

POULTRY NEWS

2/2016

TECHNICAL

Outstanding Performances:
LOHMANN Layers above
the Standards

CUSTOMER PROFILE

Sakura & Nihon Layer
Meeting 2016

EVENTS

54TH Franchise Distributor
Meeting in Kyoto



HOW TO MAINTAIN THE GROWTH OF LOHMANN TIERZUCHT

EVEN UNDER TOUGH CIRCUMSTANCES



LOHMANN
TIERZUCHT



In this current edition of the LOHMANN Poultry News, you will receive an update on the latest seminars joined by a great number of customers from different corners of the world. Continuous genetic progress has to be supported by adjusted management and nutritional requirements on the customer level which is why we strive to reach out to you wherever you are.

The team at LOHMANN does its very best to transfer lots of valuable information to you, our customers and egg producers. Parent stock and commercials with higher genetic potential require support for adapted management in order to fully utilise the genetic potential of our birds. Genetic progress in livability and egg quality combined with effective management, will safeguard the profitability of your chick and egg production.

We hope you will enjoy reading this issue. If you have any feedback or require any further support, our team of experts is always ready to assist you.

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Sincerely,

Prof. Dr. Rudolf Preisinger
CTO Layers

Prof. Dr. Rudolf Preisinger



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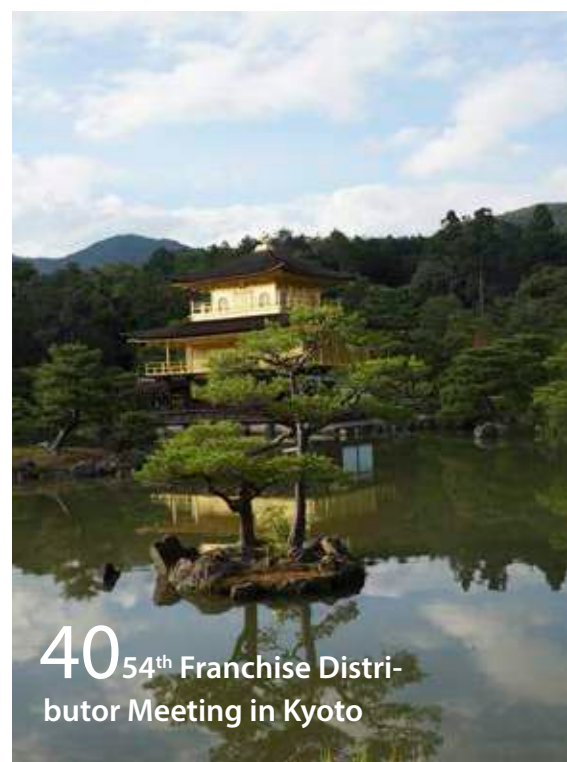
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How to Maintain the Growth of **LOHMANN TIERZUCHT** even under tough circumstances



The article, "The trend is the friend" published in the "Internal" news of the Poultry News issue no. 1/2014, showed how sales have been developing in the past 10 years, i.e. very successfully. Looking at our sales position today, 2 years later, we can confirm that the sales trend continues to be very positive despite the challenges we have been facing in various regions all over the world. Germany, Canada, the USA and France were confronted with Avian Influenza outbreaks resulting in supply interruptions or delays in shipments. Political unrest in other areas continues as well. In order to cope with the challenges, we decided to restructure the sales organisation two years ago in the interest of focusing more on customer awareness and proximity by generating regional responsibilities and competence. This was done by empowering Regional Area Managers to be the decision makers for their respective areas. Under the new sales structure, 5 regional areas were determined, i.e. the Americas, Europe, Africa, Asia and the CIS countries. Each Regional Area Manager reports directly to the Managing Director, Javier Ramírez. This new structure has already proven to be successful with the creation of new customer relations in each region and safeguarding current partnerships.

ASIA

The Asian market for table egg business has the most prospective outlook for further growth as compared to other areas in the world. The number of people in Asia is expected to grow by more than 10 % by 2020, reaching more than 4.6 billion people (about 60 % of the global population). Of course, in order to feed all these people, the number of laying hens will also have to continue to grow by at least 40 % in the years to come. A double digit growth in egg production is expected in countries like Pakistan, Bangladesh, Vietnam and Myanmar in the coming decade. At present, more than 60 % of all layers worldwide are found in Asia.

LOHMANN TIERZUCHT is well positioned to confront the challenges of the Asian market. With a team of 8 experi-

enced staff members spread over various countries in the region, we are able to increase our business every year. Special attention is given to the major players in the region: China, India, Japan and Indonesia. Needless to say, for sure we will continue to grow in other countries as well.

The Chinese tiger continues to roar

Let's have a closer look at the global "powerhouse", China, by far the most populous country world-wide.

When you review statistics of the global layer market, China is considered to be the largest market for table eggs in the world. LOHMANN strains are of course well represented in the Chinese market. Traditionally, Northern China prefers brown-shelled eggs whereas the southern states like cream-coloured and tinted eggs more.

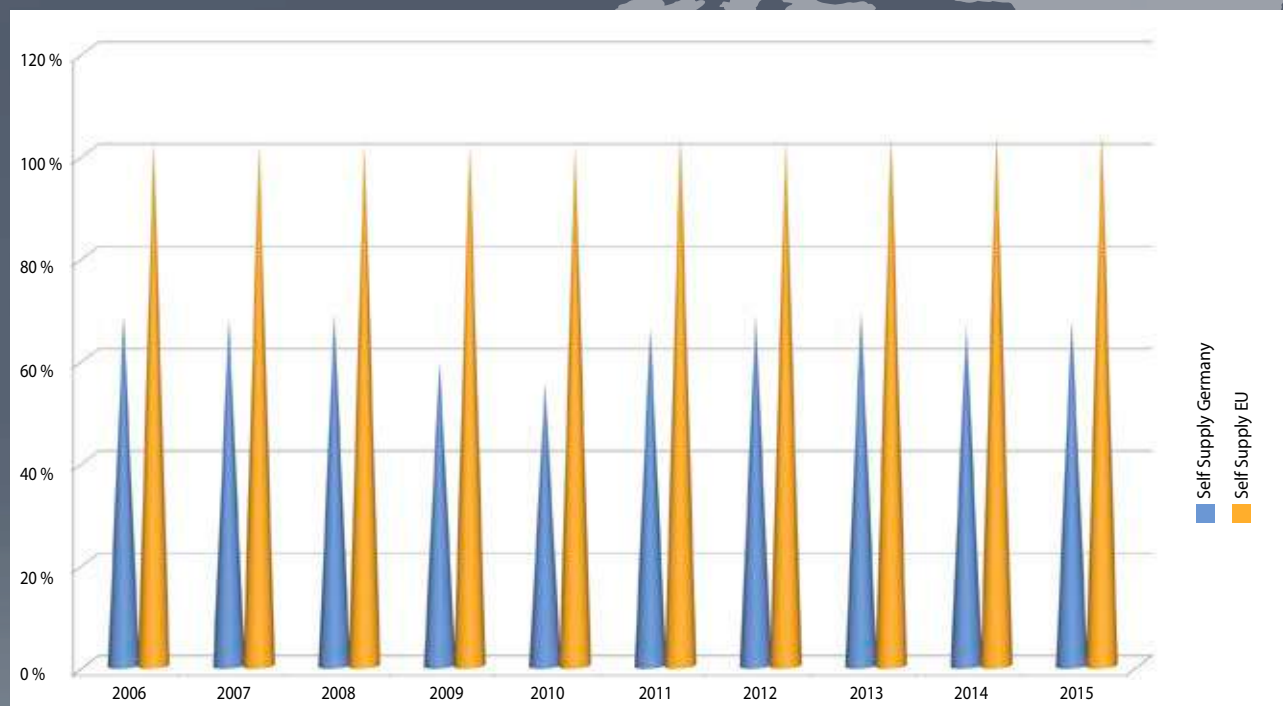
A niche market for white eggs also exists. LOHMANN BROWN, SANDY and LOHMANN LSL are amongst the most popular breeds in China. Both breeder and layer farms prefer the LOHMANN breeds much more to others. At breeder level, the excellent reproduction rate of the (grand-) parent stock is well-known. The egg producing farms appreciate the long lasting cost effective production of A-class eggs of the LOHMANN strains.

It is also well-known that besides other leading egg producing countries like Indonesia and Mexico, China is also struggling with endemic high and low avian influenza field infections. The strategies of AI vaccination and beefed-up biosecurity measures at major layer projects have proven to be effective for China. Most breeder and layer flocks perform well above international

Table 1: Human Population Development 2000 - 2030

Region	2000		2010		2015		2020		2030	
	million	%	million	%	million	%	million	%	million	%
Africa	808,3	13,2	1.031,1	14,9	1.166,2	15,9	1.312,1	17,0	1.634,4	19,4
Americas	841,7	13,7	942,7	13,6	991,2	13,5	1.037,5	13,4	1.120,1	13,3
Asia	3.717,4	60,7	4.165,4	60,2	4.384,9	59,9	4.581,5	59,4	4.886,9	58,0
Europe	729,1	11,9	740,3	10,7	743,1	10,1	743,6	9,6	736,4	8,7
Oceania	31,2	0,5	36,7	0,5	39,4	0,5	42,1	0,5	47,3	0,6
World	6.127,7	100,0	6.916,2	99,9	7.324,8	99,9	7.716,7	99,9	8.424,9	100,0

Table 2: Self Supply Germany/EU



nal standards, despite the high challenges in the field. The Chinese market is highly competitive with a handful of domestic breeding companies and the presence of all leading international layer breeding companies in the country. Foreign companies are only allowed to export grandparent stock (GPS) to the Chinese market. About 15-20 companies are licensed to keep GPs, most of whom not only produce Parent stock for sales, but also keep their own breeders for layer chick sales and some even go downstream to table egg production.

After a year of bottleneck supplies, LOHMANN was finally able to bring breeding stock to 7 companies in China in 2015/16. Our local presence has certainly facilitated imports into China following restrictions due to AI in previous years. LOHMANN has experienced staff in China and Taiwan who are familiar with local customs, language and they bring with them extensive knowledge which all customers

appreciate. Regular customer events are organized to update the staff of our customers on the latest technologies by experts from LOHMANN's head office in Cuxhaven.

In the near future, LOHMANN seeks to further strengthen relationships with existing customers and expand the market even more with the steady growth of our partners.

AFRICA

The African continent has one of the largest potential for growth world-wide as the population is increasing by more than two hundred million inhabitants every ten years. In 2020, this will represent about 17 % of the world's total population of 7,716.7 million people, according to statistics provided by the FAO. Table egg consumption in Africa is only about 2.3 kg per capita per year. Despite this, LOHMANN TIERZUCHT has been able to grow even stronger by 21 %

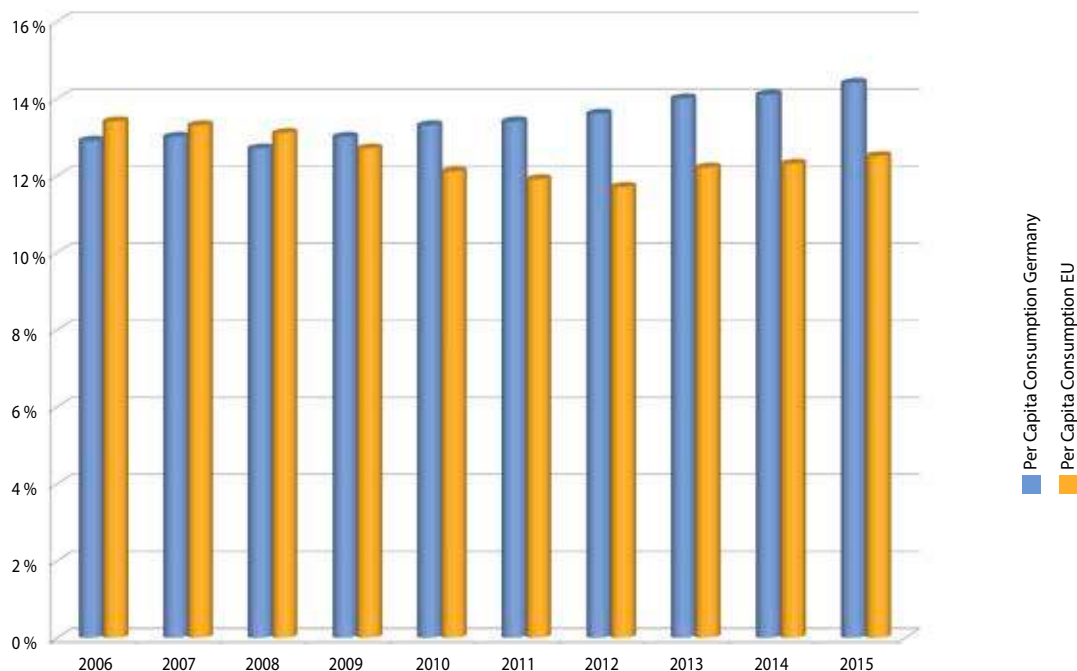
as compared to the previous fiscal year.

One of the success stories in Africa is the re-introduction of the LOHMANN breed to Morocco. A brand new parent stock project (farms and hatchery) for 50,000 chicks was built according to European state of the art standards. 25,000 parent stock have already been delivered in June 2016.

We also have significant increases in sales in Algeria, Ethiopia and Cameroon. Wadi Poultry, our Egyptian partner, is on its way back to regaining its previous strength and market share. In Ghana, our new customer, BOAHEME Farm is expected to increase our current market shares of 60 % even further.

Overall, our sales forecast for 16/17 is highly optimistic with new partners in Nigeria with more than 100,000 PS.

Table 3: Per Capita Consumption Germany/EU



EUROPE

By looking at poultry statistics like annual placements for hens, parent stock sales, egg consumption etc., Europe seems to be the most 'boring' region or if you like, the most stable market in the global overview. But then again, take a second glimpse and we will see that with its constant transition from cage to alternative housing and free range, from traditional management – as known in other parts of the world – to organic flocks, animal welfare regulations and the ban of beak treatment, we have to admit that this is the most challenging market to operate within.

This is the place where all the genetic potential is put to the ultimate tests – and they all perform very well whether LOHMANN BROWN or LOHMANN LSL - whatever the system, whatever the size of the flock and, however, the turnover of the company may be; from Ukrainian Avangard (the third biggest egg producer in

the world) to a small family business at an organic farm in Tyrol where the farmer knows all his hens by their names. It is the genetics department and research and development that keep their eyes open to any market demands, always focusing on future developments and customer demands.

AMERICA

With a strong focus on technical services, LOHMANN has been able to grow in several countries with consistent market shares through its presence in new countries and expansion of its distributor network in some others. A highly qualified sales and technical service crew that is ever present has always been accompanying the continuous growth of LOHMANN in this continent. This team is composed of 4 people geographically distributed in the area. LOHMANN promotes intensive training by means of visits and courses such as the

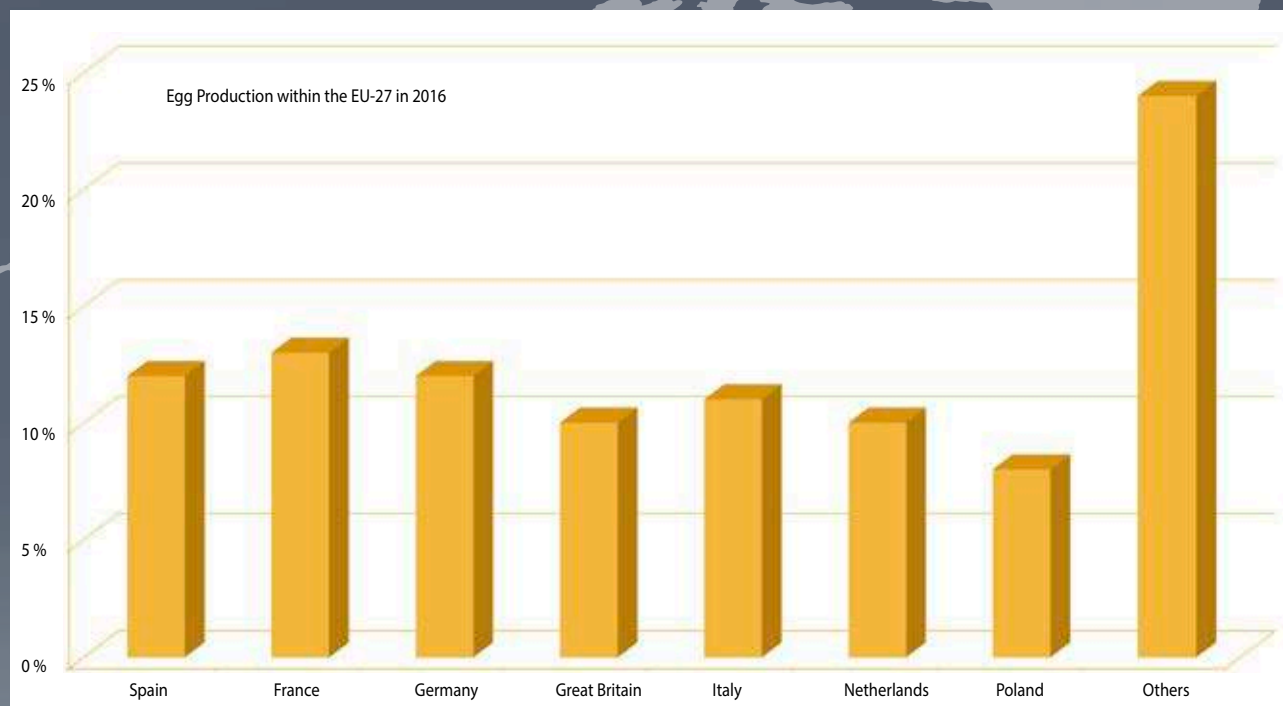
globally recognized LOHMANN School in Canada, Brazil and Guatemala in 2015 and 2016, respectively.

From North to South, we highlight the growth of LOHMANN with its own operations in Canada aimed at supporting our ever-stronger world-wide distribution capacity as well as a sales increase of 14 % within the country for 2 years now.

The increasing strength of LOHMANN birds in the U.S. is shown in impressive numbers with a cumulated sales growth of over 80 % in the last 2 years.

As one of the largest markets in the world, Mexico has also been LOHMANN's target with the latter being served by just 3 distributors now. This has been proven effective as LOHMANN has had a growth of 25 % in this country with an even higher expectation for the coming years as the new production facilities will grant customers with steady, reliable and consistent delivery capacities.

Table 4: Egg Production within the EU in 2016



LOHMANN is now present in Costa Rica and has also reinforced its presence in Guatemala 30 years later. With distribution centres in these Central American countries, logistics has become a major advantage for LOHMANN locally as Costa Rica is in the southern area and Guatemala in the northern area of the region.

Brazil is another fast growing market for LOHMANN since the start of its own operation a few years ago. Current and future market needs have driven the company to a higher level with the set-up of a new major and recognised distributor in the country.

All in all, there is a net growth of 40 % as compared to two years ago and there is still a trend of steady growth in the coming years throughout the whole American continent.

THE CIS STATES

The success story of LOHMANN TIER-

ZUCHT in Russia is not only the success of individual companies but of an entire industry. It began in the late eighties of the last century with the shipment of breeding stocks and technical support in order to develop Russia's own breeding program from which lines such as "Rodonit", "Ptichnoe" or "Kuban" arose.

In 1995, LOHMANN delivered the first parent stock to Russia. As there were hardly any direct flights, it was rather complicated and complex to ship our breeds to our first customer "Sverdlovskaya Pticefabrika" in Ekaterinburg. Since then, we have continuously increased our market shares and now supply more than 1 million parents per year to the Russian market. This special market is structured differently than the European as there are only a few numbers of breeding companies but almost exclusively large and medium sized integrators with an annual production of 200 million to 1 billion table eggs!

One particular success of LOHMANN TIERZUCHT in Russia is that 10 of the 12 largest companies are working with the LOHMANN breed. The particular advantages of our white and brown lines, both for commercials and parents, is the maximum egg production with optimum feed conversion and excellent hatchability of the parents, which ensures the economic success of our customers.

Despite the difficult political environment, we were able to develop not only our customer base, but were able to win yet another new breeding establishment like "Volshanin Pticefabrika".

The global commitment to customer focus and service in line with constant genetic progress in all LOHMANN breeds ensure the competitive edge of our customers today and in the years to come.

True to the maxim: **For every management, the right hen – for every market, the right egg.**

Michael Seidel & Sales Team

LOHMANN TIERZUCHT APPLICATION SOFTWARE

Available for iOS and Android devices



google play store



App Store



google play store



App Store



App Store

LOHMANN TIERZUCHT Application Software

The so-called "app" or application software is nowadays a part of lives of millions of people world-wide using smartphones, tablet computers and other mobile devices. Also in the modern livestock farming the apps are getting more popular as nice tools supporting farmers in the daily management. In this context LOHMANN TIERZUCHT has started to develop application software based on the specification and management of its birds. At the moment 2 apps are available for iOS and Android devices.

The Specification App

Body weight development in the rearing, production per hen/day, egg weight, livability or the cumulative eggs mass are some of the most important parameters for an egg producer to optimize the performance results. For the parent stock farmers also the detailed information on the performance, number of hatching eggs and especially saleable chickens at different ages of the birds could be some of the main parameters to have a look on that. "LTZ performance specifications app" offers a unique opportunity to compare your results with standards of LOHMANN commercial layers and parent stock including details and charts. This app is now available for Android and iOS devices on Google Play store and Apple app store.

The Lighting Program App

Sexual maturity and performance of layers are substantially affected by the length of daylight during rearing and production. In systems where pullets are kept in windowless houses without access to the outside, lighting programs can be designed in such a way that optimal rearing and preparation for the laying period are guaranteed. However, still in many world-wide light-tight houses are rare and environmental controlled houses which have been constructed during the last years are often not fully light-tight. Lighting programs adapted to specific conditions are a valuable tool in the management of highly productive laying hens. For example, it is very important to apply the appropriate lighting programs for the laying hens kept in new alternative systems such as free-range. For these kinds of housings a tailor-made lighting program has to be compiled.

"LTZ lighting Program App" offers you the opportunity to make this possible set to the season, geographical location and the date of the hatch. This app is now available for iPad tablets and can be downloaded from Apple app store.

Farhad Mozafar

More Attention to t

Water is considered as the most important, but also as the most often forgotten nutrient in poultry farming. The supply of livestock with fresh, high-quality water is one of the most important basics of modern animal husbandry.

Despite the great importance of water and the water supply for the livestock, this area is often neglected and underestimated. Thereby, poor and inadequate water quality and water supply for poultry may cause adverse effect on the health and performance of birds. Anyhow, the high genetic potential of the birds can only be utilized by feeding them with a full-value nutritious diet which surely includes also good quality and fresh drinking water.

It is not for nothing that water is considered in many cultures as the "source of life".

Important functions of water in animal organism

- In fact all chemical procedures in body proceed in water. Water is also the means of transport for nutrients and oxygen to cells and carries out the metabolism waste products away from the cells.
- Water is essential for feed intake and digestion procedures.
- Water regulates the body temperature.
- Significant parts of animal body, its organs and tissues such as the brain and the muscles are made up in large amount of water.

That is why the good quality and fresh drinking water must be always available for birds.

Water quality: What do we have to keep an eye on?

The drinking water for poultry should be the same quality as the drinking water for human use that means clean, colorless, odorless, tasteless and free of pathogens and hazardous ingredients. Although the drinking water regulations for human does not necessarily also apply to drinking water for poultry or in general livestock, it should still basically meet the requirements of the drinking water ordinance.

Table 1 shows recommended ranges for a suitable drinking water for laying hens. Exceeding these limits may cause an adverse effect on animal health and performance. In addition, the effectiveness of medications and vaccines that are administered via the drinking water could be affected because of poor water quality. Furthermore, the water system in a poultry house can be also affected by poor water quality. For example there is a risk of clogging of water system by excessively high calcium or iron contents in water and low pH values of the water may cause damages to copper pipes.

In general it is important to keep in mind that poultry and laying hens in particular are very sensitive to an excess of the recommended limits.

650^M

650 million people live without safe water.

2.3^B

2.3 billion people don't have access to adequate sanitation, one in three of the world's population.

315K

Over 315,000 children die every year from diarrhoeal diseases caused by unsafe water and poor sanitation. That's almost 900 children a day.

Some facts about drinking water for humans; Source: <http://www.wateraid.org>

Over one third (36%) of all drinking water in poultry houses is of poor quality, according to research by the Dutch Animal Health Service (GD).

According to calculation by the GD, water that is contaminated with moulds and yeasts can cost the farmer €12,000 per year (based on a farm with 30,000 layers). A bacteriological contamination of water on a farm of 30,000 broilers can lead leads to a loss of €2,000 per round.

Table 1: Recommended ranges for drinking water for laying hens

Parameter	Recommended Range *
Calcium	60 - 75 mg/L
Copper	0.6 - 1 mg/L
Iron	0.2 - 0.3 mg/L
Magnesium	50 - 75 mg/L
Manganese	0.1 mg/L
Nitrate	15 mg/L
pH	6 – 8
Phosphorus	0.1 mg/L
Potassium	250 - 500 mg/L
Sodium	50 mg/L
Sulfate	100 – 200 mg/L
Hardness	60 – 180 mg/L

* Evaluation of drinking water quality for poultry should basically meet the requirements of the drinking water ordinance for humans.

the Drinking Water!

Water Source: municipal or well-water?

Clearly the water quality is highly dependent on the water source. The water supply of poultry farms take place either through the municipal water supply or well-water. Usually the water supply through well-water is cheaper. However, it is very important to pay extra attention to the quality of well-water and its contents and any contamination with pathogens should be completely excluded. That's why well-water should be inspected at least twice a year of its germ content and physicochemical properties. Moreover, it is extremely important to pay attention to a professional sampling and analysis. For example excessive salt levels in drinking water for laying hens can cause persistent damage to shell quality and hard water with high TDS* levels may cause kidney damage.

However, the water quality via the municipal network is even only ensured until the entrance to the poultry house. The long way of the water through the whole water system in a farm may have a negative impact on the water quality. In addition, high temperatures in a poultry house along with low water flow rates and old pipeline systems offer pathogens the optimal living and growing conditions.

(TDS* : Total Dissolved Solids)



For example excessive salt levels in drinking water for laying hens can cause persistent damage to shell quality and hard water with high TDS levels may cause kidney damage.*

Biofilm: the hidden hazard

By poor water quality, high water temperatures, low water flow rate and standing water and residues of medications and vaccinations a slimy layer "the so-called biofilm" forms in water system. In addition, dirt particles, mold, algae and micro-organisms can attach to the biofilm and accumulate there. Also food particles, feces or sugar often used as a carrier for medications offer an optimal growing environment for the micro-organisms in the watering system. The biofilm affects the taste, smell and the quality of drinking water and in addition to it may have also negative impacts on the performance of the birds and cause diseases in the flocks. Bacteria protected inside the biofilm can multiply within just few hours under ideal conditions inside biofilm. Regular cleaning and disinfecting of the whole pipelines and water system in a poultry house in order to eliminate biofilm are important requirements to ensure a high drinking water hygiene and quality.



Be sure, although you don't see it, Biofilm and Mineral Deposits are almost always inside the waterlines!

Water consumption, water temperature and drinkers height

It is in general recommended to check the accurate water consumption regularly. A water meter is the best useful tool to monitor water consumption and changes in it. Sudden increase or decrease in water consumption can indicate serious health problems of the birds such as diseases or heat stress. Furthermore, it may also indicate issues with water system (e.g. leaks, air locks, residue build-ups etc.). The water consumption depends on various factors and environmental conditions and is particularly influenced by the ambient and water temperature. In general, the daily amount of water consumption increases with increasing ambient temperature.

The optimal water temperature for drinking water for laying hens is about 15 to 20° C. At higher ambient temperatures the water is also used as a tool to regulate the body temperature. Water and feed consumption are closely related: The water to feed ratio at comfort temperatures of 18 to 20° C is around 2:1. This relation increases up to 5:1 or even higher at high ambient temperatures of over 30° C. At such temperatures the birds eat less food but drink more water. In these weather conditions, it is advisable to supply the birds with cool drinking water as the hens do not drink when the water temperature is too high. Especially at housing of day-old chicks and during first days of rearing because of desired high house temperatures more attention should be paid to the water temperature. Water Temperatures of ca. 18 - 22° C is recommended for day-old-chicks in first days. By temporarily flushing of the nipple drinkers or by regular renewing of water in bell drinkers the optimum water temperature of the drinking water for the chicks can be achieved.

Moreover, the height of drinkers should be set so that the chicks can easily drink water. For sure the drinkers' height must be adjusted accordingly to the age of the birds.



The right water pressure should be always taken into consideration.



The height of drinkers should be adjusted accordingly to the age of the birds. In this example the drinker's height is too low.



The functionality of the water system among others water pipes, water reservoirs, water meter, water filters, pressure regulators, nipple drinker etc. should be always kept under review.



The output pressure of nipple drinkers must be regulated exactly. Examples for too high and too low output pressures or clogged nipples.

Water as a tool for vaccination and medication

Drinking Water vaccinations are not labor intensive but must be carried out with the greatest care to be effective. The water used for medications and vaccinations must not contain any disinfectants or dirt particles. The water system should be cleaned and water should be flushed through the pipelines before the vaccination. Especially the recommended values for nitrite, nitrate, iron and manganese which may have negative impact on efficacy of vaccines and medications should not be exceeded. In addition low pH-values may harm the effectiveness of vaccinations and antibiotics. The accurate water consumption is needed to make the right dosages of vaccinations and medications. The amount of vaccine solution should be calculated for complete consumption within about 2 hours as vaccinations via drinking water are usually live vaccines. This is also advisable to use water stabilizers to protect the virus titer to ensure the effectiveness of vaccinations. To avoid any mistakes during the application, the package inserts should be carefully studied before vaccination.

Summary

Poor water supply and lack of water intake put the quality of the food produced by the livestock under risk. Poor drinking water quality and water supply can lead to performance depressions and health problems of poultry flocks. A regular inspection of water supply equipment and water quality as well as cleaning and disinfection of drinking facilities must be ensured. At each service period the whole water system including water tanks, water pipes and drinkers must also be cleaned and disinfected thoroughly. Many poultry diseases may have their causes in poor water hygiene and quality. Generally, the importance of good quality drinking water for livestock is often underestimated. Therefore, greater attention should be paid to drinking water quality and water supply for poultry.

Farhad Mozafar



Sudden increase or decrease in water consumption can indicate serious health problems such as diseases or heat stress. Furthermore, it may also indicate issues with water system (e.g. leaks, air locks, residue build-ups etc.).



With algae clogged water filter



Ensuring good water quality for the laying hens kept in free range or organic systems is a real challenge for farmers in Europe.



Outstanding Performances: LOHMANN Layers above the standards



The current analysis of production data captured from LOHMANN pure line layers highlights the enormous potential of these hens. The observation period covers up to 102 weeks of age. During this period with more than 500 observation days, the hens' production cycle was analysed in detail. Egg numbers are recorded every day and also specifically for each individual hen.

Peak Production

Based on their average laying rate from 24 to 48 weeks of age, the layers were classified into 6 different groups. During this time, 84 % of the layers achieved an average laying performance

Table 1: Distribution of hens in terms of laying performance at the peak of production

Laying Performance (24 to 48 weeks of age)	Hens (%)
100	2
98 – 99	20
95 – 97	33
90 – 94	29
< 90	16

The categories shown in Table 1 were used to see the production development of these groups below in later stages of the production cycle.

of more than 90 %. Moreover, 22 % of the hens laid at least 171 saleable eggs in 175 days, which is equivalent to an average laying performance of at least 98 % (Table 1). This very high laying intensity is only possible by having just a few number of days without oviposition. There was even a group of layers in the flock that produced 175 eggs in 175 days, which means a performance level of 100 % over 25 weeks. Producing one saleable egg with a good eggshell, every single day, and at almost the same time of the day, is the biological limit!

Production Cycle of up to 102 weeks of age

55 % of the layers in this particular group were constantly producing above the standard throughout the entire production cycle. Even the layers in the group with a laying performance of between 90 and 94 % that were producing slightly below the standard level during the first 25 weeks, were quite persistent in laying. Consequently, in the second part of production, this group of layers went over the standard production curve. Therefore, the first conclusion is that only a small percentage of the layers in a flock, i.e. 16 % of the same, lay below the standard performance curve of LOHMANN TIERZUCHT (Figure 1).

From the first egg at 21 weeks on right up to 102 weeks of age, many layers were producing in big clutches. For 8 % of the layers, at least one clutch was bigger than 180 eggs. Laying 180 eggs in sequence corresponds to a time frame of six months in which the hen laid an egg every single day without pausing. The average laying rate of these hens was 96 % during 574 days of

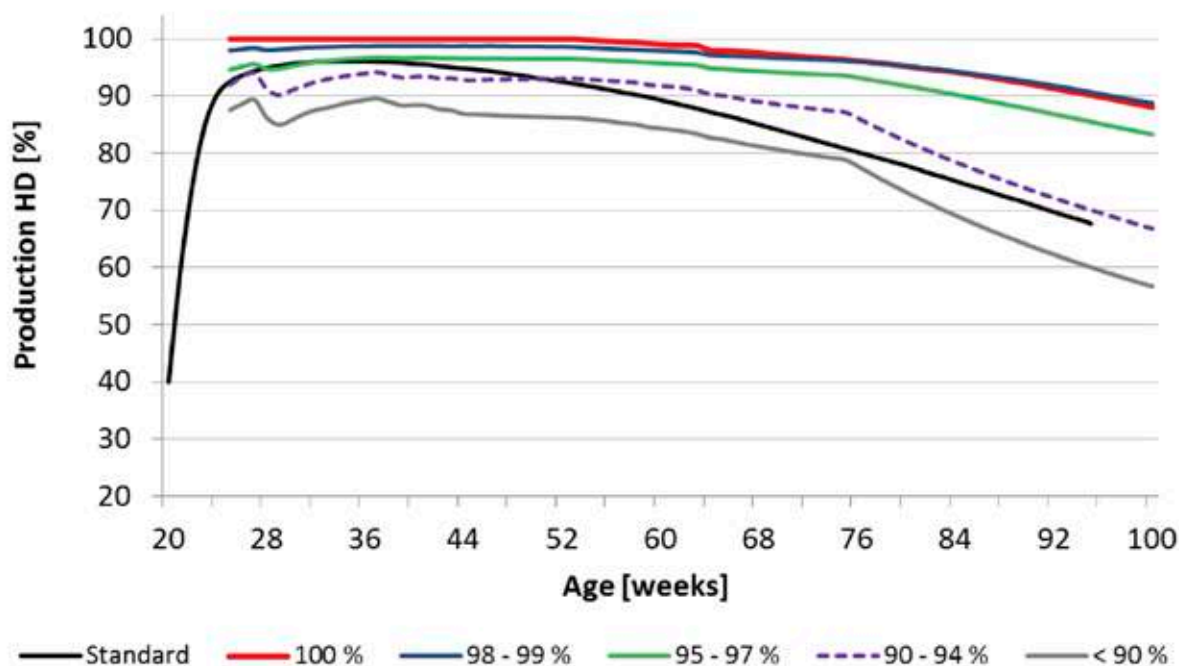


Figure 1: Laying performance curves for layers in different laying performance categories

production. A minimum clutch of 90 days, i.e. three months in a row, was achieved by 46 % of the layers. Eggs that were produced in such big clutches were even better in eggshell stability than eggs that were produced in smaller clutches (Table 2). Additionally, there was a group of 3 % of layers in the flock that had a very irregular laying rhythm with less than 30 eggs in one sequence and a distinctly smaller egg weight than the average. It seems like these layers could not find an optimal laying rhythm. To sum up, the majority of the layers (i.e. 97 % of the flock), were laying eggs in clutches of more than 30 eggs on a very high level of egg quality.

To highlight the outstanding production level of LOHMANN layers, the average and the range of the maximum clutch size for the different production groups are shown in further detail in Table 3. As it can be seen, there is a great variation in the largest clutch of individual layers within the different production groups. Layers that produced at their biological optimum during the peak of production, reached clutches of up to 400 eggs. Laying 400 saleable eggs in 400 days is hard to beat. However, there were also hens that had an excellent average laying performance of more than 98 % with a variation in their biggest clutch size ranging from

Table 2: Average laying rate and egg quality traits in regard to the biggest clutch of a hen

Biggest clutch of a hen between 21 to 102 weeks of age (574 days)	Hens (%)	Laying rate (%)	Egg weight (%)	Breaking strength (N)
> 180 eggs	8	96	63.7	49.9
90–180 eggs	38	94	65.2	49.3
30–89 eggs	51	86	66.0	48.2
< 30 eggs	3	60	62.0	48.2

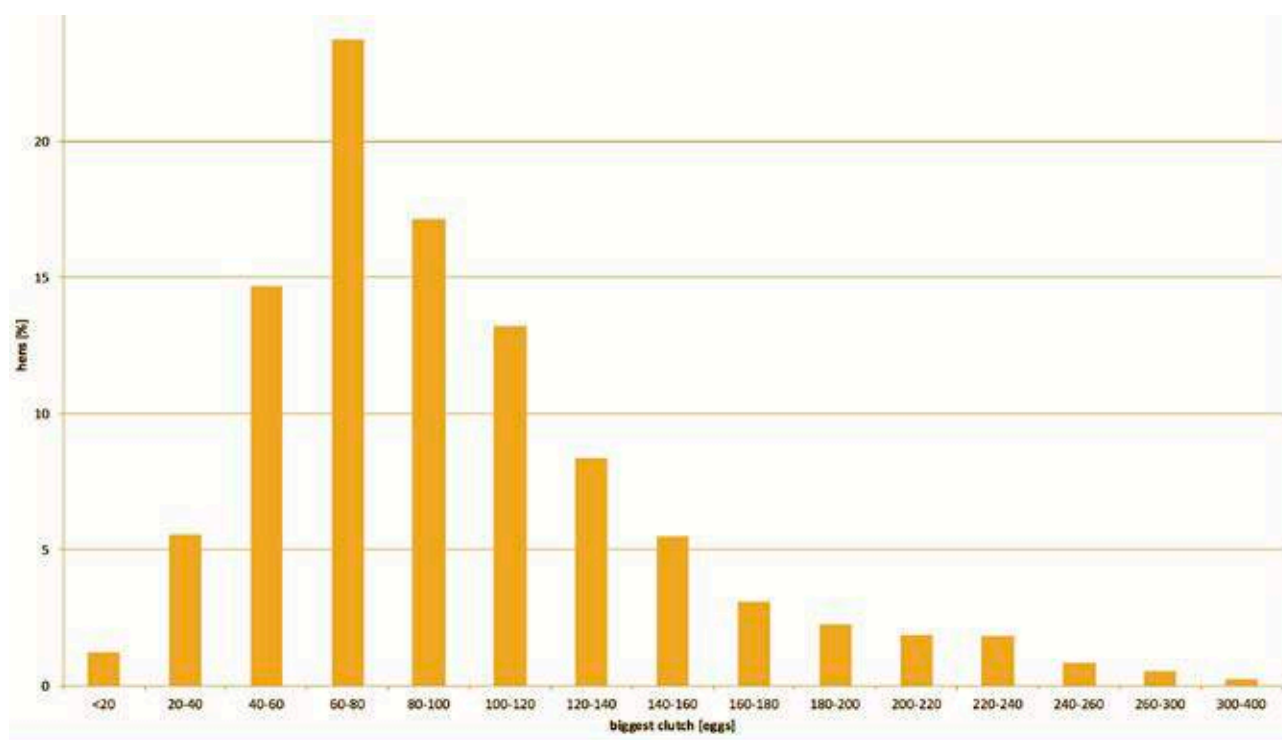


Figure 2: Distribution of hens by their biggest clutch size

64 to 343 eggs. If the biggest clutch amounted to 64 eggs, then the respective hens were producing in very constant clutch sizes. However, normally most of the layers that produced above the standard showed certain variation in their clutch sizes. Most of the hens started to lay in short clutches at 21 weeks of age and prolonged their length rapidly from one clutch to the next.

Contrary to the large clutch size, the number of days without oviposition between two clutches mainly takes just one day. Producing saleable eggs in such big clutches with only one day off in between, requires a very controlled diurnal cycle and results in

enormous laying rates that apply for the majority of LOHMANN layers.

Taking the analysed production data into consideration, it can be concluded that LOHMANN layers are prepared to lay eggs on a very high level during a long production cycle of more than 100 weeks. Most of the hens in a flock lay eggs in long clutches and only take one day off in between two consecutive clutches thereby producing one egg almost every day. To achieve this level of performance, feed and water have to be supplied in a very consistent quality and amount every day.

Dr. Wiebke Icken

Table 3: Variations in the biggest clutch of individual layers in different performance categories

Average laying rate between 24 to 48 weeks of age (%)	Hens (%)	Maximum clutch size in 574 days of production		
		Mean	Min	Max
100	2	244	206	400
98-99	20	143	64	343
95-97	33	104	38	367
90-94	29	73	24	225
< 90	16	54	16	200



30th Anniversary of Bounty Fresh & the 4th Bounty School





The 4th Bounty School organized by Bounty Farms Inc. and supported by LOHMANN TIERZUCHT, was held in Kimberly Hotel, Tagaytay City in late March 2016. It was an event combined with the 30th anniversary of Bounty Fresh, the brand name of the group of companies active in livestock, meat, eggs and feed in the Philippines which was founded by the Chen family.

Bounty School is one of the most anticipated events that is organized by Bounty Farms Inc. on an annual basis to strengthen the partnerships that they have with their key customers. The event received a good response from Bounty Farm's commercial layer customers and their exclusive distributors which are scattered all over the Philippines.

Relaxed Beginning

The programme started with a welcome dinner in the hotel. Everyone received a very warm welcome from Dr. Rowena Weng and her staff. The latter is in charge of the layer/breeder department and technical service.

The next day, the participants were treated to an outing to the Taal Lake. The fun filled day started with a quick boat ride through the deep blue water of the volcano crater that formed the famous Taal Lake. It was a surreal experience as we 'sliced through' the calm water heading to the dormant volcano in the middle of the lake itself. After reaching the shore, the guests went trekking on ponies to the top

of the hill to enjoy the panoramic view. After this adventure, all the guests were treated to a sumptuous dinner.

Time for Lecture

The school continued with the lecture series with 4 speakers from LOHMANN TIERZUCHT who shared their technical know-how on topics carefully selected by Dr. Weng for the benefit of the audience.

Mr. Edwin Chen, the Managing Director of Bounty Farms Inc., gave a warm welcome to the guests and thanked everybody for the great support throughout the years and for making Bounty the market leader in the egg industry in the Philippines.

LOHMANN Specialists rose to speak

Ron Eek, the Regional Area Manager of Asia, started the seminar discussing about "The Economics of Layer Farming: Attaining the Best Income Over Feed Cost (IOFC)". This topic highlights how efficient the LSL-EXTRA layers are and why this line is specially developed for the Philippines market. The commercial layer farms can be assured of good profitability when keeping LSL-EXTRA because it is an efficient layer with excellent egg shell strength.

Robert Pottgüter, nutrition specialist, followed with a presentation on "Updates on Feeds and Feeding". In this topic, Mr. Pottgüter shared on how to feed our LSL-EXTRA layers for good performance and good egg shell quality with the audience. The customers gave a good response and

numerous questions were asked on how to improve the feeding management in their farms.

The third speaker of the day was Dr. Atoussa Mazaheri, veterinary specialist. She enlightened the audience with her talk on "Complex Respiratory Disease", a practical approach to vaccination on the farm and how to keep respiratory diseases under control. This topic received a good response due to last year's NCD outbreak in the Philippines, and in the future, the commercial farmers can be more prepared to combat this disease.

Lastly, Dr. Ling Ling Chuah, sales and technical service for the Philippines, talked about "Evaluating Egg Quality: Keeping the egg fresh". This topic focus on general ideas on how to market eggs and to keep the eggs fresh and prolong the egg shelf life for sales.

Congratulations & a big Thank-You

The event ended with special thanks from Mr. Edwin and his team. We at LOHMANN TIERZUCHT would like to congratulate Bounty on their 30th anniversary and thank Bounty for their great support, a strong partnership with LOHMANN TIERZUCHT that started in 1999 and still continues to this day and for making LSL-EXTRA the most popular breed in the Philippines. We look forward to the coming 5th Bounty School that will be held in March 2017 where Cagayan De Oro, a city famous for its white beautiful beaches, will be the host.

Dr. Ling Ling Chuah



Sakura & Ni

For more than a decade now, LOHMANN LSL (called JULIA in Japan) is by far the most popular white eggger in Japan. Japan is a major egg producer ranking in the top 5 of the global egg industry. Of the 65 million white layers, more than 85 % are JULIA-CLASSIC and –Lite. A network of more than 20 hatcheries distribute layer chicks in the different regions of Japan. Ghen Corporation is a subsidiary of the EW Group which imports LOHMANN GPS and sells more than 1 million breeders to their customers every year. Good service, top quality and reliability are extremely important for Japanese customers. Therefore, LOHMANN TIERZUCHT pays much attention to providing active support to their customers by organising seminars and technical visits regularly.

Cherry Blossom – Sakura

Cherry Blossom, otherwise known as Sakura in the Japanese language, holds a very special place in the Japanese art and culture. The Cherry Blossom season is very famous and well anticipated not only by the Japanese people, but also by tourists from all over the world.

In April of this year, Ghen Corporation held its annual Sakura Meeting. The meeting was well attended by all of Ghen's high profile and loyal JULIA-CLASSIC and JULIA-LITE Parent Stock customers from all over Japan.

LOHMANN Experts speak on Experience

Dr. Matthias Schmutz gave an update on the genetic progress of the JULIA-CLASSIC and JULIA-LITE strain and its performance. Afterwards, Ron Eek shared his presentation on the management for layers and breeders.

Before the meeting ended, a Q&A session was held. The audience sent in the questions which were answered by the LOH-

MANN TIERZUCHT panel. The meeting ended with traditional Japanese lunch boxes that were well enjoyed by all the guests including the speakers from LOHMANN TIERZUCHT.

Nihon Layer Meeting

Subsequently, during the Nihon Layer Meeting, Dr. Matthias Schmutz and Ron Eek presented the topics that were shared during the Sakura Meeting. Dr. Ling Ling Chuah shared her presentation "Review of the Asian Layer Industry".

Blossoming Conclusion

After the completion of the lecture tours, a barbeque was organized in Sano hatchery to enjoy the Sakura season. A beautiful panoramic view of the Sakura blossoming coupled with excellent Japanese food and good interaction with all the colleagues at the barbeque, was worth the efforts taken earlier on.

Dr. Ling Ling Chuah

hon Layer Meeting 2016





HASTAVUK SEMINAR

April 2016

From April 21st – 24th 2016, the members of the board and the team at HasTavuk hosted more than 200 guests at the conference center of BAIA OTEL-LARA in Antalya. The participants included laying hen farmers, representatives of the Turkish Ministry of Agriculture and other significant players in the Turkish layer industry.

Successful Start

The first day began with a welcoming speech by the General Manager of HasTavuk, Mr. Sahin Aydemir and Mr. Javier Ramírez, Managing Director of LOHMANN TIERZUCHT.

After providing a brief overview of HasTavuk and its developments, Mr. Mujdat Sezer, a shareholder of the company, highlighted the fast development of the poultry market in Turkey during the last years. The technical and marketing part of the program was presented by the following:

- 1) Ekrem Temel Yücesan, Area Manager and Company Veterinarian at HasTavuk, described the "Different Approaches for Healthy Production", with special attention on the rearing period and biosecurity measures.
- 2) Robert Pottgüter, Nutritionist at LOHMANN TIERZUCHT, gave recommendations on "How to improve the profitability of lay-

ers when feed quality has been ensured".

- 3) Dr. Schmutz Matthias, Geneticist at LOHMANN TIERZUCHT, highlighted the "Recent genetic advances and needs to be done to get the best results from LOHMANN Layers".
- 4) Julian Madeley, IEC General Manager, presented the "Global Opportunities and Challenges for the Egg Industry"

Fantastic Conclusion

Closing the event, both Mr. Sahin and Mr. Müjdat thanked their customers and partners for their loyalty and assured them about the HasTavuk's determination to develop further with LOHMANN breeds in order to better meet their needs. The event was rounded off with a fantastic gala dinner held in the beautiful gardens of the Baia Otel.

Mohammed Chairi Ben Hilma



LOHMANN TIERZUCHT at China Animal Husbandry Expo & China Layer Market 2016

The China International Animal Husbandry Expo (CAHE) is usually held in different cities every year. This year's largest livestock show in Asia took place in the Chinese city of Shengyang from May 18th – 20th. LOHMANN TIERZUCHT was represented by Messrs. Zhongfeng Qiao and Chien Ming Wu both in charge for sales and service in the fast Chinese layer market. This grand expo is by far the most perfect platform for all of LOHMANN's Chinese customers to interact with each other on the latest market information and techniques.



A Highly Successful Exhibition

In 2016, CAHE attracted a total of almost 162,000 visitors and 1,200 exhibitors from nearly 40 countries. The size of the exhibition reached a new record with a perimeter of 120,000 square meters. Several embassies and international organizations set-up their national pavilions in CAHE, including the several EU countries, Canada and the USA. Nearly 150 internationally well-known companies from the USA, Germany, Australia, South Korea, Japan, Israel and Turkey also took part in CAHE bringing it all to an international participation of more than 20 %.

Chinese Layer Market – Structure

Before 1978 table egg production on a professional scale was insignificant in China, most eggs were produced in small sized

backyard farms, with eggs always in a short supply. Since then the country reformed and opened up. The egg industry developed rapidly and since 1984 China has surpassed the USA to become the world largest egg producer. In 1988 production was more than 20 million tons (40 % of the global egg production) and showed as steady annual growth to reach more than 400 billion eggs (26 million tons) nowadays.

Due to the numerous import bans, China suffered from a huge supply gap for breeding stock in 2015. LOHMANN was able to be one of the first to supply GPS to their customers from early 2016 onwards. LOHMANN's total market share in China is about 30 %. The remaining market shares are divided Hy-Line, ISA-Hendrix and some local breeding companies. The total annual quantity for the imported of layer GPs into the Chinese market stands at about 200,000 chicks. Each year more than 12 million parent stock day-old-chicks are placed in order to produce the required quantity of nearly 1 billion commercial layers. The distribution table eggs in the Chinese market is as follows: consumers in the south prefer cream-coloured medium-sized eggs which represents 30 % of the domestic production, people in the north and east coast areas prefer large-sized brown eggs (65 %) and a few white eggs (5 %) are also sold as branded table eggs and/or vaccine eggs. LOHMANN is represented in all 3 segments with the LOHMANN BROWN, LOHMANN SANDY and LSL brands.

Chinese Layer Market - Development

Since several years several large sized modern operations have been erected with state-of-the-art equipment. Some huge projects vary in size between 1 million birds up to more than 3 million layers at a single location. More than 80 % of the production is concentrated in 10 areas near to the main urban hubs predominantly along the east coast, in the north and around the metropolises in central provinces.

In recent years China observes a rising awareness of environmental protection forcing the layer industry to make substantial financial investments in order to comply with more stringent regulations. Fortunately, China shows a stable economic development to support the required efforts. Other challenges the industry has to cope with are: health issues (endemic HPAI), highly fluctuating egg revenues for the producers, changing consumer patterns and rising feed costs. Some economic data: egg revenues (farm gate): 1.5-2.0 €/kg eggs, 40-50 €/ct/layer chick, 350-400 €/per ton of feed.

In 2016, a number of large-scale layer companies joined the National Equities Exchange and Quotations (Chinese Stock-market NEEQ) in order to attract capital for more investments. As a result, an insurance system could be set-up for the respective owners and consumers of layer business operations. The layer market of China is expected to further develop and change within this decade.

Jimmy Wu



Picture from left to right: Leomar Klassmann, General Manager LOHMANN do Brasil, Marcelo Maki, winner of Egg Quality Contest 2016 in Bastos

LOHMANN LSL wins the “Egg Quality Contest” in Brazil

LOHMANN do Brasil earned first place at the famous “Festa do Ovo” in Bastos, Brazil for the second year in a row. Mr. Marcelo Maki is the farmer who won the prize in the category for white eggs - the most disputed one. This was the 57th edition of the event in Bastos, the egg capital of Brazil, and was made up by a judging commission of 13 reputed professionals from egg companies and public science institutions in the country.

Successful LOHMANN Breed

Clearly satisfied with this outstanding performance, Mr. Maki highlighted LOHMANN birds and recalled his father, Mr. Satoshi Maki, founder of the family’s first egg farm who worked side by side with him for several years. “He left us a strong legacy of hard work” Mr.

Maki stated proudly. He also won last year’s contest with LOHMANN.

Just as happy is Mr. Leomar Klassmann, General Manager of LOHMANN do Brasil, who reinforces the slogan “Breeding for success... together”. “Being next to our customer, collaborating with his growth and evolution, gives our brand its worth”, states Mr. Klassmann.

“LOHMANN has been the fastest growing breed in Brazil during the last years thanks to the results we have achieved, our on-field technical service presence and the high level of professionalization in the egg sector. These spotlight our economic advantages when compared to the competition, assuring our customers to take confident decisions on their choice of the best breed”, says Mr. Klassmann.

Thomas Calil

POULTRY INFORMATION EXCHANGE

at the Australasian Milling
Conference, “Key Concepts
for our Future”



Our experts at LOHMANN were invited by our customer, Specialised Breeders Australia (SBA) to attend the PIX/AMC 2016 (Poultry Information Exchange/Australasian Milling Conference) held from 29th -31st May 2016. The conference took place at the Convention and Exhibition Centre in Broad Beach at the Gold Coast. The theme of this poultry exhibition was: "Key concepts for our future". More than 200 exhibitors presented their latest products and equipment at the latter. The exhibition comprised of workshops and presentations on numerous areas of special interest encompassing all aspects of the poultry industry.



General Topics

The outbreaks of Avian Influenza world-wide and the measures performed to keep this out of Australia, was one of the main topics during the 3-day event. Biosecurity is a major issue where this subject is concerned and the same appeared in many presentations during the exhibition, often with a theoretical and scientific approach. In our conversations with fellow visitors, we recognised the need for practical tools.

Other themes such as farming and feed management were often hot topics in our dialogues as well, most likely due to the recent introduction of aviary and other alternative systems in Australia. It was a great pleasure to have done this together with the experts of SBA as they have a solid understanding of the layer business in Australia.

Australian Layer Business

During the exhibition and a farm visit later that week, we got a better impression of the Australian layer business. Together with Richard Rayner (CEO of SBA) and his colleagues, we had some interactive discussions with some key customers during that week. We realised that although technique and equipment are already

available, it is necessary to have practical instructions on how to utilise these in the best practical way. We, at LOHMANN, are sure that SBA has the right expertise to give this service to their customers.

Cooperation - Past and Future

SBA and LOHMANN have been working together for 5 years now. The breed "LOHMANN BROWN" reached "Down Under" in 2011. The official market launch of this breed was at the PIX conference at Broad Beach, Gold Coast in May of 2012. The launch was very successful and LOHMANN sales are growing consistently. As a result of the growth in the Australian market SBA has already started to build a new hatchery at Rochester, Victoria this year. Plans are also on the way for the establishment of new breeding facilities. The soon to be built Rochester hatchery can produce up to 13 million chicks annually.

"We are the suppliers of these sought-after international breeds for reliable productive laying chickens", Rayner says. "We are a local company, operating for over 50 years with a strong reputation of investing in the best technology and infrastructure to ensure the safe growth of the egg industry."



With the friendly assistance of Specialised Breeders Australia (SBA)

In Harmony with Nature Eggs from the “Valley of Nature”

AKTIW is a known manufacturer and distributor of fresh eggs based in Gostków, which took a leading position in the alternative sector among egg producers in Poland. The latest initiative of the company - its own brand “Valley of Nature” - is the culmination of many years of efforts to offer consumers organic and natural products, as well as the result of in-depth observations of the food market, both in Poland and abroad.



“The company’s development cannot be reduced only to following the trends – says Adrian Wyrwiński, CEO AKTIW. First of all, we actively participate in the changes of the market, coming up with new products working hard on advertisement and promotion of healthy food. We see that consumers of eggs in Poland are increasingly inclined towards eggs from alternative systems. In this respect, we are trying to catch up with Western European countries, where barn and free-range eggs are in high demand.”

The Highest Quality

It is a young brand, an alternative offer for the conscious customer. These are eggs from barn, free range and organic. A distinguishing feature of the brand is also a place where the farm is based: the green areas of the Sudetenland, crystal clear water and unpolluted mountain air, all of which significantly affect the quality of the eggs. Consumers are increasingly turning attention not only to the volume and the price of eggs, but also their origin, type of management and quality. Valley of Nature takes the growing demands of customers into account. Full value and the product’s safety are ensured by the company’s quality control system (Egg Quality System) and the supervision of the production process at every stage. Eggs from external farms entering the packing station can be accepted only after the contract farmers fulfilled the company standards and underwent an audit organized by AKTIW.

The company is using the latest technology and the best equipment available adopting its production standards to the latest trends and EU requirements. The company is finishing building a new free range house which is going to be the first certified by KAT unit in Poland. Recently, AKTIW has also received BRC Certification.



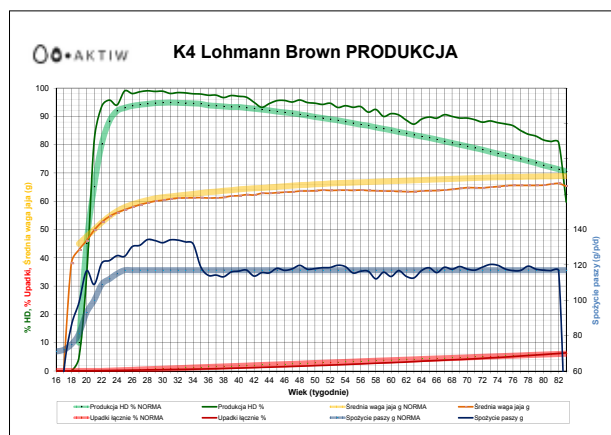
ature – ey of Nature“



From Small Egg Producer to Market Leader

It is difficult to distinguish specific moments at which the company turned from a small egg producer – one of thousands registered in Poland – to the market leader with 500,000 layers. It is the series of decisions made over the last twelve years which have led AKTIW to where it is now. Throughout this time, new and new poultry houses were added, and last year, a modern packing and sorting station was launched. A reliable supplier of LOHMANN BROWN and H&N BROWN NICK day-old chicks for many years is the well-known Dutch company Pluriton that stays at the beginning of the production process. Pluriton delivers healthy day old layer chickens and hatching eggs to more than 70 countries world-wide. Excellent quality of the day-olds of Pluriton together with AKTIW's know-how ensure the rearing losses well, i.e. under 1 % and puts a firm basement for excellent performance of the flocks up to 82 weeks.

With the friendly assistance of AKTIW





Expert Spirit all over the World – 9th LOHMANN SCHOOL Russia

LOHMANN SCHOOL Russia was successfully held in March of this year. The annual event, that took place in the capital city of Kazan in the Republic of Tatarstan, attracted more than 100 guests – most of whom were heads and specialists of our loyal poultry business partners in Russia and the C.I.S. States, delegates and members of the Agricultural Ministry as well as experts and scholars from “Rosptizessojuz” and research institutes.

Welcome

Mr. Nasip Chasipow, Deputy Minister for the Agricultural Ministry of Tatarstan, warmly welcomed our guests with an update on the status for the region. Mr. Chasipow's elaborate report on the dynamic development of agriculture was presented in an easy to understand manner and well received by the audience. The speaker also devoted a lot of time on a report about high rates of poultry farms in the region, the success of which largely depends on the land used, the service quality of the operation, and the organisation of the production.

“OOO Ak Bars”

Another partner invited to hold a speech at this year's event was the large poultry farm of “Yaratelle”, a branch of “OOO Ak Bars”. The head of this large establishment, Mr. Rischat Chismatullin, made an excellent presentation of the company that underwent ‘rebranding’ lately. Mr. Chismatullin's report consisted of much comparable and objective information on production numbers. The specialists at “Yaratelle” have been experimenting with several common breeds and hens for some time now and in the end, they made their final choice, our breeds.

LOHMANN – Traditional Overview and Future Aspects

Mr. Javier Ramírez, Managing Director (MD) of LOHMANN TIERZUCHT GMBH, took over the microphone from Mr. Chismatullin. His presentation included the traditional overview on the main trends in poultry breeding and innovations in technology that are being applied by LOHMANN TIERZUCHT (e.g. stopping the use of Formaldehyde for the disinfection of hatching eggs and using other safer disinfectants instead). The MD then went on to elaborate on the new production standards of LOHMANN's hens and explained that these have not been calculated to the maximum possible value, but rather as average values as these are based on the actual conditions of the hens. He also encouraged the audience to communicate and exchange experiences on current programmes and online technologies.

"Rosptizessojuz"

The main breeding at "Rosptizessojuz", Ms. Ljudmila Karpenko led a comparative analysis of the current situation in the country's poultry industry. Ms. Karpenko highlighted that LOHMANN's hens has the leading position with 41.7 % of the entire hen population in the country. Carrying on, she mentioned how important it is to form local breeding centres in order to guarantee an increase in effectiveness for the future of this business. The Regional Area Manager for the C.I.S. and Baltic States, Mr. Norbert Mischke, presented the construction of our first branch in Russia. The first deliveries of day-old chicks are expected to take place at the beginning of 2017. With this new development, we will now be in the position to deliver our customers with parent stock of high quality within a short and flexible period of time. Read more on this in the next issue of Poultry News.

LOHMANN - From Pure Lines to Layers

Dr. David Cavero illustrated LOHMANN TIERZUCHT's breeding programme with his presentation "From pure lines to layers", highlighting an extension of the laying period and the number of eggs. In the selection of pure lines, our geneticists take no lesser than 30 phenotypic and genotypic traits into consideration in order to obtain first class layers.



All-Russian Scientific Research Institute of Poultry

Ms. Tamara Okolelowa of the All-Russian Scientific Research Institute of Poultry, highlighted the importance of knowledgeable equalisation of rations and giving the right feed. She emphasised how important it is to pay special attention to the feed of young animals and the complexity of making corrections in this period. The professor made extensive recommendations and also reported on the prophylaxis of the birds infected by diseases that are associated with poor feeding.

LOHMANN Experts

Norbert Mischke continued with this topic and he also presented the administration of lighting programmes at the farms. This report led to lively discussions as lighting is a tool which is decisive for several activities – from regulating the beginning of production right up until combatting cannibalism.

LOHMANN's company veterinarian, Yaroslav Bortyuk, delivered a speech on the diagnostics of bacterial and viral diseases, the advantages and defects of different diagnostic methods as well as the significance of data recording and careful analysis of each research result. He also covered topics on the occurrence of Infectious Colitis (cloacal infection) and prolapse.

"Chelyabinskaya" & "Pyschminskaya"

Some of our other business partners were also invited to present their companies. The main zoo technician of the poultry farm "Chelyabinskaya", Mr. Alexander Orlov, proudly presented the production figures they achieved recently. The specialist is convinced that it is necessary to correct the rations in order to maintain the best results, without having to save on qualitative raw materials. Ms. Anna Wolodina, the deputy of the main director for feed at "Pyschminskaya", shared on how the company went without feed containing ingredients of animal origin including fishmeal. Certain risks exist with the components of such raw materials. These can include traces of synthetic and gene-modified substances. They only apply traditional methods that are regularly tested and verified from time to time.





The joint presentation on the use of probiotics in feed by Ms. Wolodina and our staff, Ms. Nina Kudrya, caught the undivided attention of the audience. Ms. Wolodina shared the positive experiences “Pyshchinskaya” has had with the utilisation of this compound. Ms. Kudrya focused more on how microorganisms work and the food of their life activity in the organism of the hens. She also had a generous review of corresponding literature in which the classes of bacteria and/or which type of compounds should be used in order to obtain the maximum results in poultry breeding. Ms. Kudrya came across conflicting data and strongly advised the audience to be selective when choosing a supplier and to orientate themselves based on the experiences of colleagues. Also it is important to perform tests/experiments on a small group of hens.

LOHMANN Sales and Technical Service

Reverting back to current problems like cannibalism, LOHMANN's Sales and Technical Service representative for the C.I.S. states, Mr. Pavel Bogatkin, stated that the basic cause for this problem is an increased number of hens in the cage. He used schematic examples to illustrate the same. Mr. Bogatkin also listed results from practical experiences on how productivity and the quality of the egg can be improved with the right type of housing. Mr. Mischke complemented this by describing how important beak trimming is to prevent this. There are no official regulations on these processes in the Russian Federation whereas beak trimming in most European countries is strictly prohibited. In line with this, the geneticists at LOHMANN are already working on an optimal length and beak form for the pedigree breeds.





The lecture programme of the seminar was brought to a close with a final presentation held by the youngest employee in the Russian export department, Mr. Ilshat Ismagilov. His slides showed an analysis of the production numbers that were obtained from our customers. This was compiled based on the rating of economies. The best of these farms received presents that are useful for the breeding of poultry. The remaining partners were presented with a memorable souvenir for their active participation in this competition.

Culture – a LOHMANN SCHOOL Must

A mesmerising tour of the oldest Russian city of Kazan rounded off the event. Guests were treated to a visit of the famous mosque, 'Qol Sharif' as well as the 'Cathedral of the Annunciation' followed by a stroll through the Kazan Kremlin. A trip to the unique Raifa Bogoro-

ditsky Monastery left behind an unforgettable and lasting impression.

Positive Feedback

We received lots of positive feedback concerning the organisation of the LOHMANN SCHOOL. The participants expressed the necessity of holding similar seminars based on the most current issues. With such seminars, the participants also have the opportunity to exchange experiences with fellow colleagues from other businesses. An official media report of this event can be found on pages 6 – 10 of the magazine 'Zhivotnovodstvo Rossii' (May 2016). There is also a video recording of the event including interviews with the participants. This can be found on our homepage <http://www.ltz.de/news>. We would like to thank our partners for their participation and are already eagerly looking forward to next year's event!

Ilshat Ismagilov



LOHMANN SCHOOL CANADA 2016 –

a great accomplishment with many more to follow...



LOHMANN TIERZUCHT Canada organized a School that was held in the picturesque Rousseau Muskoka Resort in Minett on Lake Muskoka, Ontario. The event took the form of a two-day seminar, intended to be a forum for LOHMANN distributors to share information with their customers and local producers, and a chance present ideas by experts in the field from several parts of the world, utilizing LOHMANN's knowledge base and network.

Background

Around 150 attendees participated in the meetings, from Newfoundland in the East to British Columbia in the West, around half of which were from Ontario. The event was an opportunity to showcase the latest developments of LOHMANN's Genetic Program and production centers. It also served as a venue for the exchange of information

in a relaxed and pleasant atmosphere, and an occasion for customer appreciation.

The issue of the hour in North America is the stir in the layer market caused by the continued pour of proclamations and pledges by food service and retail outlets in favor of cage free layer housing. Since Europe went through a similar experience a decade earlier, we thought it would be

appropriate to present the European experience and highlight the similarities and contrasts with the North American conditions, while keeping in mind the implications of the Canadian Supply Management system.

The meetings were moderated by Khalil Arar, the Managing Director of LOHMANN TIERZUCHT CANADA Ltd. and Area

Sales Manager for North America, who gave a brief overview followed by an introduction of the speakers. The latter also moderated the question and answer sessions.

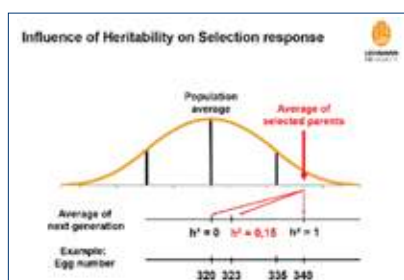
Opening

The opening speech was given by Mr. Peter Clarke, Chairman of the Egg Farmers of Canada, who outlined the position of EFC in terms of current issues and summarized the efforts by the organization to serve its membership by ensuring the availability of information and resources necessary for the sustainability of egg farming in Canada. Mr. Clarke offered his insight based on his vast knowledge, gathered through intensive contact and dialogue with all parties on every side of the issue, i.e. from welfare organizations to retail, consumer advocates and poultry organizations - both national, regional and international.

Earlier in February, Egg Farmers of Canada announced an industry-wide transition away from conventional cage housing systems by means of a collective, coordinated and market-oriented approach that will take hen welfare, human health, environmental impact and food production sustainability into account. The chairman reiterated his belief that Canadian egg producers will embrace the change even faster than the announced target dates of no more than 15 % conventional cages in 15 years, and a 100 % enriched housing, free-run, aviary or free-range by 2036.

Genetic Update

The "Genetic Update" was presented by Dr. Matthias Schmutz, who started with a description of the breeding activities carried at the pedigree farm in Canada. Dr.



Schmutz explained that the changes in housing systems in Europe and worldwide has propelled LOHMANN to select for new traits especially those related to animal welfare, using environments similar to those that selected birds are expected to experience. Traits like nest acceptance, laying off the perch, feather-pecking and beak shape/size, are now part of the selection index in LOHMANN's genetic program.

Dr. Schmutz went on to explain the influence of multiplying the number of families in the program and extending the life-cycle on genetic progress, which benefits all production programs and not only those that are longer than 85 weeks. He also indicated that he has not lost sight of the importance of the traditional economic traits, and the housing systems that are still being used in many parts of the world.

LOHMANN has risen to current challenges

Javier Ramírez, the Managing Director of LOHMANN TIERZUCHT GMBH, gave a presentation describing the way LOHMANN has reacted to the challenges the layer business has been facing in the past few years. Investments in a variety of housing systems in several locations were made to support the genetic program. Avian Influenza that ravaged the poultry industry in North America and many other regions in Europe, Asia and Africa, has wreaked havoc on world trade. LOHMANN had to diversify its supply centers to overcome trade barriers and place multiplier flocks in strategic locations outside Germany and Canada.

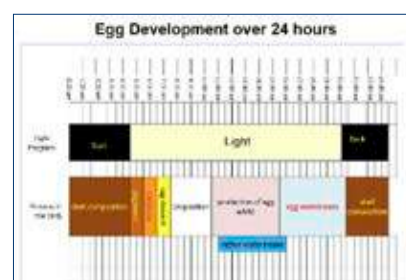
As for the main theme of the event, Mr. Ramírez reminded the audience that although traditional cages are banned in

Europe since 2015, the shift in housing systems is still on-going in response to market pressure, and it would be futile to try to predict who will be the winners and losers. As change continues, producers have to be prepared to jump in based on their own tolerance for risk.

Alternative Housing Systems Worldwide

Pieter-Jan Luykx, Area Sales Manager for Northern Europe, gave an invigorating talk on the experiences with alternative housing systems in Europe and in other parts of the world that he travels to, and focused on the issues of piling and floor eggs. He noted that these issues are seen in all breeds and are specific to each flock. Flock behavior should therefore be observed closely, to know when, where, how prevalent and what triggers the behavior.

Pieter-Jan listed a few common causes of piling that producers will need to check and eliminate. Piling results in stressful conditions that induce the birds to huddle together. Issues with nutrition, environment, health challenges, lighting etc., can cause discomfort and compel the birds to move in order to alleviate the stress or seek comfort in flock behavior. The remedy should therefore be tailored to address the trigger and eliminate the cause of stress. Sometimes, the remedy can be in the treatment



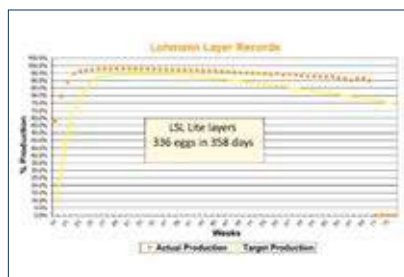
of the symptoms, as in using wood pallets to block the corners where birds pile, or playing music in the barn to dampen sudden noises that may startle the flock.

With floor eggs, Pieter-Jan highlighted the importance of bird training and attention to detail in lighting, e.g. from the type of lighting to placement, dimming, etc. Furthermore, litter condition and depth of the same, affects floor eggs on litter. He recommended litter removal using simple automated systems that can keep the litter level at around 1 inch thick.

Alternative Housing Systems in France

Mickael Pezot, the Production Manager at LOHMANN FRANCE, an organization that distributes LOHMANN commercial chicks in France, gave a comprehensive presentation about alternative housing in France. He started with describing the evolution over the past 15 years. Currently, a little over 30 % of laying hens are in free range, organic, or barn housing systems, and 70 % are still in cages, albeit enriched. He went on to describe in detail the European/French legislation governing animal welfare and poultry housing and provided several videos and images to illustrate his point.

Mr. Pezot explained that it is virtually impossible to rear a bird in a conventional cage and move it to an aviary for lay. Birds need to be trained to move up, down, and across the system and find water and feed from the early days of life. Birds would also need to develop their skeletal muscles and bone density that would allow them to fly and jump between levels and land safely. Compatibility of equipment between rearing and lay will also affect performance, as well as the proper layout of the equipment. From his experience, he went on to describe the advantages and disadvantages of some of the systems common in France. Like Pieter-Jan earlier, Mickael highlighted the importance of close attention to the laying barn at the time of transfer where birds have to be monitored closely to en-



sure their ability to move and find water and feed, and that all birds are up in the system at night-time. It does not take long for a flock to develop bad habits that can have serious economic implications.

Canadian Impression

Francois Duguay, Director of Sales and Services at Boire & Frères, LOHMANN's distributor in Quebec, presented records from his area indicating that LSL-LITE are attaining impressive peak production, topping 98 % with excellent persistency (16 wks over 98 %, and 33 wks. over 95 %), while mortality is at around 1.5 % for the whole life of the flock, thereby enabling a HH production of 345 eggs by 72 wks. of age. Francois talked about the challenges with the new housing systems that started to appear in his area and the training Boire is providing to the service staff in cooperation with LOHMANN. He also described the layer hatchery that Boire has built lately and the impressive hatchability records seen in LOHMANN lines. Biosecurity improvements with the new hatchery have enabled Boire to supply high quality chicks, with a first 10-day livability of 99.7 %.

Greg Brown, the Director of Sales and Technical Service at Archer's Poultry, LOHMANN's largest distributor in Canada covering Ontario, gave a presentation summarizing his observations from the field. LSL-LITE, which represents more than 86 % of their chick sales, is reaching 336 eggs/HH to 358 day of production, with 75 % large and x-large eggs and 3.7 % undergrads with a feed consumption averaging to 104 g/b/d.

Greg went on to describe the challenges that the new housing systems pre-



sent with respect to pullet services and the planning required to be able to raise a pullet fit for the destined layer barn system. He mentioned that from his experience, egg numbers in alternative systems are close to the conventional cage systems which Canadian producers have learned to manage well. However, livability and feed consumption in alternative systems are still a challenge.

Greg lamented the past decade and wondered what the future of egg production in Canada would be in 2050.

Animal Welfare from a European Perspective

Michael Lüke, Coordinator of Animal Welfare and Communication at the EW-Group, gave a presentation on Animal Welfare from a European perspective in which he went over the developments leading to the current situation and the focus on the following three issues: ban on conventional cages, beak trimming and the culling of day-old males in layer hatcheries. The ban

NPIP 12 Principle Components of Biosecurity	
1. Biosecurity responsibility	7. Equipment and Vehicles
2. Training	8. Dead bird disposal
3. Perimeter Buffer Area (PBA)	9. Manure and litter management
4. Line of Separation (LOS)	10. Replacement poultry
5. Personnel	11. Water supply
6. Wild birds, Rodents, and Insects	12. Feed and replacement litter storage

6. Bird Environment Management
• F L A W S
• <u>F</u> eed
• <u>L</u> ights
• <u>A</u> ir
• <u>W</u> ater
• <u>S</u> pace

on conventional cage systems has led to increased cost of production in terms of a higher perimeter of space per bird, feed consumption, higher mortality and increased egg-downgrades, in addition to the costs of replacing the equipment. Flocks kept without beak trimming had higher mortality from cannibalism, more feather loss and higher feed consumption as compared to trimmed flocks. Michael then addressed the issue of day-old male chicks and added that the present solutions talked about are in-ovo gender determination and raising males for meat production including dual-purpose breeds, both of which are not ready yet for commercial application.

Antibiotic-free Egg Production

Dr. Eric Gingerich, DVM with Diamond-V gave the final presentation about "Successful Antibiotic-free Egg Production". The drive for antibiotic-free food production has intensified lately and has succeeded in convincing several corporate players to pledge eliminating antibiotics from their food products.

Programs for successful ABF production rely on bio-security, vaccination, water sanitation, nutrition and the use of non-antibiotic products and treatments. Enhancing management to reduce stress and training of employees are important components that should not be ignored. He highlighted the importance of documentation and verification of biosecurity practices. Standard Operating Procedures (SOPs) should be comprehensive and accessible to all employees.

With nutrition, Eric emphasized on the importance of monitoring ingredient quality, the use of mold inhibitors and sterilizing products, as well as the use of enzymes to ensure birds get their nutrient requirements without impediment. Water sanitation is an important component not to be ignored. For maintaining health, probiotics, fermentation metabolites, pre-biotics, essential oils, anticoccidials and anti-mycotoxin products are non-antibiotic

products that can be used. Maintaining a healthy environment also requires attention to ammonia and dust levels in addition to temperature and humidity.

Last but not least, a good disease surveillance program is needed to ensure flock health, with Infectious bursal disease, Mycoplasmosis and Coccidiosis as the main diseases of concern in North America. Vaccinal immunity should be monitored for Pox, SE, ND, IB and AE.

Social Program

Outside the presentations program, a few other activities were organized to give the participants the opportunity to socialize and to discover the area where the meeting was held. A dinner cruise on the Muskoka Lake turned out to be a great success, the weather was perfect and so were the views, especially the sunset. The participants also appreciated the food and the relaxed atmosphere.

A few of the attendees ventured on a guided nature hike in the vicinity of the hotel, looking at some of the flora and fauna around the lake. For the sports enthusiasts, a bike and row tour tested their endurance and physical fitness. Overall, the feedback was very positive as the participants enjoyed the natural beauty of the area and appreciated the comradery.

Summary

In summary, the LOHMANN SCHOOL CANADA 2016 was a great success based on the feedback we received. Participants expressed their gratitude and appreciation for the level of professionalism of the speakers, the seriousness of the presented material and the organization of the event.

Khalil Arar





1st “Afro-Asian LOHMANN Seminar” in Thailand – a big success!

From 12th – 15th of April 2016, LOHMANN held its very first “Afro-Asian LOHMANN Seminar” in Bangkok, Thailand. This seminar was especially designed to cater to the unique needs of our African and Asian customers. It was very popular and a great success indeed, not only for our customers, but also for us.

Lectures

The 4-day program comprised of 2 days of lectures on issues surrounding “Hatchery and Incubation” followed by a presentation on “Parent Stock Management”. The last 2 days of the seminar were dedicated to “Commercial Layer Management”, “Nutrition and Feeding” and “Veterinary Topics”.

Culture

As Bangkok is a vibrant metropolis with a fascinating blend of traditional culture and modernity, we could not miss this extraordinary chance to have a guided tour of this wonderful city and made this a part of our afternoon social program.

Thank-You

We would like to take this opportunity to thank all the participants for joining us and we sincerely hope you enjoyed your stay in Bangkok together with the LOHMANN Team as much as we enjoyed having you with us!

Marketing





54th Franchise Distributor Meeting in Kyoto, Japan

Our 54th Franchise Distributor Meeting in Kyoto is now successfully concluded. It was indeed a great pleasure to meet 180 guests from 38 countries and have lively discussions and a fruitful exchange of experiences with them.

We had an interesting array of presentations such as the latest trends at LOHMANN, the Japanese layer business and the global egg industry. These topics were presented by several high-profile international experts and of course, our very own in-house specialists at LOHMANN.

As Kyoto is one of the oldest cities in Japan, the meeting programme was completed with Japanese culture and history. We also organized additional tours to Mount Fuji and a sightseeing tour of Tokyo for those who wanted to get to know Japan a bit more.

We would like to thank all of our participants for joining us and hope that everyone enjoyed their stay in Kyoto together with our LOHMANN Team!

Marketing







54th Franchise Distributor Meeting in Kyoto, Japan



LOHMANN SCHOOL 2016

in Cuxhaven and on Tour in the Netherlands!

23rd – 27th May 2016

A total of 44 participants from 25 nations accepted our invitation to attend our LOHMANN SCHOOL 2016 held here in Cuxhaven.

This year's event was divided into two parts. On the first three days, emphasis was placed particularly on the most important subjects surrounding the management of parent stock and layers, e.g. feeding, animal health and housing as well as brooding. During these days, we made it our priority to deal with these subjects interactively with the participants. The exchange of experiences among the group members is an absolute must throughout the whole LOHMANN SCHOOL.

In addition to handling technical issues, we also made sure that 'fun & leisure' did not fall too far behind. A bowling contest was held and the sweet singing voices of the participants were put to the test during our Karaoke session on one of the evenings.

An excursion to the Netherlands made up the second half of the LOHMANN SCHOOL. The participants had the opportunity to visit a state-of-the-art hatchery. Afterwards, there was a guided tour of the "Rondeel Farm" which has a special management system that is unique in the Netherlands. It gives us great pleasure to conclude that this year's LOHMANN SCHOOL was once again a successful event!

Marketing



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, block23/Shutterstock.com,
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