

POULTRY NEWS

2/2015

TECHNICAL

Improving Bone Strength
in Poultry

CUSTOMERS

LOHMANN Klub Russia

INTERNAL

Building a Bridge between
Science and Practice

EVENTS

Twofold Success in Japan



OPENING NEW GATEWAYS TO THE WORLD



LOHMANN
TIERZUCHT

“Creating the perfect chicken...”



...is like cooking good food!

This relies on combining the best pure lines as the key ingredients with the knowledge and experience to select and integrate these successfully, generation after generation, whilst striving for further optimisation. Selection priorities simply have to be in line with customer needs!

At LOHMANN TIERZUCHT, we know that chickens have to perform under different management conditions all the times. This is why we test them in various systems using the best available state of the art technologies. If you

conduct precise and comprehensive tests, you will be able to make better and more efficient selections!

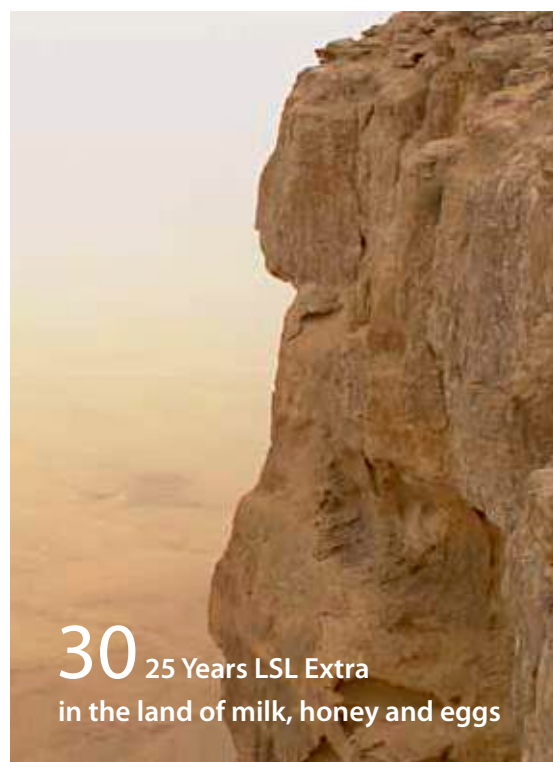
Now after churning up a buffet of our best breeds, the next challenge is to deliver these to your doorsteps despite the on-going challenges of the prevailing avian influenza conditions in several parts of the world. Our production teams, located all over the world, are doing their utmost best to overcome these challenges and are working very hard to open new gateways to the world and to your doorsteps. Have a look at our title story and find out how we are doing so.

We hope you will enjoy the latest issue of our Poultry News!

Prof. Dr. Rudolf Preisinger

Prof. Dr. Rudolf Preisinger

Chief geneticist and managing director



READ ALL ABOUT IT – ELECTRONICALLY!

Try out the brand new features of our Poultry News, now with QR codes and hyperlinks!

Just click on these and read the latest, no matter where you are!



- ① Get the QR-code reader (barcode) in your app store
- ② Scan this QR Code with your mobile device
- ③ Read Poultry News online





16 Layer type
pullet rearing



32 LOHMANN TIERZUCHT
leading in Chinese egg market

COVER STORY

Opening new gateways
to the world **4**

TECHNICAL

Different housing
systems for parent stock **8**

Improving bone strength
in poultry **12**

Layer type pullet rearing
Managing the first days..... **16**

CUSTOMERS

Investment guide to Africa **20**

International LOHMANN Klub Russia
meets in Wandersleben **22**

25 Years LSL Extra in the land
of milk, honey and eggs **26**

LOHMANN TIERZUCHT leading
in Chinese egg market **28**

25 Years of pursuing excellence **30**

The cockerel,
the hen and the egg **32**

EVENTS

Sports and Technology **34**

VIV Asia booms! **36**

Twofold Success in Japan **38**

Successful LOHMANN School **39**

INTERNAL

New sales and
technical service
representative Latin America **40**

Building a bridge between
science and practice **42**

OPENING NEW GATEWAYS TO THE WORLD

LOHMANN TIERZUCHT has proven to be a successful key player in the poultry industry for many decades. To ensure the continuation of the success story of LOHMANN Layers it is of paramount importance to secure existing distribution channels and to create new gateways to the world.

Today's challenges are different from the time when LOHMANN TIERZUCHT started layer breeding 1959 in Cuxhaven, Germany, focusing on Europe and North Africa only. "In the meantime, we have a global presence covering over 120 countries on all continents, with the exception of Antarctica", states Director Business Development Michael Seidel. "LOHMANN TIERZUCHT has become the global leader in the production of parent stocks and laying hens in the last five decades." The Head Office is still at the same location in Cuxhaven. As are the two hatcheries Dorum and Altenwalde and the original breeder farms, of course.

New challenges

However, times have changed and the entire poultry industry is facing new challenges and threats. The most severe is the latent presence of Avian Influenza in the wild bird population. Outbreaks of LPAI or even HPAI are possible in most countries at any time and the risks are highest during the migration period of the wild birds. Outbreaks do not only have an enormous impact on the farm struck by the disease but they also affect the entire country to a certain extent. In any case, transportation and trade are affected and disturbed. This period may vary from three months up to three years from the date of cleaning and

disinfection, leading to interruption of shipments and production cycles. Director of Global Reproduction Tobias Baumgarten: "To avoid this, LOHMANN TIERZUCHT is well-represented in all key regions around the world having its own production sites for pure lines and grandparent stocks in countries such as Germany, Denmark, Brazil, Canada and the USA."

Production areas

To ensure production and breeding in Canada, LOHMANN TIERZUCHT started building new breeding farms in 2013. Location and layout of the breeding farms were selected to meet a very high biosecurity standard. Eggs from the new production sites can be exported to Germany or hatched in the LOHMANN TIERZUCHT hatchery in Canada. "This allows us to be more flexible and provides us with more genetic backup in times of export restrictions in one of the production areas", explains Baumgarten. "With the increase of production Canada will be a possible supplier of chicks to LOHMANN customers. In 2014 Spain was added as an additional LOHMANN grandparent production site. The Spanish production farms are jointly managed by LOHMANN and our long term partner Ibertec. This ensures high chick quality and vast experience in the industry." This new production area offers all

products and might be an option for countries to which LOHMANN could not deliver before. Another advantage of the new production site is that it is situated closer to North Africa, an important and growing region for the future. The time needed for transportation from Spain is much less and the day-old chicks are closer to customers in Africa than the ones from Canada and German hatcheries.

However, availability of production alone does not automatically allow export shipments. Health certificates have to be in place. If the supplying LOHMANN hatchery and the receiving LOHMANN customer is within the European Union, this is easily achieved because of the common market and binding EU directives for all 28 member states. The EU follows the OIE (World Organisation for Animal Health) regulations with regards to management and handling of poultry movements in case of an outbreak of Avian Influenza.

Regionalisation

The so called 'regionalisation' is an important tool to ensure continuation of supplies and normal business unless the immediate region of the hatchery or farm is affected. Regionalisation is a methodology for disease control through the separation of disease free and affected areas on the basis of epidemiological criteria. Exports

to and from non-EU countries are more complex, especially if regionalisation is not applied and valid health certificates are required. In some cases inspections of the supplier farms and hatchery are necessary as a base for negotiations for an agreed health certificate.

Fact finding visit hatching eggs and day-old chicks

An official delegation from Bolivia visited Germany for one week with four high ranking officials, Ing. Mauricio Ordoñez Castillo, Chief Executive Officer SENASAG, Dr. Javier Ernesto Suárez Hurtado, Director State Veterinary Service of SENASAG, Dr. Hernan Oliver Daza Gutierrez, State Commissioner for Epidemiology and Dr. Ornar Benavides Céspedes, Officer for the State Poultry Health Programme. The inspection was organised by LOHMANN TIERZUCHT in cooperation with the German Poultry Association.

The purpose was a fact finding visit concerning hatching eggs and day-old chicks to the Friedrich Loeffler Institute and other competent veterinary authorities to become acquainted with the German veterinary system and disease prevention. "Our goal was to create confidence with the officials to pave the way for German poultry being imported into Bolivia", says Michael Seidel.

Friedrich Loeffler Institute

The tour started at the Federal Research Institute for Animal Health, named Friedrich Loeffler Institute (FLI) having its headquarters on the Isle of Riems. Dr. J. Schell presented the work of the FLI, which focusses on both farm animal health and welfare and on the protection of humans from zoonosis. Main topic of the visit was Avian Influenza.

Prof. Harder and Prof. Grund introduced the FLI as the international reference laboratory of the OIE for Avian Influenza. This was followed by an update of Dr. Homeier on H5N8 outbreaks in Germany and Europe. "The most important message was the fact that all Avian Influenza out-

breaks in Germany were regionally isolated cases and no cross contamination took place", Seidel shares.

The second day, LOHMANN TIERZUCHT was the major focus. Seidel: "We visited our Head Office in Cuxhaven and paid a visit to the District Veterinary Office of Cuxhaven. Biosecurity and -protection were the main topics of the presentations and discussions. It goes without saying that LOHMANN TIERZUCHT as a primary breeding company has the highest possible standards."

Veterinary system

Day three of the inspection brought us to GESEVO GmbH (Association of Disease Prevention) in Cloppenburg. The company is owned by various animal farmer associations. It is financed through the Animal Disease Funds of the States of Lower Saxony and Mecklenburg Western Pomerania. The purpose is to organise the combat of outbreaks of notifiable animal diseases as quickly and efficiently as possible. This is done through the killing and disposal of affected flocks in accordance with the German Animal Welfare Act to prevent the disease from spreading. The company, which was founded in 2008, is able to be ready to leave fully equipped with trucks, cleaning and disinfection material within six hours after being alarmed.

The Federal Ministry of Food and Agriculture in Germany's capital city Berlin followed. Dr. Axel Stockmann, head of Division 334, responsible for veterinary affairs relating to export trade and international animal health policy welcomed the delegation jointly with Dr. A. Jackst giving introductory remarks on the German veterinary system. Lastly, Dr. Anette Jackst requested to consider an agreed health certificate between Germany and Bolivia based on regionalisation on district level. "This was conditionally agreed upon and might lead to new supply possibilities from Germany", says Seidel. "Before flying back home, we visited the Lufthansa Animal Lounge at Frankfurt International Air-

port together with the Hessian Veterinary Boarder Control Station."

Vietnamese Expert delegation

A similar visiting programme was done in November 2013 by a Vietnamese expert delegation of the Ministry of Agriculture and Rural Development. As a result of the visit, as of February 18th 2014, a 'veterinary certificate for the exportation of day-old chicks from the Federal Republic of Germany to the Socialist Republic of Vietnam' was agreed where the reference is directly to the breeding establishment and hatcheries.

As a result, the trade barriers have decreased due to the trust in the German Veterinary System and disease prevention, even in case of an outbreak of Avian Influenza. The next logical step to broaden the trade relation of both countries was the one-week visit of a group of experts in June this year, led by the Vice Chairman of Vietnamese Veterinary Association, Dr. Tran Dinh Tu and Dr. Mai Van Hiep, Deputy Director General Department of Animal Health, Ministry of Agriculture and Rural Development. Purpose of the visit was to establish a closer cooperation between the veterinary authorities and commercial establishments of both countries. On the agenda were visits of layer, broiler and egg production companies as well as an opening conference at the Ministry of Food and Agriculture in Berlin. During that meeting Vice Minister Peter Bleser welcomed the group.

"Initiated by LOHMANN TIERZUCHT through the German Poultry Association and supported by the German Federal Ministry of Food and Agriculture", Seidel concludes, "these programmes confirmed that trust and confidence is an important prerequisite to establish or ease trade and distribution channels for poultry and hatching eggs between Germany and countries worldwide."

Michael B. Seidel



Visit to the Friedrich Löffler Institute (library)



Parliamentary State Secretary with Vietnamese Delegation in the foyer of the Ministry



Mr. M. Kroschel in a conversation with translator Mrs. Auke Friedel-Nguyen, Dr. Tran Dinh Tu and Dr. Mai Van Hiep



A touristic trip to the „Bra



Bolivian Delegation f.l.t.r.: Dr. O. Benavides Céspedes, Dr. J. E. Suárez Hurtado, Dr. H.



"Brandenburger Tor in Berlin"



Visit of the Bolivian delegation in the Friedrich Löffler Institute



Mr. Kroschel guides the group through the packing station



*Medes, Ing. M. Ordóñez
D. Daza Gutierrez*

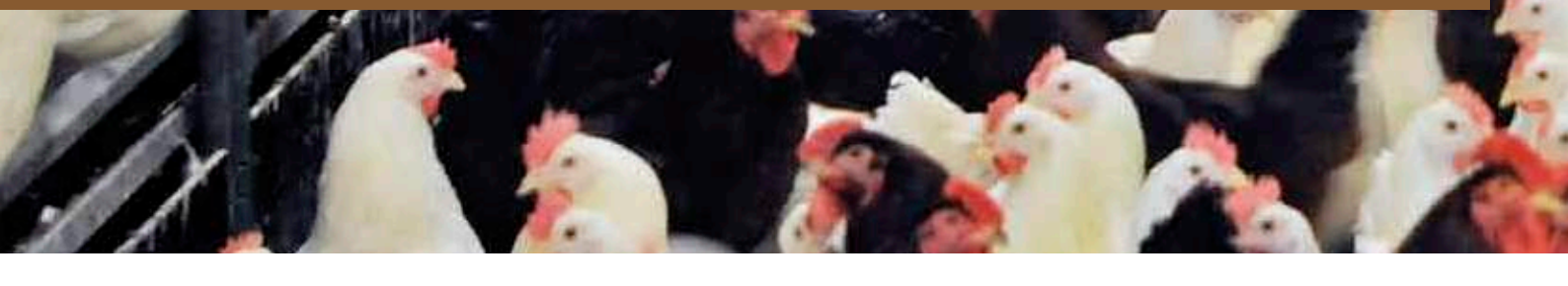


Visit of the Bolivian delegation in the Friedrich Löffler Institute



Different housing systems for parent stock

Developments of housing systems for parent stock have not ceased. Besides traditional floor housing, several other systems have made their entrance in the layer breeding sector. An overview of the most important housing systems and their key aspects.





Cages

For those who consider switching to a new housing system there are various options. The advantage of the classic cage system is mainly in the rare occurrence of floor eggs. In addition, it offers overview in the poultry house, good climate and hygiene possibilities and a good working environment. "As groups are smaller, social stress occurs less among the birds", knows LOHMANN TIERZUCHT's Area Sales Manager Pieter-Jan Luykx. "It is possible to divide parent stock into smaller groups when they are kept in cages. This allows several strains of parent stock, such as LOHMANN LSL and LOHMANN Brown, to be kept in the same house, and it makes it easier to separate the different strains."

Point of attention for cage housing

In cage housing (in groups) keeping the legs shape is vital. This is particularly relevant for the males. Usually a male percentage of 6 to 7 percent is sufficient if the quality of the males is correct. Determine the hen-male ratio based on the size of the group. If needed, group size may be varied by combining two or more groups (cages).

Veranda system

In the past the standard veranda system, in which birds are confined, showed mixed results. That is why in the Netherlands farmers acquired experience in 'opening the veranda system'. This involved opening the cages after the acclimation period, which is around 28 – 30 weeks of age, allowing the birds, after opening the cages, to scratch outside their cages. As a result, breeding results improved during the second half of the laying period. The plumage of the hens remained in better condition as male toenails causing feather damage on the back of the female during mating – grow less quickly by scratching the floor. "This combines the benefits of both floor housing and cage housing: mi-

nimum floor eggs, the birds show better social behaviour and the poultry house occupancy has improved", Luykx lists. "Climate can be managed more easily, litter quality is better and the system has labour and management benefits."

Point of attention for cages using a veranda system

The veranda system, however, is not cheap. Plus the concept is not applicable in every house. This is determined by the layout of the house. In general, feed intake is more efficient in cage systems. "Another point of focus is the number of males. They tend to be over-represented in cage- and veranda systems. If you need to add or switch males, then choose to switch all males in one section, allowing a new social order to be established. A single added male will not be accepted by the other hens and males will not survive."

Non-cage systems

Globally a large number of parent stock is kept in traditional floor systems. These systems occur on every continent, often in a unique, specific set-up, with varying automation levels. For instance, in several countries collecting eggs is not automated.

Non-cage systems with aviary systems

The so called aviary system is gaining popularity in the layer parent stock business. This is particularly the case in Western Europe. This development is mainly driven by the upscaling of parent stock farms and by local regulations concerning dust and ammonia reduction. Aviary systems are often installed in former traditional floor houses. As in traditional floor houses, parent stock may roam freely. By installing multiple row systems additional living layers are created which in turn create additional living surfaces and related nests and feeding and drinking lines. As a result up to twice



the number of parent stock can be kept in the same system. The aviary system offers several variants and most well-established suppliers of stable equipment have one or more equipped aviary system for parent stock. Both the height of and under the system and the position of feed and water in regular aviary systems for laying hens have often been adjusted. After all, the male, being considerably larger than the hen, must live in the system as well. Luykx: "As a floor housing system with aviary system can accommodate more birds, heat production rises. Particularly in countries with cool weather conditions this will lead to a more stable temperature in the poultry house, making it easy to ventilate because there is more warm production caused by higher bird density. Moreover, today all suppliers of floor housing and aviary systems ought to be capable of supplying laying nests which guarantee a perfect egg quality."

Point of attention for floor houses using aviary systems

There are still risks associated with the transition of eggs from the nest belt to the cross-conveyor belt. Transitions must be checked regularly for the correct adjustments. Stay focused on this, especially in the production of hatching eggs. This has a direct negative effect on the breeding results.

Aviary housing

In comparison with traditional floor housing, aviary housing offers a better climate due to the fact that there is less ammonia in the house. Manure is removed at least once per week and the heat production of the birds allows better ventilation. Optionally the manure on the belts can be additionally dried by aeration. Moreover, aviary systems can also be equipped with manure belts and aeration. This is beneficial to the climate in the house as well. Today, litter can be removed automatically in modern aviary systems. "The litter is partially removed together with the manure", Luykx explains. "This reduces labour and the risk of floor eggs. It improves the climate in the house, as less dust is produced."

Point of attention aviary system

Keep in mind an aviary system requires a higher truss height than a floor housing system. Whether it concerns existing or newly built houses, it is highly recommended to choose a house with sufficient volume and plenty of space above the system, to ensure the airflow is not disturbed.

Combination systems

In the past few years the popularity of so called 'combination systems' has been rising in commercial layer hen houses. Though they are deployable for parent



animals there is an increased risk of dirty eggs. A hatching egg should be produced in a nestbox. In a 'combination system' this is not always the case. It is often difficult or even impossible to keep eggs produced in nests and system separated. This increases the risk the hatching eggs may get contaminated. "If these system eggs get moved onto different conveyors and can be collected separately there is no problem", Luykx notes. "It is a no-go to put eggs from outside a nest into one. These should be collected separately and put with the second type of egg at all times."

Management and automation

Keep in mind that management of the different housing systems may vary. "The housing system for the rearing period must be selected with care: cage rearing for cage production and aviary rearing for aviary production. Switching from a ground- to a cage system is possible, but is not optimal, in particular for the males", Luykx says. "Systems using manure belts have the distinct disadvantage of a mandatory weekly cleaning. The manure pit is often located under ground. This makes it difficult to clean, which brings with it a variety of risks of vermin in the stable." These days the discharge belt can be placed on the even floor instead of in a pit. There are also belts on wheels that can be moved after shifting the manure. The belt then stays in the stable and can be closed air-tight. The newest development is a series of central, automatically sealable covers above the discharge belt. After opening the manure will fall through these and onto the belt. This prevents drafts and enhances the climate in the stable. A bad climate enhances the risk of E-coli infections and other diseases, which can be followed by disastrous results. "On modern reproduction farms, the climate should not be a theme but it is still a point of attention", so Luykx says. "When considering the clima-

te, make sure there is enough space between the system and the floor. This goes for both cage- and aviary systems. This improves air circulation and vermin has no chance to hide."

How to choose a new housing system?

Are you considering to purchase a new system? We would like to offer you some advice to get you started.

- Make an inventory of the key aspects that count as most important to you. A clear overview will help you to make the right choices which enable keeping parent stock over the coming decades.
- A new housing system requires a considerable investment. Therefore, take time to be informed about the latest techniques. Examine systems with potential suppliers, but also take the trouble of working in a company with a similar system for several days.
- Substantiate your decision with reliable results, facts and experiences of other breeders. Learn from other people's mistakes.
- Prepare yourself well. This is the first step of mastering the management of the new housing system.
- LOHMANN TIERZUCHT may be of service in this matter.

Pieter-Jan Luykx

*Photos provided by
Ter Heerdt Hatchery, The Netherlands,
Big Dutchman, Germany*

Improving bone strength in poultry

Eggs are a source of highly digestible protein that have done much to improve world nutrition. To enhance the sustainability of production there are persistent demands to increase egg quality and the length of time in lay. However, a longer period of egg production can come with correlated problems of bone quality.

Bones come in a variety of shapes and sizes and have a complex internal and external structure. The hard outer layer of bones is composed of cortical bone, also called compact bone. Filling the interior of the bone is the cancellous bone, also known as trabecular or spongy bone tissue. It has a more open structure and its spaces are filled with bone marrow and, in the case of laying hens, a form of bone called medullary bone. The cortical and cancellous bone types are the key components that give the skeleton its strength.

Osteoporosis

The medullary bone acts as a special form of calcium storage. This special bone is absorbed and laid down rapidly with the daily cycle of shell formation. The cells which form bone are known as osteoblasts. When hens are laying eggs, these cells are almost exclusively active in forming medullary bone.

There are also bone absorbing cells which are known as osteoclasts. They reabsorb the medullary bone to form the shell and they reabsorb the cortical and cancellous bone. This results in a gradual weakening of the skeleton over the lifetime of the hen. As in humans, this is known as osteoporosis and it can increase the chances of bone breakage.

Keel damage

Alternative housing systems can make the problem worse with

increases in breakage and keel bone deformities. This is caused by the increased opportunity for damage due to collisions, etcetera. Keel damage has been identified as a particular problem, with incidences of keel damage in commercial flocks varying from 20 to 80%. As the demand for economical food is unlikely to reduce, solutions to improve bone health are required if the welfare of the laying hen is not to be compromised.

Improving bone strength

"Our research with LOHMANN TIERZUCHT has focused on developing approaches to improve bone strength", says Heather McCormack. "As a consequence the welfare of the laying hen will also improve whilst maintaining egg production." The research team used a programme of retrospective selection over nine generations. "We produced hens with a two-fold difference in tibiotarsal breaking strength. We demonstrated that bone characteristics can be improved by selection and that there is the genetic potential within commercial pure lines to both lay a high number of eggs and have good bone quality at the end of lay." Most importantly, this improvement in bone strength was accompanied by a reduction in the incidence of fractures.

Genes

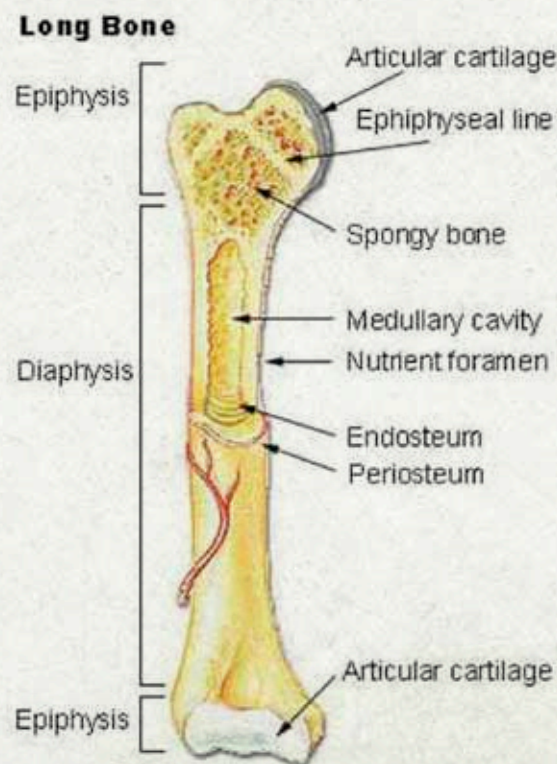
The next task was to identify the Quantitative Trait Loci (QTL). These are regions of DNA which contain or are linked to genes that underlie the bone quality traits. A large QTL was identified on

chromosome 1 for component traits. Tibiotarsal breaking strength for instance. "We were confident that selection with markers in this region would improve bone strength", McCormack says. "As the revolution in genetics advanced, we were able to complete high density genotyping of this region of the genome in a recent generation of a white leghorn line. This produced DNA markers which were highly associated with tibiotarsal breaking strength. They linked to about a ten percent increase in strength and density of the structural bone." So the application of markers has the ability to improve bone strength and improve the welfare of laying hens when applied in a breeding programme. This investment in research over the last twenty years has now put us in a position to make an impact on bone strength and hen welfare."

New project

The team is about to start a new project funded through the ANIHWA programme of the European Union. McCormack: "Over the next three years we will develop and validate a number of complimentary approaches to improve bone quality."

- 1) A study will be carried out, using large genotyping arrays which are now available. This will be done to identify further genetic markers for bone quality. All these markers will be validated in other genetic lines of laying hens for use in selection.
- 2) Using another tool of the revolution in genetics called 'next-generation sequencing' the research team has identified a novel





gene. "We believe this gene may be responsible for some of the differences in bone strength", says McCormack. "This in turn has led to the identification of metabolic marker. We believe this marker can also predict variance in bone quality. Measurement of this metabolite early in life could predict bone quality at the end of lay."

3) Finally, ultrasound has been successful in determining bone quality in humans. The team's initial studies with chicken's toes demonstrated good genetic correlation with bone strength. Technology has advanced since these studies. It will now utilise so called 'axial transmission' in the surface of cortical bone. This will allow the keel and the long bones to be analysed.

Constant remodeling

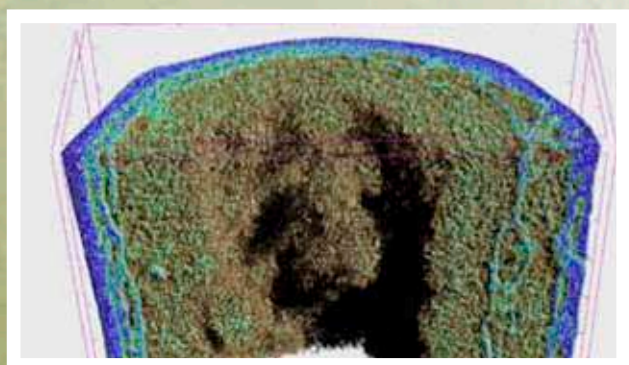
The ability to measure bone quality in living hens will create a big advantage in improving bone health.

"We will discover and test new ways of selecting hens to improve

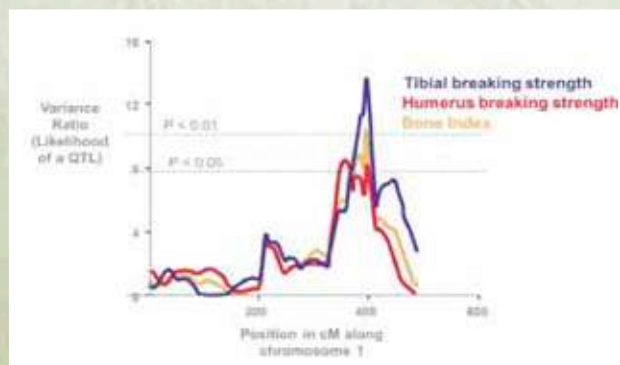
bone quality. Plus, we will learn more about the biology of bone formation of avian bone and the factors which influence it. Bone is a living tissue that is constantly being replaced and reshaped, following injuries such as fractures and micro-damage (which occurs during normal activity)", McCormack explains. "Bone tissue is constantly being remodeled. This is a lifelong process where mature bone is removed from the skeleton and new bone is formed. "These processes produce characteristic changes in the composition of the bone. The team will use sophisticated analytical techniques such as Infrared Spectrometry, Optical Emission Spectroscopy and 2D X-ray Diffraction, to further inform us about the ultrastructure and composition of the bone.

Practical solution

"By using several approaches we want to deliver a practical solution to breeders that will realise the genetic potential of laying hens with better bone", McCormack states. "We expect to demonstrate that combinations of genetic markers can explain suf-

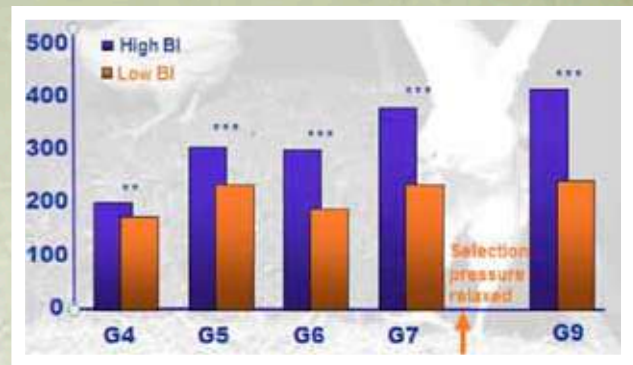


Computed tomography of bone showing medullary bone in green

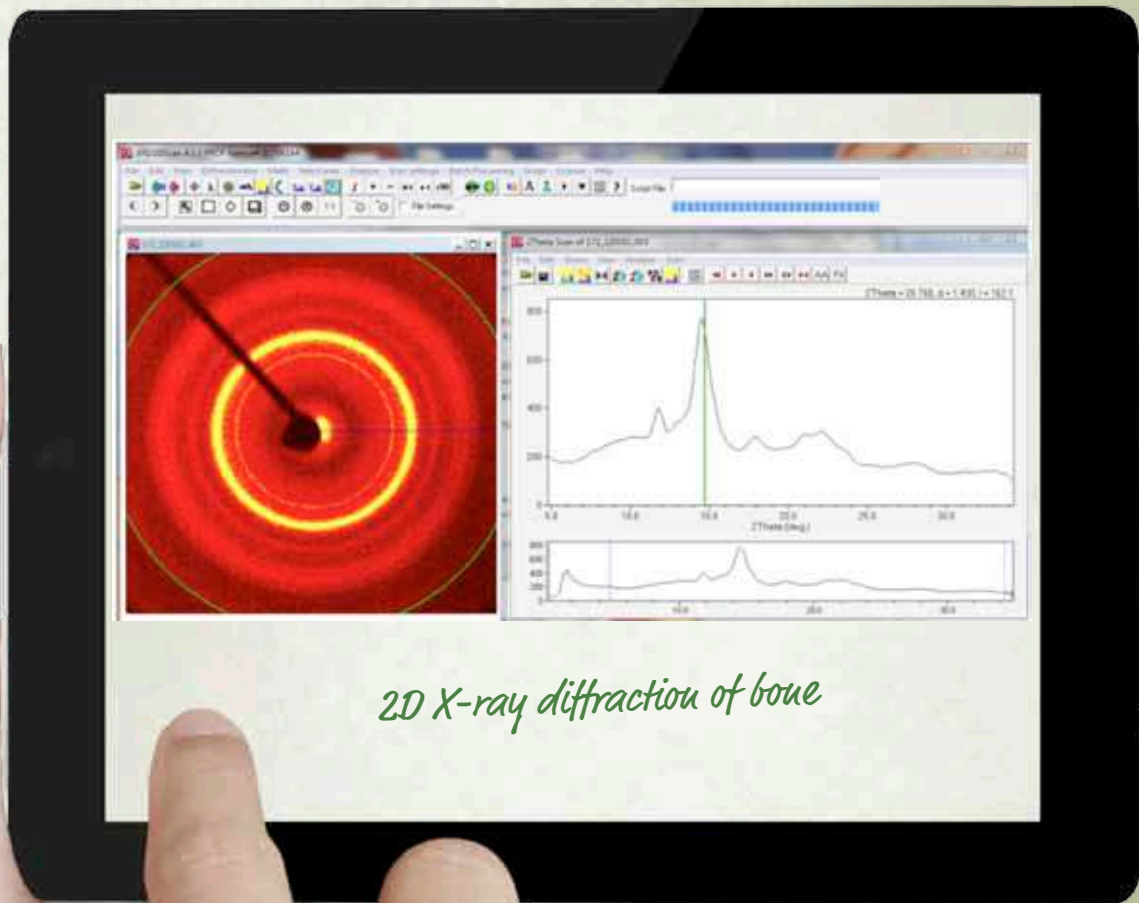


ficient variance in bone quality to be used in selection. And that the markers work in several lines of chicken. We also expect that the new non-destructive measurement of bone property phenotypes will have sufficient correlation with traditional but destructive measures of bone quality for it to be used predictively in selection. Finally, we will also be able to further our understanding of avian osteoporosis and lay the foundation for future advances."

Ian C. Dunn, Heather McCormack and Bob Fleming, The Roslin Institute and RDS(V)S, University of Edinburgh, Scotland, U.K., Dirk Jan DeKoning, Swedish University of Agricultural Sciences, Sweden and Alejandro Rodriguez-Navarro, University of Granada, Spain.



Tibiotarsal breaking strength (N)





Layer type pullet rearing

Managing the first days

Nowadays a layer flock has a live span of up to 90 weeks. Compared to the production period, the rearing phase represents only a small part of the whole life cycle. Yet it determines to a large extent the success of later egg production. It is therefore of crucial importance to give the birds a good start in this phase of their life.

Good rearing management entails more than just following the Management Guides of the breeding company very strictly. People who work with the animals should be able to judge the behavior and the condition of the flock and make the right conclusions. The eye and the common sense of the pullet rearer are often underestimated or forgotten. Even though they are among the most important factors in successful pullet growing.

Preparing the chicken house

Isolation and restricted access to the brooding area are of prime importance for the control and prevention of poultry disease. The all-in all-out rearing programme is recommended as it provides excellent means for isolation. It also allows for proper clean-up in the event of a disease outbreak. Traffic between the rearing area and lay houses should be avoided. Place day-old chicks in houses which are properly cleaned and disinfected only. Make sure that the house is heated up to 36 °C at the moment of chick arrival. Litter should be placed after heating the shed, for instance when the floor has reached the correct temperature. If litter

is spread too early, significant differences between floor and room temperature can cause condensation. The litter becomes wet and sticky from beneath.

Brooding period

The first week of a pullet's life can also be described as the brooding period. When chickens hatch, they are coldblooded for about the first 5 days of their life. This means they are unable to maintain their body temperature of 40-41°C on their own and are highly dependent on external heat sources. This is why, during the first phase of life, we have to consider air temperature as one of the most important factors leading to a successful rearing period. It is absolutely necessary to supply the birds with the right temperatures for each period of age. An infrared thermometer for babies is used to easily supervise chick body temperature and adjust the house temperature accordingly. Some crucial mistakes with regard to temperature that often occur in the chicken houses:

➤ The reference thermometer is not placed on chick level. One has to be aware that the temperature half a metre

above the chick level can be already up to 2 to 3°C warmer.

➤ Chick behavior is not taken into account. We should not only watch the exact temperature on the thermometer, but also observe the chickens very closely. Some flocks feel comfortable at a temperature of 34°C, others need 36°C or more during the first 24 hours. Chicks should be evenly spread in the barn. If they huddle together, they feel too cold. If they spread out their wings and are inactive, they feel too warm.

➤ Air humidity. Often the house is well prepared concerning target temperature but at the same moment, air humidity is very weak (< 40 %). In order to have a better distribution of heating energy in the whole chicken house and to avoid dehydration of the chicks, air humidity must be at least 60 %. If this is not the case, it is possible that the chicks feel uncomfortable even though the target temperatures are correct. There are easy measures which can be taken to improve air humidity. For instance, moistening the floor and walls where chicks are

not present and hanging wet sheets will help to improve air humidity.

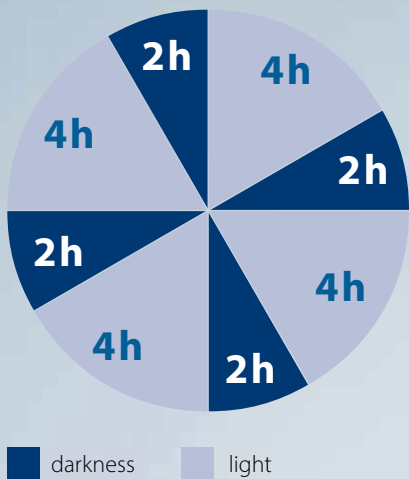
- Air drafts in a poultry house may chill the chicks and can result in piling.

Lighting scheme

Besides the temperature, the lighting program is an important tool to give chickens a good start into their life. Young chicks arriving at the rearing farm already have endured a long transport after hatching. Day-old chickens are normally provided with 24 hours of light for the first 2 to 3 days to give them time to recover and to eat and drink ad libitum. “In reality, however, it has been observed that some chicks continue to rest after arrival, while others seek out food or water. Flock activity will therefore always be uneven. During this phase of rearing, attendants find it particularly difficult to accurately assess chick behavior and condition. An intermittent lighting program (see figure 1) can be used during the first 7 to 10 days after hatching. This program divides the day into resting and activity phases. The objective of such a program is to synchronize chick activity. This makes it easier for the staff to assess the condition of the flock more accurately. It also stimulates food and water intake through group behavior.

The benefits of using an intermittent lighting program are:

- Chicks rest or sleep at the same time. Chick behavior is synchronized.



Graph: Intermittent Lighting Program for day-old chicks. This lighting program can be applied during the first 7 to 10 days after hatching.

- Weaker chicks are stimulated by stronger ones to be active and ingest feed and water.
- Flock behavior is more uniform, making chick assessment easier.
- Losses in the first week are reduced.

After the intermittent lighting program has been used for about the first 10 days, the pullet rearer can switch over to the normal lighting program which is recommended by the breeding company.

Feed and water

The physiology of day-old chicks makes it possible to transport them over very long distances without feed and water. They are born with a yolk sac, which supplies them

with everything they need during the first 48 hours of their life. It also provides them with maternal antibodies which help to develop a certain immunocompetence. However, poultry growers should aim to feed and water day-old chicks as fast as possible to maintain good vitality. As a consequence, they will achieve a low first week mortality. The earlier the chicks are starting to eat, the better they can metabolize the nutrient package of their yolk sac, which lowers the risk of yolk sac infection. Supply enough drinker and feeder space. Some producers have found that adding electrolytes to the drinking water improves the performance of chicks. This step should be taken after consulting a qualified veterinarian who is familiar with local conditions. Maintaining the right drinking water temperature of 22 to 25°C is crucial in order to have the highest possible water intake from the beginning. It is recommendable to feed best quality mash or crumbled feed during the brooding period. Only unsaturated fatty acids like linoleic acid can be usefully utilized by chicks and should be added to the feed. Saturated fatty acids in contrast, will harm the birds and will result in wet and black cloacas. Providing four diets (starter, grower, developer and pre-layer) during the brood and grow period are very adequate for the chicks and pullets. Each diet should be supplemented with vitamins and minerals. Each diet should be fed until the appropriate target weight (provided by the breeding company) is achieved. Only at that point, the switch to the next diet should be made.

Main mistakes which occur in rearing houses:

- Nipple drinkers are placed too high. During the first days, the nipple should be at eye level of the chicks. Reduce the pressure of the water in water lines, so that the day-old chicks easily operate the nipples.

Table 1: Recommended particle size distribution of developer and layer feed

Particle size (mm)	Rearing (%)	Laying Period (%)
0–0.05	19	19
0.5–1.0	21	21
1.0–1.5	35	35
1.5–2.0	15	15
>2.0*	10	10

*in the 1st age phase, never exceed 3 mm; in other phases never exceed 5 mm

- Too few drinkers and feeders. It is crucial that the birds don't have to search for water and feed. It is better to place too many drinkers than too few. Birds that do not drink will also eat too little.
- For birds which arrive from the hatchery with their beak treated, open water sources (for instance round drinkers, cups) have to be available.
- Change the water in the round drinkers and flush water pipes regularly. Avoid dirty and contaminated water. Make sure you clean water pipes efficiently during service periods, simultaneously ensuring that no residues of disinfectants remain in the water system and harm the taste of the water.
- Wrong water temperature. Maintain a water temperature between 22 and 25°C. Change the water in round drinkers and flush water pipes regularly. Chicks don't like to drink very hot water. A good measure is to flush the water pipes during the 2 hours of darkness when an intermittent lighting program is applied.
- Feed and water are placed many hours and sometimes days before chick arrival. This results in very dry feed and too hot water. Both are not appreciated by the birds and will slow down their development. In the worst case scenario this may induce a high first week mortality.
- Pan feeders. They don't fit the needs of layer type pullets. They hardly run empty once a week. This stimulates selective eating of birds aged over 12 weeks. Therefore, it results in an imbalanced nutrient supply.
- Using different drinker and feeder systems during rearing and production. This is dangerous and contributes to pullets starving out and drying out after transfer. Never use open water sources and chain

feeders when you transfer pullets in a production house where only nipple drinkers and pan feeders are installed.

- Supply the birds with feed that has the right particle size for each age. Very young birds also don't like to eat feed that is too fine. (See table 1)
- To change the phase of feeding, the body weight is a more important factor than the age of the flock. If the body weight of a flock is not on target, the feed type should not be changed until the birds have reached their weight.

Weighing of birds

Weighing the birds on a regular basis (once per week and directly in the morning when the light goes on) is one of the most important indicators for applying important management tools, such as lighting program and phase feeding, in the correct way. Things which are done wrongly in the field are:

- Weighing the birds without making conclusions.
- Weighing too few birds. It is recommended to weigh at least 1 % of the flock or at least 100 birds per flock.
- Not weighing birds at all!

Signs of distress

Be alert to distress signals coming from the chicks. React appropriately to the following chick behavior:

- Listless and prostrate chicks indicate excessive heat.
- Loud chirping indicates hunger or cold.
- Grouping (huddling) together indicates excessive cold or draughts.
- Pasted vents which may indicate exces-

sive heat or coldness or feed that contains saturated fatty acids.

Common sense

Pullet rearing sounds easy in management guides. And many people think that, if they only meticulously follow the management guidelines, nothing can go wrong. But there are some measures which cannot be described or explained in a management guide, and these include relying on your own common sense. When entering a pullet barn, every sense like smelling, hearing, feeling and touching should be used. If you have the vague impression that something is wrong, believe your instinct and try to find out what is amiss. Even though the climate computer shows optimal conditions, search for the reason why you personally had a bad feeling about the conditions or the behavior of that flock. This little investment of time will pay off and make you more sensitive to the needs of your pullets.

In this article only a few measures are described and the main focus is on the first week management of a flock. Be aware that in the critical phase of 4 to 8 weeks, birds have an enormous body weight development. A too high stocking density during that age destroys every flock with respect to average body weight and homogeneity.

Farhad Mozafar

Investment gui

With China's economy slowing down, Brazil's markets in trouble and Russia sliding into recession, more and more equity funds and investors are looking at the African market to make their money work for them. The wish is understandable; with the impressive economic development on the continent and the high increase of population it seems to be a profitable move.

There are success stories, but also many failures. Taking a closer look at the markets and specific situation of the different countries pays off. East Africa for example has a surplus of eggs produced locally, while West Africa shows a deficit of 6000 t shell eggs on a yearly average production and North Africa even more with 8000 t per year. The egg markets on the continent are mostly unpredictable and professional farmers have to compete with the production of backyard chicken. Most eggs in Africa are purchased for direct consumption without a food processing industry serving as a puffer. Egg producers are facing fluctuations on sales due to religious reasons such as the orthodox fasting periods in Ethiopia and Ramadan in Muslim countries or simply an overproduction because of too many players in the market. Producers of broiler meat face tough competition of cheap imported frozen meat from Europe as well as Brazil which has nearly killed the broiler

industry in Ghana. Feed mill owners have a hard time convincing the local farmers to accept higher prices for better feed quality and quit mixing their own feed.

Beach life

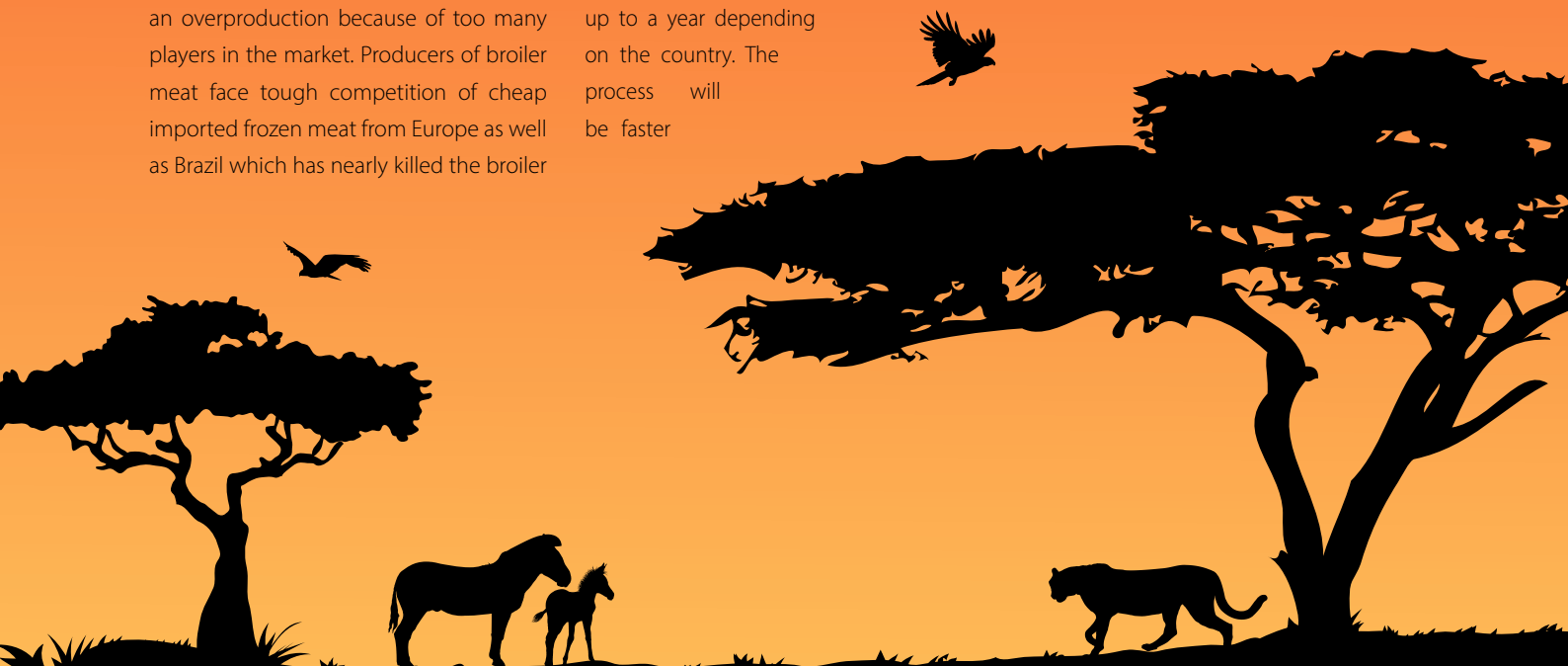
Many potential future poultry farmers asked me which country I would see as most lucrative to invest in and I unfortunately have bad news for the ones which hoped to combine business and beach life. I believe the most interesting markets in the future are Congo, Sudan and Ethiopia apart from Nigeria, of course, which is already a booming market.

Foreign investors often have to undergo an administrative marathon in order to secure all the licenses, tax numbers and business permits which can take up to a year depending on the country. The process will be faster

and much cheaper with a local partner, but I have seen a number of these apparently trustworthy and reliable gentlemen making a mockery of the business, leaving a disillusioned penniless foreign investor behind with few chances of getting his money back. Court cases can take years in most African countries and the outcome is uncertain, but that may be the case for many court cases no matter where in the world. Don't get me wrong, there are honest potential business partners out there, but the selection has to be extremely thorough.

Land

Land issue is a big problem in most African countries, either because it is not available or because the issue of ownership is not solved. I know people



de to Africa

who had to buy their property a few times because the title deed of their land was disputed after each purchase due to suddenly appearing uncles, brothers or former business partners holding legal documents.

Possession of land is a sensitive topic in Africa and in many countries a company cannot buy the land but lease it for a certain amount of time. A private foreign person cannot buy land in most cases, Tanzania for example, he can only buy land if he holds a citizenship.

Be sure to budget enough funds for electricity since power supply is an issue throughout Africa. A whole week in Tanzania can pass without power and even South Africa is now facing 'load shadings' which leaves alternating parts of the city cut off the electricity for 2 to 3 hours several times during the week.

Raw materials

Raw materials such as maize and soya are not available throughout the year and have to be imported or are of low quality and the feed mills are competing with human consumption. In landlocked countries the price for raw materials are normally significantly higher than in countries with access to the sea. Good storage facilities are also important because the price for maize is increasing with each month after harvest time.

And last but not least good control measures are a must in any company because theft is the major problem of all businesses in Africa; it is not for no reason that security companies in Africa are the most profitable businesses apart from banks.

Viola Holik



New farm in Nigeria





International LOHMANN Klub Russia meets in Wandersleben





The 24th meeting of the LOHMANN Klub Russia took place in Wandersleben in Thuringia from March 17 till March 20. Wandersleben is a little village between Erfurt and Gotha. Why we chose Wandersleben, a little village nearly 500 km away from Cuxhaven? To answer this question we have to go back to the foundation of LOHMANN Klub Russia.

Establishing a platform for meetings, training, exchange of experiences and to union poultry plants, identical to 'Gold Ei' in Wandersleben – that was the basic idea behind the LOHMANN Klub, devised by Mr. Zimmerer.

The problem of determining egg prices is as large in Germany as in Russia or in the Netherlands. Showing that this is nevertheless possible was the most important reason to organise this meeting. As the name of the Zimmerer family is for most of the experts not only linked to egg production but also with the cage manufacturer Salmét, we started our meeting with a visit to the cage production plant in Ittlingen.

Careful inspections

"The man who has his own poultry knows that it is necessary to attain high productivity and to keep it high for a long period of time." With these words the director of Salmét, Norbert Brehters, welcomed the group. He talked about the founder and owner of the egg producing family company, Mr. Philipp Zimmerer. These words have reflected in his life and his strategy throughout his professional career. Only inspected systems which were tested

on the company's own plant found their way to the customer. This was noticed by the visitors throughout the visit and the discussions – all systems are produced in Germany and are only shipped after careful inspection. Not only the latest developments of cage facilities but also the composting plant aroused very high interest. The problem of manure removal is playing a more and more important role in Russia. The new laws (under preparation in Russia) raise more questions and entail new tasks.

Gold Ei

Getting to know 'Gold Ei' took place one day later – at first directly on the farm. Mr. Gregor Zimmerer, director and son of the founder, welcomed the group in front of the 'flagship' of the company: a house with more than 110,000 LOHMANN layers in Salmét percherries, with open space. He briefly explained the history of the company and also shared the philosophy behind the plant system. Afterwards, production manager Mr. Dietrich Blechschmidt clearly explained the management- and production cycle on the rearing and production farm. Some information surprised nearly all

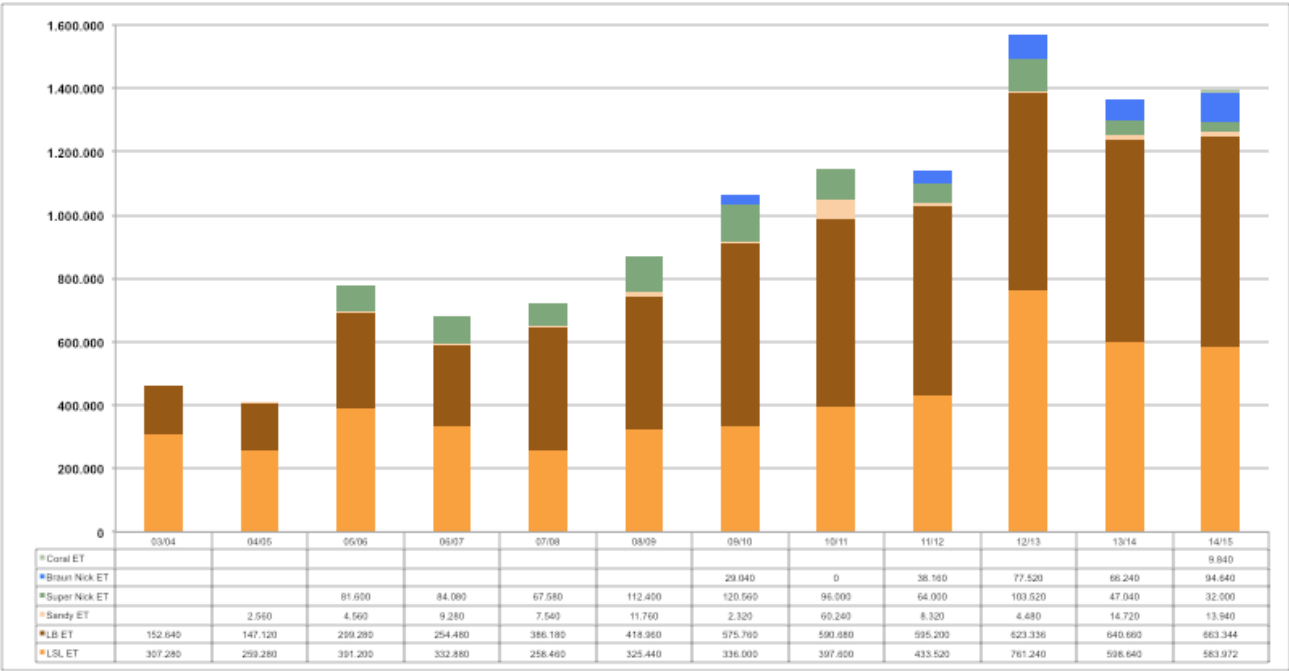
of the visitors: as in all other parts of Germany, a change from brown to white laying hens is taking place. The reason is the excellent feed conversion and so the LSL is coming more and more into play. According to Mr. Blechschmidt one of the most important guarantees for success is the strict division of production- and rearing areas (in this case 80 km inbetween) and the working system in different areas, for instance totally completed or totally empty.

Only after the farm visit the group could become familiar with the 'Gold Ei' system.

The single egg producer does not have the power or the chance to push through his own prices which is identical compared to Russia. However, more producers together will not only offer 500,000 eggs per day but several million. These quantities are more interesting for the wholesale business. Every member of the association delivers eggs to their 'own' sales organisation which makes also the accounting much easier. We hope that this will achieve positive results in the future.

New channels

The last, but this time most important part of the meeting, was the internal consultan-



Chick Deliveries to CIS countries (without Ukraine) during the years 03/04 until 14/15

cy of the Klub members which has been impatiently awaited. It is not customary that both managing directors of LOHMANN TIERZUCHT to take part. All participants felt that something important was going to happen.

“The continuously increasing parent stock shipments to Russia and to all other CIS countries, (see graph 1) the permanently changing political situation and the even more dangerous epizootic situation in the world require new decisions. “With these words Prof. Preisinger started his speech. Additionally, there is the permanently changing economic situation in the countries or regions, the changing Euro rate which highly depends on the political situation. These continuous modifications have a negative influence on our cooperation. We cannot reduce the risk only by the increasing productivity of our breed. Therefore, we have to find and use other channels.

One of these channels is the chick truck where chicks can eat and drink, enabling a transport of 6 to 7 days. Time will tell whether this would be possible for shipments to the Urals or Siberia. We are already set for this challenge. Another possibility is the improved genetic thanks to the marker-assisted selection. This leads to better

progress for sectors where the traditional selection could not make much progress.

New way of working

Javier Ramirez emphasized a very new way of working of LOHMANN TIERZUCHT. Due to the present geopolitical situation, the EW group made the best decision: to build its own grandparent stock farm in Russia. In the near future we can produce our hatching eggs and hatch our parent stock chicks close to our customers. This would reduce both the enormous transport costs and the transport time which would further increase chick quality.

After this information a lively discussion started – the most important question was, of course: “Where?”. The managing directors explained that a rough direction already is selected – Aviagen has its own hatchery in the Tula region (200 km south of Moscow) – but the search and the discussion continue.

Election

The most important factor during the discussion was the best quality, but we may not lose sight of production costs. As we have to sell the chicks here, the price has to be competitive. At the end of the inter-

nal part of the event, only the Klub members were invited. The president of the Klub had to be elected. Valeriy Pavlovich Goryachev, director of the fourth largest egg producing plant in Russia, asked the members to release him from his duty due to the increasing work load. The proposal to elect Mr. Sergey Vladimirovich Timofeev, director of Pyshminskaya Pticefabrica (plant in Tyumen with a yearly production of 300 million eggs) was approved unanimously. Mr. Timofeev accepted the election with slight delays and concerns. But then he immediately made his first proposal. In order to honor the founder and initiator of the LOHMANN Klub Russia – Prof. Winfried Bonitz – he proposed to add his name to the name of the Klub. This was widely applauded with much enthusiasm. From now on the full name of the Klub is ‘International LOHMANN Klub Russia awarded to Prof. Winfried Bonitz’.

The last item (but not less important) on the program was of course culture and history – a visit of Weimar, the city of Goethe and Schiller, and Dresden.

Norbert Mischke



25 Years LSL Extra in the land of milk, honey and eggs

Makorit 2000 celebrates 25th anniversary



Mid May 2015 Makorit 2000, LOHMANN TIERZUCHT's distributor of LSL in Israel, celebrated its 25th anniversary in Tiflis, Georgia. More than 75 staff and farmers joined in this 4-day event. A brief overview of this great company and the poultry industry in the land of milk, honey and eggs.

Since the foundation of the company in 1988, the main owner and Managing Director Moshe Senitzky has largely expanded the business of turkeys and layer chicks in Israel.

At present, Makorit 2000 has a market share well above 50%. About 20 years ago, the LOHMANN LSL-EXTRA was introduced which turned out to be the ideal bird for the highly demanding Israeli market. Most layers are kept in traditional cages under harsh conditions. Farm houses are open or semi-closed, with summer temperatures exceeding 35°C and major disease challenges. In the last two to three years several large-sized modern farms with closed, climate controlled houses were constructed.

Israel: champion in poultry and egg consumption

Israel's poultry sector accounts for almost one fifth of the country's agricultural output. Per capita consumption of broiler and turkey meat is amongst the highest in the world. About 1.88 billion table eggs, 460,000 tons of broiler meat and 75,000 tons of turkey meat are produced each year. Consumers clearly prefer large, white

shelled eggs. Eggs need to be 'kosher' for religious reasons, meaning no blood nor meat spots may be present inside the egg. Eggs above 73 grams get a premium price.

Government-regulated production

Both the egg market and the dairy market in Israel are state regulated. This means that farmers receive a fixed price for selling their eggs and milk. However, they are also limited to producing a fixed, government-determined quantity. This so-called "quota system" ensures a fixed income for the farmers. Some farmers also sell or rent out their quotas to larger producers. Many poultry farmers sell their quota eggs to supermarket chains and other stores. Less than 5% of the sold eggs originate from free range and organic barn production. Those specialty eggs are not subject to governmental price control and are generally double the price of ordinary table eggs.

Animal welfare

Nearly all layers in Israel are kept in conventional cages. For several years now, animal rights activists are trying to change conditions in the poultry industry. The parliament, called Knesseth, has already approved

legislation to increase minimum space per hen from 300 to 750 square centimeters, in line with former European regulations. Another fundamental change will be a complete ban on forced molting; merely all birds are currently molted after a production period of one year and kept for an additional second cycle up to 115 to 120 weeks of age. Several new projects have already installed enrichable cages in recent years, to be prepared for further legislation.

LOHMANN TIERZUCHT

Opening of a new hatchery

In late August, Makorit officially celebrated opening of a brand-new hatchery at kibbutz Hasolelim. The new facility has an annual capacity of 14 million hatching eggs, exclusively for Lohmann LSL Extra. State-of-the-art equipment of Petersime, Viscon and Novatech ensure that this is the largest, most modern layer hatchery in the region. With this new milestone, Makorit 2000 is well prepared for another 25 years of successful distribution of Lohmann layers.





LOHMANN TIER-ZUCHT leading in Chinese egg market

The Sundaily Village Ecological Food CO. LTD (SDF), a full subsidiary of the Chinese TQLS group (Tie Qi Li Shi group), successfully faces several challenges in a rapidly developing market.

TQLS group is a national force on industrialisation of agriculture leading enterprises. Since its foundation 23 year ago, it developed from 6 people and a capital of 35,000 into the high tech enterprise it is today, counting 51 subsidiaries and more than 6,000 employees. The divisions of TQLS group are feed, food, livestock industry, enterprise technic center and TQLS College.

Complete production chain

SDF is TQLS group's subsidiary involved in the table egg layer business. It is involved in the complete production chain of the layer industry, in professional hens feed production, parent stock breeding, commercial layer rearing, table egg production and egg processing.

Besides the fact that SDF

is the first egg company to have HACCP identification in China, it has the biggest market share. So far, the capacity of SDF is 4.2 million commercial eggs, 0.8 million parent stock, and 20,000 grand parent stock. There are six bases, located in Sichuan Zitong, Sichuan Qionglai, Jiangxi Fengcheng, Tongling, Anhui, Hubei Xiangfan, Hubei Shishou, the western and southern area of China.

SDF sells table eggs in over 20 cities, such as Shanghai, Beijing, Shenzhen, Guangzhou, Chengdu and Chongqing. It cooperates with famous international food companies such as KFC, of which SDF is the designated egg supplier. SDF's high tech facilities

made them the demonstration farm of China's egg production standards and LOHMANN's demonstration farm in China.

Current challenges

The layer breeder business in China is very competitive, but the price of table eggs has an average of 7 RMB per kilogram. This means the parent stock farm faces the challenge of meeting the changing market requirement. Profit is as important as capacity. The commercial farmers calculated no profit differences between rearing 5,000 hens and 10,000 hens. That keeps the price of commercial DOC



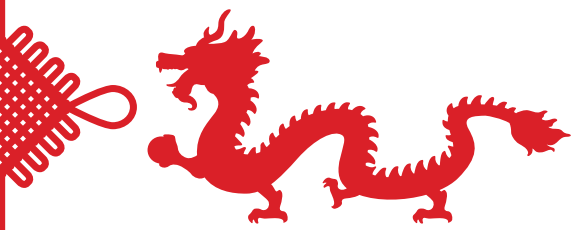


photo provided by SDF



low, while the parent stock farm remained profitable.

Currently, the layer business is turning to chain production. Profit will largely come from selling table eggs. Chinese consumers pay more attention to food safety nowadays. This will take the entire egg industry to a higher level. SDF has always been operational in chain production and focused on safety from the beginning. So far, they are facing the current challenges well.

The grand parent stock farm of SDF is located in Sichuan Zitong, and is very isolated ensuring good biosecurity. Eight

experienced and responsible staff members work at the grand parent stock farm. Production performance is excellent, exceeding all standards.

Customer event

On this year's April 23rd and 24th, SDF organised a highly successful customer event. After a sightseeing tour in Jiuzhaigou, Sichuan province, a high profile seminar was held. LOHMANN TIERZUCHT was represented by Ron Eek, Asia Regional Area Manager, Robert Pottgueter, Nutritionist, Atoussa Mazaheri, Veterinarian, David Lin, Area Ma-

nager Asia, Gimmy Wu, technical support manager China and Mr. Quiao, country manager China. For a large audience of customers, LOHMANN specialists shared updates on poultry nutrition, disease control and various management issues.

This seminar, which had a clear internal and commercial training goal, was hosted in a beautiful village that used to be a missile tech research center in the past. The training time was two days, mainly focusing on business management and layer rearing technique improvement. This fits SDF, which is always looking for more progress and innovation in all operational aspects.

Gimmy Wu





25 Years of pursuing excellence

Ommat-Arab Poultry Breeders' Success Story in the Middle East

In 1989, former Managing Director of LOHMANN TIERZUCHT, Mr. Alfons Hüttmann, and Eng. Hus-sain Saeed Bahri, founder and chairman of Ommat Group, signed an agreement for distribution of layer chicks for Gulf Council Countries (GCC: Saudi Arabia, Kuwait, Bahrain, Qatar, United Arab Emirates and Oman). In those early days nobody could foresee the impressive expansion Ommat would realise in the years to come.



The basis for the success of Ommat was the vision of Mr. Hussain Bahri: no compromises to be the best supplier of layer chicks in the region, by pursuing excellence in providing the utmost care for chicks, employees and clients. State of the art facilities, a regional network of sales and service staff and, last but not least, excellent genetics, which fit well in the challenging conditions in the Middle East region, have contributed to the success of Ommat.

In total, Ommat Group consists of 10 subsidiaries spread in the Middle East region and employs well above 1,500 staff. The company is fully family-owned by Hussain Bahri and shows large similarities with EW-Group. In the early years, Ommat Jeddah annually produced about 3 million layer chicks for the Saudi Arabian market only. At present production exceeds 20 million chicks per year covering more than 75% of the regional market.

Market share Ommat

Country	KSA	Kuwait	Qatar	Bahrain	UAE	Oman	Yemen
Share	75	80	100	100	70	30	25

KSA: Kingdom of Saudi Arabia; UAE: United Arab Emirates

Ommat-Group: a multinational group of companies in poultry business

Nowadays, Ommat Group consists of 3 major hubs:

- Ommat Saudi Arabia, based in Jeddah / Ommat UAE in Abu Dhabi. From both locations LOHMANN layer chicks are distributed in GCC and Yemen.
- Ommat Sudan & Ommat Egypt: both subsidiaries are fully integrated broiler companies from breeders to processing.

Congratulations!

LOHMANN TIERZUCHT's Management Team and all our employees wish to congratulate Ommat-APBCo. with the great achievements over the past 25 years. LOHMANN TIERZUCHT is proud and honoured to be your partner and wishes to further strengthen our partnership and expand our joined business for at least another 25 years.

Ron Eek



The cockerel, the hen and the egg

Effective January 2016, day-old chicks will no longer be euthanised in the organic egg production in Austria. This is an essential move to promote consumer's acceptance of organic eggs. LOHMANN SANDY will be mobilised to serve this purpose.

The demands for dual purpose birds is particularly high in the organic sector. Even in-ovo sex determination is currently being criticised when regarded as an alternative to the euthanasia of day-old male chicks. As a solution for this, the company Eiermacher in Schlierbach has decided to introduce LOHMANN SANDY into the market.

Concept

The concept is a closed system. Each layer farmer would purchase female day-old chicks of organic parent stocks for the production of eggs. The hatchery is obligated to fatten the corresponding brothers until they reach 70 days of age. Each egg producer will already bear the costs for this fattening process when a female bird is purchased. These significant additional costs will be reimbursed with higher egg prices at a later stage. As a compensation for these additional expenses, the hatchery will organise the fattening process by building houses with a winter garden and access to free range space, slaughter the cockerels and market their meat for food.

Challenge

A special challenge is the slaughter and cutting process of these birds which have a very limited deposit of lean meat. A new specialised slaughter house has to develop a machine to automatically separate the meat from the bones. The meat obtained from these birds will be mainly used for the production of poultry sausages.

In dual purpose birds, focus is primarily on the amount of meat these can produce. Instead, this new and unique Austrian concept is centered on that of an egg-driven dual purpose concept. LOHMANN SANDY is characterised by excellent laying performance, high feed efficiency and a very special egg shell colour. Increase in costs for dual purpose birds is steered mainly by a much longer production cycle of hens. Therefore, one has decided to choose a genotype with a higher laying performance rate and a much lower fattening rate of cockerels.

Colour

The cream coloured eggs serve as a unique selling point and a distinguishing feature for the consumers. The colour of the organic egg shell is evidence of a closed production system and maximised observation of the wellbeing of the birds. Funding for this system is covered by a higher selling price of the eggs. This concept is supported by a binding contract between the trading companies and the marketing of organic eggs. All substantial Austrian trading companies have signed this agreement and by doing so, they have secured a nationwide offer.

Existing old buildings should be refurbished and used as a facility to fatten the cockerels. The total overhead for the fully integrated system is the group of producers which make a unique and pioneering step when it comes to animal welfare and sustainability

Prof. Dr. Rudolf Preisinger



Organic egg production in Austria



In the winter garden



*Carcass of Lohmann Sandy
at 70 days*



Ranging Lohmann Sandy females

Sports and Technology



The ideal Combination for a Production Manager Seminar

"The production manager seminar was an engaging combination of sport activities and technical lectures", recaps Niels Fischer of LOHMANN TIERZUCHT's Sales and Technical Services Europe. After the last production manager seminar in 2011 in Potsdam, 50 participants from 11 European countries accepted the invitation of LOHMANN TIERZUCHT to come to the Ötztaler Alps this year.

On the day of arrival the weather put on its best face and the guests were pleased about the impressive mountain backdrop. All participants were welcomed by Prof. Preisinger in the late afternoon. He presented the programme for the following two days - a combination of sport activities and technical speeches. After dinner, the evening ended in a relaxed atmosphere.

Monday morning's motto was: Enjoy your time on the slopes! "On this occasion the home advantage of our friends from the Alpine region clearly applied", Fischer recalls. "However, some 'low-

landers' also cut a good figure. Some colleagues were on skis for the first, but not for the last time."

In ovo sex determination

In the afternoon Prof. Preisinger presented the current status of 'in ovo' sex determination and its practical application. Although different procedures are at an experimental stage, it will take some time until it is ready for practical use. In any case the costs for day-old chicks will increase significantly. A seamless transition was made to the subject of chick weight and future performance. The result:



chick weight does not influence future performance of the layer hen. Subsequently, Tobias Baumgarten presented the new chick store of LOHMANN TIERZUCHT where, due to optimum climate conditions, day-old chicks could be put into in case of necessity.

Hatchery Disinfection

Tobias Baumgarten initiated the afternoon programme with his speech about the new performance standards for layers. Afterwards, Robert Schulte-Drüggelte presented different procedures

for egg disinfection and emphasized in particular the necessity of disinfection. The last item on the agenda was the speech about veterinary issues, presented by Matthias Voss. The programme ended with an interesting discussion and in the evening all participants finally came together for the gala dinner. After two days in the mountains with sport, interesting speeches and enough time to exchange experiences and thoughts, the participants made their way home on Wednesday morning.

Niels Fischer

VIV Asia booms!

Feed-to-meat exhibition in Thailand attracts worldwide interest

An impressive 38,425 professionals originating from 124 countries visited VIV ASIA, which was held in Bangkok from the 11th to the 13th of March. The international feed-to-meat exhibition attracted leaders in the agriculture, livestock, poultry and fishery industries, all participating in the three-day event that was witnessed by worldwide media.

VIV Asia gained tremendous success and grew by 16% in comparison with 2013: 874 exhibitors from 59 countries and a visitor total that exceeded the expected 30,000 by almost 9,000. In 2013, 770 exhibitors and 33,000 visitors found their way to the event. This year 178 companies participated in the event for the first time. VIV's position as a global feed-to-meat market connector was further reinforced, placing itself as the world's 4th international stage show for this industry.

Poultry's importance underlined

With feed-to-meat being the central theme of event, there was due representation of the various processes in meat, seafood, dairy and egg production. Poultry's importance in the VIV Asia profile has been underlined again, with the major growth in Asian attendance originating from countries that have a strong interest in producing chickens and eggs. For the egg industry, it was further enhanced by the decision of the International Egg Commission (IEC) to hold its Asian leadership forum in Bangkok immediately before the show. Poultry being a main attraction for this exhibition, a wide range of products for poultry production was displayed.

Conferences

There were conferences held on various topics such as feed, ingredients, additives, health management and advanced technology to boost the poultry industry. VIV Asia 2015 also saw several conferences being held over the course of three days like the Aquatic Asia Conference, Biogas Conference, Dairy Tech Conference, Pork Production Summit and Pet Health and Nutrition Conference.

International feeling

The VIV Asia Show gave a truly international feeling; there was a strong show of support from countries like the USA, the Netherlands, Germany, Taiwan, Italy, France and China. Foreign visitors from outside the show's home country of Thailand rose by 18.2% to 25,302. Thailand itself was among 15 Asian nations sending more visitors to VIV Asia in 2015, with the region's largest increases coming from Pakistan, Bangladesh, India, Indonesia, Sri Lanka and China.

During the show people were asked to rate their experience on a scale from 1 to 10. For the exhibitors the average rating was 8.0, which is a very good result. However, the visitors rated this year's VIV Asia even higher. In 2016, VIV MEA will open its doors in Abu Dhabi. This new initiative focuses on servicing poultry professionals in the Middle East and Africa with their own international VIV.

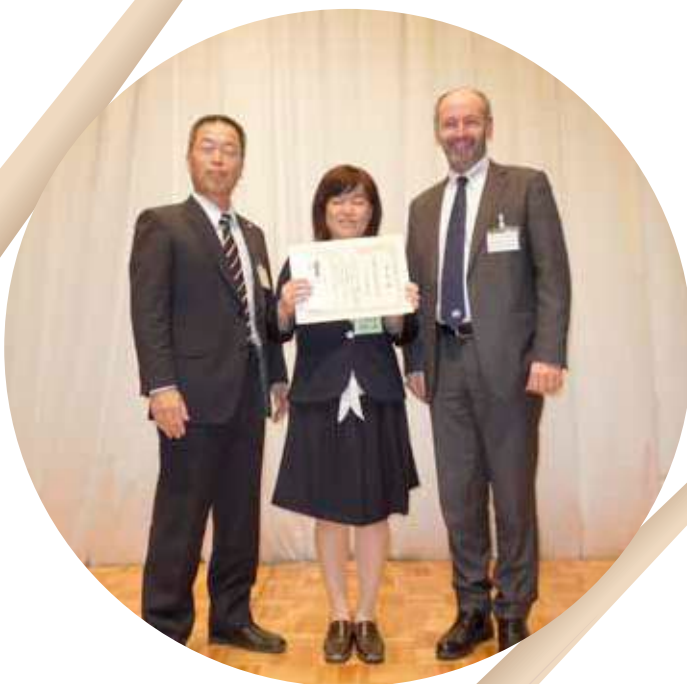
Dr. Sohail Habib Syed





Twofold Success in Japan

Novelties introduced at Japanese Events



In the period of April 1st to 3rd 2015, Ghen Corporation of Gifu and Nihon Layer (NL) organised two separate seminars in Central Japan. Both events have become an annual tradition during the so called Sakura (cherry blossom) season and have been for several years now.

The seminar in Gifu aimed at staff of about 20 hatcheries which distribute LSL CLASSIC and – LITE (Julia) layers in the different regions of Japan. Over 60 participants attended the event. Professor Rudolf Preisinger, Managing Director and senior geneticist of LOHMANN TIERZUCHT, updated the audience on the latest progress in LOHMANN's R&D programme. Ron Eek presented a comprehensive paper on hatchability and chick quality. During the dinner event several companies received a special award for outstanding achievement in performance of LSL Parents Stock.

On Friday April 3rd, Nihon Layer (NL) organised a seminar in Nagoya for Japanese table egg producers and related industries. Over 150 participants attended this event. NL's Managing Director Mr. Watura Hashimoto welcomed the audience and gave a short update on the current situation in the Japanese egg market. After Prof. Preisinger's genetics paper, Ron Eek gave an introduction on forced molting in layer birds. Finally, Mr. Mizoguchi, in charge of production, introduced experience with infrared beak treatment, a novelty in the Japanese pullet business.

Ron Eek



Successful LOHMANN School

Exciting presentations captivate participants

Over 50 customers originating from 26 countries made their way to Cuxhaven to listen to the exciting presentations by LOHMANN TIERZUCHT's in-house specialists. Frequently requested subjects such as 'nutrition' and 'hot climate management' were, in addition to other interesting topics, the main focus of the week.

Stella Schnor



Dr. Matheus Alves

New sales and technical service representative Latin America

Dr. Matheus Alves joined the sales and technical service department of LOHMANN TIERZUCHT on July 1, 2015. In his new role he will focus entirely on Latin America. The 34 year old Brazilian Alves brings with him over eleven years of experience in the poultry industry.

Over the last four years Alves, who holds a Master Degree in Veterinary Medicine, has worked for LOHMANN TIERZUCHT Brazil in the position of technical manager, accompanying customers' flocks, analyzing field results, training teams and developing technical strategies

for the Brazilian market. Prior to this he spent seven years as a veterinarian in a broiler parent stock and layer parent stock company. There he acted as the internal auditor of quality and was responsible for health, biosecurity and standardization of the farms in the quality management system.



Matheus Alves

"I would like to tell that is a great pleasure for me to be part of Lohmann Tierzucht's team and that I am also very excited about the new challenges. The presence in the field is the best way to know our customers, their needs and the results of our products. I am available to contribute, share information and help our customers by giving an adequate support to maintain a strong partnership!"



Thomas Calil

"With a fast growing demand of Lohmann products in Latin America and the proved experience on layer breeding market, our colleague Dr Alves has been promoted to join the Sales and Service team in our region. This is a natural path for a professional who brings the necessary experience and skills to get the best of the daily challenges we face in our business and surely it'll be a big pleasure to have him working with our team and customers".

Building a bridge between science and practice

The rapid development of information technology has led to a fundamental change in the culture of scientific publication. The time gap between the end of an experiment and the publication of results has been reduced considerably.

Scientific articles are being produced under high time pressure and only on restricted areas of interest. Scientific progress is communicated through a large number of successive articles in peer-reviewed scientific journals which are often difficult to understand for the common reader.

Bridging the gap

LOHMANN INFORMATION aims to bridge this gap in selected areas along the production chain of animal-based food. "We will publish up-to-date scientific results in an easily understandable format", says Prof.

Dietmar Flock. "Our articles address current issues in life science which are of special interest for livestock extension services, governmental authorities, farm managers, veterinarians and students in applied poultry and livestock science." The scope of LOHMANN INFORMATION comprises the whole field of animal food production ranging from breeding to husbandry systems, feeding and nutrition, health and veterinary care, product quality, environmental aspects, issues in animal welfare and changing consumer demands. The information provided is based on independent scientific sources and practical experience. The

list of references ensures that the reader can find more detailed information on a particular subject of interest in the references cited.

While the main animal species targeted by LOHMANN INFORMATION is poultry, articles on other species of farm animals and articles of general interest in the context of sustainable food production 'from farm to fork' will also be included from time to time. "We appreciate receiving comments, questions and suggestions from our readers on subjects they would like to read about in future issues of our journal."



*Lohmann Information
is reinforced*



Change in editorial management

"We would like to take this opportunity to announce changes in the editorial management", says Prof. Dietmar Flock, who has been serving as editor of LOHMANN INFORMATION since 2006. Prof. Flock is now being assisted by Prof. Werner Bessei, who currently acts as co-editor and will take over as editor following a transitional period. Prof. Bessei is well-known in the scientific community as senior Vice-President of the World Poultry Science Association (WPSA) and the President of the German Branch of WPSA. Werner Bessei studied Agricultural Sciences at the University of

Hohenheim, Stuttgart-Hohenheim, Germany, from 1967 – 1971. After his doctorate at the Institute of Animal Husbandry and Breeding of the same university, he joined Philips-Duphar, Düsseldorf, as Technical Advisor for agro-chemical products in Western Europe, Northern Africa and the Middle East. From 1985 to 1990, he served as an Animal Production Officer (Poultry) at the FAO Headquarters in Rome. From 1990 onwards, he was a professor for Farm Animal Ethology and Small Animal Sciences at the

University of Hohenheim. He retired in 2014 from his duties at the University of Hohenheim but continues to be an advisor in different poultry organizations and working groups.

Prof. Dietmar Flock

Imprint

EDITOR:

Marketing Department LOHMANN TIERZUCHT GmbH
Am Seedeich 9–11 | 27472 Cuxhaven | Germany
P. O. Box 460 | 27454 Cuxhaven | Germany
Phone +49 (0) 47 21/505-0 | Telefax +49 (0) 47 21/505-222
Email: marketing@ltz.de | www.ltz.de

PHOTO CREDITS:

Filipchuk Oleg/Shutterstock.com, Rostislav Glinsky/Shutterstock.com,
avian/Shutterstock.com, IrenD/Shutterstock.com, Kritchanut/Shutterstock.com,
MaKars/Shutterstock.com, Apostrophe/Shutterstock.com,
Artem Kovalenco/Shutterstock.com, Vectomart/Shutterstock.com,
Irina Solatges/Shutterstock.com, WWW/Shutterstock.com,
Virginija Valatkiene/Shutterstock.com, iadams/Shutterstock.com, ixpert/Shutterstock.com,
David Franklin/Shutterstock.com, vichie81/Shutterstock.com, PGMart/Shutterstock.com,
Leone_V/Shutterstock.com, dominic8/Shutterstock.com, Ivan Baranov/Shutterstock.com,
Tashal/Shutterstock.com, Ozerina Anna/Shutterstock.com, phoelix/Shutterstock.com,
Aquir/Shutterstock.com, Samuel Borges Photography/Shutterstock.com

GOTOMEDIA WERBE- UND MEDIENAGENTUR

