

Poultry News

LOHMANN TIERZUCHT 2/2010

Compartmentalisation in the Poultry Industry Trading during an epidemic



LOHMANN ... Editorial

Diagnostic tests, veterinary support for livestock and customer service are the main areas of work for the veterinary laboratory of LOHMANN TIERZUCHT, which last year celebrated its 50th anniversary.



In times of Avian Influenza, however, it is also important to seek possibilities, together with organisations and authorities, to maintain international trade in the event of a disease outbreak.

In addition to regionalisation, which is accepted by many countries, the so-called compartmentalisation, now controlled by an EU regulation, provides a further possibility for maintaining supply in the event of an outbreak.

While geographical factors are mainly the basis for regionalisation, the basis for compartmentalisation lies in the establishment and documentation of a biosecurity system of the highest standard. This also ensures, in the event of an outbreak within a region, that the livestock are kept disease-free. However, there is a long way to go before compartments between EU member states and third countries will be established.

Yours,
Dr. Matthias Voss

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The occurrence of a disease such as Avian Influenza can have very serious effects on the international trade with poultry. Compartmentalisation in this case can also present another way to preserve international trade.

In recent years there has been an increased incidence of infections with highly pathogenic influenza viruses. Starting with the 1999/2000 epidemic outbreak in Italy and the large 2003 outbreak of HPAI in the Netherlands, which were followed by several other Avian Influenza outbreaks in Europe and, not least, the subsequent global H5N1 outbreak. Since then, there is a daily risk for the global poultry industry that notifiable influenza viruses (Notifi-

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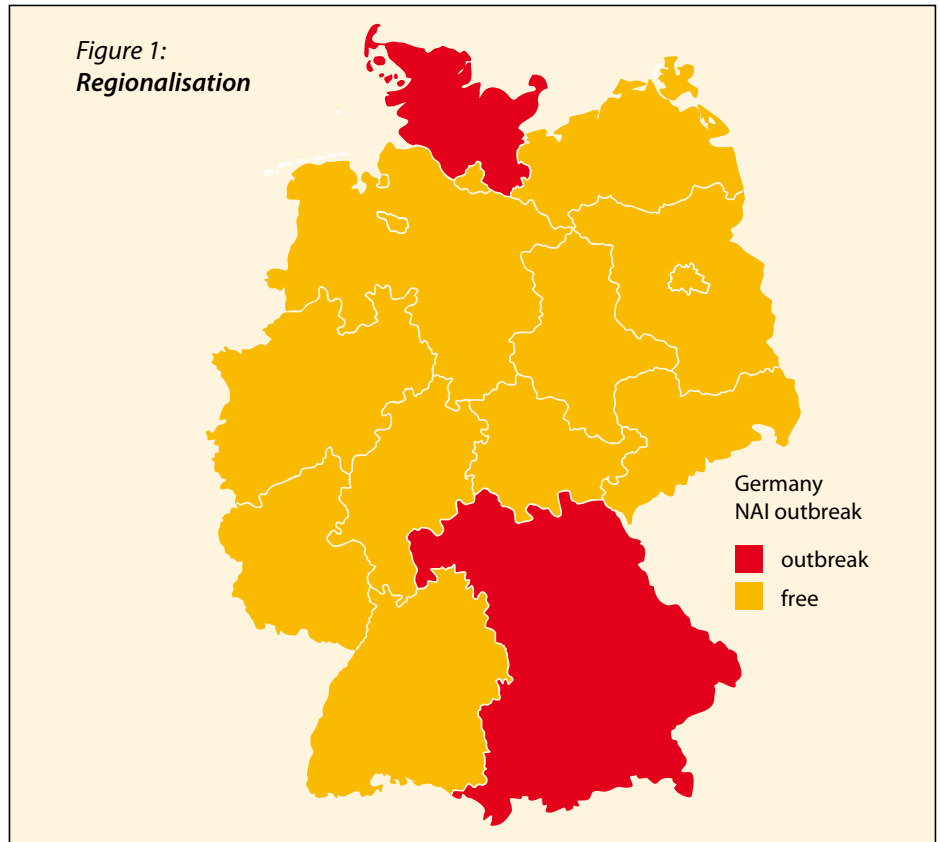
able Avian Influenza, NAI) will be found. In all cases, these are influenza viruses of the subtypes H5 and H7, independent of whether they are categorised as low (LPAI) or highly (HPAI) pathogenic strains. This may result in immediate trade restrictions, particularly in international trade with third countries.

Within the EU, the “Council Directive 2005/94/EC of 20 December 2005 on Community measures for the control of Avian Influenza” regulates intra-Community trade with regard to the occurrence of notifiable Avian Influenza infections. For trade with third countries, the specifications of the World Organisation for Animal Health (OIE) in Paris shall apply.

OIE to create transparency

The task of the OIE is to ensure transparency in the global situation with regard to animal diseases. Each member state undertakes to report any animal diseases that may occur on its territory. The OIE will forward this information to other countries, which can then take the appropriate protective measures. Furthermore, the OIE issues recommendations regarding the criteria to attain disease-free status from a particular disease and recommendations for international trade.

It is important to clarify that the OIE will not declare any country to be free from Avian Influenza. The World Organisation for Animal Health publishes only the information that is reported to it by the various member countries. Only when the OIE has



Geographical factors play an important role in regionalisation.

received the so-called “final report” from a country after the outbreak and eradication of an epizootic can the country declare itself to be free from the disease.

Trade recommendations in the event of an outbreak

The OIE also makes recommendations on how trade with third countries can be maintained in the event of outbreaks of certain diseases. In the case of Avian Influenza these are:

- zoning/regionalisation
- compartmentalisation

In Chapter 4.3 of the OIE’s Terrestrial Animal Health Code, zoning and compartmentalisation are described as procedures implemented by a country under the provisions of this chapter with a view to defining subpopulations of distinct health status within its territory for the purpose of disease control and/or international trade. The term

“zoning” refers here to a subpopulation of animals defined primarily on a geographical basis using natural, artificial or legal boundaries (Figure 1).

The term “compartmentalisation” applies to an animal subpopulation defined primarily by management and husbandry practices related to biosecurity (Figure 2). A compartment may include several actions and may have been approved for a defined disease or a series of such diseases. This is based on a detailed and documented biosecurity plan that has been created and implemented for those diseases. Thereby, the initial approval of a compartment should preferably take place in a disease-free country, region or zone before the outbreak of the relevant disease(s). This is particularly important with contagious diseases such as highly pathogenic Avian Influenza. In case of an outbreak, compartmentalisation can be used to facilitate trading.

**Figure 2:
Compartmentalisation**



Compartmentalisation can facilitate international trade.

Regionalisation problematic for breeders

Regionalisation is usually sufficient for trade within the EU and also with some third countries (worst case scenario: location in the restriction zone). Nevertheless, regionalisation is not sufficient for primary breeding companies such as LOHMANN TIERZUCHT and other breeder companies exporting from Germany.

Breeding companies must take into account the possibility of an influenza outbreak within a region in which establishments of their breeding facilities (farms, hatcheries) are located. Therefore, they must progress with the compartmentalisation of their breeding companies according to OIE standards and, together with the competent veterinary authority, define them as separate compartments of the poultry industry. At this juncture, it is

important to note that the veterinary authorities of the exporting country, which is establishing a zone or compartment on its territory for international trade purposes, should clearly define the subpopulation in accordance with the measures as described in the relevant Chapters of the Terrestrial Animal Health Code. Furthermore, they should be able to explain clearly to the veterinary authorities of an importing country the basis for claiming a distinct animal health status for the zone or compartment.

Available guidelines for compartmentalisation

The recommendations by the OIE for compartmentalisation were adopted into European law with the "Commission Regulation No.616/2009 of 13 July 2009 implementing Council Directive 2005/94/EC as regards the approval of poultry

compartments and other captive birds compartments with respect to Avian Influenza and additional preventive biosecurity measures in such compartments".

Meanwhile in Germany, a federal state/federal republic working group was set up which will soon meet members of the exporting poultry breeding industry to work on the realisation and implementation of this directive. Nevertheless, it is expected that even after the establishment of such compartments, it will be very difficult for poultry breeders in Germany and other Member States to gain acceptance from third countries for such compartments.

Countries that already do not accept regionalisation within an exporting country where an outbreak has occurred – even if the outbreak is several hundred kilometres away – will certainly not agree to compartmentalisation if the outbreak is possibly only 30 kilometres away.

However, in Germany work still needs to be done on the implementation of EU Regulation No. 616/2009, in order to ensure competitiveness in international trade. Here, there is unanimity amongst exporting breeder companies that the requirements of EU Regulation No. 616/2009 are insufficient in many respects with regards to assuring and clarifying the biosecurity measures within a compartment to third countries. It will, therefore, depend critically on the implementation of the EU regulation to gain the confidence of third countries regarding the establishment of poultry farming compartments for international trade.

Successful return to the market with Rancho Grande

Comeback for LSL-LITE in Mexico

After a two year interruption due to an import ban on breeders from Europe, Rancho Grande has filled its farms with LSL-LITE.

The year 2006 will be remembered as the year of the Avian Influenza. In order to avoid an outbreak in Mexico, its government took severe preventive measures banning all kinds of imports of poultry breeding stock from any European country. Since then, only imports from USA and Chile are allowed.

Thanks to the purchase of a new Grandparent farm in Clinton, Michigan, LOHMANN TIERZUCHT was able to deliver again to Rancho Grande up to 90,000 LSL-LITE breeders on a regular basis.

Rancho Grande's growth plan

With renovated energy and confident expansion policy, now that our deliveries are assured, Rancho Grande has increased the capacity of the layers farms to 3,000,000 layers producing more than 6,000 cases of 360 eggs per day.

The breeders farms count with two rearing and six production units located in a very isolated area far away from any other poultry farm and are operated under strict biosecurity measures with well trained professional staff.

Since Rancho Grande is also selling DOCs to the market, around 70 % of its production, the capacity at the hatchery will be increased to 11 million DOCs in order to meet the increasing demands of Mexican farmers not only in the Pacific Coast, but also in other important regions such as Jalisco, Monterrey and Puebla.

Mexican market

LOHMANN TIERZUCHT will assist Rancho Grande in all of its marketing activities to regain the position that LSL-LITE had already achieved in the Mexican market before the import ban was implemented.

Mexico, with a population of more than 111 million people, a production of around 39 billions of eggs per year and 22 kg per capita consumption, is the most important egg market in Latin America and is ranked fifth among the leading countries world wide.

With a fast growing population which also holds an increasing buying power, this market is bound for continuous growth and is expected to surpass Japan in the near future.

Rancho Grande is committed to top quality

From the breeder farms and hatchery, where high biosecurity standards are implemented in order to produce chicks of the very best quality, to the layers farms where extreme hygiene, excellent nutrition and good management are a must, Rancho Grande is committed to always deliver products of top quality.



The table eggs are distributed with own cooled trucks that proudly announce the high value of their freight.

The main goal is "to produce the best table egg in the Mexican market through selected quality norms in all processes with first class human resources". With three egg brands: Rancho Grande, Avico and Senda distributed by 11 centres located in the states of Sonora, Sinaloa, Baja California and Distrito Federal, Rancho Grande is achieving this goal with our LSL-LITE product placed in five different production sites (Cd. Obregón, Hermosillo, Navojoa, Guaymas and Los Mochis).

We wish Rancho Grande a huge success and are very grateful for the patience and fidelity demonstrated towards LOHMANN TIERZUCHT during this involuntary interruption period.



Seminar by LSK Poultry Oy in Finland

Know-how transfer in the far north

In mid January of 2010, a team from LOHMANN TIERZUCHT extended its know-how expertise to its Finnish customer, LSK Poultry Oy, at a customer seminar organised by the latter.

The team from LOHMANN TIERZUCHT that set out for Finland consisted of the Area Manager, Niels Fischer, the Head of Technical Services, Dr. Hans-Heinrich Thiele and the Nutritionist, Robert Pottgueter. To make the trip as efficient as possible, the experts visited a couple of egg producers, who had requested technical support, as they made their way to LSK Poultry. The LOHMANN team was once again able to confirm that the performances of LOHMANN LSL in Finland are of very high standards.

Seminar with substance

Sanna Muurama, Managing Director of LSK Poultry Oy, welcomed more than 100 interested guests to the company's seminar. The topics for the lecture had been agreed in advance between LSK and the LOHMANN staff. In his presentation, Robert Pottgüter focused on various aspects of feeding. He also responded to the question of how a market-conformed egg weight can be influenced by management and feeding as well as how good shell stability can be maintained in older flocks. The presentation and discussion of feed sample analyses that LOHMANN TIERZUCHT carries out for

LSK in line with its technical services, always provide very good pointers to solve various problems, according to Pottgüter.

Participants eager to discuss

In his presentation, "Who is who in the primary breeding of layers", Niels Fischer seized the opportunity to introduce the EW Group and its versatile activities. Furthermore, he also described the most important breeding goals in the



Feeding was a main focus at the seminar.



The LOHMANN TIERZUCHT experts visited various egg producers who had requested technical support.

genetic work being done by LOHMANN TIERZUCHT to the participants.

"Data from various international, neutral performance tests, consistently prove the high quality performance of LOHMANN breeding products", Fischer emphasised.

Dr. Hans-Heinrich Thiele provided many practical tips and advice on the subject of "The General Management of LSL Layers" to the interested and keen participants. Key aspects of his presentation included the distinctive feature of alternative housing systems in terms of minimising floor eggs, the optimal feeding system and the specially adapted lighting programme. He focused particularly on the differences in vision between humans and birds, and the possibility to consider this factor in reproduction and performance with variable, seasonally adjusted lighting applications.

The speech by Dr. Thiele was followed by a presentation on current developments by the Finnish poultry association. A recitation by a well-known Finnish poet was the cultural conclusion to the event.

Sanna Muurama was obviously very happy with the well-attended and successful event with some very intensive in-depth technical discussions. As a service-oriented company, LOHMANN TIERZUCHT will continue to provide technical support services to LSK Poultry Oy as well as other customers in the future.

HasTavuk-Seminar in Antalya

The table egg in focus



April, from 15th to 18th, 2010, HasTavuk and LOHMANN TIERZUCHT organised their third seminar for the table egg sector in Antalya (Turkey), with around 500 experts taking part in this high-profile event.

The seminar of LOHMANN TIERZUCHT and HasTavuk, distributor of LOHMANN BROWN and LOHMANN LSL Layers, was held in the prestigious Baia Hotel in Antalya on the Mediterranean coast. Representatives from all branches of the table egg business came to the meetings. More than 500 people, accounting for more than 80% of the domestic table egg producers, attended this highly successful event. After previous meetings in Bursa in 2007 and Alanya in 2008, the seminar has become a highlight for exchanging ideas and providing new insights into the Turkish table egg industry.

Concentrated expertise from research and practice

The first day of the seminar was led by Professor Dr. Rveyda Akbay, former President of the World Poultry Science Association. Dr. Hans-Friedrich Finck, General Manager of LOHMANN TIERZUCHT, gave a presenta-

tion about the company and showed the milestones achieved in recent years. As a leading member of the Erich Wesjohann Group, LOHMANN has established itself as the industry leader in table egg layer type genetics. The newly established vac-

cine plant for autogenous vaccines and expansion of the vaccine egg/SPF egg production, have added a new chapter to LOHMANN's success story. Robert Pottgueter, nutritionist at LOHMANN TIERZUCHT, introduced the importance of sound nutritional practices for the development of layer pullets. More than 95% of egg producers in Turkey mix their own feed. Particularly in times where feed costs

Turkish table egg production – consumption		
	Egg production (in Billions)	Egg consumption (No./Person)
2005	8.4	115
2006	8.4	114
2007	10.5	149
2008	11.2	157
2009	11.9	164

Table egg layer farm size (2010)		
	Number of birds per farm (*1,000)	Percentage of total egg production
	below 150	12
	150– 400	57
	400–750	20
	750–2,000	11

are increasing, awareness of correct nutritional composition of feed is paramount. He also emphasised expressly the importance of correct feeding to maintain strong egg shells, especially towards the end of the laying cycle. Dr. Matthias Voss, senior veterinarian at LOHMANN TIERZUCHT, presented a paper on biosecurity on poultry farms as an essential tool for safeguarding the health of birds. He also addressed specific items related to disease prevention.

Organic use of poultry manure

Area manager, Ron Eek explained how egg producers worldwide tackle the problem of poultry manure. In Western Europe, farmers place biogas installations to generate electricity thanks to the payment of generous government subsidies. In the Netherlands, poultry producers, supported by the relevant ministry are constructing the world's largest power plant operated by poultry manure. By far the most cost effective way of processing this product is through composting, as practised in most parts of the world. Due to the strong growth in poultry production in Turkey in recent years, and the emergence of increasing environmental restrictions, farmers in Turkey must also face up to the challenge of finding solutions for manure-related problems which are becoming increasingly numerous. The first day was completed by Mr. Müjdat Sezer, who presented a paper on current production costs in Turkey and cost analysis as a useful tool for improving financial results.

Leading government officials as speakers

On April 17, Mrs. Derya Pala, President of the Turkish Egg Producers Association, chaired the seminar. Mrs. Pala led discussions alongside leading authorities from the Turkish egg industry. Mr. Du-

rali Kocak, Assistant General Manager of the Department of Protection and Control under the aegis of the Ministry of Agriculture, described the application of control processes in the poultry industry. An interesting medical paper was presented by Prof. Dr. Bingur Sönmez, Department Head of Cardiovascular Surgery at the Memorial Hospital. The Professor addressed the lack of information and incorrect perceptions by consumers regarding the beneficial effects of eggs on human health. Dr. Hüseyin Sungur, General Secretary of Yum-Bir – an organisation for data collection and the promotion of egg consumption – discussed the situation of the Turkish egg sector. Mr. Sahin Aydemir, GM of HasTavuk, addressed the various goals and objectives of the Turkish egg market, followed by a paper from HasTavuk's financial manager, Aydin Bayraktar, on the issue of controlling finances at farm level. After some lively discussions, the event drew to a close with an excellent gala dinner, live music and extensive Turkish folklore.

Turkey amongst the Top Ten

Turkey is in the top ten global egg producers; egg production outweighs domestic consumption and so the government is supporting activities by the poultry production board to improve domestic consumption through increasing consumer awareness, advertisement campaigns and egg branding measures. All stakeholders in the table egg business should be involved so as to further improve the reputation of Turkish eggs, especially traders and intermediaries who occupy a key position. After the Avian Influenza (AI) crisis which hit the Turkish poultry sector in 2005, table egg producers have gained in professionalism and increased quality and capacity. Most leading egg producers have quality standards and

state-of-the-art technology comparable with European cage-egg production.

Ideal Partners

HasTavuk and LOHMANN TIERZUCHT are complementary partners; both following identical business principles:

- no compromise over quality (control);
- state-of-the-art production facilities;
- high professionalism and experience of staff;
- targeting maximum customer satisfaction.

LOHMANN TIERZUCHT is proud to have a high profile partner like HasTavuk, who not only serves customers with top quality layer chicks, but is moreover heavily involved in trying to find solutions to the problems faced by farmers in an increasingly challenging market sector.

Customer Portrait: HasTavuk

HasTavuk was founded in 1972 in Bursa city by Mr. Ismail Hakki Yilmaz, who is still active as a board member and Mr. Sedat Sezer, whose sons Müjdat and Nejat are company managers. They started with layer chick distribution followed by broiler chicks in 1983. Over the years, they have established themselves as the industry leader for chick supply and have expanded business activities to include layer pullet (up to 5 million layer pullets annually), hatching egg production and are very active in the export business notably with surrounding countries.

At present the individual production facilities are spread over almost 30 separate locations in poultry-free areas. The main centres are located in Bursa and near Eskisehir, where HasTavuk possesses breeder farms, hatcheries and feed mills (cap. 30 tons per hour).

LSL Genome analysed

On the trail of genetic information

As part of the innovation cluster “Synergistic plant and animal breeding” (Synbreed) at the Helmholtz Centre, Munich, the genome, i.e. the totality of an individual’s genomic information, was sequenced from selected LSL hens.

Synbreed is a highly innovative cluster of different research groups, that combines scientific excellence with a strong focus on application. The aim of this unique network of excellent scientists from plant and animal breeding, molecular biology, bioinformatics and human medicine, is the establishment of an interdisciplinary research centre for genome-based breeding in farm animals and crops. The research assignments will focus on the functional analysis of native biodiversity, the genetic analysis of complex traits and the development

and implementation of optimised breeding strategies.

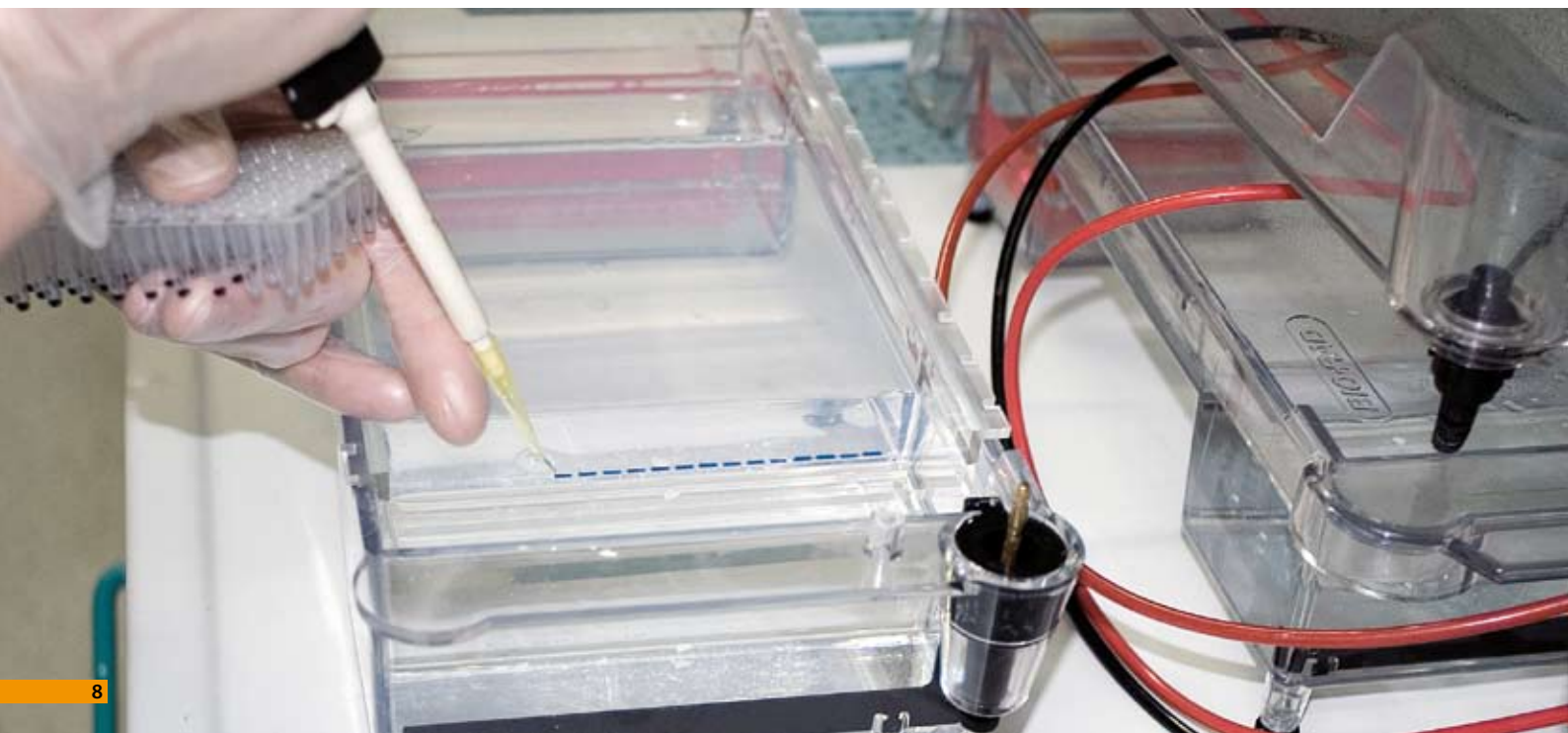
1.2 billion nucleotides

The genetic information is encoded as a sequence of nucleotides in a chain, the deoxyribonucleic acid (DNA). The nucleotides are often only represented by the letters A, C, G and T, with reference to their four different organic bases: Adenine, Cytosine, Thymine and Guanine. The chicken genome consists of approximately 1.2 bil-

lion nucleotides, which are located on different chromosomes. Where each of the nucleotides (A, C, T, G) is located at a given position was “read” multiple times for all 1.2 billion positions in the selected LSL hens using suitable biochemical methods. This ensures that all genetic information be analysed reliably.

Differences in the sequence of nucleotides between the animals provide information on regions with differing importance for the genetic predisposition of the animals. In addition to single individuals, a pool of DNA samples from different animals was selected. This work provides the basis for the identification of molecular areas, which

Quality control using agarose gel.





Preparation of lysis for DNA isolation from FTA cards.

are connected with the existing, exploitable variation in the breeding of the pure-bred population of LSL.

In a following step, a set of up to 500,000 markers (genome positions that may be exposed to different nucleotides) can be selected that can be analysed individually with the aid of the so-called "DNA chip technology". With this DNA chip, the genetic information of the entire breeding population at the selected genome positions can be recorded and compared to the performance data.

Selection assistance already available for young animals

This comparison between the genetic code and actual performance information can be derived as a selection aid for performance, quality and vitality properties. Although performance data for the

breeding animal may not (yet) be available, these selection tools can already be used for young animals and can be applied to both males and females. In a second step, the genome for the LB breeding lines will be decoded.

Milestone achieved through cooperation

The achievement of a further milestone in breeding is made possible through collaboration between the various research partners under the umbrella of the Synbreed Cluster, making use of synergies in methodology development and establishing a common technology platform to further develop these procedures over the next four years to be put into practice. The German Federal Ministry for Education and Research (BMBF) supports this project within the AgroClustErs "Synbreed – synergistic plant and animal breeding".

Award for Dr. Wiebke Icken

Excellent performance

The German Association of Poultry Science (WPSA) awarded Dr. Wiebke Icken with a prize for her dissertation. In a joint project with the Technical University of Munich, the Bavarian State Research Centre for Agriculture and LOHMANN TIERZUCHT, Dr. Icken estimated genetic parameters for the behaviour and performance traits of laying hens in group housing systems. The results show that enhanced performance testing on individual layers in floor housing gives new, important information concerning behavioural characteristics. With the specially developed Weihenstephan Funnel Nest Box it is now possible to record traits, such as nest acceptance and the length of time spent in the nest. LOHMANN TIERZUCHT congratulates Dr. Icken on her scientific performance. The young scientist will continue to support this research alongside egg quality.



Dr. Wiebke Icken (3rd from the right) was awarded a prize for her dissertation by the German Association of Poultry Scientists (WPSA).

The end of conventional battery hens in Germany

Sophisticated alternatives

Since the beginning of the year the keeping of conventional battery hens has been forbidden. Conversion or new entry into the open floor, aviary and free-range systems is difficult for many poultry farmers. To be successful in farming laying hens there is a lot to be considered, as this technical paper demonstrates.

The numbers speak volumes: in December 2008 approximately 60 % of the 33 million German-registered laying hens laid eggs in conventional batteries. In 2009, the year of the upgrading, the quantity, according to the MEG, decreased at times to as low as 26 million. 1.6 billion fewer eggs were produced in the same time period.

In the meantime, many producers pulled the plug on egg production. In April of this year, the DBV determined a reduction of around 15 % in the overall livestock population. Several companies are planning again to expand their production capacity, whilst others take up egg production as

newcomers. In 2009, the German market has a self-sufficiency rate of just under 60 percent – good conditions to invest in egg production. Whether, after the conversion and realignment phase, the previous total population of more than 40 million laying hens can be achieved or even exceeded, as some experts are predicting, remains to be seen.

In 2004, under the leadership of LOHMANN TIERZUCHT, the “Guidelines for the management of laying hens in floor, aviary and free-range systems” were drawn up. Its authors noted that the management of laying hens in floor, aviary and free-range sys-

tems compared to conventional batteries requires much more expertise. This statement also from today’s perspective must be strongly emphasised. A strong emphasis should also be given to the statement in the guideline that “before a farmer decides to keep laying hens in the alternatives to the battery housing, he should familiarise himself with the basic principles of the alternative systems”.

Mistakes are punished more severely

The early pioneers have learned from their initial mistakes and manage the “non-cage systems” almost to perfection. Their egg laying hens perform better than one could have expected of hens kept in floor, aviary and free-range systems. Newcomers, especially the “old hands” from the cage



systems that upgraded their houses at the last minute, have had to realise that the new housing systems require much more expertise, commitment and “manpower” and that errors in the adaptation and care of the animals are punished more severely by poor performance and loss of animals than would be the case with conventional battery hens. The raising of chickens in cages and their subsequent insertion into egg production was seen as being relatively easy. Meanwhile, it has become clear to the majority of laying hen keepers: a professional rearing of pullets adapted to the requirements of the future-oriented housing system is essential for economic success in egg production.

For the rearing of animals for the alternative housing systems, in addition to a good development of the body weight, it is particularly crucial for them to be able to take in enough feed and to learn to move about correspondingly in the pens. As the free and unhindered movement of the animals uses energy, hens should take in sufficient feed as soon as they arrive in the laying pen. For this, the birds learning to feed sitting on a perch is required and also they should find and accept the drinkers. At night, the animals should sleep inside, on the slats or in the systems. That is a habit they should have learned in their

nursery. Hens that sleep on the floor will also lay their eggs there. The more flexibly the animals can adjust to the different systems of the laying houses, the better they will find their way in their new home.

LOHMANN hens very suitable

The LOHMANN TIERZUCHT hens are very suitable for the alternative housing systems. This is particularly true for LOHMANN BROWN variants, but also for LOHMANN LSL's, LOHMANN TRADITION and SILVER. The great advantage of the animals is their good appetite. In recent years, through careful selection of the best feed exploiters, they have become more and more effective, so that for each kilogram of egg mass produced, less and less food is needed. Nevertheless, the “LOHMANNs” have not forgotten how to take in as much feed as is needed to cover their nutrient requirements. The decisive phase in the life of a laying hen ranges from the move to the laying house and/or the start of the egg production until about 30–35 weeks old. A wise preparation and sophisticated adaptation to this phase can help significantly to prevent problems and to improve the economic success of the farmer. In this phase of life, the animals begin to lay eggs, but must continue to grow and gain weight considerably. In weeks 8–17 of the rearing

period, particular attention should be paid to a low-protein feed, enriched with up to five percent crude fibre that promotes a good feed intake capacity in the pullets. Then the use of starter feed to adjust the animals to the high calcium content of laying feed is recommended. Only in this way can a feed intake be ensured that matches the needs of the animal during this important phase.

Problem area – litter

In spite of all efforts by the farmers, there are now problems in the floor, aviary and free-range laying hens, which were not found in conventional cages, nor are they found today in the enriched cages. It is especially the litter that worries the farmers. In summer it is often too dry and dusty, causes respiration problems and thus endangers the health and welfare of the animals and farmers. In the winter, laying hen farmers often complain about the damp litter, which is affecting the health of animals and workers, but may also result in dirty eggs. During winter weather conditions, problems occur with manure drying that, due to the low housing temperature and high humidity, which cannot be resolved with manure belt aeration. It is especially difficult in free-range facilities with open pop holes to regulate the climate in



the layer barns. Here, the manufacturers' ventilation system experts are called for. In cooperation with the layer farmers, they should search for barn specific solutions aimed at an optimal climate design. An

almost insurmountable problem seems to be that of red mite. Once the mites are present in the flock, they can pose significant problems. They are difficult to combat as they take refuge also in the litter. There

are several materials for the treatment available, which are used with varying degrees of effectiveness.

Avoid animal losses

It is repeatedly reported that through uneven distribution of the animals in the barns or nests hens are crushed to death. Particularly in the critical phase at the start of the egg production, animal losses can occur even with white egg layers. With hens that produce white eggs it was hitherto thought that, especially due to their better mobility, they would be particularly suited for non-cage housing.

Today's perspective is that even white egg layers must be particularly observed during the aforementioned "critical phase".

To prevent animal losses the following should be considered:

- The barns should be well illuminated
- Uniform climate conditions should be maintained, avoiding particularly attractive areas for hens (especially warm, without draughts etc.)

- Sufficient nest capacity has to be supplied
- Movement of the animals in the barns (feeding, patrols etc.) helps to avoid crowding.

It is generally accepted that white egg layers are more economical. Their better efficiency is due to their lower maintenance needs. White hens need less feed due to their lower bodyweight and, therefore, produce eggs more economically. For a good start the white egg layer should have the appropriate body weight and a good feed intake capacity. To them, the same applies as to their brown counterparts: those that are lightweight and cannot eat should not have to lay eggs. Where appropriate, the start for such animals should be postponed. In this case, the length of the daylight should not be increased and we must wait until the hens have reached the appropriate weight and are fit enough "for business".

A delayed start to production is often less expensive than a flock that, after 30 weeks, have lost their feathers, consume, therefore, more feed and at the end of the production cycle have "gobbled up" any advantage that may have been gained from an early egg production. Anyone seeing those naked hens in the barns would doubt whether this type of farming is so animal friendly, as is often – too often – claimed. "The white ones looked much better in the cages", is frequently reported in practice. That lightweights are more susceptible to disease and that their malaise can have a negative impact on behaviour is well known, but it is often not given enough consideration by farmers.

Lighting programmes as a challenge

One of the big challenges is the design of lighting programmes for these types



of housing systems. The fact that hens are highly responsive to variations in the length of daylight could be neglected in light proven houses with the conventional cages. Those times have changed. These days, only lighting programmes that are adjusted to the hatching of the chicks or hens will guarantee an optimal egg production performance. Too much stimulation after the transfer into the laying barn through abrupt prolongation of daylight, and very different qualities of light, in which a change from artificial lighting in the rearing house to the natural daylight of free range conditions may be considered an extreme case, illustrates the problem. To avoid errors in the light stimulation of animals, the laying hen farmer should get together early on with the supplier of his young hens to discuss the design of lighting programmes.

Increased risk of injury from pecking

The fact that laying hens peck whilst feeding to absorb the particles of the administered feed is natural. However, the animals

also use their beaks to explore other birds and to defend themselves when necessary. In the alternative types of farming, the hens peck each other far stronger, tear out feathers or even injure each other fatally. Uncontroversial among experts is that errors in management (nutrient deficiency, improper lighting, etc.), diseases and other things that influence the animals negatively, often lead to this type of behaviour. In hens, where the beaks have not been shortened, feather pecking and cannibalism lead to serious damage. High animal losses and reduced economic success are completely contrary to the efforts of waiving beak treatments in the future. Here, new methods need to be researched and discussed openly as to how we can move forward legally in the future. A complete ban on beak treatments is currently not possible, if one considers the real situation objectively.

Make contact with the animals

To manage the stock of an alternative system well, the farmers must go inside.

The principle “seeing, hearing, smelling and possibly even tasting takes me closer to the action”, applies entirely. The manure pit in the floor house, a perch in the aviary or straw bales in the winter garden are good seating possibilities, even for the farmer. “Old hands” say that “the hens will tell you whether they are doing well or not”. A person that does not make this effort or is afraid of the flapping birds is in the wrong profession. Therefore, only employees who have developed the necessary feeling for the hens should be entrusted with the care of laying hens.

It is to be hoped that the training of poultry management assistants, that once again has been intensified, will ensure the necessary supply of experts that are passionate about their chickens, and that with open eyes, ears and a good nose they will care well for their flocks. There is still a long way to go for many farmers until they understand what the pullets and layers need in alternative farming to utilise their genetic potential to the full and to ensure they can earn good money with them.



10th LOHMANN School 2010

Celebration of a round jubilee



LOHMANN School participants in the garden of Hotel Seelust in Duhnen

From April 26 to 30, 2010, LOHMANN TIERZUCHT held it's LOHMANN School in Cuxhaven. The jubilee school was again a huge success.

Even a threatening force of nature could not blur the pleasant anticipation of the jubilee school. During the ash cloud disaster in the middle of April, people

already discussed cancelling the jubilee school. The Management of LOHMANN TIERZUCHT stayed cool and waited for the normalisation of air traffic. Even with a few cancellations, due to the unsure situation, it was a high quality school with 45 participants from 24 countries. The week in Cuxhaven came to a close with the visit of a rearing farm of the franchise hatchery Gudendorf-Ankum and later the visit of the egg-processing plant Waden in Wildeshausen.

During the week in Cuxhaven the participants of LOHMANN School get a comprehensive schooling regarding the best possible management of their birds. Regional differences and local laws are always taken into consideration.

LOHMANN School is held by Dr. Hans-Heinrich Thiele who is in charge of the technical service. He is supported by feed experts, veterinarians, geneticists and members of his own team.

5th LOHMANN TIERZUCHT/H&N Hatchery Course 2010

High Quality Training

Hatchery managers from 22 countries took advantage of the courses offered by LOHMANN TIERZUCHT and H&N International to undergo intensive training.

The 5th LTZ/H&N Hatchery Course took place from 14–16 June 2010 in Cuxhaven. 35 Hatchery Managers from 22 countries received very specialised training over three days to which external specialists were invited as lecturers. Extensive topics were discussed in depth: incubation temperature and chicken embryology were included as well as the design of the hatchery and the incubator, the handling and hygiene of hatching eggs and the vacci-

nation of day old chicks. In addition to the theoretical lectures, frequent discussions allowed participants to address questions related to their own locations.

The visit to the Gudendorf-Ankum hatchery and the "break-out" made up the practical elements of this theory-focused training. On the final day each participant was awarded a Hatchery Course Certificate.

Biography: Dr. Hans-Heinrich Thiele

The Hatchery Course and the LOHMANN School are under the direction of Dr. Hans-Heinrich Thiele, Head of Technical Services at LOHMANN TIERZUCHT. For years he and his team have been active in customer service and, in line with this position, also visit the farms in order to gain insight into local problems and to support the customer with optimal care of the animals. Alongside Dr. Thiele, nine other colleagues make up the team, which can always rely on the support of geneticists and veterinarians from LOHMANN TIERZUCHT.

Trade show review Pig & Poultry Fair 2010, Stoneleigh

LOHMANN GB: Searching for alternatives



The Stand of LOHMANN GB was well frequented by trade fair visitors.

On May 11 and 12, 2010 the traditional Pig and Poultry Fair at STONELEIGH (UK) was again meeting point for lots of poultry people. Alternatives to cages were the centre of interest.

Due to the 2012 cage ban special interest could be observed in finding the best breed and technical solution for producing eggs in free range, barn, or enriched cage conditions.

The stand of LOHMANN GB in Halle 2 was extremely well frequented by lots of customers. The LOHMANN GB team with David Scott as director, Dave Welsh, Alan Berry, James Atrill and Kenny Shaw as area sales/service managers and Julia Wright as planning chief as well as Carol

Arnold with marketing responsibility were fully engaged with hosting guests and giving the latest news on LOHMANN BROWN-CLASSIC and LOHMANN BROWN-LITE. Assistance was given by Heiko Tiller of LOHMANN TIERZUCHT GMBH, Germany as sales and service representative for UK.

Both LOHMANN BROWN breeds are significantly gaining market shares in UK and Ireland. Thus LOHMANN GB recently increased again the parent base.



All members of the team were busy taking care of the visitors.

Review VIV Europe 2010

In the shadow of the volcano

Just before the start of VIV Europe 2010, April 20–23, dark clouds literally shaded the trade show event. With its gigantic ash cloud the Iceland volcano Eyjafjallajökull caused an unbelievable chaos for plane traffic.



General Manager Dr. Hans-Heinrich Finck in a discussion with a trade fair visitor.

This natural phenomenon will stay especially in the memory of the exhibitors of VIV Europe since one airport after the other had to close down. For the trade show this showed severe effects: colleagues were stranded abroad and could not return to Germany. Customers planning to attend the show had to change their plans. Exhibitors who could not get to Utrecht by car or train had to stay away. Some visitors flew to the southern part of Europe and travelled further on by car or train, others were lucky and arrived some days before the start of the show and therefore before the closure of the airports.

According to these circumstances, the numbers of visitors of this trade fair were disappointing. During the 3 days of the show, only 10,445 visitors were counted, which was roughly 50 percent compared to 2006. Of the planned exhibitors only 85 percent were present.

Video interview linked to webpage

Next to Prof. Preisinger and Dr. Finck, General Managers of LOHMANN TIERZUCHT, all specialists were present and had interesting discussions with their customers. On the second show day a film team of the organizer, VNU, taped interviews which were used by the General Managers to introduce the company and innovations. This interview has been linked to the LOHMANN TIERZUCHT webpage and can be downloaded.

In the next issue of the Poultry News, we will report on the following topics :

- **Publications:**
One year – small aviaries Report – DFE operation

- **R&D: Fugato-Brain**

- **Events: Breeder Conference Nantes, Agrena review**

- **Outlook:**
VIV Asia, March 2011

Calendar

- Space in Rennes
September 14 – 17, 2010, France

- LOHMANN School Latin America
October 11 – 15, 2011, Urubamba

- IPE Atlanta 2011
January 26 – 28, 2011, Atlanta, USA

- VIV Asia 2011
March 9 – 11, 2011, Bangkok, Thailand

- LOHMANN School Asia
March 14 – 16, 2011, Indonesia

Imprint

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Concept, text and design: 360Grad – Agentur für integrierte Kommunikation und Marketing GmbH, Leimen, www.360Grad-komm.de
Realization: Kraft & Partner, Leimen, www.kraftundpartner.com
Print office: Druckerei Wöbber, Cuxhaven