



# AGROFOOD PRODUCTIVE: ENHANCING PRODUCTIVITY AND YIELD IN POULTRY PRODUCTION

| 25 NOVEMBER 2020 | 11.00AM – 1.00PM | ZOOM WEBINAR |

  
Safura Abdul Malek  
Pengurus AFPN/PGD



**AGROFOOD PRODUCTIVE:**  
**Enhancing Productivity and Yield in Poultry Production**

**FREE REGISTRATION**  
To register please click the link or scan the QR Code  
<https://zoom.us/join/register?WN=3c8AE5MhQG6KD15dYPVaEg>

**25 NOV 2020 (WED)**  
**11.00 A.M - 1.00 P.M**

**Objectives**

- To discuss the key elements for successful poultry flock management.
- To demonstrate the improvement of productivity and improving financial gains in poultry farming from Good Animal Practice, biosecurity and Flock Health Management.

**Moderator:**  
Mr Chan Seng Kit  
Director  
K-Farm Sdn Bhd

**Speakers:**  
Dr Mohammad Razli Abdul Razak  
Head of Inspection and Veterinary Certification  
DVS

**Speakers:**  
Dr David Choe Di Wei  
Veterinary Service Manager  
Rhône Ma Malaysia

**Speakers:**  
Dr Nafisah Mydin  
Area Technical & Marketing Manager  
Yenher Agro-Products Sdn Bhd

**Speakers:**  
Dr Lee Jin Ee  
Veterinary Services Manager  
CEVA Animal Health  
Malaysia Sdn Bhd

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CPD Code/s: VAMCPD-2020.305  
VAM CPD Points: 1

**Moderator:** Mr Kit Chan, Managing Director, K-Farm Sdn Bhd

**Panel 1:** Dr Mohammad Razli Abdul Razak, Head of Inspection and Veterinary Certification, Department of Veterinary Services

**Panel 2:** Dr David Choe Di Wei, Veterinary Service Manager, Rhone Ma Malaysia

**Panel 3:** Dr Nafisah Mydin, Area Technical & Marketing Manager, Yenher Agro-Products Sdn Bhd

**Panel 4:** Dr Lee Jin Ee, Veterinary Service Manager, CEVA Animal Health Malaysia Sdn Bhd

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## **EXECUTIVE SUMMARY**

This webinar session looks at factor affecting yield and productivity of poultry production from various angle throughout poultry supply chain and how compliance to Malaysian government standards gives competitive edge and access to wider market. Various elements contributing to improved productivity were also examined apart from introduction to current holistic approach. Participants were walked through the future of production improvement in this industry via big data analytics and predictive model.

### **A. OPENING REMARKS**

- Panelists will be sharing on their view on what productivity could be like and how it could be improved.
- Improvement in yield and productivity goes beyond organisational structure and daily operations. It also involves animal science in producing better broiler. Ultimately consumers will have the definitive answer to the quality by the perceived value of the products.
- Today's session is to talk about:
  - The key elements for successful poultry flock management; and
  - The improvement of productivity and improving financial gains in poultry farming from Good Animal Practice, especially in Biosecurity and Flock Health Management.

### **B. PAPER PRESENTATION**

**Panel 1: Dr Mohammad Razli Abdul Razak, Head of Inspection and Veterinary Certification, Department of Veterinary Services**

#### **Key Highlight of the Presentation**

- Government has introduced certification to increase competitiveness through superior poultries. Some of these certifications are under the purview of DVS. These services are free for producers and farmers on a voluntary and mandatory basis.
- myGAP is quality assurance to ensure produced food safety. Products certified fulfilled local and international requirements. This system is being updated regularly to comply to latest standards and regulations. It reduces time duration of obtaining veterinary health certificate ultimately getting consumers' confidence in respective products.
- Applicants are required to prepare all the required documents and comply to all prerequisite to qualify for the certification application. These documents range from information on business and daily operation and respective permits for the authorities.

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- myGAP is a holistic certification scheme based on Good Animal Husbandry Practice (GAHP). myGAP looks at key elements in poultry industry operation in order to qualify for certification addressing compliance to farms/ facilities standards, operation's standards and requirements, welfare and health of livestock, controlled usage of approved substances, infection prevention and contamination at farms/ facilities, and management of waste and pollution at farms/ facilities.
  - myOrganic standards ensure compliance to organic produce of poultry and livestock by incorporating similar holistic approach in operation and poultry/ livestock standards with minimal usage of drugs and chemicals.
  - These certifications ensure marketability of poultries in both domestic and export market and assurance on the quality of poultries sold to consumers.
  - Applicants are required to comply to the requirements stipulated together with documents completion before undergoing several audit processes by DVS. Applicant who meets all the requirement on top of passing audit processes is eligible for certification. Certified producers are subjected to periodical surveillance and review audit by DVS.
  - DVS is also responsible in inspecting poultries/ livestock to be exported to select countries as part of compliance to respective foreign market requirement.

#### Key challenges

- n/a

#### Recommendation

- n/a

### **Panel 2: Dr David Choe Di Wei, Veterinary Service Manager, Rhone Ma Malaysia**

#### Key Highlight of the Presentation

- Poultries' growth can be affected by various factors from infection to feed issues. Heat stress is another key element which could impact poultries growth adversely.
- In order to maintain normal core temperature, poultry react to surrounding temperature increment by losing heat through sensible heat loss (surrounding temperature within thermoneutral zone) or latent heat loss (surrounding temperature higher exceeds thermoneutral zone). Losing latent heat would consume energy making the chicken vulnerable due to limited sweat glands and feather hampering heat transfer.

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- Heat stress, measured by Heat Stress Index (HSI) is a condition where body is unable to maintain balance between heat production and body heat loss, applicable during post- brooding period.
  - HSI need to be kept below 160 to prevent risk of Heat Stress (HS) among poultries. Malaysia as a tropical country are susceptible to HS risk for both open and close houses. Ventilation system plays critical role to overcome this issue.
  - Farmers need to be cautious of HS signs. Birds would be reacting in specific ways to lose heat e.g. excessive drinking, lifting wing from body or diarrhea and in worst case, sudden death can occur among birds.
  - HS exposed birds to adverse physiological changes that affected the quality of the poultry and productivity level of a farms. This is underlined by production of negative hormone, birds' habit and smaller size of critical organs that contribute to birds' immunity.
  - Studies undertaken by FLFAM and MPC shows that temperature in closed house is more consistent as opposed to temperature of open house that is more susceptible to external temperature.
  - In other studies, by similar bodies, closed house shows significant reduction in HSI indicating less risks of HS among birds. Closed House system also records better poultry quality and productivity over open house system improving profitability.

#### Key challenges

- n/a

#### Recommendation

- Heat Stress is a key factor influencing productivity of farms. Farms with birds that suffer heat stress will be having impaired productivity and quality of poultries. It is important for farmers to manage Heat Stress.
- Although closed house system requires higher investment by farmers, this system can generate superior yield with better consistency over time than open house system.
- Closed house system should be complimented with microclimate control that is reliable apart from good farming practice.

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**Panel 3: Dr Nafisah Mydin, Area Technical & Marketing Manager, Yenher Agro-Products Sdn Bhd**

Key Highlight of the Presentation

- Poultry as the most affordable source of protein in Malaysia has put stress on the industry players to produce affordable poultries with improved quality, in-line with consumers expectation and government/ regulatory bodies requirement.
- Conventional practices of ensuring the health and safety of birds require manual physical inspection at farms by workers to observe behaviours, clinical sign and manure condition on regular basis.
- Data obtained from inspection are not shared timely affecting treatment response time and cost adversely.

Key challenges

- Challenges range from keeping the industry dynamic to keep up with the ever-changing requirement in order to meet demands for safe and quality food, sourcing for skilled, enough manpower. Data transparency and accuracy are also one of the issues.
- Predictive model requires real- time and accurate data transmitted through the internet connection. Farms at rural area will be facing challenges in ensuring data transmitted seamlessly.
- Farmers mindset and inhibition to data transparency will hinder adoption of predictive model approach.
- Upskilling manpower to develop adequate skills to operate this technology effectively and efficiently.
- Low data fidelity will jeopardise the feasibility and outcome of data processing.

Recommendation

- Reacting to issues on piecemeal is not adequate to sustain current demand in poultry industries. A proactive holistic approach throughout poultry supply chain that could anticipate and prevent issues to happen saves time and cost.
- Real- time detection and predictive concept is a forward- looking concept that leverages on cutting edge tools and technologies. This model actively collects data to be processed by Artificial Intelligence technology for accurate and timely solutions to be implemented at farms.
- Monitoring can be done via various hardware which has its own advantages and limitation.

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**Panel 4: Dr Lee Jin Ee, Veterinary Service Manager, CEVA Animal Health Malaysia Sdn Bhd**

Key highlight of the presentation

- There are various factors contributing to productivity decline or improvement in farms. Identifying cause(s) in productivity fluctuation is key question that needs to be addressed to pinpoint a workable solution in poultry production.
- Previous practice of diagnosing diseases in birds is subjective, depending on opinion and perception of veterinarian. Current trend is to be data-driven, enhancing accuracy of remedial action taken before moving to adoption of predictive model.
- Big data analytics is capable of not just supporting disease diagnostics, but also production of data analysis. This approach can perform advance analytic technique of very large data that were collected from different sources in real-time.
- Major industry percentage loss occurs during hatchery phase where birds are susceptible to mortality and marketing phase where product marketed may not be marketable due to various reasons.
- Current predictive systems can perform extensive analytics at every phase of the supply chain with the support of cutting- edge devices and gadgets.

Key challenges

- n/a

Recommendation

- n/a

**C. PANEL DISCUSSION**

- Panel 1 mentions that DVS encourages all players of various size to be certified by DVS. myGAP centers around good animal husbandry practices. Both open house and close house system has sets of requirements that need to be complied to.
- Panel 3 remarks that IoT and predictive technologies have already been adopted by several integrators in Malaysia. Small- sized players should be able to slowly adopt these technologies in the future. Currently, these data are not made accessible to government or consumers. However, she believes that one day consumers can access these data reflecting the traceability of poultries. Poultry farmers could consider wearables on birds that measure their activities and body temperature as some input on bird's health condition.

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- Panel 3 says that predictive model is currently adopted by integrated farm at their facilities. However, generic data from farms are also captured by local authorities where data captured covers larger region. Farmers can leverage on data captured by association and authorities to assist in making relevant decision.
  - Panel 2 remarks that usage of hormone in improving birds' digestion is common in the industry yielding positive result. However, he will verify on utilising glucose- oxydase before reverting to the enquiry later.
  - Panel 2 informs that feed constitute majority of the cost producing poultry, varying from 60% - 75% depending on the raw materials and other factors. He is unsure whether enough research are being done to understand more about feed.
  - Panel 4 mentions that end-to-end big data analytics is typically employed by integrators and major industry players to optimise value from their poultry and operations. However, these capabilities can be dissected into smaller areas that is relevant to smaller farmers still yielding value for production.
  - Panel 3 suggests that small- scale farmers won't be facing any difficulties in monitoring and treating their birds manually. Adoption on predictive model could be done by accessing data captured by association and regulatory bodies to assist in making accurate and timely decision.
  - Panel 1 says that farms in southern Malaysia exports poultries to Singapore hence compliance to standards and regulations are mandatory to gain access to Singapore's market. myGAP ensures access to bigger market. DVS is working closely with other agencies to better support players in exploring bigger foreign markets.
  - Mr. Kit Chan believes that industry players should ask questions and communicate with authorities on surrounding issues to have better understanding on this industry. Price of products is inherent to the value perceived by both consumers and suppliers; there are always potential in various industries. Pursuit of knowledge through science to improve operations should be adopted by all players regardless of background and scale of production.

#### **D. SUMMARY OF THE SESSION**

- This session focuses on technical and operational level to investigate how farmers can improve their productivity. It highlights gaps that could be addressed from managing technical aspect of poultry growing to compliance to Malaysian government standards.
- These elements are complimenting each other in creating synergistic value. Usage of new technologies in poultry farming benefitted farmers strategically in cost, quality of poultries and animal welfare, ultimately supporting certification from the government. Being certified by the

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Malaysian government open access to new foreign market together with supports provided by other relevant government agencies.

- Improving quality of poultry and productivity entails accurate treatment for birds and effective preventive measure. This is made possible through real-time data analytics via predictive model in the future and current practice of big data analytics.