



Studying the Gap in the Processes of Converting Currently Produced Poultry Flocks into Sustainable Ones

27th of September 2022



Egypt's Vision for Cop27: The Role of Animal Health in Egypt's National Climate Commitments

Organization Committee



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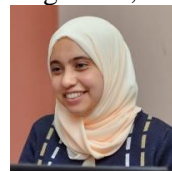
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(SESSION A)

Prof. Mostafa Ahmed Bastamy

Professor of Poultry Diseases, Faculty of Veterinary
Medicine, Cairo University.

Prof. Ahmed Sayed Hamouda

Professor of Poultry Diseases, Faculty of Veterinary
Medicine, Cairo University.

Prof. Sahar Ahmed Zulfakkar

Professor of Poultry Diseases, Faculty of Veterinary
Medicine, Cairo University.

(SESSION B)

Prof. Mostafa Ahmed Bastamy

Professor of Poultry Diseases, Faculty of Veterinary
Medicine, Cairo University.

Prof. Sahar Ahmed Zulfakkar

Professor of Poultry Diseases, Faculty of Veterinary
Medicine, Cairo University.

Prof. Dr. Mohamed AbdelRahman ElMenawey

Professor of Poultry Management, Faculty of Agriculture,
Cairo University and Manager of Poultry Services
Centre.

Prof. Ahmed Hamouda



Dr. Ahmed Hamouda is a Professor of poultry diseases Faculty of veterinary medicine Cairo university. He was graduated on poultry disease on 1983, Professor since 2000, member in world veterinary poultry association. Also he was in previous veterinary syndicate council, have long experience in management of poultry mega project in both regular and irregular weather condition.

Effect of climate change on the epidemiology of poultry diseases

Abstract

Climate changes are a big challenge for poultry production around the world as it will affect the whole production inputs including feeding and nutrition, management, as well as microbiome and even the ecology of avian pathogens which will alter epidemiological and the geographical distribution of the pathogen affecting poultry and threaten the poultry industry all over the world , that means the introduction of new production equipment and technological techniques in cooling and ventilation as well as the great need for recent medicaments and herbal products , recent generation of disinfectant and hygienic products and new generation of poultry vaccines and vaccination technology and programs. Innovation of recent immune enhancer to enable the birds to overcome and withstand the stressors due to climate change and minimize the use of antibiotics as immunosuppressant and avoid its residues which affect human health as hazard contaminating the human food is a must. In this presentation we shall discuss the effect of climate change on the avian pathogens and the modern methods to minimize its deleterious effect on poultry health for good and healthy protein source for the welfare of human.

Prof. Fathy Farouk Mohamed



Dr. Fathy is a Professor of Nutrition and Clinical Nutrition. President of Veterinary Studies Sector Committee, Supreme Council of Universities. Former Dean, Faculty of Veterinary Medicine, Cairo University. Former Vice Dean of Community Service and Environment Development Affairs, Faculty of Veterinary Medicine, Cairo University. Former Head of Department of Nutrition and Clinical Nutrition, Faculty of Veterinary Medicine, Cairo University. Former director of Analysis and Applied Veterinary Studies, Faculty of Veterinary Medicine, Cairo University. Peace Fellow, University of Wisconsin-Madison U.S.A. Former Chairman of the technical committee for feeds (Egyptian General Authority for Standardization) and a member in Egyptian Codex sub-committee for Feeds. Published more than 35 papers and articles in Scientific Journals and in Local and International Conferences. External reviewer for the Egyptian National Authority for Quality Assurance and Accreditation for Education. Certified International Professional Trainer. Devoted 25+ years as a technical consultant for several feed, premix and additive local and international companies as well as poultry and ruminants integrators. Major Scientific Interest: nutrition and immunity and how to improve production and health through feeding and nutrition. Member of some local and international Professional Organizations.

Poultry Nutrition and Climate Change: Toward a sustainable healthy herd

Abstract

On discussing poultry production and poultry nutrition, the word sustainability is used to denote the longevity and production capabilities of the flock. Efficiency will result in profitability, which also translates into environmental credentials. In regard to environment, sustainability covers many factors, mineral leaching and carbon footprint are examples. When talking about poultry, 80% of the footprint will come from feed, and as such, nutritional management aims to reduce pollution load by limiting excess nutrient intake and/or improving the nutrient utilization efficacy of the bird.

If producers use less feed to achieve the same target, or use the same amount of feed, but produce more, there will be sustainability benefits; both environmental and economical. Manure resulting from poultry contains detectable amounts of nutrients such as nitrogen, phosphorus, as well as excreted substances namely hormones, antibiotics, pathogens, and heavy metals which are introduced through feed. Leaching of these substances has the potential to result in contamination of surface water and groundwater resources.

The best type of ration for the bird's life stage of production is one way of doing this. Use of organic minerals, improving gut health nutrient digestibility and absorption as well as diet formulation can also impact the sustainability credentials. The role of nutrition as related to a better sustainable healthy flock will be discussed.

**Prof. Mohamed
Mamdouh
Hamoud**



Dr. Mohamed Hamoud, Is currently the General Manager of The Poultry Division, he has joined the group in 2022. He has different leadership roles in many assignments with proven track record of success resulting double digit growth in sales and profit with increasing market share, product offering, innovative strategies and leading the organization to an extreme level of sustainable growth and success.

Dr.Mohamed was appointed to the faculty in 1995 in the Department of Poultry Diseases and more than 25 years experience in poultry field in leading companies and institutions like Emory University developing a molecular vaccine. He joined Embrex (Pfizer Animal Health)as a senior Research Scientist developing the first Inovo coccidial vaccine among other key projects. Dr. Hamoud returned to Egypt in 2010 as the Technical Manager for Cairo Poultry Group where he achieved record breaking technical results for CPG.

Dr. Mohamed Hamoud got his DVM and MVSc from the faculty of Veterinary Medicine Cairo University. He got his PhD in Veterinary Pathology from the Poultry Diagnostic Research Center in the University of Georgia. He recently got his MBA in management from the Royal British College.

Poultry Integration meeting a global growing population in a sustainable green way

Abstract

Discussing the impact of growing need of animal proteins due to increase in global human population, on advances in poultry integration, innovations, and management practices that have the least impact on climate change or environmental footprint.

Asst. Prof. Mai A. Mohamed



Dr. Mai is an assistant professor of Meat Hygiene, Faculty of Veterinary Medicine, Cairo University. She had Bachelor of Veterinary Science, 2008, Cairo University, Egypt, MSc. Meat Hygiene, 2012, Cairo University, Egypt, Thesis title "Impact of mechanically recovered poultry meat on the quality of raw comminuted formed meat products", and PhD Meat Hygiene, 2015, Cairo University, Egypt, Thesis title "Impact of use of mechanically recovered poultry meat on quality of emulsion type sausage" Have many certificates in communication, computer ,and language skills. She shared in international project with title "Application of Decentralized On-Site Water Treatment System in Egypt for Use in Agriculture and Producing Safe Fish and Animal Proteins". She Published more than 15 papers in scientific international journals. She is an External reviewer in many scientific international journals. She was Devoted as a technical consultant for several meat processing plants and laboratories for analysis of meat and meat products. Her major Scientific Interest: Meat hygiene, meat analysis and meat technology

Climate change and heat stress: Impact on the quality of poultry meat and its mitigation using new strategies

Abstract

Heat stress is an important environmental factor that negatively affects the performance of poultry worldwide. The detrimental effects of heat stress include reduction in growth rate, body weight, egg production, and deterioration of meat quality such as reduction in water holding capacity, alteration in pH, elevation in drip loss as well as deterioration in sensory quality attributes of poultry meat, which cause severe economic losses in the poultry industry. Moreover, heat stress can create favorable conditions for the growth of both spoilage, and pathogenic microorganisms leading to shorting in the shelf life of meat as well as causing health risks to a human. Among food poisoning bacteria; *Salmonella*, *Campylobacter*, and *E. coli* have been reported as the most common bacteria causing illness as a result of consumption of poultry meat. Therefore, mitigation of the negative effects of heat stress during poultry production, transportation, carcass preparation, and storage act as an important issue to improve the efficiency of poultry production and serve good quality and safe meat to consumers. In this presentation, we will discuss the detrimental effects of heat stress on the quality of poultry meat and the new strategies to mitigate these effects for improving the quality and safety of poultry meat.

**Prof. Mohamed
Abdel Rahman
Elmenawey**



Dr. Elmenawey is a Professor of Poultry Management at Animal Production Department, College of Agriculture, Cairo University and Manager of Poultry Services Centre. Member in 4 different Scientific Societies in and outside Egypt. Shared in preparation of 4 books and 6 different booklets. He has a list of Publication including 56 different Scientific Papers. He is mostly concerned about poultry house environment control, modern management methods and chick, egg and meat quality. He has participated in 15 Scientific Conference in and outside Egypt. He has participated in 5 different Scientific Projects. Supervisor for 22 Master and PhD students in the field of Poultry Management. He has participated in Organization and Training in more than 65 Scientific Training Programs and Workshop. In addition to the academic positions, he had performed several consulting assignments in different poultry production companies. He works as technical service and consultant in the different poultry production sectors such as, broiler grandparents, broiler breeders and layer breeders, broilers, egg production and hatchery sectors.

Proper managerial aspects in intensive poultry farms and climate change: for achieving a sustainable production

Abstract

The poultry industry is gaining great importance and a distinguished position in terms of economic, social and nutritional aspects, due to the huge capital invested in this industry, as it is considered one of the strategic industries with an economic, social and security dimension.

The poultry sector has been developing very dynamically in recent years. Poultry farming is a significant cause of environmental pollution. Chemicals and energy used in the production of feed, and the attendant harmful gases are responsible for climate change. Volatile organic compounds emitted from poultry farms pose a health risk to poultry and workers and emit unpleasant odors. Long exposure to odors causes respiratory – also chronic – diseases.

Malignant gas dispersion models have been developed to predict the severity of odor emissions. A poultry farm must not be built without the assessment of such factors as the speed and direction of the wind, rainfall, temperature and air humidity along with the exposure time, intensity and frequency, i.e. all the factors that might boost odor diffusion and harmfulness. Now, discuss the effect of climate change on the poultry production and the modern techniques for the Management in poultry farms.

**Asst. Prof. Basem M.
Ahmed**



Dr. Basem is a virologist, expert in veterinary vaccine design, manufacture, evaluation, marketing, and support. He had obtained his PhD on avian influenza vaccines from the faculty of veterinary medicine, Cairo university in 2016 and trained on herpesvirus genome manipulation in FUB, Germany, 2019. He had an H-index of 5, published 30 peer-reviewed research articles and participated in 5 research grants; Two of which as the Principle Investigator. His major research interests are virus evolution, novel virus diagnostics and viral vaccines.

Poultry viral diseases under a changing climate




Abstract

Unlike ruminants that produce 45% of agricultural greenhouse gases (GHGs), the share of poultry in GHGs production does not exceed 5%. However, climate change and global warming have a profound effect on all forms of life on the planet including poultry.

For instance, cold weather increases transmissibility of many avian viruses including influenza, Newcastle disease, and infectious bronchitis as birds huddle together to generate heat. leading to failure of control and extensive economic losses. On the other hand, the hot dry weather is detrimental for most viruses, but the increasing humidity nowadays is a burden on poultry industry. Birds will become more stressed and more susceptible to infectious bursal disease virus, fowl adenovirus, as well as enteric and respiratory virus infections.

By 2070, it is expected that the world will get warmer by 2 degrees Celsius, and consequently thousands of new viruses will emerge in animal species and others will pass the cross-species barriers. Emergence of heat stable poultry viruses could not be excluded. These direct losses can be mitigated by controlled atmosphere inside poultry farms; the act that will raise energy bills, increase poultry share in agricultural GHGs production, and/or make poultry production unfeasible in certain parts of the world.

**Postgraduate session entitled:
Sustainability of poultry production**

Yasmen Hamed Asfour	Youssra Mohammed Nassar	Alaa Mohamed El- Sadany
		
Demonstrator at department of Clinical Pathology, faculty of Veterinary Medicine, Cairo University.	Demonstrator at department of Poultry Diseases, faculty of Veterinary Medicine, Cairo University.	Veterinarian.

A) Characterization of salmonella species in some Egyptian chicken flocks

Yossra M. Nassar

Salmonellosis is a serious disease that is currently threatening the poultry industry around the world. Paratyphoid Salmonellae are of a public health risk because of their role in food poisoning as well as their zoonotic significance. The aim of this study was characterization of salmonella species in different chicken flocks in some Egyptian governorates using conventional isolation techniques. In addition demonstration of the antibiotic sensitivity test of the isolated salmonellae. and confirmation of the isolated strains , detection of some virulence genes , some antibiotic resistance genes by molecular recent techniques were done. A total number of 238 organ samples representing 79 liver, 81 yolk sac, 18 heart, 20 spleen, 6 cecum, 3 ovary, 3 gallbladder, 28 dead in shell embryos were obtained.

In conclusion there are circulating salmonellae in the Egyptian flocks. The Salmonella spp. strains exhibited resistance to multiple antibiotics commonly used in the field, as well as multiple virulence and antibiotic resistance genes associated with them, and PCR assays was a technique that was helpful in confirmation of the isolated salmonellae and detection of these genes.

B) Enhancing response against diseases in broiler chicken: laboratory assessment

Alaa M El-Saadany

Microalgae (Spirulina) is one main source of natural antioxidant antiviral and immune enhancer. Spirulina was prepared as a separate feed additive or added to water in mix form where spirulina mixed with other microalgae Chlorella spp., vitamin C and pot iodide by addition to water intake.

A total of 200 broiler chicks where grown in different groups of control and experimental groups. Results revealed shortening the challenged period of NDV infection in treated group than control one that proven according to tested swabs by real time PCR. hematological and biochemical changes revealed rapid recovery from diseases.

C) Effects of essential oil use in broiler chicken: laboratory assessment

Yasmen H. Asfour

Essential oil is prepared by heat distillation for proper extraction and mixing in way to prepare the effective active formula. Essential oil used to be a model for studying immune response of chicks regarding stress condition induced by NDV infection, growth performance, and feed conversion ratio.

A total of 180 chicks were used in control group and treated groups, results revealed broiler checks received essential oil were more resistant against NDV infection with higher growth performance and proper feed conversion ratio when compared with control group