

DEAR AVIAN PROFESSIONALS,



this is the ninth issue of AviPro® News and the last one in 2008. It is also the last issue edited by me and, therefore, I would like to take this opportunity to thank all of you for these 3 years of enjoyable cooperation. I have really enjoyed creating this newsletter for you to keep you updated on our achievements, changes and events, and I really hope you enjoyed the reading just as much. The publication of AviPro® News will continue after my leaving, so please keep sending news, suggestions and pictures to our Marketing Department.

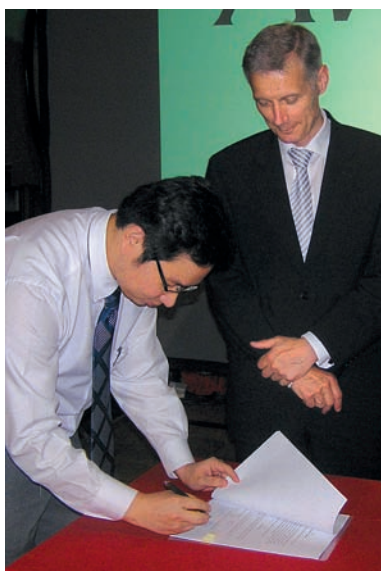
This ninth issue again comes up with lots of interesting information and exciting news from the Lohmann world. LAH is very happy to announce in this issue, that our Chicken Infectious Anaemia (CAV) vaccine AviPro® THYMOVAC finally obtained an MR registration in Europe (more on page 8). Our technical column "Ask us!" this time deals with "Crucial questions on IB vaccination" answered by our senior veterinarian Dr Thijs van Dijk (page 5).

I wish all of you the very best for the future. May our paths cross again!

Yours sincerely,
Anna-Christina Riebau
Product Manager
Marketing Poultry Vaccines, Lohmann Animal Health GmbH & Co. KG

■ BUSY YEAR FOR LAH IN INDONESIA

■ The year 2008 turned out to be a very busy and successful year for Lohmann Animal Health in Indonesia. Recently, the newly established local subsidiary PT Lohmann Animal Health (LAH) Indonesia, has launched LAH's new product brand name "AviPro®" in Lara Jonggrang Caffe, Jarkarta. Together with the AviPro® launch the company also signed a new distributor contract with Indovetraco – giving a double reason to celebrate...!



Signing of the contract – Dr Kaesler (LAH) and Mr Abadi (Indovetraco).

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■ BUSY YEAR FOR LAH IN INDONESIA



An atmospheric dinner was part of the celebration ceremony.

... More than 100 professionals from the poultry industry participated in the well-organised celebration ceremony, hosted by Dr Bruno Kaesler, Managing Director of LAH.

"I congratulate LAH and hope that there will be good cooperation, especially in the animal drug sector. Supported by experience and good quality in human resource, LAH

could become one of the major players in the poultry vaccine business in Indonesia," said Agus Heriyanto, Head of Indonesia's Animal Drug Assay Laboratory.

Lohmann Animal Health Indonesia was established in April 2008 to better service and monitor the largest poultry sector in south-east Asia. Dr Kardiman, head of the subsidiary, is responsible for a sound and professional technical service in the region. He is supported by Dr Evie, who is in charge of registrations and the local office management.

The subsidiary will work closely with LAH's new Indonesian distributor Indovetraco, a daughter company of CP (Charoen Pokhapand), whose headquarters is in Thailand.

Events/visits

■ SUCCESSFUL SHOOT FOR UK BROILER INDUSTRY

 Broiler-breeders and broiler producers representing a high proportion of the UK industry gathered in Shropshire recently for an informal clay pigeon shoot.

The event – the fifth organised by Adam Goddard, UK regional sales consultant, and UK LAH distributor, David Hodson – was preceded by a dinner, addressed by Klaus Torborg, Lohmann's director of vaccine sales who talked about factors affecting production in the UK.

items of mutual interest, such as developments affecting the poultry industry, in an informal manner," commented Adam Goddard.



The popular 100-bird shooting competition ...


Among other items, he noted that surveys had shown that UK consumers wanted to buy "farm assured" chicken, with the implied controls over management and welfare. But with sharp increases in energy and feed costs the pay for this and also getting any increased returns at retail level passed down the food chain to the primary producer. Overall winner of the popular 100-bird shooting competition was Matthew Ward of Crown Chicken Ltd, Norfolk. "Everyone enjoyed the day but the big benefit of events such as this is that it provides producers an opportunity to discuss



... was enjoyed by everyone.

Events/visits

LAH STRENGTHENS ITS BUSINESS CONTACTS WITH CHINA

 In the beginning of July, Lohmann Animal Health welcomed a group of Chinese visitors to its headquarters in Cuxhaven. The group was accompanied by LAH Area Sales Manager Scott Faul. As a welcoming surprise LAH invited the Far Eastern guests to a typical northern German fish dinner on Cuxhaven's historic waterfront.

Due to the group's special interest in vaccination against Salmonella and our live vaccine AviPro® SALMONELLA VAC E, a



Chinese visitors in front of LAH headquarters.

full, well-conceived Salmonella workshop, including a visit to Lohmann's test farm, awaited the guests the next day. On the Lohmann campus the group was also guided through the feed additive production plant by head of production, Jörg Evert.

The visitors also had a chance to see the PHW headquarters next to the LAH facilities as well as MEGA Feed and Wiesenhof processing plant (both belonging to PHW) in Rechterfeld.

Events/visits

LOHMANN ANIMAL HEALTH AT AGRENA 2008 IN CAIRO



The BPT/LAH booth at Agrena 2008.

 Agrena 2008, one of the most important exhibitions for the Middle East poultry industry, was held from 3 to 5 July at the Cairo International Conference Centre. Now in its tenth year Agrena has become the Middle East's largest and most prestigious poultry and livestock exhibition. The total exhibition area comprises 18,900 sq m indoors and 2,400 sq m outside. Lohmann Animal Health attended the show

this year together with its Egyptian distributor BPT (Bio Pharma Trading). During the whole three days of the exhibition the booth, strikingly designed with the new AviPro® layout, was busy with customers, business partners and future customers, creating a perfect opportunity to secure and strengthen business contacts, as well as providing a forum to exchange new ideas and discuss common problems. Dr Nader

Emile, general manager BPT and Dr Ioannis Mavromatis, LAH area sales manager for the Middle East were always present at the booth to welcome the various visitors and respond to their questions.

Avian Influenza, still one of the biggest problems in the region, dominated many of the conversations. LAH's live Salmonella vaccines, AviPro® SALMONELLA VAC E and AviPro® SALMONELLA VAC T, as well as the water stabiliser AviBlue® were also major topics. Thanks to the good organisation by the people on site it was a very successful event for LAH.



Products

IMPROVING SAFETY OF *PASTEURELLA* VACCINES



The poultry industry in Papua New Guinea is blessed with the privilege of being in an area fairly well-isolated from the rest of the poultry world, earning a unique sanitary status which restricts the immunisation programme to the utmost basics. The enjoyable climate of the mountains grants the birds the air quality and the comfort needed for good growth and excellent performance. Nevertheless, one of the diseases the local producers must be aware of is Fowl Cholera, caused by *Pasteurella multocida*.

Zenag Poultry, in the mountains of Morobe Province, has been using AviPro® 108 FC4, distributed by Pacificvet, in their immunisation programme. The vaccine contains four strains of *Pasteurella multocida*, emulsified into an oil-in-water adjuvant. Zenag's veterinarian Vic Jumaquio has elected the intra-muscular injection method over the registered subcutaneous in the neck. Aware of the post-vaccine reaction from injections of a *Pasteurella* bacterin, Jumaquio has a highly well-trained vaccination crew and he trusts in the IM method due to its ease and safety, for both birds and vaccinators. Injecting with 20G ½ needles, Jumaquio also warms up the vaccines in a



Vic Jumaquio injecting AviPro® 108 FC4.

water bath, up to the bird's body temperature. This method, as described on LAHI's Newsletter (volume 1, 2003) not only im-

proves injectability of the emulsion, but it also minimises the tissue reaction on the injection site.

AviPro® 108 FC4 at a glance



Description: *Pasteurella multocida* bacterin, avian isolates, types 1,3,4 and 3 x 4.

Directions for use: Vaccine should be warmed to room temperature before use. Shake well prior and during use. Inject subcutaneously in the mid portion of the neck using aseptic technique. Use entire contents of bottle when first opened. Vaccinate chickens that are at least twelve weeks of age or older and turkeys should be six weeks of age or older. Revaccinate in three to six weeks. Layers or breeders should be revaccinated at three month intervals. In the event of a natural outbreak, vaccinate the unaffected birds. Vaccinate only healthy birds.

Dose: 1/2 ml (0.5 ml) per bird. Inject all birds in flock. This product is an oil-based emulsion used as an aid in the prevention of Fowl Cholera caused by *Pasteurella multocida* type 1 infection in chickens and types 3, 4 and 3 x 4 in turkeys.

Caution: Store at 2-7 °C (35-45 °F). Do not freeze.

Products

CRUCIAL QUESTIONS ON IB VACCINATION



Dr Thijs van Dijk
Senior Veterinarian –
Technical Support

At what ages do IB infections constitute a threat to performance?

IB infections can cause economic (performance) problems in broilers, in layers and breeders in production as well as in very young future layers and breeders.

What problems do IB infections cause in breeders, layers and broilers?

In breeders and layers the disease can cause a significant drop in egg production with reduced egg-shell quality (thin or deformed shells) as well as poor-quality hatching eggs in breeders or the loss of the egg colour in brown layers. Very early IB infections, during the first weeks of life, may damage the juvenile oviduct, which can result in so called “false layers”.



Deformed shell



Thin shell

In broilers IB infections constitute respiratory problems, with secondary bacterial complications, resulting in loss of performance and carcass condemnation in the slaughter house. There can also be renal problems, with higher water-feed ratio, wet litter and poor daily weight gain, possibly followed by increased condemnation due to dermatitis or other skin lesions.

When can IB vaccines be applied?

In general, milder live vaccines (H120) can be used from the first day of age onwards. Stronger vaccines (H52) should only be

used in older birds that have previously been primed with a milder live IB vaccine strain. A period of two weeks should be left between the applications of two live vaccines. The inactivated vaccine is usually used at around 16 to 20 weeks of age. A period of four to six weeks should be left between the last live IB vaccine and the inactivated vaccine.

What is an IB serotype and what is an IB variant serotype?

- 1) When strains of IBV have a high degree of seroneutralisation against each other, they are regarded as belonging to the same serotype.
- 2) When strains of IBV have only a limited level of seroneutralisation against each other, they are considered different serotypes.
- 3) When strains of IBV belong to serotypes, different from the classical Massachusetts serotype, they are usually called variant serotypes.

Is it necessary to develop a new vaccine with the appearance of every new serotype or variant virus?

When a new serotype or variant of IBV emerges it may be necessary to develop a new vaccine and include it in the vaccination programme. Nevertheless, this is not always necessary if the new virus falls into the protective range (protectotype) of currently available vaccines.

Is an inactivated Massachusetts vaccine necessary for the protection of layers and breeders during the production period?

An inactivated IB vaccine can give additional protection to layers and breeders during the production period. Layers and/or breeders primed with H 120 and vaccinated with an inactivated vaccine based on the Massachusetts serotype will develop high levels of antibodies both against this serotype and also related serotypes.

When vaccinating against IB, when do interference problems occur?

Interference may occur when vaccines that compete for the same target cells are combined (for example, live Infectious Bronchitis, Newcastle Disease, ILT and/or Pneumovirus vaccines). At least one week should be left between each vaccination, unless the specific vaccine strains have been demonstrated to be compatible.

Products

EASY VACCINATION VIA THE DRINKING WATER AGAINST CAV

Chicken Infectious Anaemia Virus (CAV) can be isolated in all countries with poultry production. The virus impairs the thymus of very young chickens and, at the same time, it negatively affects the development of blood cells and the immune system. Infected birds show depression, reduced weight gain, anaemia, haemorrhages, atrophy of the thymus and changes in the bone marrow. Furthermore, the reduction of T-lymphocytes leads to immunosuppression, a reduced production of antibodies and a higher susceptibility to secondary infections. With the addition of secondary infections, mortality in clinically ill flocks may reach up to 60%.



possibly infected breeders, which again lowers the risk of susceptible birds to become infected by direct or indirect contact.

As vaccination programmes are getting more and more intensive, with several handlings of the birds, further vaccinations requiring individual handling should be avoided. AviPro® THYMOVAC with its strain Cux-1 is exactly attenuated to such a degree that it allows the application by drinking water. Even though attenuated, the vaccine strain

Cux-1 still possesses the capability of spreading what results in a full protection of the whole flock. In orally vaccinated flock-seroconversion is completed within approximately five weeks.

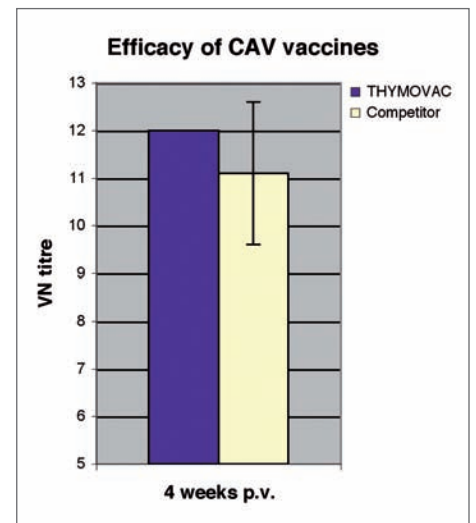
Besides the clinical form of CAV (mostly seen in birds without maternal antibodies against CAV), also subclinical CAV has to be considered when it comes to economic losses caused by the disease. Broilers that have very low maternal antibody levels at hatching, become infected with CAV at a relatively early age. They may appear healthy, but will show CAV titres around the day of slaughter. The analysis of production parameters of such flocks shows that feed conversion and weight gain are lower compared to birds negative for CAV titres at slaughter. Hence, both clinical and subclinical CAV infections can have a substantial effect on commercial broiler performance and profitability.

The disease normally occurs when layer or broiler breeder flocks with no previous exposure to the virus become infected during the production period. Under these conditions, the virus is transmitted via the hatching egg (vertically) to the progeny, which show clinical signs of the disease from 10–14 days of age. CAV can also spread horizontally, in a contaminated environment, to the progeny of breeders that are not protected by maternally derived antibodies.

Vaccination of the breeder flocks with AviPro® THYMOVAC is the method of choice in order to provide the breeders with high and uniform antibody levels. When egg production starts, they will transmit those protective antibodies to their progeny, and in this way, protect them against early infections with CAV. Besides that, vaccination also stops the horizontal spread of a virus from

When AviPro® THYMOVAC was compared with an injectable vaccine under experimental conditions it elicited higher and more uniform titres (graph 1). Under practical conditions this effect is even more pronounced since a certain number of the individually handled birds always stay unvaccinated.

In summary, CAV can be efficiently controlled by vaccination via the drinking water with AviPro® THYMOVAC. In addition to being convenient and effective this route of administration offers considerable welfare benefits. Drinking-water application represents one of the easiest methods of administration, avoiding the need for additional handling of birds for injection, thereby reducing the stress for both birds and vaccination crew and contributing to animal welfare. In addition, this method yields significant savings in terms of time, labour and money.



Avian Professionals

■ LAHI APPOINTED WILLIAM MCREE AS TECHNICAL SERVICE VETERINARIAN



William McRee



McRee, a 15-year veteran in the poultry health sector, will be responsible for providing a high level of technical expertise, service and support to all LAH customers. He will also assist the research and development team with product evaluation, licensing trials and product development, while performing field trial evaluations of newly licensed products.

McRee holds a Bachelor of Science degree in biology from Davidson College, a Bachelor of Science degree in poultry science from North Carolina State University and a Doctor of Veterinary Medicine degree from North Carolina State University. He is board-accredited by the American College of Poultry Veterinarians.

He has previously worked as Director of Veterinary and Technical Services for a primary breeder and Senior Technical Services Veterinarian for a poultry health company.

■ ENHANCEMENT FOR LAH'S TECHNICAL SERVICE



Dr Karsten Augustinski



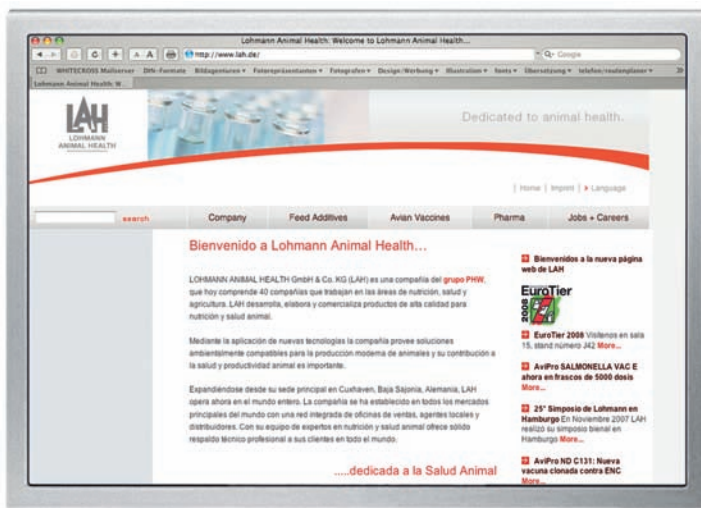
The Technical Service Department of LAH has recently been enlarged, with the additional help of Dr Karsten Augustinski. Based in Cuxhaven, he will report directly to Dr Rita Weber, head of Technical Service. Dr Augustinski holds a Doctor of Veterinary Medicine from the Ludwig-Maximilians University in Munich.

His experience in the poultry field covers four years as a company veterinarian for a pekin duck producer as well as four years of veterinary care of domestic poultry for a large German veterinary practice.

At Lohmann Animal Health Dr Augustinski will provide technical support to LAH's customers worldwide and will act as technical adviser to our sales forces around the globe.

What's new?

■ SPANISH AND RUSSIAN FOR LOHMANN WEBSITE



LAH website in Spanish

Technical and product information on avian vaccines is now available in Spanish and Russian on Lohmann Animal Health's

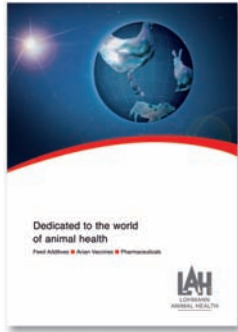
website, located at www.lah.de. Already available in German and English, the website – which was launched last year – provides a database of all products from both Lohmann Animal Health (LAH) and Lohmann Animal Health International (LAHI). These can be searched for by type of vaccine, production sector or by disease, to find the right solution for your poultry health problem.

In addition, the website also contains information on Lohmann's two other business divisions, feed additives and toll-manufacturing pharmaceuticals, as well as a careers section.

“The translation follows many requests from customers in Spanish- and Russian-speaking countries. Spoken by around 500 million people, Spanish is now the third most-popular language, while Russia and the CIS countries are very important growing markets within the international poultry industry,” commented Anna-Christina Riebau, Lohmann's product manager – marketing for poultry vaccines.

What's new?

LAH WITH NEW COMPANY BROCHURE



A new LAH brochure, created in the new Corporate Design provides useful information on the company. It starts with a general introduction page followed by the company's history as well as individual pages for the three different business sections – avian vaccines, feed additives and toll-manufacturing pharmaceuticals. The well-structured and clearly designed layout makes it easy for the reader to follow the informative text.

This freshly printed company brochure is now available in English and German through LAH's customer service in Cuxhaven, for everybody who is interested in a deeper insight into the world of Lohmann Animal Health. The pdf file can also be downloaded from the LAH webpage under www.lah.de.

+ + + BREAKING NEWS + + +

AviPro® THYMOVAC now available in Europe

In August 2008, Lohmann Animal Health finally obtained a MR (mutual recognition) registration for its Chicken Anaemia vaccine AviPro® THYMOVAC. Within two to three months the product will become available to our customers in Belgium, Estonia, France, Iceland, Ireland, Italy, Latvia, the Netherlands, Norway, Portugal, Slovenia, Spain and Sweden.

AviPro® THYMOVAC at a glance

Description: Live vaccine (freeze-dried) for poultry against Chicken Infectious Anaemia. For administration via the drinking water.

Directions for use: Vaccinate one dose per bird between twelve and 16 weeks of life, at the latest six weeks prior to the onset of lay.

- Features:**
- Reference product in the vaccination against Chicken Infectious Anaemia
 - High and uniform sero-conversion for better protection against vertical and horizontal CAV infection
 - High immunogenicity
 - Excellent safety
 - Long-lasting immunity
 - Easy to use → mass vaccination via the drinking water

Presentations: 500 doses, 1,000 doses



AviPro® NEWS CREDITS

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What's new?

LOHMANN KICKS OFF IN ITALY

Lohmann Animal Health has recently obtained registration for some of its products in Italy. This is the first time LAH has entered this important European poultry market. The vaccine business will be coordinated through the local office in Milan, where sales manager Andrea Cioffi and head of local office, Roozbeh Dowlatshahi, are based.

The market entry is supported by the advertising campaign "Lohmann kicks off in Italy" (see picture below).

The "kick-off" in Italy will be done with Lohmann's star products in the protection against Salmonella infections – AviPro® SALMONELLA VAC E and T accompanied by the blue water stabiliser AviBlue. Other products will soon follow to further enhance LAH's product portfolio in Italy.



The advertising campaign, which supports the market entry.