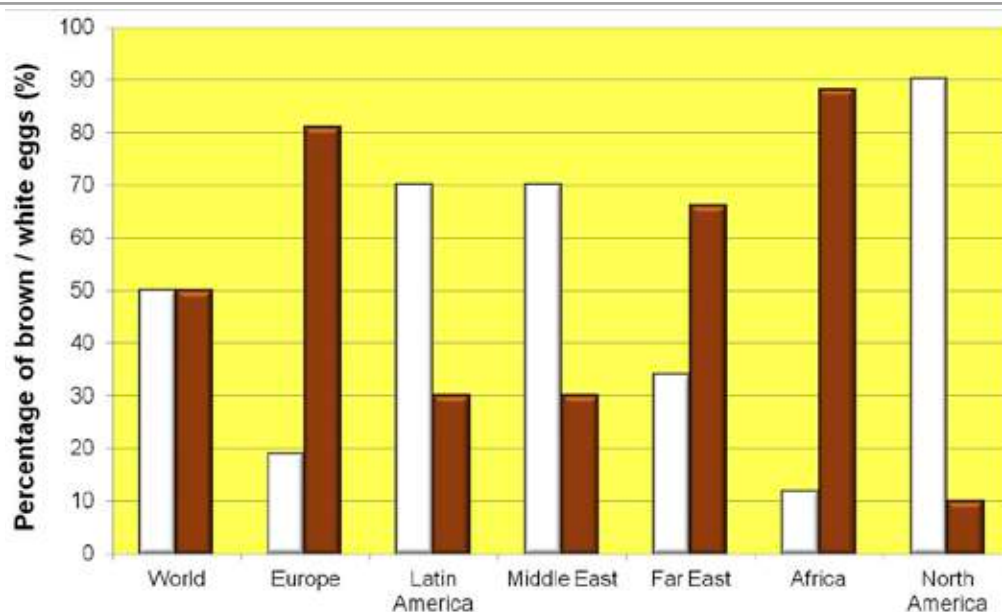


Figure 2: Estimated percentage of brown and white eggs worldwide

The preference for a certain egg colour in this region shows a similar pattern to that described for the world. In Iraq for example, brown eggs are mostly consumed with the exception of some areas in the northern part of country where white eggs are preferred. In contrast, Pakistan and Iran prefer 100% white eggs, although it appears that this pattern is slowly changing as far as Iran is concerned.

### First brown breeders in Iranian Market

For the first time, the Toyoor Nasim company decided to import a parent stock flock of the LOHMANN BROWN-LITE breed into

the Iranian market. In addition to large integrations in the poultry business in Iran, there are still some privately-owned family companies active in this sector. Toyoor Nasim is one of the best examples. It is run by owner and managing director, Mr Khorasanizadeh, whose sons are the production managers. Their flock started production some weeks ago with an excellent laying performance selling high quality, brown day-old chicks to the market. Consequently, the Iranian egg market will not be 100% white in the near future. Only time will tell to what extent the preference of egg shell colour will change in this market or in other countries in the world. Whatever the

preference, one fact remains unchanged; the question is not about the colour, the question is about the egg itself.

**An egg is an egg and it is one of the most nutritious and valuable foods on planet Earth!**

*Farhad Mozafar*



Managing director of "Toyoor Nasim Co." Mr Khorasanizadeh and his sons as production managers, a real example of a family business



Parent Stock farm compound of "Toyoor Nasim" close to city of Isfahan



# BREEDING FOR BETTER BONES – GENETIC INFLUENCE ON THE REDUCTION OF BONE FRACTURES IN LAYERS

The laying hen as a bird has some specific differences compared to mammals. Besides the obvious characteristics of feathers and the ability to lay eggs, a major difference is the totally different bone system. In addition to pneumatic bones for the reduction of bodyweight to enable flight, the bird has the peculiarity of a medullary bone system. The medullary bone system allows the bird to store calcium in the bones and mobilise the calcium later for eggshell formation. As the age of the hen increases, the capacity to store calcium in the medullary bone system declines. As a result, calcium is increasingly resorbed from other bone tissues with a consequently higher risk of bone fractures. The main cause of bone fractures is impact within the housing environment, but handling of the hens, especially at the time of depopulation, can also repeatedly result in bone fractures. Taking the prolonged laying cycles of our hens into account, bone fractures in laying hens become an even more relevant topic. Influences on the prevalence of fractures are seen in the husbandry system, bird management and nutrition but also in genetics.

## Investigation by keel bone palpation

The influence of genetics and possible correlations of bone changes to performance traits were examined more closely in a study. Two different white pure lines of the LSL breeding program were investigated twice, at 46 and 70 weeks of age, for bone changes. At both ages, 5869 hens in total were

examined. The focus was on the keel bone (sternum) of the hen, which was examined using the tactile procedure of keel bone palpation. For this palpation procedure, the hen was fixed by the left hand by its wings, while the thumb and forefinger of the right hand scanned the keel bone for changes. The keel bone evaluation was performed using a four-score assessment scheme: 1- fracture, 2- severe deformation, 3- slight deformation, 4- unchanged keel bone. In summary, the score 1 to 3 described an indication of the keel bone while score 4 stands for an undamaged keel bone without indications.

## Genetics has an influence on bone changes

The palpation showed a clear result at both ages examined in the study. At both palpation dates there was a much higher

incidence of total indications in Line A compared to Line B. In the first palpation at 46 weeks of age, 76.3% of the hens of Line A and only 14.3% of the hens of Line B had a keel bone indication. In the second palpation at 70 weeks of age, 73.4% and 15.8% of the hens respectively showed keel bone indications. The strong phenotypic differences of the keel bone palpation between both lines are also shown in the estimated heritabilities. For Line A, a moderate heritability of  $h^2 = 0.3$  and for Line B a lower heritability of  $h^2 = 0.15$  could be estimated. The genetic correlation does not show a link of keel bone changes to relevant egg quality traits such as shell breaking strength ( $r_g = -0.13$  to  $+0.04$ ) or egg weight ( $r_g = -0.01$  to  $+0.10$ ). The correlation described in literature between body weight and bone quality traits

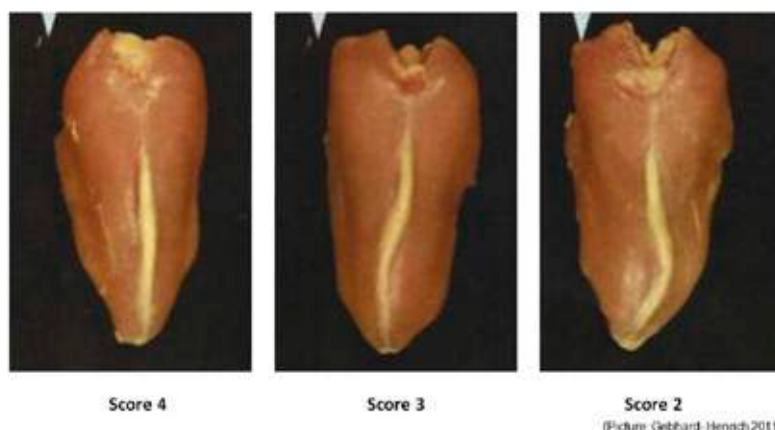


Figure 1: Keel bone palpation assessment scores

could not be estimated ( $r_g = -0.06$  to  $-0.01$ ). Only a negative correlation to the early egg number was found ( $r_g = -0.54$  to  $-0.24$ ).

### Breeding for better keel bones at the expense of early egg production

The results show significant differences between both tested lines. Low to moderate heritabilities clarify that breeding for the reduction of keel bone damages seems to be possible.

The selection for a reduction of keel bone indication, however, will be accompanied by later sexual maturity and a reduced early egg number. Egg quality traits, in particular shell breaking strength, are indicated to be not affected. Further studies on alternative methods compared to the subjective keel bone palpation will reveal new possibilities and contribute to a genetic improvement of the bone quality and reduction of bone fractures in layers.



Figure 3: Fractured layer keel bone at 72 weeks of age

### Bone fractures – a multifactorial problem

However, we have to take into account the complexity of the bone fracture problem. Keel bone changes and broken bones are a multifactorial problem where breeding can only contribute to its reduction. Other areas like nutrition, management and hus-

bandry systems have a significant influence on the reduction of bone changes in laying hens. A sustained reduction of bone fractures can only be achieved by improvement in all areas.

*Björn Andersson*

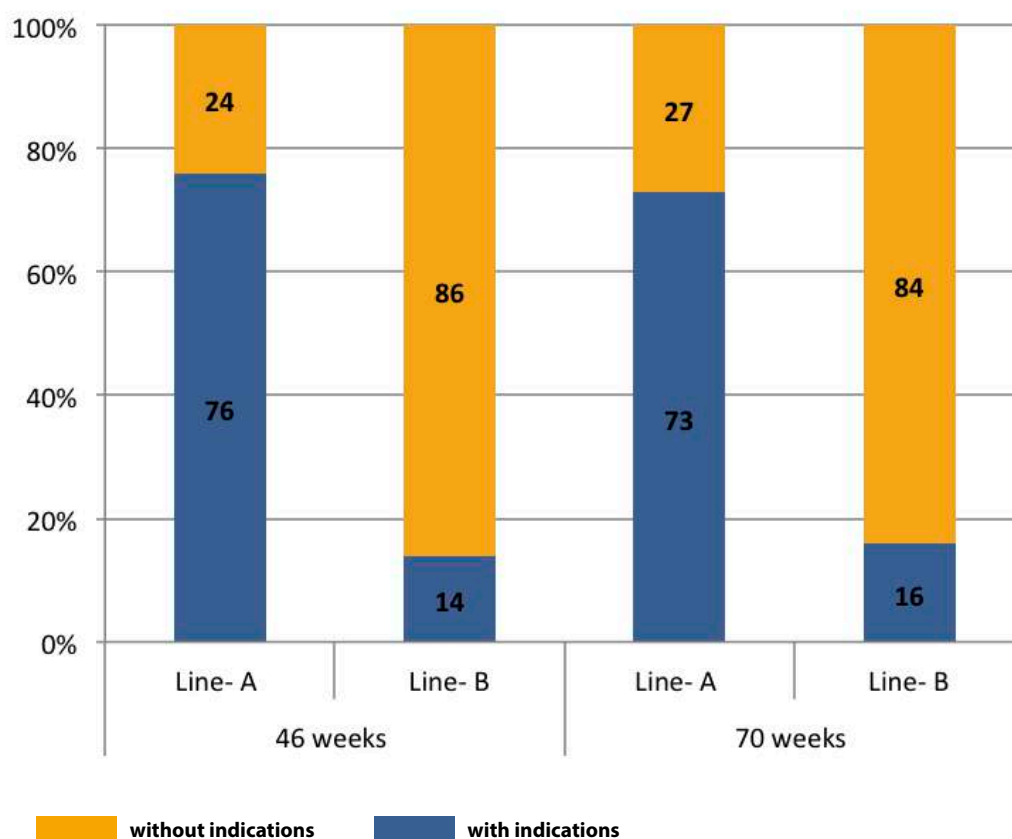


Figure 2: Percentage of hens with and without keel bone indications at 46 and 70 weeks of age



# A STORY OF SUCCESS A NEW NUTRITIONAL APPROACH IN FEEDING LOHMANN BROWN IN UK

Eggs consumption in the UK is a success story with demand rising by 3-4% per year. However competition between supermarkets has resulted in a highly competitive market meaning that egg producers need to focus more than ever on cost of production per dozen.

LOHMANN BROWN wins on that score through longer laying cycles and the highest percentage of first quality eggs of any brown layer in the market but, for the supermarkets, that needs to be combined with a clean audit sheet. Breeding company LOHMANN TIERZUCHT has been working on the key to that.

Through the combination of traditional breeding methods and the introduction of new technologies such as genomics, LOHMANN TIERZUCHT have produced a range of incredibly productive laying strains, commonly producing over 12 times their own bodyweight in egg mass through the laying cycle. "When we visit flocks in Holland and Germany it's not unusual to find flocks in production up to 90 weeks old, still producing a high percentage of first quality eggs" comments Kenny Shaw, Managing Director of LOHMANN GB. "Selection by LOHMANN TIERZUCHT for more persistent production – achieved through longer clutch lengths has shown some birds in trials laying clutches of more than 180 eggs! That's great for producers and makes the LOHMANN BROWN the most profitable bird in the market but the issue can be how to keep up with the birds nutritionally".

Feed manufacturers have reacted to the needs of the birds by increasing the energy density and specification of diets. However, energy isn't the only requirement for highly productive LOHMANN layers and it's a real challenge balancing all the dietary requirements of the birds. As diets have become more energy dense, the grain content of the rations has increased leaving less room for other "traditional" raw materials. One significant impact of that is to reduce fibre levels which can be as low as 2.5% in diets with a high grain content.

Research by LOHMANN TIERZUCHT now indicates that finding room in the diet for indigestible fibre can have huge benefits for LOHMANN birds. Robert Pottgueter, Head Nutritionist at LOHMANN TIERZUCHT said "Even in the rearing phase, fibre is beneficial and helps in development of the gastro-intestinal (GI) tract and feed intake capacity. In the laying phase it is even more important in aiding gut health, slowing down transit of feed in the GI tract and improving nutrient availability for the birds".

LOHMANN GB has found this demonstrated in a very practical sense over the last 12 months. Kenny Shaw

said "LOHMANN birds are so productive it's sometimes difficult for them to meet all their needs – production and maintenance – through feed intake. For the bird, production is the priority and, in a few cases, we saw this result in some feather loss with the LOHMANN BROWN. We had a lot of discussions about this with the breeding company and Robert Pottgueter was convinced that the low fibre levels in some modern layer diets was detrimental for LOHMANN birds. As a result of this, and with the co-operation of some of our long standing LOHMANN customers, we trialled the use of fibre levels of 4.5-5.0% in layer diets. The results were quite rapid and dramatic with birds which had lost some feather showing regrowth over a period of about 6 weeks and birds fed on the high fibre diets from 16 weeks keeping absolutely perfect feathering. These results are great news for producers who now get the benefit of LOHMANN's being able to maintain longer laying cycles due to having shell quality better than any other breed in the market and without any indication of feather loss from the birds."

Robert Pottgueter added "Of course good feed structure with some grist in



and a balanced amino acid profile are important - but these are normal factors. It is fascinating that a low nutrition material like fibre can have such a beneficial impact on the birds and their production. There are many ways to increase fibre levels in diets, from proprietary lignocellulose products that are available in the market, to the use of more traditional raw materials like barley, oats, sunflower or rapeseed meal. Increasing fibre levels may require the addition of more oil to the feed to maintain the energy level but this is also a positive for the birds, reducing the risk of fatty liver syndrome in high producing layers and making the feed more palatable by binding the fine particles. We often find a reduction in feed intake with high fibre diets due to the slower transit of feed through the gut and better utilisation of nutrients by the bird, so it can be a no cost solution to improving overall performance."

"This is such a win for producers with LOHMANN birds we want to make sure everyone in the UK and Ireland is aware of how to gain the benefits" said Kenny Shaw. LOHMANN GB will soon be starting a tour of presentations to feed companies and producer groups to go into



more detail on the benefits of high fibre diets for LOHMANN layers. If anyone is looking for more information faster, your LOHMANN Technical Manager around the country will gladly go through the figures. Just give your local TM a call and they will visit you.

*With the friendly assistance of David Scott, this article has been published in 'Ranger Magazine' – May 2018*