

Global expertise in foodborne zoonoses prevention

by Verena Beckhusen, Lohmann Animal Health GmbH, Germany.

Salmonellosis is one of the most prevalent foodborne zoonoses worldwide and food animals are reservoirs for non-typhoid (zoonotic) salmonella infections. Salmonella vaccines can decrease public health risk by reducing the colonisation of internal organs in the birds, by preventing egg contamination, by diminishing faecal shedding, and thus reducing environmental contamination.

For several years, Lohmann Animal Health has been actively involved in the research and development of salmonella live vaccines for use in poultry production, contributing to real practical success in the field.

As a result of this development process, Lohmann has marketed billions of doses and has successfully expanded operations in more than 60 countries, including the most demanding markets worldwide.

Lohmann salmonella live vaccines are not injected into the birds, but applied via drinking water. The application is as easy as safe, and parallels the natural path of infection.

It is this combination that makes them so effective. They have contributed to the successful maintenance of the highest food safety standards in the most important markets worldwide. These outstanding vaccines built up Lohmann's global reputation of comprehensive expertise in foodborne zoonoses prevention by thousands of satisfied customers.

Innovative technology

AviPro Salmonella Duo, the most recent product launched by Lohmann is the result of an innovative manufacturing technology based on the principle of 'co-fermentation'. It ensures the optimal maintenance of all the immunogenic properties for both vaccine strains in one vial, whether in vitro or in husbandry conditions.

This unique, bivalent, live vaccine confers homologous protection against the two most challenging salmonella serotypes: Salmonella enteritidis and S. typhimurium and is the first approved live vaccine against S. typhimurium in ducks. Official approval is

also expected in the near future for breeding and fattening turkeys.

This novel vaccine has already been registered in Germany, Austria, Belgium, Bulgaria, Czech Republic, France, Great Britain, Hungary, The Netherlands, Spain, Italy, Poland, Portugal, Cyprus, Greece and Slovakia. Registrations are expected also in non-EU countries.

Italian launch

Lohmann Animal Health recently launched AviPro Salmonella Duo in Soave and the event gathered around 50 producers and poultry veterinarians from Italy and Malta.

Roosbeh Dowlatshahi, Lohmann Country Manager for Italy, opened the conference and Dr Mauro Castello, Lohmann Technical Services, acted as chairman for the seminar.

The first lecture, presented by Prof. Paul Barrow (Faculty of Veterinary Medicine, University of Nottingham, UK), was about salmonella prevalence in humans and poultry in different countries and explained how, thanks to the control measures promoted by the European Union (health and management, monitoring and vaccination) the incidence of salmonella infection has gradually decreased over the past 10 years.

Prof. Barrow also stressed the importance of homologous protection over heterologous protection and the threat of S. typhimurium: including the emerging non-motile monophasic 1,4,[5],12:i:

Dr Daniel Windhorst (Lohmann Global R&D) described how to test the effectiveness of administration of the new vaccine: during application, at 1-2 days and at 3-5 days after vaccination. He also explained how to differentiate the vaccine strain from the field strain through their specific antibiotic markers as well as the principle and added value of 'co-fermentation'.

Carlos Bilello (Lohmann Global Technical Services) presented the relevant safety and efficacy data available in chickens and ducks, emphasising the long lasting protection demonstrated in chickens for at least 68 weeks against S. enteritidis and 62 weeks against S. typhimurium. Dr Bilello referred to the forthcoming line extension of the product for breeding and fattening turkeys.

In addition, Francisco Monsalve (Lohmann Global Product Management), summarised the main advantages and benefits of vaccination with AviPro Salmonella Duo.

These include the easy administration; reliable attenuation (based on the technology of 'metabolic drift mutation'), the reduced survival in the environment, the very high sensitivity for antibiotics used in human therapy, the genetic stability for both vaccine strains in one vial, the easy differentiation from the field strains and the early and long lasting protection. Reference was also made to the several benefits for animals (welfare improvement, and injection of the vaccine not necessary), for the producer (practical and reliable differentiation, easy and reliable application, not affecting egg production), for the consumer (safe foodstuffs) and the environment (no spread to non-target animals and humans).

In closing, Klaus Torborg presented interesting experiences with Lohmann live salmonella vaccines from the UK and Benelux.

At the end of the presentations there was a roundtable discussion in which the speakers answered questions from the participants and covered additional topics.

First choice

Lohmann Animal Health performs scientific research at the highest level and continuously works on optimising its products in order to satisfy customers' needs in terms of profitable production and food safety.

By combining expertise across the entire production chain and providing customer support by a qualified technical sales team, Lohmann has become the first choice for numerous customers. Foodborne zoonoses represent a particular challenge which the meat and egg industries must overcome if they are to remain competitive in the long term. Lohmann Animal Health fully meets this challenge through a comprehensive range of products and services duly reflecting their global expertise in foodborne zoonoses prevention. ■

