Holistic approach needed in AGP-free era

ASIAN POULTRY MAGAZINE

The *Asian Agribiz* Broiler Feed Conferences in Bangkok and Jakarta welcomed close to 500 delegates from 23 countries in South Asia, Southeast Asia, East Asia, Middle East, Australia, Europe and the US.

From 16 global experts in broiler nutrition and production, the delegates learned about trends, new research and solutions on AGP, early chick nutrition, amino acid nutrition and water & environment management.

The red line of the key topics was that "there is no single solution for broiler production without AGP." It is also important to note that there is no complete replacement for AGP that can entail the same economic benefits and efficiency. That is why a holistic approach combining good nutrition, feeding & farm management and biosecurity, is crucial for optimal bird performance.

Delegates' acknowledgement

Delegates met by *Asian Agribiz* praised the strong conference program and the knowledgeable experts. They are eager to implement the take-home messages in their operations.

Thatiya Chan-ngoen, Specialist of Science & Technology Development at Thailand's Lab Inter said the conference offered many benefits for industry players to update, learn and network. "These are the reasons why I came back and I will attend next year," she said.

Mohamed Atiar Rahman, Chairman of Bangladesh's Agrotech Feeds, also promised to attend again next year. He was satisfied with the conference's program quality.

Candra Yanuartin, Director & Nutritionist of Indonesia's Sinta Prima Feedmill said this year's program was better since she learned new things from the speakers.

Intan Nursiam, Nutritionist of Farmsco Feed Indonesia said the conference was interesting with qualified speakers presenting new trial results and up-to-date information. "The presentation from Dr Widjaja Lukito was great. Next, I expect to see more presentations from local industry experts and/or researchers," he added.

Toyochika Yoshida, Senior Account Manager for Animal Nutrition and Health at DSM Japan, valued the conference as a good platform for animal nutrition and health companies to share their knowledge and innovation. He hopes next year the conference will offer even more trial data and practical experiences.

Jasong Huang, Vice General Manager of Overseas Business Center

broiler FEED QUALITY CONFERENCES

of Guangdong VTR Biotech, said his company sponsored the right event because many key poultry feed producers in Asia attended the conferences, adding that he enjoyed the networking sessions.

Speaking for the first time at the conferences, Juan Antonio Javierre, R&D Director of Colombia's Tekzol SAS said: "I am impressed with the conferences' quality. Plentiful, good and engaged audience, good venues and facilities, and excellent organization even before the event started."

Beyond AGP

Kicking off the conferences Robert Renema, Principal at Canada-based Robert Renema & Associates Poultry Consulting, said there is no single solution that works as well or consistently as AGP have worked.

Robert Renema

"Players need to explore a mix of AGP replacements and enhanced bird health via feed additives and management of brooding, environment and water system conditions.

"Good maternal and broiler vaccination programs and quality incubation should be in place and moving away from whole house brooding to half-house brooding is recommended.

Juan Antonio Javierre

By applying these methods to our operations, we can be prepared for the loss of AGP in our production system," he suggested.

Sharing his experience of reducing antibiotic use in commercial broiler farms in Canada, Derek Detzler, Global Technical Services Manager of Jefo Nutrition and General Manager of Hucon Poultry, said AGP reduction or replacement can only be done with commitment, team effort and time.

After investigating AGP alternatives, talking to many experts, and benchmarking the performance and management of his farm, Mr Detzler concluded: "Coccidiosis vaccines work and alternatives work. However, there is no single product that can replace AGP. It must be a combination of many different approaches with the core purpose being to reduce the stress on the birds."

In the wake of antibiotic resistance, phytogenics

Delegates from India and Bangladesh.

Juan Antonio Javierre

can be a new solution for respiratory challenges, according to Ruturaj Patil, EW Nutrition's Product Manager Liquid Phytogenics and P Kowsigaraj, EW Nutrition's Global Validation Trial Manager. With the key mechanism of eliminating mucus accumulation, regenerating the respiratory epithelium and increasing feed intake, phytogenics can improve animal health in the context of reduced or no antibiotic use.

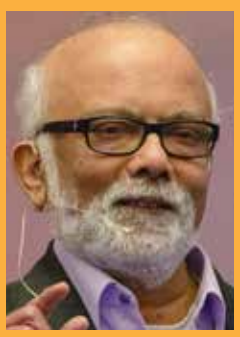
Zhi-cheng Xiao, Professor of Anatomy & Developmental Biology

Zhi-cheng Xiao

at Monash University, Australia, and his team have performed bioinformatics screening from target herbs to target compounds. Their special

Ruturaj Patil (left) and P Kowsigaraj.

Asian Agribiz honors Prof Ravi Ravindran



At the conference in Bangkok, *Asian Agribiz* honored Prof Ravi Ravindran for his outstanding contribution to the development of the livestock nutrition industries in Southeast Asia. He is one of the world's leading authorities in the field of poultry nutrition.

In August 2015, he received the McMeekan Memorial Award, New Zealand's highest honor for a production animal scientist.

Prof Ravi, from Massey University, specializes in poultry nutrition, with emphasis on nutrient metabolism, feed enzymes, feed evaluation, amino acid availability, gut flora management and early nutrition in poultry.

Delegates from Indonesia.

compounds called IRP001, from several treatments, significantly decreased mortality and intestinal lesion score in Necrotic enteritis challenged broilers. Good results were also found in treatments with coccidiosis, spotty liver and campylobacter.

From his trials, Dr Javierre of Tekzol found that organic acids, particularly butyric acid, are proven potential AGP alternatives. "Adding glyceryl tributyrate in sufficient amounts to poultry feed allows replacing AGP while keeping bird performance at similar levels.

"However, it has to be stressed that other practices, including diet digestibility, early feed intake, farm management, and biosecurity, have to be put in place to guarantee success in commercial conditions in the tropics," he explained.

Meanwhile, Ricardo Esquerra, Global Poultry Manager of APC, claimed spray-dried plasma is viable in reducing dependence on antibiotics. "Recently, there has been some research proving the effect of spray-dried plasma in improving immune response, improving performance, reducing mortality,

Ricardo Esquerra

increasing tolerance of diseases in chicken."

Talking about enzymes, Jung Min Heo, Assistant Professor at Chungnam National University in South Korea, said multi-carbohydrase supplementation into low energy or low amino acid diets containing wheat and wheat by-products has a positive effect on growth performance and nutrient digestibility along with improved gut morphology of broiler

The masterclass was attended by 50 delegates from 12 countries.

Male broiler breeder optimization

The interactive Broiler Breeder Masterclass was held on the day after the conference in Bangkok with 50 delegates from 12 countries. Dr Renema led this event with support from specialists from JRS and Aviagen.

The masterclass discussed male broiler breeder optimization. There is not enough attention paid to this issue, although it is a critical part of the success of a farm to maintain the fertility performance of the male birds.

Dr Renema said factors that affect the growth of male broiler breeders include changes in bird weight, environmental conditions, feed allocation, feeding behavior, role of individual responses in flock success, and changes in mating activity.

Stan Keimer of Aviagen discussed the importance of weight control at an early age of male birds, the correct management of separate sex feeding, and how to make assessment of male condition daily.

His colleague Alex Chang, meanwhile, talked about key feeding management factors that can impact male bird weight uniformity during growing and male diet in production.

Manfred Pietsch of JRS elaborated on insoluble fiber and its impact on health and performance of broiler breeders.

Delegates from the Philippines.

Jung Min Heo

chickens from 1-35 days of age.

Early chick nutrition

Evidence suggest that intestinal growth and function of newly hatched chicks may not be adequate to support efficient growth, according to Ravi Ravindran, Professor of Poultry Science at Monogastric Research Centre, Massey University.

Prof Ravindran explained it may be possible to enhance intestinal growth in the embryo through breeder nutrition. Another approach would be in-ovo administration of highly digestible nutrients into the amnion of late-term embryo. And, "the easiest and the practical way to ensure the optimal intestinal development of the chick is through ensuring feed access immediately after hatch," he remarked.

Pietro Celi, Senior Scientist at DSM Nutritional Products, explained that providing access to feed and water within the hatchery and developing highly digestible pre-starter diets has the potential to ameliorate gastrointestinal functionality.

Post-hatch feeding can promote the development of the gastrointestinal tract and therefore, supports adequate digestion and absorption, resulting in a

Pietro Celi

better transition from the yolk to the pre-starter diet.

"Optimal gastrointestinal functionality is crucial for broilers' health, performances and welfare because it improves feed efficiency, reduces use of antibiotics, and sustain food safety," said Dr Celi.

Amino acid nutrition

It has been reported that through proper formulation and use of added amino acids, nitrogen excretion can drop by 8-10% for each 1%-point drop in dietary nitrogen or crude protein. This decline in nitrogen excretion can be as much as 40-60%, according to Paul B Tillman, Poultry Nutrition Consultant at US Poultry Technical Nutrition Services.

Paul B Tillman

On the other hand, Dr Tillman added the commercial availability of L-threonine and L-valine allows for a reduction in dietary crude protein, nitrogen output and an efficient means of meeting the broilers' requirement for these two often limiting amino acids.

Usama Aftab, Technical Director Asia Pacific of AB Vista, stressed that poultry do not have the requirement for crude protein per se. However, they require a specific quantity and correct balance of the essential

Usama Aftab

Recognizing millers progressing towards sustainability

At the conferences, *Asian Agribiz* announced Vietnam's Mavin Group as the winner of the 2019 Asian Feed Miller Sustainability Award, and two Indonesian feed producers, Malindo Feedmill and Suri Tani Pemuka, as the runners-up.

Mavin Group's progress towards sustainability include 'no waste' in the milling operations, fuel boilers with rice husk and sawdust, dust collection and noise reduction systems, using inverter systems to save energy, and skylight roof technology to make the most of natural light for electricity conservation.

For sustainability, Malindo Feedmill switched from coal to palm shells in fueling boilers and corn dryers and established corn drying stations in central Indonesia to use more local corn. Its production activities are environmentally friendly with minimum pollution. Indonesia's Ministry of Environment and Forestry applauded its vigilance in saving the environment for five consecutive years.

For Suri Tani Pemuka, sustainability and traceability are a key goal. It is recovering energy from flue gas, reducing electricity with modifying grinding, replacing fishmeal with sustainable ingredients, as well as introducing innovations, good management practices and reliable technical support to enhance sustainability and social responsibility.

Mavin Group and Suri Tani Pemuka attended the award presentation in Bangkok, Thailand.

amino acids and sufficient nitrogen to synthesize the non-essential amino acids.

Focusing on seleno-amino acids, Kevin Liu, Vice President of Adisseo Asia Pacific said recent studies showed pure OH-SeMet has great potential and ability to enrich Se in eggs, embryos and offspring, which can help birds cope with various stresses, especially under

Kevin Liu

challenging conditions.

Water & environment management

Tim Walker, Independent Food Production Consultant from Australia said optimal water intake is needed to maximize broiler health, welfare and production. Rapidly growing broilers consume a lot of water for maintenance and growth. This water is physiologically necessary and broiler performance will decrease if water intake is restricted.

Drinking water quality is often an afterthought

Tim Walker

on many poultry farms, Sudipto Haldar, Director of India's Agrivet Consultancy found. "The importance of ensuring the supply of clean, safe water has gained importance after the ban on in-feed antibiotics since the quality of drinking water has been found to have a huge impact on flock performance," he said.

On environment management, Santiago Ramirez, Technical Marketing Manager of DSM Nutritional Products,

Sudipto Haldar

presented Muramidase, as a novel enzyme developed by DSM and Novozymes, to help optimize nutritional absorption and digestion, so broilers get more from their feed. Trials show that

Santiago Ramirez

adding the enzyme of a broiler flock of 1 million birds saves 12,500kg of feed. This reduced feed requirement contributes to GHG emissions reduction. AP

How many AMR deaths will it take before we act?

Widjaja Lukito (left) and Bob Nichol of EW Nutrition. Dr Lukito spoke at the conference in Jakarta with support from EW Nutrition.

At least 700,000 deaths worldwide are caused by drug-resistant bacteria each year, slashing about USD 100 trillion from the combined GDP and an additional USD 210 trillion from secondary effects, according to the United Nations' Interagency Coordination Group on Antimicrobial Resistance. This could rise to 10 million deaths per year by 2050, if business continues as usual.

Speaking at the conference in Jakarta, Widjaja Lukito, former Special Advisor to Indonesia's Minister of Health, said in 2014, Indonesia alone had 130,000 AMR-related deaths, making it the fourth-ranked country with the most significant risk of an AMR outbreak. So, "how many deaths do we need before the nation takes serious action?" he stressed.

AMR genes like Mobilized Colistin Resistance-1 (MCR-1) among livestock and fisheries are endangering the domestic food chains. Dr Lukito said a research from Bogor Agricultural University this year found that the MCR-1 gene in E coli bacteria has permeated Indonesia's food chains, particularly in poultry and in traditional markets.

Further, "the MCR-1 gene in almost 90% of E coli isolates showed resistance to colistin, one of the last-resort antibiotics, in the entire supply chain of broiler meat in West Java province, one of the biggest poultry producers in Indonesia," he said. "This scientific evidence of growing antimicrobial resistance should prompt the government to act."

According to him, Indonesia has made several attempts to tackle AMR, but it may face complex challenges, including profit motives. "Although the National Action Plan on AMR of 2017-2019 stipulates key actions such as increasing awareness and knowledge of AMR and rationalizing the use of antibiotics, it lacks enforcement.

"A national emergency approach is required with the involvement of all relevant ministries, scientists and key stakeholders, such as food producers and consumer groups, as stipulated in the National Action Plan. Indonesia must come up with effective tangible actions that are realistic and implementable," he explained.