

# Poultry Fortune

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June 2020

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DSM to add world leading Animal Nutrition and Health specialty Businesses with acquisition of Erber Group

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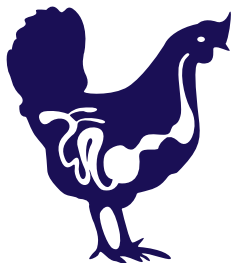
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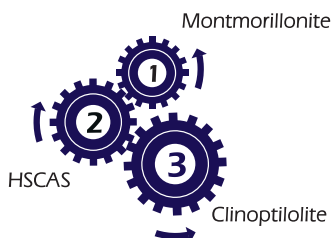
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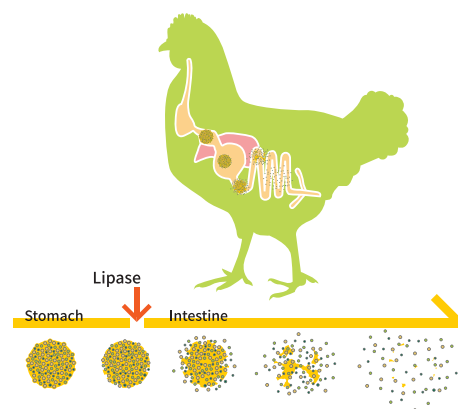
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NRS Publications,  
BG-4, Venkataramana Apartments,  
11-4-634, A.C.Guards,  
Hyderabad - 500 004, India.  
Tel: 040 - 2330 3989, 96666 89554  
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# It's time to further organise Indian poultry sector

*There is a need of establishing National Poultry Development Board*



There was no fall of egg and chicken consumption in US, Europe and many Asian and African countries during Covid-19,

whereas their consumption suddenly fell down in India during corona pandemic. The one lakh plus crore rupees Indian poultry industry was badly shaken with corona pandemic as people were against eating chicken and eggs in the country due to the fear of rumours attributing virus to human being through chicken consumption.

Except India, people in most of the countries in the world enjoyed consuming nutritious food items like egg and chicken products during Covid-19. We need to seriously analyse and do the needful so that people in India consume poultry products without fear and myths. The stakeholders of poultry industry in the country should come out with scientific facts on how egg and chicken products help the people to have balanced and nutritious diet in daily life.

In poultry sector, we have main segments such as the Farmer, Integrator, Hatchery man, Feed miller, Egg and Chicken Trader and Processor-cum-Exporter with subsidiary segments like Health and Nutrition Products, Equipment and Automation, Technical Professionals etc. This industry does not have supporting government agencies and it has grown on its own to the present level by the efforts of private sector stakeholders. There are Central and State Animal Husbandry departments, and the Educational and Research Institutions on poultry science.

All these segments should understand this industry, their role and contribute their best to streamline and further strengthen this sector which can provide nutritious food and employment in a big way to the people.

This sector consisting of egg and chick-

en production in India should set its own standards and guidelines to produce quality products and to have an orderly and sustainable growth. The chicken and eggs produced in the farms should be antibiotic free. Proper protocol of quality testing has to be done at production level to maintain transparency and to establish confidence among consumers. When standards are maintained by the producers and other inputs manufacturers, they will gain credibility and the produce "Indian eggs and broiler meat" will be accepted well on priority with better price.

Farmers should also check themselves if they are observing protocol of brooding shed preparation before the chicks are placed in the shed and ensure proper nutrition, healthcare and management during growing stage till the birds are sold out at the farm gate.

All segments of poultry sector should together go and request the government to setup "National Poultry Development Board" on the lines of NFDB. About 10 years ago on the request of stakeholders, Government of India established National Fisheries Development Board for aquaculture sector with an investment / capital of over Rs 2,500 crores to promote fisheries / aquaculture sector in India. Similarly, stakeholders of poultry sector may request the government to establish "National Poultry Development Board" for the promotion of poultry sector in the country.

Apart from creating infrastructure like cold storage and cold chain link, the Board can effectively work for branding, marketing and promotion of egg and chicken consumption in the country. In a systematic way, the Board can educate egg and chicken producers and consumers about the quality and nutrition value of these products.

Government has to ensure registration of poultry farms soon making the farmers understand the benefits of registration. It will help to know correct figures of Egg and Broiler production state wise and at national level in India. Without

registration and a certificate no one can do business or an activity like poultry farming. There is no reliable data and statistics about production and other aspects in this sector, and registration of farms can help greatly in this regard and plan to resolve the issues of the industry as a whole.

There is a need of establishing National Poultry Development Board to guide and monitor egg and broiler Production, Usage of advanced technology, Maintenance of quality standards, Branding & Marketing, Statistics, Registration of farms, Promotion of domestic consumption of eggs and chicken products in the country.

NPDB would be an effective solution to resolve the issues and crisis this sector facing.

**M.A. Nazeer**  
Editor & Publisher  
Poultry Fortune



## Poultry Fortune

### Our Mission

**Poultry Fortune** will strive to be the reliable source of information to poultry industry in India.

**PF** will give its opinion and suggest the industry what is needed in the interest of the stakeholders of the industry.

**PF** will strive to be The Forum to the Stakeholders of the industry for development and self-regulation.

**PF** will recognize the efforts and contribution of individuals, institutions and organizations for the development of poultry industry in the country through annual Awards presentation.

**PF** will strive to maintain quality and standards at all times.

## Aviagen President of International Business Bob Dobbie to Retire

*Customers in Asia Pacific benefit from his commitment, expertise and passion*



**Bob Dobbie, President - International Business, Aviagen**

**June 5, 2020 – HUNTSVILLE, Ala:** After more than 43 years of dedicated service to the global poultry industry, Bob Dobbie will retire from his role as Aviagen® President of International Business as of August of this year. The recruitment process for the right candidate to meet the unique challenges of this role is already well underway.

Due to Bob's strong leadership, expertise and commitment, Aviagen's global business has grown right along with the success of its customers. Among his strengths are the ability to build the right team to take on the developing region's unique challenges, while providing customers with excellent care. Through his closeness with the region's producers, he has insight into their unique needs, and he and his team continually share with them the knowledge and expertise to strengthen the performance, health and welfare of their birds, while maximizing the profitability of their operations.

**Rich and productive career**  
Bob has enjoyed a vast and

well-rounded career in the industry. He started in 1977 with Ross and Aviagen on the hatchery side of the business, and then moved to breeder farms, production, customer service and finally into commercial management responsibilities. He has been a regional manager in Europe, Middle East, Africa, Asia and Latin America, and was directly involved in acquisitions and start-ups in Turkey, Brazil, India, Australia, South Africa, and New Zealand plus the integration of the Indian River and Arbor Acres businesses before moving into his current role.

### **Commitment to training the future**

Bob believes that education is key to the sustainability of the global poultry industry, and has always been an executive sponsor of the long-standing Aviagen Production Management School. He sees the School's enormous benefit in helping to build the next generation of poultry industry leaders. And, he recognizes the School's importance in providing a forum for sharing knowledge to help producers optimize the productivity of their operations at home, while at the same time forming lasting relationships with industry colleagues.

### **Invaluable contribution to industry as a whole**

Aviagen CEO reflects on Bob's immense dedication and larger-than-life personality. "Bob is well-liked by colleagues and customers alike, and we will all miss his tenacity, straightforward way of communicating, in-depth knowledge and insight, and sense of humour. He genuinely cares about

people. He appreciates diversity and diverse cultures, and has the special ability to feel at home anywhere in the world," remarked Aviagen CEO Jan Henriksen. "We thank him for his contribution to our company, our customers, and our industry." Until a new president of International Business is named, our in-country teams will keep providing excellence in service to

enable customers throughout Australia, New Zealand, India and China to advance their businesses.

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## Aviagen India gives back to local community amid COVID-19 Lockdown



**May 14, 2020 – Udumalpet, India:** The extended COVID-19 lockdown has caused many hardships for local communities. Aviagen India cares about the people in the communities they serve, recently stepping up to provide much-needed food and grocery packages to elderly and underprivileged families in the local villages of Andiyagoudanoor, Kootathurai and Elayamuthur near Udumalpet in Tamil Nadu.

The company also recognized and appreciated the difficult work of the local police, donating protective overalls, masks, hand gel and disinfectants.

Leading the effort was the Aviagen Support Team which consisted of Mr Sathish, Transport Manager, Mr Ram-

dass, Property Services Manager, Mr Ismail, Wood-shaving Store Manager, Mr Dhanuskodi, Production Manager and Mr Dhayanandhan, Production Management Trainee, said a press release from the company.

According to Marc Scott, Aviagen India Business Manager, Aviagen staff in Tamil Nadu, South India, all live in the local towns and villages. "COVID-19 has brought about trying times for us all, and certain sections of the community require more assistance – the elderly and under-privileged in particular have been severely affected. We hope our efforts will, in some small way, help the communities get through these difficult and challenging times."



## DSM to add world-leading Animal Nutrition and Health specialty businesses with acquisition of Erber Group



**Left: Ivo Lansbergen, President, Animal Nutrition & Health, DSM and on Right: Dr Erich Erber, Founder and President of Erber Group.**

**Heerlen, NL, 12 Jun 2020:**

Royal DSM, a global science-based company in Nutrition, Health and Sustainable Living, announces that it has reached agreement to acquire Erber Group for an enterprise value of €980m. The value of the transaction represents an EV/EBITDA multiple of about 14x the 2020 EBITDA (fiscal year ending September 2020). The transaction – which excludes two smaller units in the Erber Group – is expected to be earnings enhancing in the first year upon completion. Erber Group's specialty animal nutrition and health businesses, Biomin and Romer Labs, specialize primarily in mycotoxin risk management, gut health performance management, and food and feed safety diagnostic solutions, expanding DSM's range of higher value-add specialty solutions. Romer Labs also complements DSM's human nutrition and health offering to food industry customers. Sanphar and EFB, represent

ing 7% of Erber Group's total sales, are not included in this transaction.

The acquired businesses have combined sales of €330m and an Adjusted EBITDA margin above 20% for the twelve months to the end of March 2020, with a high single-digit organic sales growth rate over the past 5 years. The acquisition will be debt financed, with committed bridge financing in place. DSM continues to benefit from a strong balance sheet and remains committed to maintaining a strong investment grade credit profile.

With state-of-the-art research and manufacturing facilities and approximately 1,200 employees around the world, the acquisition of Erber Group is a unique strategic opportunity that provides revenue-enhancing synergies from the combined offering, global customer base, and complementary geographic strengths. Austrian-based Erber Group offers DSM the

opportunity to enter the mycotoxin risk management market as the world leader and extends the company's position as one of the top suppliers in the rapidly growing animal gut performance management market.

Mycotoxins occur as a result of natural fungus contaminants in animal feed and threaten the health of both animals and humans. In addition to increasing the risk of illness, mycotoxins also reduce the nutritional value of feed. Biomin's patented and proprietary technology provides the most scientifically advanced mycotoxin protection available. Biomin is also a major producer of phytogenic and probiotic feed alternatives to antibiotics, which complements and strengthens DSM's position in the rapidly growing global eubiotics market for improving animal gut health.

Romer Labs is at the forefront of diagnostic technology with innovative testing solutions for the analysis of mycotoxins in feed and food, food allergens and pathogens as well as veterinary drug residues, with accredited full-service labs in Austria, UK, USA and Singapore. DSM's extensive global network of food and beverage customers as well as feed customers stand to benefit from Romer Labs' expertise and the combined group's data-based quality assurance offering.

The acquisition of Erber Group further strengthens DSM's expertise and reputation as a leading provider of animal health and nutrition solutions for farm productivity and sustainability, with an emphasis on emissions

reduction, feed consumption efficiency, and better use of water and land.

**Geraldine Matchett and Dimitri de Vreeze**, Co-CEOs of DSM, said: "These are great businesses with strong and sustained track records of profitable growth and attractive margins. Biomin and Romer Labs will help strengthen and accelerate the growth of our specialty animal nutrition and health offering, including our big data and diagnostic capabilities, and it is exciting to be entrusted to take these family-founded businesses forward. It was immediately clear to us that the people at Erber Group share our purpose-led mission and will make a wonderful addition to DSM".

Dr Erich Erber, Founder and President of Erber Group, commented: "In DSM, I recognize the mutual values of sustainable stewardship that are so important to us. The world must reduce farming's environmental impact at the same time as increasing protein production to feed 10 billion people by 2050. To do that, we have to make sure protein is produced sustainably, using renewable ingredients as much as possible, while protecting the well-being of animals. DSM is the perfect home for our businesses, as Biomin and Romer Labs will be able to use their new scale to intensify our joint contribution to a more sustainable world's food supply".

The transaction, which remains subject to customary conditions, is expected to close in Q4 2020.



## For an 'eggstra' score



The human body is made up of around 10,000 different proteins that make us who we are and keep us that way with only 20 amino acids comprising these proteins. However, 9 of them are incredibly essential as our bodies cannot manufacture them which is why we have to get them by taking a proper diet. People have different ways of getting all nine amino acids even though there are only a few foods that contain all them namely red meat, fish, chicken, quinoa, cheese, milk, yoghurt and eggs. Of these, eggs are inarguably the most popular because when

it comes to protein digestibility corrected amino acid score or PDASS, egg scores a perfect 100 and is the only other protein than whey that is best utilised by our body.

### Why is protein important:

Just like fats and carbohydrates, proteins is a macronutrient that is a vital source of energy for the body. Protein is found in every other cells in the body as it facilitates a lot of functions like energy supply, boosting satiety, preventing muscle loss in old people as well as promoting muscle recovery in athletes. However, much of the word credited to protein is attributed to amino acids. The current International recommended dietary allowance is 0.8 grams of protein per 1 kg of body weight per day giving and average requirement of 56 grams protein for a person

with an ideal 70 kg body weight.

### Eggs, a nutritional powerhouse

A whole egg contains several vitamins like vitamin A, D, E, K, B6, B2, B5, B12 along with Sodium, Calcium, Iron, Magnesium, Phosphorus, Potassium, Zinc, Selenium, Lutein, Zeaxanthin, and Folate. These nutrients in eggs provide us with a wide range of benefits like:

**Strong muscles:** Eggs are rich in protein (branched-chain amino acids) which help us repair body tissues including muscles.

**Immunity:** Eggs are a good source of vitamin A, B12 and Selenium which are key in keeping the immune system healthy.

**Reduce risk of heart disease:** choline present in egg reduces the levels of homocysteine present in human plasma, reducing the risk of heart disease.

**Eye Health:** The lutein and Zeaxanthin in eggs promotes good vision and keeps macular degeneration at bay which is the leading cause of age-related blindness.

**Good during pregnancy:** Eggs are rich in Folic acid which is effective in preventing congenital disabilities like spina bifida in newborns.

**The cholesterol controversy:** There have been misconceptions associated with eggs in the past including the notion that eggs increase blood cholesterol levels. And egg has 212 mg of cholesterol but since eggs are low in saturated fat, they are actually good for heart health.

Our body has two kinds of cholesterol namely LDL low-density lipoprotein and HDL which is high density lipoprotein. When we consume egg it increases our HDL cholesterol which is good for us and reduces LDL which is bad for us.

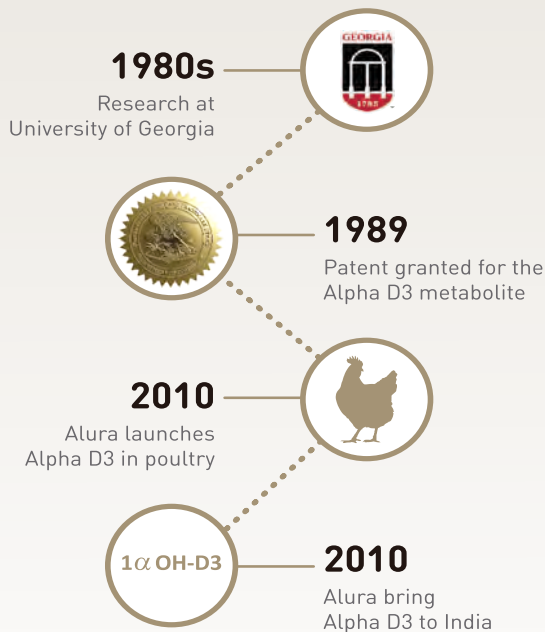
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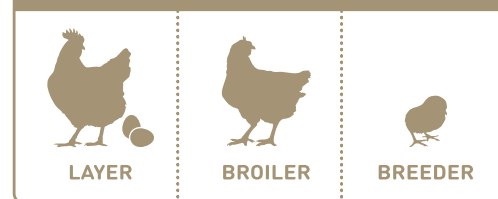
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## Pakistan turns locusts into chicken feed to tackle the invasion



*In this picture taken on February 23, 2020, a farmer holds dead locusts in Pipli Pahar village in Pakistan's central Punjab province*

Chickens in Pakistan have been feasting on captured locusts under an initiative to combat swarms of the insects that are threatening food supplies in the impoverished country. Prime Minister, Imran Khan has endorsed plans to expand a pilot project in the breadbasket province of Punjab, where villagers earned cash by gathering locusts that were then dried out, shredded and added to poultry feed.

More:

- ◆ Pakistan says working with India in fight against locust menace
- ◆ 'Locusts! Locusts!': Pakistan's crucial cotton crop under threat
- ◆ India and Pakistan face the worst locust attack in decades

Farmers are struggling as the worst locust invasion in 25 years wipes out entire harvests in Pakistan's agricultural heartlands,

leaving people scrambling for income.

Muhammad Khurshid from Pakistan's food ministry and biotechnologist Johar Ali set up the programme, drawing on efforts in war-ravaged Yemen, where authorities have encouraged people to eat the protein-rich locusts amid famine.

The pair chose Punjab's Okara district, where farmers had not used any pesticides that would make locusts unsuitable for consumption.

"We first had to learn, and then teach the locals how to catch the locusts. Nets are useless against them," Khurshid told the AFP news agency.

At night, locusts cluster on trees and plants, making them easy to scoop up as they lie motionless in the cooler temperatures until the sun begins to rise.

For a reward of 20 rupees (12 cents) per kilogramme

(roughly two pounds) of locusts, locals worked all night to collect them.

One farmer who lost all her crops to the insects said she and her son earned 1,600 rupees (\$10) during a single locust-gathering outing, helping to offset the financial damage.

Organisers struggled at first to convince farmers to join the hunt but, by the third night, word had spread, and hundreds joined in - turning up with their own bags to stuff full.

With 20 tonnes of captured locusts, authorities ran out of money to pay the collectors and the programme was paused.

The ministry, which recently announced the results of February's pilot, is now preparing to expand the project to other locations.

The harvested locusts went to Hi-Tech Feeds - Pakistan's largest animal-feed producer - which substituted 10 percent of the soybean in its chicken food with the insects.

"There was no issue with the feed, the locusts have a good potential for use in poultry feed," general manager Muhammad Athar said, after trying the modified product on 500 broiler hens.

Nationwide emergency

While the project is not a solution to the devastation inflicted on crops, it can provide hard-hit farmers with a fresh revenue stream and relieve pressure on authorities struggling to distribute locust-beating pesticides.

Locust swarms have gnawed their way through crops across East Africa, the Arabian Peninsula, and parts of India this year, and experts fear their numbers will explode as monsoon rains arrive this month.

The crisis is so severe that the government has declared a nationwide emergency and appealed for help from the international community.

Bananas, mangoes, vegetables and other crops are all vulnerable - raising fears of food shortages - as are the wheat and cotton harvests that provide Pakistan with vital revenue.

According to the UN's Food and Agriculture Organization, Pakistan could suffer about \$5bn in losses if 25 percent of its crops are damaged.

A reduced harvest could also push prices up and risks worsening food insecurity, according to poultry site .

About 20 percent of the population are already undernourished, with almost half of all children under five stunted, according to the World Food Programme.



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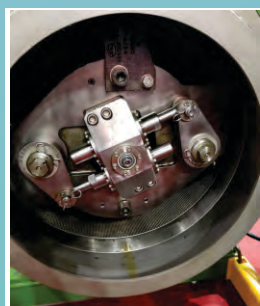


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## Nutrex NV appoints Dr Amit Kumar Patra as TSM - South Asia



**Dr Amit Kumar Patra,**  
TSM, Nutrex

**Kolkata:** Nutrex NV, Belgium has appointed Dr Amit Kumar Patra as Technical Sales Manager - South Asia (India, Bangladesh, Nepal and Sri Lanka). He will report to Belgium office.

Dr Amit completed M. V. Sc in Animal Nutrition at West Bengal University of Animal &



Fishery Sciences, Kolkata. He has been involved in Poultry and Dairy industries for more than 15 years before joining Nutrex. Dr Amit comes with his expertise and knowledge of the South Asia market to reinforce Nutrex business in the region.

Nutrex's market presence has been continuously growing in South Asia and Nutrex aim to bring a constant high quality support to its customers to help them to obtain the best performances with the Nutrex range of quality products.

## Govinda Rajulu appointed NABARD Chairman



**Govinda Rajulu Chintala,**  
Chairman, NABARD

**New Delhi:** Mr Govinda Rajulu Chintala has been appointed as the Chairman of the National Bank for Agriculture and Rural Development (NABARD), a Personnel Ministry order said on 19 May 2020.

Chintala, at present, is

working as the Chief General Manager (CGM) of the bank. He will hold the post till his super annuation on July 31, 2022, the order said.

Besides him, Shaji K.V. and P. V. S. Suryakumar have been appointed Deputy Managing Directors in the NABARD. Shaji is General Manager of Canara Bank.

Suryakumar, at present CGM in the NABARD, will hold the post till his super-annuation on July 31, 2023 the order said. PTI AKV DPB an additional Rs 30,000 crore of emergency working capital for farmers is a key element of the Rs 20 trillion economic package announced by the government in the first fortnight of May.

## Vetphage Extends a Helping Hand to Support Poultry Farmers During Lockdown

*Vetphage offered bacteriophages feed additives – BAFASAL+G to farmers free of cost*

- ◆ 300 liters of the product worth 27 lakh rupees were distributed.



**Dr Ramdas Kambale, Sr. VP,**  
Vetphage Pharmaceuticals

**June 2020:** To help poultry farmers tide over the market crunch caused due to the COVID 19 pandemic, Vetphage Pharmaceuticals, in collaboration with its parent company Proteon Pharmaceuticals, distributed their top of the line poultry feed additive BAFASAL+G free of charge to farmers.

Poultry farms in India were already facing pressure on their profit margins due to the steady increase in feed prices. The government's decision last year to increase the minimum support prices for soybean and maize, two of the products most commonly used as poultry feed, led to an increase in the cost of production of a poultry. At a time when they were struggling to pass this on to the consumers despite a demand, the corona virus pandemic turned everything helter-skelter. When the news of the pandemic started spreading, misinformation spread along with it, and a lot of people were inundated with erroneous forwards that claimed that the virus can be transmitted through the consumption of poultry meat. This caused the demand for poultry meat to drop, and the prices dropped along with it, from over 75 rupees per kg to 5 rupees per kg, in just over a

month. Despite efforts by the Ministry of Animal Husbandry, Department of Health and Family Welfare, Poultry Federations of India and Breeders Associations across the country to quell the rumours, the panic had settled in and the public started avoiding meat & egg consumption, which led to a sharp fall in demand, and a huge setback for farmers who depended on farming poultry for their livelihood. "Since poultry is a low margin commodity, it takes over 10 production cycles to recover the losses, which are currently upwards of Rs. 20000 crores. This does not bode well for the economy either as the industry contributes 6-7 percent to our national GDP. Considering the dire situation, Vetphage Pharmaceuticals decided to give the industry a push by supplying high quality poultry feed additive (BAFASAL+G) to the farmers free of cost." Said Dr Ramdas Kambale, Senior Vice President, Vetphage pharmaceuticals.

**BAFASAL+G is an innovative feed additive** consisting of a cocktail of 6 lytic bacteriophages, with 2 phages targeting *S. Gallinarum* specifically, without any negative impact on the gut microbiome of chicken. By directly impacting *Salmonella* bacteria, BAFASAL+G helps create space for good bacteria to proliferate, thereby **improving gut health**, bird performance and preventing high mortality in broiler, layer & breeder flocks. BAFASAL+G also helps to reduce the usage of antibiotics and improves profitability.

*Continue on page 22*



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## Can COVID-19 outbreak accelerate India's movement toward processed meat ?

The COVID-19 outbreak could trigger the growth of the processed meat segment both from the demand and supply sides. With the right help from the government and private investment, India could see a movement towards a mature processed poultry market.

### The Indian poultry market

With 10 lakh farmers producing around 851.8 million birds annually, poultry contributes Rs 1.3 lakh crore to the national GDP. The poultry market is predominantly fresh meat and processed meat accounts for just 5 to 10 percent depending on the geography. This share varies from 30 to 40 percent in countries such as Russia and France and 15 - 25 per cent in South East Asian countries and Brazil. Hence there is a clear opportunity to double or even triple the size of processed poultry meat in India.

A live poultry market puts pressure on producers as fresh meat prices are impacted by supply-demand economics and market shocks. The continuous rearing process and natural gestation period make it difficult to vary supply with demand. Another complexity in India is that the meat consumption cycle is not constant as in other countries. Producers often bear reduced margins or even losses to sustain the farming volumes. To give a perspective, the loss suffered by the poultry industry on account of the current price crash is estimated at around Rs 22,500 crore.

### Advantages of the processed meat market

A well-developed processed meat market will benefit both producers and consumers. Processing will increase the shelf life of meat products and

will enable producers to absorb demand shocks through improved inventory control. Also the ability to store the product will shield the producers from price crashes.

With social distancing becoming a norm, the need for hygienically packed meat untouched by hand will increase. Indian customers will start asking for traceability, no antibiotics/chemicals, fresh-but-hygienic meat. Processed meat is a logical answer as producers will be able to confirm adher-

**"With 10 lakh farmers producing around 851.8 million birds annually, poultry contributes Rs 1.3 lakh crore to the national GDP"**

ence to these quality requirements. Existing players who can forward-integrate into a processed brand-led play could gain from this consumer trend.

### Challenges for the transition

The first challenge in the Indian context is the preference to buy fresh food. Indians are for long used to buying fresh fruits, vegetables and poultry. Changing this buying behaviour will need sustained investment in customer education. The biggest challenge will be to convince that the taste of the meat and its nutrient value is largely undisturbed during processing.

The second challenge is the feared loss of employment among a section of wholesale traders and butchers, who could become redundant if the processed segment grows. As the processed meat industry gains share, such interme-

diaries often find different roles in the new supply chain network. In addition, we could see an increase in employment in processing plants.

The third challenge is upgrading the processing and supply chain infrastructure. Capacity utilisation in India's processing plants is around 50 percent, and is hence not an issue. However, it is the supply chain infrastructure that needs to be invested in. A robust cold chain from the processing plants to storages and extending to retail refrigeration will be needed. Favourable government policies will also be needed to attract foreign investments in this area.

### The way ahead

Growth of processed meat consumption benefits both producers and consumers in the long run. India, just as many other countries, will continue to have both wet and dry markets. The key will

**"There is an opportunity to double or even triple the size of processed poultry meat in India"**

be to create consumer awareness and change the perception towards processed meat. There are many factors accelerating this change in the Indian market-changing lifestyles and demographic profiles of families; exposure to international cuisines; growth of modern retail and restaurants.

Once end-consumer acceptance increases, capacities could be created and utilised well. Some of the Indian players could seize this opportunity to forge international tie-ups. Government regulations will continue to play a key role both in attracting investments and in promoting processed meat as safe and hygienic food. To conclude, this transition won't be an overnight journey — it could take five to ten years for India to have a well-developed processed poultry meat market.

## IVA, Ex-President Dr P. N. Bhatt passes away



**Chennai:** Dr P. N. Bhatt, President, Indian Veterinary Association (2001-09), Director, IVRI, Izatnagar; DDG (Animal Science) ICAR, Chairman, Task Force on Animal Biotechnology, DBT, New Delhi and Chairman, World Buffalo Trust, Ex-Animal Husbandry

Commissioner, Ex-Director, IVRI passed away on 11 June 2020.

Dr Bhatt was dedicated beloved veterinarian who served the animals and farmers with zeal and inspirational leader who dedicated his life to serving the veterinary community in India. On behalf of Indian Veterinary Association, we extend our deepest condolences to the bereaved family members of great Dr P. N. Bhatt and the veterinary fraternity of India, said a note from Dr Chirantan Kadian, President, IVA and Councillor, World Veterinarian Association.

# A Surgical Strike on Bacteria

For millions of years, bacteriophages have been hunting down and killing bacteria. **eXolution Bacterophage F** uses a cocktail of these ancient killers to purge disease-causing bacteria in a formulation created specifically for use in poultry.

Each bacteriophage is a virus that has evolved to target and eliminate only a specific bacteria; leaving other beneficial bacteria completely unharmed.

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## eXolution Bacterophage F

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Targets and eliminates specific bacteria, even those resistant to antibiotics

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**Clostridium Perfringens**

Type A, C, B, D, E

**Staphylococcus Aureus**



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## Poultry ryots to get maize at subsidised price

*Government purchases maize at Rs 1,760 per quintal, gives it to poultry ryots at Rs 1,525 per quintal*

**Hyderabad:** The State government has decided to supply maize to poultry farmers at a subsidised rate of Rs 1,525 per quintal against the minimum support price of Rs 1,760 at which the government is procuring the crop from farmers now.

According to an order issued by Secretary (Animal Husbandry, Dairy Development and Fisheries) Anita Rajendra on Saturday, the decision has been taken following a request made by the Telangana State Poultry Federation (TSPF) to supply maize, a principal ingredient of poultry feed, on subsidy to overcome the losses suffered by poultry farmers during the COVID-19 conditions.

In the guidelines issued on the subject, the government has asked the TSPF and Telangana Poultry Breeders Association to identify poultry farmers and the farmers who get the supply were required to make the payment within two months through equat-

ed weekly instalments after allocation of maize to them against bank guarantee.

Telangana State Cooperative Marketing Federation (TS-Markfed) has been asked to allocate the required quantity of maize to poultry farmers from the nearest procurement centre. The transportation charges and any other taxes/charges have to be borne by the poultry farmers while loading charges and cost of gunny sacks would be borne by the Markfed.

The Markfed has also been cautioned "against the maize supplied to poultry farmers getting recycled and reaching the procurement centres against under any circumstances". The government has procured over 5.32 lakh tonnes of maize worth about Rs 937 crore. The maize has been procured from over 97,000 farmers at 1,097 procurement centres and the farmers have already been paid over Rs 333 crore.

## Vetphage Extends a Helping Hand to Support Poultry Farmers During Lockdown

*Continue from page 18*

Vetphage has successfully distributed over 300 liters of the product, valued at over 27 lakh rupees, to 57 poultry farmers across the country. The product has shown proven results when it comes to improving the efficacy of flocks, increasing the body weight of broilers, and increasing production performance during the moulting and post moulting phase in layers.

A lot of farmers have already shut farms due to the current crisis and the viability issues. If the current trend continues, poultry farmers will end

up facing more losses. Not only will it disrupt their livelihood, it will also affect livestock production, and have an adverse impact on the market, which will in turn affect more farmers and stakeholders. Meanwhile, the institutes that finance players in the industry are looking forward to more concrete policy support and guidelines from the central government so that they can issue fresh working capital to businesses who are looking to revive the slump in their production. With their initiative, Vetphage Pharmaceuticals joins the

government and other industry players in their efforts to boost production and sales volume of struggling poultry

farmers, and they intend to continue supporting them in the future.

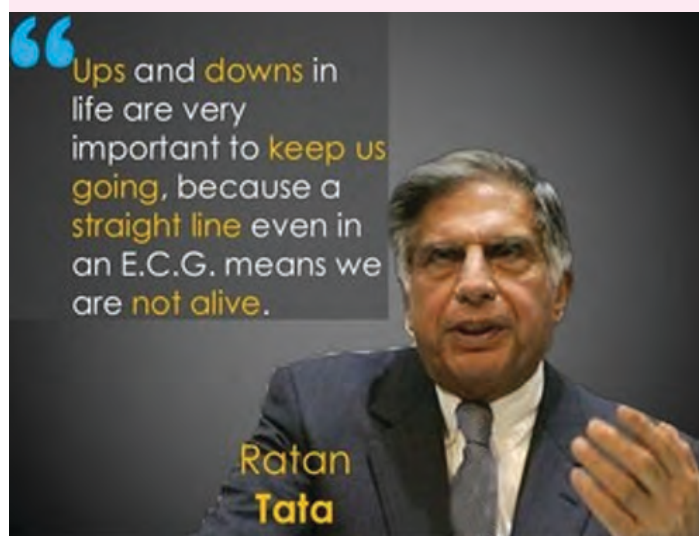
## Ratan Tata lists down the 10 things not taught at school and it's a must read !

Nothing succeeds like success — and Ratan Tata, founder of the one of the biggest conglomerates is a living example of this.

The man, known for his humble ways has equally humble

beginnings as well and it was only through his hard work, perseverance and determination that he has scaled this height today.

At a recent event held at a school, Ratan Tata shared



these 10 pearls of wisdom, that no school will ever teach you – go ahead, get inspired!

1. Get used to the ups and downs of life. In life, things are never always good or always bad. Learn to go with the flow and make the best of any situation.

2. People respect you more if you respect yourself. Do not show off before you prove yourself.

3. Do not make the mistake of thinking you can get a high post or attain overnight success after graduating college. It takes a lot of hard work and effort.

4. If you think your teacher is strict, scary, hard, and dangerous wait until you meet your boss. Your old teachers will pale in comparison.

5. Do not blame yourself for your defeat, just learn from your mistakes and move

forward.

6. Your parents were not as boring and unimaginative before you were born, they matured after caring for and nurturing you.

7. Consolation prizes are only in school. In reality the rules are different for those who fail. There are no second chances for losers.

8. In real life, you do not get vacation after a few months of work, like you do in school. You do not get the luxury of teachers in adult life. You have to rely on yourself and teach yourself.

9. What is shown on TV is not the reality of life. In reality there is Work and only work.

10. Study Constantly and work hard. Do not tease your friends there may come a time that you have to work under them."



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Recommended for the vaccination of broilers, broilers and replacement pullets against Newcastle Disease in poultry.

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**INDICATIONS**  
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**USAGE INSTRUCTIONS:**  
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**Product colour change will not affect performance.**

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**USAGE INSTRUCTIONS**  
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## Rising cost of poultry products has hoteliers worried



**Amritsar, June 7:** Hoteliers and restaurant owners, who are set to resume operations for take aways and home deliveries from June 8 onwards, are jittery over the rising cost of poultry products.

The government has allowed the reopening of restaurants for takeaways and home delivery, and at hotels, food will be served in rooms only.

Navdeep Singh, Manager of Astoria restaurant, said the cost of broiler before the lockdown was between Rs 130 and Rs 140, but it had now increased to Rs 230 to Rs 250.

Similarly, the price of mutton per kg was now Rs 600

to Rs 650, while it was Rs 400 per kg earlier. A kg of boneless mutton was now Rs 900, while it would cost Rs 550 before the lockdown.

GS Bedi, President of the Amritsar Poultry Association, said the production of broiler had come down to 30 to 40 percent. "Earlier, 12 to 20 lakh chicks used to be reared in hatcheries, but the number has now declined to five lakh," he said.

He said there was a huge gap between demand and supply. Most orders for poultry products would come from hotels, restaurants and resorts, which were likely to open in phases from the next week.

fraction of the normal in the wake of Covid-19.

"Poultry is a low-margin commodity product. It will take about 10-12 production cycles to recover the losses. Extending an interest-free working capital for two years on all the borrowings is the need of the hour to save the industry as it is suffering massive losses," said **Vijay Sardana**, advisor, Poultry Federation of India.

After the lockdown was announced in March, most of the people have stopped eating non-vegetarian food and sales also plummeted following closure of retail outlets as well as hotels and restaurants. The continuous losses by the poultry sector will have multiplier effects on agriculture economy since a major chunk of soyabean and maize is used as feed.

Various food grains produced by small farmers, which are not fit for human consumption, are consumed by the poultry sector as feed, Sardana said. "If poultry farmers will not buy oil meal, no edible oil industry can run regularly because they will not be able to recover their cost and will not be viable just by producing cooking oils."

The industry had earlier written to the government demanding one year moratorium on all term loans and complete interest waiver for one year. According to PFI President **Ramesh Chander Khatri**, the poultry farmers have cut production by 80% due to slump in demand and closure of supply chain. Unless they get some immediate relief, default is not ruled out and 60-70% of the outstanding may become

non-performing asset (NPA), he said.

Prices of rabi-grown maize in Bihar, the key producer, are currently hovering Rs 1,000 to 1,150 quintal against Rs 1,500 to 1,700 a year ago, said Khatri.

However, there has been little impact seen on prices of egg, mainly as its supply line was not affected. In Barwala, Haryana, main trading centre in north India, the egg prices hover in the range of Rs 290 to 312 per 100 pieces this month with an average of about Rs 294, against Rs 278 in April. The prices were also around same levels in the year-ago period.

Retailers started reporting slide in chicken sales from last week of January as demand abruptly reduced after "rumour on spread of coronavirus" surfaced in social media. "Though consumption is safe in India, rumour on spread of coronavirus from chicken has reduced the demand sharply by over 50% in just one month and as a result ex-farm gate prices have also fallen by 70%," Godrej Agrovet's Managing Director, **Dr B.S. Yadav** had said on February 27.

Chicken sales had come down to 35 million birds a week in February from 75 million birds a week across the country in January, while farm gate prices have dipped to Rs 35 per kg from Rs 100 per kg during this period. Though the industry was expecting the consumption to rise after the rumour fizzles out, the rise in corona positive cases and subsequent lockdown from March 25 dashed any hope of revival.

## Left high and dry, poultry sector seeks loan recast, interest relief

*Sales of poultry meat have come down to just a tiny fraction of the normal in the wake of Covid-19*

Left out of the government's Rs 20-lakh-crore package, the poultry industry has sought immediate succour in terms of restructuring of loans and 100% interest

subvention for two years so that the current credit of about Rs 20,000 crore by the sector does not turn NPAs. Sales of poultry meat have come down to just a tiny





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## Poultry farm prices at pre-lockdown levels



### Not enough, we need working capital'

Having suffered an estimated loss of Rs 20,000 crore in three months on account of fake news linking chickens with COVID-19, the poultry industry is limping back to normalcy with demand slowly picking up post partial lifting of lockdown.

With demand far exceeding supply, farm gate prices of poultry have risen up to Rs 120 a kg compared with the Rs 72 per kg in January and the Rs 5 or Rs 10 per kg in March and April when the industry bore the maximum brunt. When consumers stayed away from buying chicken for the fear of contracting the virus due to unsubstantiated rumours, the farmers and growers had, in some cases, gave away their birds free of cost and even released let them in the fields.

Egg prices had also crashed from Rs 48 to Rs 24 per

dozen.

Financially, the farmers are in dire straits with the mounting losses and are unsure about the future demand, making them vulnerable to market forces.

"Though the prices have gone up due to sudden demand, this rate is unsustainable. Farmers are unsure about the future demand and pricing. There was a loss of 110% and now the profit is only 30%," It will take two more months to see how the demand pans out its too early to comment about future," said P.G. Pedgaonkar, GM, Venkateshwara Hatcheries. He said with the industry's working capital having almost vanished due to the Rs 20,000-crore loss, the need of the hour is infusion of working capital that can help farmers achieve a long term capital goal.

"The government, with the help of the RBI, has to replicate some of the measures it took during the swine

flu outbreak of 2006," Dr Pedgaonkar said.

Recently, the government announced a financial package of Rs 15,000 crore for the fisheries sector and it is understood that it also includes the poultry sector. Commenting on the impact, Dr Pedgaonkar said it is serious because the poultry industry contributes 6-7% to the GDP.

"Farmers were forced to sell their livestock at very low prices due to panic. A lot of restaurants are also closed and they contribute up to 20-25% in the supply chain," he added.

Stating that a large section of the population is facing uncertainty due to job losses and salary cuts, he said it is difficult to predict when the situation will get back to normal.

Ramdas Kambale, senior vice-president, Vetphage Pharmaceuticals Pvt. Ltd. said, the unfounded rumours about the possible transmission of COVID-19 from the consumption of bird meat ravaged the poultry industry which is primarily based in Maharashtra, Andhra Pradesh, Telangana, Tamil Nadu, Karnataka and Haryana. Unfounded rumours destabilised the industry and the supply chain which led to massive dip in production. The shortage of labour has added to the problem, he said.

"Since poultry is a low-margin commodity product, it takes over 10 production cycles to recover the losses. The government must provide subsidies to the poultry sector, extend in-

terest-free working capital to recover the losses incurred by the industry, and help procure raw material at cheaper rate," he said.

"We need concerted efforts from the government and the players in the sector to allay public fears and revive the slump in demand. We do not expect the demand to get back to normal any time before winter," he added.

According to Krishna Chandra Sahoo, global product manager, Vetphage Pharma, the Indian poultry industry was growing at 7-8% per annum for the past few years which propelled it to be the fourth largest producer of chicken in the world and second largest producer of eggs. "Currently valued at Rs 1 trillion, the industry employs over five million farmers and indirectly supports millions of maize and soya farmers, medicines and vaccines manufacturers all of which contribute to the GDP," he said.

He said since the poultry industry in India relies mostly on private butcher shops, most medium and small level poultry businesses don't have the capital for storage units wherein culled chicken can be preserved for seven-eight months at sub-zero temperatures.

"This is why the government must actively help farmers who cannot look after their chicken any longer, by offering subsidised rates for fodder as well as storage space to preserve culled chicken which will cut down the losses significantly," Dr Sahoo added.

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## Dr Mujeeb Ather retires from VBRI



Dr M. A. Mujeeb Ather

**Hyderabad:** Dr M. A. Mujeeb Ather, Deputy Director, Veterinary Biological Research Institute, Hyderabad, retired on 31 May 2020 from Government service after completion of 34 years of service. He is a poultry pathologist and received many gold medals and awards. Published and presented several technical papers in national and international journals and conferences respectively. An overwhelming send-off given to him by the Director and Additional Director of Veterinary and Animal Husbandry Department, Govt. of Telangana and Staff of

VBRI, Hyderabad.

During the felicitation function held on the occasion, Dr Laxma Reddy, Director of Veterinary and Animal Husbandry, Govt of Telangana appreciated the sincere services of Dr Mujeeb Ather.

Dr Ramchander, Additional Director of Animal Husbandry Dept, Govt of Telangana, Dr Malleshwari, Joint Director, VBRI, Dr Sunita, Deputy Director, VBRI, Dr Sreelaxmi, Asst. Director, VBRI, Dr Sudha Rani, Asst. Director, VBRI, Dr devender, Asst. Director, VBRI were also present.

Dr Suresh S. Honappagol, Commissioner of Animal Husbandry Dairying and Fisheries, Gol, sent an appreciation letter to Dr Mujeeb Ather that his professional involvement as a state nodal officer for the National Mission of World Organisation for Animal Health (OIE) – Performance of Veterinary Services – PVS Evaluation of the country during 19 February 2018 to 9 March 2018 and 11 April 2018 to 2 May 2018.



Left to Right: Dr Shakeel Ahmed, Dr Simha Rao, Dr Babu Beri, Dr V. Laxma Reddy, Director (V&AH), TS, Dr M. A. Mujeeb Ather, Mrs Ather and Dr Malleshwari, Joint Director during felicitation to Dr Mujeeb Ather.



Left to Right: Sunil, GM, Marketing, VHPL, Sanjeev Chintavar, NECC, Dr M. A. Mujeeb Ather, Mrs Ather and M. A. Malik Ather (youngest son of Dr Mujeeb Ather).

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## Industry can now buy Agri land directly from farmers

**Bangalore:** Removing what the industry terms a long standing hurdle to its growth, the Karnataka government has implemented the amended Land Reforms Act, 1961, that now allows industries to buy land directly from farmers in a big decision to hasten rebooting of the sector maimed by the lockdown.

The industries will still be required, to seek permission from the revenue department. It will, however, be deemed approved if the deputy commissioner does not raise red flags or clear the application within 30 days. Earlier, industries could get agricultural land allotted only through government agencies.

The Amendment was notified after the Karnataka Governor approved the Karnataka Land Reforms (Amendment) Bill, 2019, that had been approved by the Legislature in March.

The April 27 gadget notification repeals the related Karnataka Land Reforms (Amendment) Ordinance 2019.

On January 25, Chief Minister B. S. Yediyurappa had said the government would amend section 109 of the Land Reforms Act to facilitate industry to purchase land directly from farmers.

### Amendment was in pipeline since November

Welcoming the decision since land acquisition was “a major stumbling block”, Devesh Agarwal, President, Bangalore Chamber of Commerce and industry, said this will be beneficial, especially in a post covid-19 world, when India looks for opportunities to become an alternative sourcing point to China with global firms to de-risk their supply chain. “Removal of impediments will enhance our

competitiveness” he added.

The government was planning the amendment as early as November when it was hoping to attract more investments through a global investors meet, source said. In January Yediyurappa had said the government would issue instructions to remove all administrative hurdles and facilitate this measures.

“A three-year process now takes just about 30 days a major reform that we have been demanding for long. Tamil Nadu, Andhra Pradesh and Telangana have been along this for a while now”, we are glad the CM understood concerns. A lot of credit must go to the principal secretary of commerce and industries department and the industries Minister,” C. R. Janardhan president, FKCCI said.

Gaurav Gupta, principal secretary, commerce and industries department, said: “This has been in the pipeline for sometime as several neighbouring state did not

### NOD WITH RIDERS

- Karnataka implements amended Land Reforms Act, 1961, to allow industries to buy land directly from farmers
- Units will still need state revenue department's approval for their projects
- Industries can go ahead if the concerned deputy commissioner doesn't clear their applications in 30 days

have such restrictions. At Davos, we heard the industries' views this is not a blanket right. Approval is granted for a particular activity, investment, land and other specifics. At the stage of project approval the government would look into whether the land required for the project has restricted use, or is allowed for industries and so on.”

## We will live with Covid-19 for months Let's not deny it or panic: Dr Faheem Younus



Dr Faheem Younus from the University of Maryland in America, head of the infectious disease clinic tweets facts about covid-19, he tweets we will leave with covid-19 for months. Let's not deny it or panic. Let's not make life unnecessarily difficult. Let us learn to be happy and live with fact.

The virus will not reduce its effect in the spreading it's summer. Its summer in Brazil and Argentina, but the virus is rapidly. You cannot destroy covid-19 viruses that have penetrated the cells by drinking too much water you will just go to the toilet often.

Washing and hands and keeping a distance of 1,8 meters is the best method of protecting against the virus if you don't have a covid-19 patient at home there is no need to disinfect the surfaces in the house. Cargo packages, petrol pumps, shopping cards or ATMs do not cause infection. Wash your hands live your life as usual. Covid-19 is not a food infection. This is associated with drops of infection like flu. There is no documented risk of covid-19

being transmitted by ordering food.

Entering the sauna does not kill covid-19 viruses that have penetrated the cell. You can lose your smell with many allergies and viral infections. This is a non specific symptom for covid-19.

Once we get home, we don't need to change clothes and shower urgently purity is a virtue, not paranoia. Covid-19 virus does not hang in the air. This is a drip infection that requires close contact. The air is clean, you can walk around the gardens (keeping the distance) in the parks.

Covid-19 does not separate race or religion, it is passed on to all people. It is enough to use normal soap against covid-19 by not necessarily using antibacterial soap. The virus is not a bacteria anyway.

You don't have to worry about your food orders but if you want you can heated up a bit in the microwave. The chance to bring covid-19 home with your shoes and getting sick is the same as getting hit by lightning twice a day I have been working against viruses for 20 years, drip infections don't spread like this.

You cannot be protected from the virus by drinking or eating vinegar, sumac, soda and Ginger. Wearing gloves is a bad idea the virus can accumulate on the globe, it can easily be transmitted if you touch your face. It's best to wash your hands.

# Poultry Farmers in Raigad Left High and Dry after Cyclone

*Farmers who were just recovering from the COVID rumour have now suffered huge losses due to the cyclone; govt compensation 'a joke'*



**Damaged poultry farms in Khopoli run by M/s Premium chick feed**

**Raigad:** For the poultry farm owners in Raigad district, the troubles do not seem to end. Rumours about COVID-19 being spread through poultry (chicken and birds) hampered their business first, with poultry owners selling one chicken for as low as Rs 5 per kg, causing them heavy financial losses.

By the time the rumour disappeared and business was just about picking up, Cyclone Nisarga devastated their poultry farms on June 3, damaging the sheds and killing thousands of broiler chickens, along with a few 'kadaknath' chicken (known for its nutritional values).

Raigad being a major supplier of broiler chicken to Mumbai, the damage in the district will certainly have an impact on the supply of chicken to Mumbai and neighbouring areas. Prices are also likely to go up by 10-15 per cent in the retail market.

Dr Subhash Mhaske, deputy

director, Animal Husbandry department, Raigad, said, "The entire district has around 2,500 poultry farms, and on an average, the monthly sale goes up to Rs 35 lakh chicken costing around Rs 5 to 6 crore. It is the main source of livelihood for many families here and also employs people in larger poultry farms. While the Animal Husbandry department has estimated loss of bird lives at Rs 37,950 in the entire district, it has cost a financial loss of Rs 19.25 lakh. Poultry farmers, however, believe that the number could be higher.

According to Dr Mhaske, Pali town has witnessed a large number of poultry deaths at 11,600 birds (loss of Rs 6 lakh), followed by Alibaug (11,450 birds and loss of Rs 5.80 lakh) and Pen (6,500 birds and loss of Rs 3.25 lakh).

## Major Loss for Poultry Farmers

Kunal Pathre, a business partner in family-run M/s

KuKooChKu Poultry Farm in Alibaug, established in 1989, said, "This is the first-ever disaster that has impacted all poultry farmers across the district so much. Around 250 poultry farmers buy chicks from us and we pay them Rs 12 per bird for a 42-day period (to develop them from a chick to a full-grown chicken)." A poultry farmer invests in the poultry infrastructure including sheds, lights, feeds, vaccine, workers etc. for this purpose. The full-grown chicken is then sold to the wholesaler at Rs 100 (present rate), who sells them to a retailer and the consumer gets it at Rs 200. "The major loss is for poultry farmers who often take financial assistance for infrastructure costs," said Pathre who lost over 30,000 birds in the cyclone.

## 'Can't Afford Insurance'

Each affected poultry farmer is entitled to a compensation of Rs 5,000 per poultry. "This is like rubbing salt on our wounds. The farmers have to spend Rs 300 per

ly costs a few lakhs," Pathre said, adding that farmers often cannot afford bird insurance premium, which is almost equal to how much they earn.

Dr Shyam Dhawan, director of M/s Premium Chick Feeds (Pvt) Ltd also had to incur heavy losses after he lost 50,000 birds. "The government needs to chip in and should understand the practical difficulties of the poultry farmers. With the damaged poultry farms, no power, water and the monsoon looming, shed repairs are going to take a long time. This means no income," Dr Dhawan said.

Rajesh Karad, who runs three poultry farms in Pen taluka, had two of his farms damaged, killing 900 birds. "At one of my poultry farms, the roof broke after a tree branch fell on it, and within hours, nearly three to four inches of water accumulated inside the farm, killing the chicken within minutes," said Karad, who



sq feet for construction of sheds, and each shed usual-

**Continued to Page 31**



## New research could protect chickens from heart disease



The health and welfare of broiler chickens may improve thanks to University of Saskatchewan (USask) researcher Andrew Olkowski and colleagues.

More chickens are raised worldwide than any other livestock animal, so improving their health outcomes would have a big impact. The broiler chickens that are raised for meat were genetically selected to grow extremely fast, but they often suffer from heart diseases. Heart pump failure is a major health and welfare issue for the broiler chicken industry worldwide. Globally, economic losses associated with heart failure problems in broiler chickens amount to more than \$1 billion annually. To understand why fast-growing broiler chickens suffer from heart problems, Andrew Olkowski, a researcher with the University of Saskatchewan, and collaborators compared them with their slower-growing broiler counterparts, which have a much lower risk of heart failure, and with Leghorn chickens, which are resistant

to heart failure.

"I couldn't see obvious changes that could explain heart pump failure under the microscope, so I thought, maybe it's some more subtle problem with the heart muscle proteins themselves that is not apparent on light microscopy. When we looked at that using infrared micro-spectroscopy, it was fairly immediately obvious," says Olkowski. Using the Mid-IR beamline at the Canadian Light Source at the University of Saskatchewan, it was possible to identify misfolded and damaged proteins building up in the heart.

"The synchrotron allows you to see the conformational changes in the proteins, and we hypothesised that the changes we observed must have a physiological impact on heart pump function," says Olkowski.

Further analyses revealed that the chickens had a hard time disposing of these misfolded proteins aggregates, with knock-on health effects eventually leading to health failure. The team's results, which were published

recently in Avian Pathology, suggest that heart issues in fast-growing broiler chickens might be linked to how their genes respond to epigenetic factors, like nutrition and their environment.

Olkowski will continue to study poultry health and primary causes for disease, which could improve the health of millions of chickens.

## Poultry Farmers in Raigad Left High and Dry after Cyclone

*Continued from Page 30*



**Rajesh Karad, a poultry farmer, with his chickens that died during the cyclone**



too is extremely disappointed with the compensation of Rs 5,000 per poultry farm. He incurred losses of close to Rs 5 lakh due to the cyclone.

### 'Govt Must Be Sympathetic'

Dr Mhaske, however, said that the animal husbandry department is still reaching out to certain places, which might have been missed

due to logistical reasons. "As per the government GR, per poultry compensation is fixed at Rs 5,000."

Another senior officer added, "We have been working here closely, and it is too little a sum coming towards the poultry farmers. The government needs to be sympathetic towards them."



# With new Hy-Line breeding programme in India, Hy-Line W 80 layer will become premium product in India:

– Says C. Jagapati Rao, Chairman, Srinivasa Farms

By M. A. Nazeer, Editor, Poultry Fortune

*I am sure with this new breeding programme, Hy-Line will become premium product in India and going to excel with other good traits. Hy-Line W 80 is the best choice for the egg producers in India, says Mr C. Jagapati Rao, Chairman, Srinivasa Farms Pvt Ltd. At 86 years age, Jagapati Rao sees good prospects to poultry industry in India and for Srinivasa Farms – Hy-Line International role in Indian poultry industry.*

*Poultry Fortune Editor M. A. Nazeer had an exclusive interview with Mr C. Jagapati Rao on June 3. Excerpts:*



C. Jagapati Rao, Chairman  
Srinivasa Farms Pvt Ltd

Born in an agricultural family in a small village Kulla, situated on the banks of river Godavari in East Godavari district of Andhra Pradesh, Mr C. Jagapati Rao did his elementary schooling in his village, higher secondary schooling in Pamarru village, and moved to Rajahmundry for studying 9th, 10th and 11th class. He did his Intermediate in Biological Sciences in Kakinada and graduation in Economics in Rajahmundry.

Further, Jagapati Rao did his post graduation from Jadavpur University, Kolkata in International Relations in 1958-60. Along with post graduation he also did law course.

Jagapati Rao had applied for seat

for Masters in Business Administration in Glasgow University, England and got the seat. Somehow or the other, he did not move to England. He had joined Ph. D for sometime in Delhi and studied for one year, but discontinued it. He got married in 1961. After that he stayed back in the village looking after the family agricultural operations.

**How and when did he enter into poultry industry ?**

Jagapati Rao had a strong inclination that poultry business would grow in a big way in India. Keeping this idea in view, he moved to Hyderabad in 1965. To start with, he took an existing poultry for selling commer-

cial eggs. With 10,000 Hy-Line birds, he continued to run the business till 1971.

**Poultry Fortune: How was your experience with late Dr B. V. Rao and your role and contribution to VHPL ?**

**C. Jagapati Rao:** By 1971, I developed close bonding with late B. V. Rao who was then working with Arbor Acres. I used to meet him whenever he came to Hyderabad to sell egg laying chicks for his company. I started moving closely with him and we used to discuss about the prospects of poultry business in India.

Meanwhile, he moved to Hyderabad and started an Egg Farm viz., Venkateshwara Poultry Farm in Injapur

Village near Hyderabad. After a close mutual understanding between us we started a business viz., Egg Bank and used to sell the eggs and we were also sending truck loads of eggs to Mumbai.

Whenever we met, we used to discuss as to how to start Hatchery business. In 1971, Mr William R Todd, who was Mr B. V. Rao's Ex-Boss in Arbor Acres International, joined in Bobcock, USA and was promoted as Vice President. Mr Todd wrote a letter to Mr B.V.Rao offering Bobcock grand parent franchisee for India. We immediately accepted his proposal. Initially we thought of promoting the company by two of us and later Mr B.V.Rao decided to take another two persons and formed a group consisting of Mr B.V Rao, myself, Mr R.K. Soni and Mr S.B. Thorat, an Architect from Pune, who was a friend of Mr B.V. Rao in Pune.

We all went to Mumbai to meet Mr Todd and later we along with Mr Todd proceeded to meet the Chairman of Union Bank of India and requested him to finance us and he readily agreed our proposal to start a hatchery at Hyderabad and another one at Pune.

Meanwhile, Mr B.V. Rao's poultry business was converted into a Private Limited Company, named as Venkateshwara Hatcheries Pvt. Ltd (VHPL) Mr R.K. Soni as Chairman, Mr B.V. Rao as Managing Director, myself as Whole-Time Director and Mr S.B. Thorat as Director. We applied to Government of India for obtaining Import Licence to import Bobcock grand parents.

Accordingly we obtained import licence and in January 1972 we imported 1,000 grand parents, 6,000 parents to be housed in Pune and another 3,000 parents to be housed in Hyderabad. It was decided to house the grand



parents in Pune. Meanwhile Mr B.V. Rao moved back to Pune to oversee business operations all over India and myself as Whole-Time Director, I used to look after the operations of Andhra Pradesh. We started producing commercial chicks by 1972 end. From then onwards there was no looking back and our company's success story thus began. Later on Venkateshwara Hatcheries also imported grand parents of Cobb Vantress from USA.

In 1978 Mr B.V. Rao offered me a sub-franchisee of Venkateshwara Hatcheries for eight (8) coastal districts of Andhra Pradesh for dealing with Bobcock layers and Cobb broilers.

**Were you confident of success with the investment you made initially in poultry farming business ?**

**Jagapati:** I was very much confident of succeeding in poultry business when I initially took up poultry business.

**What are the milestones in your life and business ?**

**Jagapati:** Going to Calcutta to pursue my Post Graduation in International Relations from Jadavpur University was one of the important milestones in my life. I Initially thought of going abroad to pursue my Masters in Business Administration, but could not do so as I felt that I need to help my family during 1960 - 1965 for looking after agricul-

tural operations in my village. I was thinking deeply about economics of poultry farming and agricultural operations. I had a strong preference for poultry farming and chose to take up the same. As a result of this, I moved to Hyderabad in 1965 and took up commercial poultry farming and poultry breeding business. This was my biggest turning point / milestone in my life.

**Are you satisfied with whatever you achieved in your life? And what are your activities now ?**

**Jagapati:** I am extremely satisfied with whatever I have achieved till now in poultry business which has grown me to this stage in life. Even though I am not taking active part in the business at present, I would like to guide and encourage people to put in their best efforts for the success of the company and poultry on the whole.

**Tell us a few sweet memories in your life and business ?**

**Jagapati:** With regard to my education I have lot of memories. Still some of my college friends are in touch with me. I was very much enthusiastic when I discuss with co-students and friends about the affairs of the country. Even as a student, I used to help co-students who were not able to pay fee etc and derive lot of happiness of doing so. I felt so happy on each occasion when I was blessed with my four children. My first son late Srinivas was born in the year 1963 and unfortunately he died after 4 years of his birth. My first daughter Padmaja was born in 1965. My son Mr Suresh

“  
**Hy-Line W 80 is the best choice for the Egg producers in India**  
”





Happy Father & Grand pa : Jagapati Rao with his son Suresh Rayudu, daughter Usha Lakshmi and grandson Harsha Sri Jagapati Rayudu.

Rayudu was born in the year 1970 and further my youngest daughter Usha was born in the year 1976. I am extremely happy about their progress in life so far.

My happiness multiplied when I started my own commercial poultry farm. I have lot of memories with late Dr B.V. Rao. We used to meet and travel together within and out side the country very frequently and used to discuss about poultry affairs. All the major decisions pertaining to the company were taken either at breakfast and lunch or dinner time. I used to enjoy late B.V. Rao's boldness and his inclination to mingle with every body including ordinary people. I felt very happy when Mr B.V. Rao sent me to USA for poultry technical training as I was the first person to be sent to USA in 1974 for

the same. I felt very happy when Mr B.V. Rao offered me sub-franchise for poultry breeding for eight (8) coastal districts of Andhra Pradesh way back in 1978.

I was very happy when my children and grand son took interest in poultry business and continuing the same.

**Do you have any ambition for your son, daughters and grand son? Do you give them guidance in business?**

**Jagapati:** I wish to see my son, grandson and daughters excel in their businesses, their pursuits and become tremendously successful in running the company and be a cause to serve the nation by providing affordable nutrition to the people of this country.

“  
*Suresh is now more matured, knowledgeable and dynamic. That is the reason he became the Chairman of IEC*  
”



**What is your daily routine during Covid-19 and how do you spend your time daily?**

**Jagapati:** Every day I wake up between 4 and 5 AM and begin my day by speaking to my friends in USA for one hour, reading newspapers for a

couple of hours, doing some exercises for fitness and watching news on TV. I also spend time in talking to poultry unit heads on their activities, get updates and advise them if needed. At around 10 PM, I retire to bed. This is my schedule before COVID, during COVID and after COVID.

**What is your advice to the present generation stakeholders in poultry industry today?**

**Jagapati:** My advice to the younger generation in poultry industry is to be sincere, diligent to their approach and working. In poultry, it requires lot of nurturing since it being a livestock business. Poultry business needs relentless hard work, continuous upgradation of technology and dedication, which will pay rich dividends in long run.

**I understand you made lot of study about Hy-Line layer breed and the company Hy-Line International before choosing Hy-Line breed. Can you comment on this?**

**Jagapati:** Hy-Line is the biggest Egg producing breeding company in the world supplying layer chicks to 150 countries across the globe. Hy-Line was the first poultry breeding company to apply the principles of Hybridization to poultry breeding in the year 1933 in the state of IOWA, USA. Hy-Line is 85 years old company. They are also pioneers in applying Hybridization principles on maize. Latest layer breed next to Hy-Line W 36 is W 80. After going through their breed literature in full for 3 or 4 months, we decided to collaborate with them. 50 % of egg production of the world comes from Hy-Line birds. They are having highest research farms and having lot of genetic purelines.

Hy-Line W 80 bird produces 373 Hen Housed Eggs by the age of 80 weeks and 425 eggs by the age of 90 weeks. W 80 is the strongest shell egg and the feed conversion ratio is highest when compared to other breeds. Thus W 80 bird eats 10 grams per egg less than the competitor's bird. W 80 bird eats 3 kgs less feed in its life time than any other competitor's bird. It is also highest profit making bird than the competitor's in the market.





C. Jagapati Rao with his son Chitturi Suresh and grand son Harsha Sri Jagapati Rayudu

### Hy-Line makes history.....

Recently Hy-Line made history with new breeding programme in India. Hy-Line bird is now customized for India and its climatic conditions. Hy-Line is genetically selecting a special version of the Hy-Line W 80 to excel under India's unique conditions. The first genetic brooding programme already released to the market in January 2020. We are targeting the right egg size for India. This breeding programme is being undertaken by senior most genetisist from Hy-Line International. W 80 is producing strongest shell eggs and no egg breakages will happen till 90 weeks age.

### What are the priorities you feel to be done to establish and strengthen Hy-Line layer in India ?

**Jagapati:** Now we are confident with this new variety of W 80 bird to be produced in India locally. The Hy-Line W 80 is on her way becoming unique Indian variety. First time Hy-Line International chose to begin genetic programme out side of USA in India

for the unique conditions and great potential to feed the growing population. The Hy-Line W 80 already outperforms the competition with longer laying cycle. It means more profit for producers, more saleable eggs with less money spent on resources. Thus Hy-Line

W 80 is the best choice for the egg producers in India.

In India over the years 4 or 5 parties imported Hy-Line products to market in India but failed in their efforts to market the same in India.

We are lucky to be appointed as their partners for India and we

“  
I used to enjoy  
late B.V. Rao's  
boldness and his  
inclination to mingle  
with every body  
including ordinary  
people  
”

are optimistic to achieve good performance. I am sure with this new breeding programme, this will become premium product in India and going to excel with other good traits. This will also give more money to the farming community. We, at Srinivasa Farms feel proud and honoured to be partners of Hy-Line in India. We are highly optimistic of success with the future of W 80 now and in the years to come in India. No other breed in the world is having such huge sales as that of Hy-Line International – two (2) breeds of white eggs and two (2) breeds of brown eggs are being successfully marketed in the world by Hy-Line International.

Before finalising Hy-Line layer breed,

I had a long discussion with my son and Managing Director Mr Suresh Rayudu, and I told him "If you want to take a challenge and work for future for yourself and for Indian poultry industry – here is the breed



Grand Children Harsha Sri Jagapati Rayudu and Baby Samyukta Chitturi with Jagapati Rao

Hy-Line layer. He agreed with my point. Suresh is now more matured, knowledgeable and dynamic. That is the reason he became the Chairman of IEC.

Suresh thoroughly agreed and insisted that Indian poultry market needs a table egg of 56 to 60 grams weight, and Hy-Line International company suitably customised and developed Hy-Line version W-80 to suit to Indian climatic and marketing conditions.

My daughter, Usha Lakshmi, is working hard taking charge of Telangana, Andhra Pradesh and Karnataka states.

We have experienced professional Mr M. K. Gupta as CEO, Mr Rakesh Gehlot as Incharge of All India Layer Operations, Mr Venkat Rao as All India Broiler Incharge along with hard working team for Sales and Administration of Layer and Broiler Operations. Dr K. Somi Reddy, Joint Managing Director and Dr T. Krishna Reddy, whole time Director guide the team.

Readers may send responses to email:  
[chairman@shgroup.in](mailto:chairman@shgroup.in)

# Rebuilding the foundation: no more a luxury, but a necessity !

Mr O.P. Singh, Managing Director, Huvepharma SEA



O. P. Singh, Managing Director,  
Huvepharma SEA

I am writing this at a time just when the COVID-19 news cycle is making way for African swine fever (ASF) which has been reported in India for the first time and the political manoeuvre declaring 'we are ready' to companies looking to exit China and making their way into India! Do I lament or do I cheer? I've time for neither, because I've a house to put back in order, and I better get a move on it.

I'm not sure what percentage of Indian companies had an existing framework or a policy for 'work from home' before the lockdown precipitated by COVID-19. Since our industry is so people centric and real time, and of course, because 'who does sales from home??', we didn't have one! When the lockdown was announced, I think the feeling was like when in school, an unexpected 'off day' would be announced and you would go home, only difference being, in this case you weren't returning the next day, far from it.

Since no one knew what was happening, the first potential challenge we expected was flagging employee motivation and engagement. The manage-

ment team rallied and put together a daily interface comprising of technical trainings, marketing sessions, business reviews, updation of data etc.. Wellness of our team - physical and mental was a priority for us, for one, the business climate has been cloudy for a time now and for another, COVID brought with it fear of the unknown and uncertainty. The regular engagement ensured that the team remained anchored.

The second challenge was how to protect the business itself that was rendered handicapped. One team was constantly working on finding ways to reach our products to its customers to make sure we had a business to get back to on the other side of COVID-19.

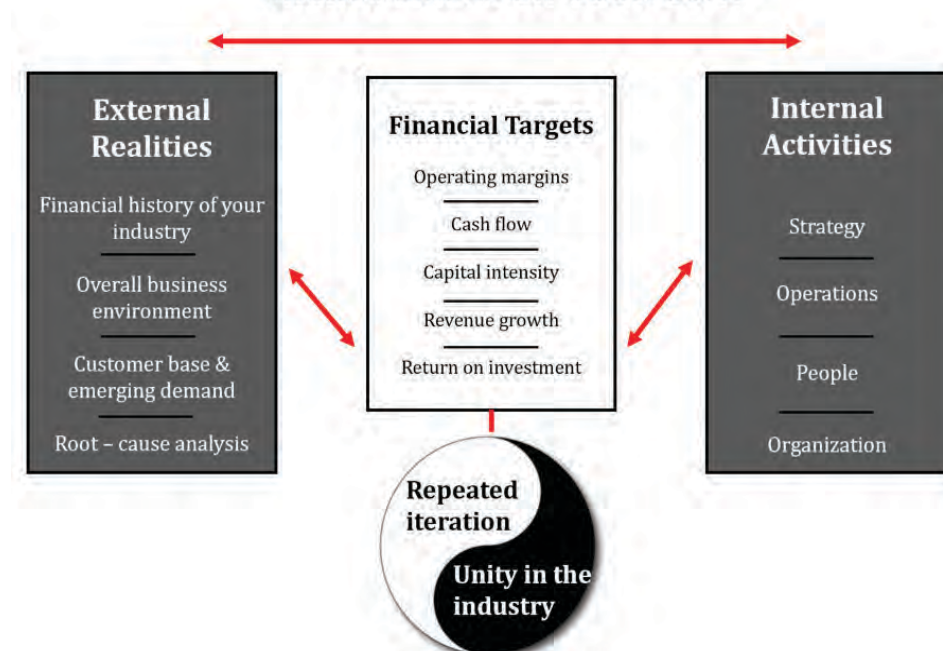
The third challenge was how to continue paying salaries to our workforce. I've been an employee myself at a point in life and I understand how every penny coming in, is already spoken for, before it even hits your account. The anxiety in the employee's minds was palpable. It was a character

defining moment for the organisation and we managed to work our way through, making an accommodating decision for all.

I won't be alone when I say that these past 6 weeks have altered a lot of things for us. Its made us think of things we otherwise never would have had to. It was a realisation of what was important in life and what wasn't. For the first time we were left to our own devices at a time which was clearly 'make or break'. The team was looking to each other for hand holding and support. We relied on each other to bring to the table experience and wisdom, to create our own model which helped evaluate our current situation, and also ensure that in the time to come, we not only survive, but thrive.

So far, it was each for his own. But if you ask me, going forward, it's my firm belief that the industry will have to act and work collectively, because the revival of the industry is beyond the scope of mere corrections. Our action areas will need to be defined, because

## FACING CRISES ON YOUR OWN





## The NEW BEDROCK of business principles



the future of this industry depends on how we understand what the market is telling us and not what we want it to be. I expect the following tenets to shape the industry:

How do I say this?

Post Covid-19, there will most certainly be a change in consumption of animal protein. How consumer looks at the industry right now will change. Its likely to manifest itself through:

- Consumer behaviour
- Demand for food safety
- Demand for hygiene in supply chain & delivery

In India, social media and rumour mongering fanned anti chicken sentiments, resulting in a loss of approximately 15 billion in the past 5 to 6 weeks. During the lockdown, demand has been low. Those still consuming have shown a clear preference to packaged, branded poultry products that vouch for high hygiene standards. It will not be an exaggeration, if in time to come, consumers demand bar coding of such products, scanning of which will give them access to the entire supply chain stages of the product. Millennials and Generation Z are the demographic driving meat consumption in our country. They are more aware, understand and demand 'food safety' and are sophisticated in their choices.

I don't see consumers lining up outside chicken shops for their sunday special lunches for some time to come. And here, the spotlight shifts to our poultry processing. Currently about 5% of poultry meat is sold in processed form, of which only about 1% undergoes processing into value-added products (ready-to-eat/ready-to-cook). The poultry processing industry

in India was expected to expand at a CAGR of ~12% between 2018 and 2023. However, taking into consideration consumers preference for packaged meat, this could go as high as 20%. Poultry is the major source of meat in our country, its share in total meat consumption is about 28%. And since we cannot allow this to change, we will need to look at the processing requirement, recalibrate our existing capabilities and capacities to prepare to match the demand.

Job losses and pay cuts are bound to lower the disposable income in the hands of urban and rural consumers alike. Over 70% of the Indian population is non-vegetarian. Eggs are the cheapest source of protein and chicken is the most loved meat! Will this change post COVID-19? While there are no statistics to support at this time, in this scenario chicken might become a luxury or once in a while eaten commodity. It will be natural behaviour for consumers to keep the focus on filling their bellies. Imagine the daily wage workers- those who are the customers for entrails, there aren't any daily wages any more! The strata of society which can still afford it are not likely to fill the consumption gap.

In this likely scenario, the industry will need to 'restructure' itself in ways more than one. Future production will have to be rationalised by re-assessing the market size to establish a figure of eggs and chicken that can be sold. We might have to look at price & product customization to keep poultry and products attractive for all consumers for inclusive growth.

On another front, institutional buyers like hotels etc constitute 40% of poultry/ products sale. This demand has been close to non-existent since mid March. There are yet no clear indications when this will change. This is a big hit to industry and we have no idea where from to make up for this gap. Even when this sector is back on its feet, for patrons to flock to their favourite eateries could take 6-8 months. And this is provided they are satisfied about hygiene and safety standards followed at these establishments. 'Biosecurity' hitherto not ap-

plied in this context, will become the new normal for institutional business. It will be expected and it will have to be delivered.

Chicken growers and egg producing farmers will have **additional** responsibilities, to include that they adhere to and comply with **food safety, biosecurity and hygiene** standards in operations. And it cannot only be claimed. The claim will have to be legitimised in order for the product to be acceptable. They will be expected to be able to prove the quality of protein, with full traceability. This will undoubtedly add to production cost and consequently transferred to the cost of protein delivered/kg body weight. A lot of small players might succumb to the pressures of the current situation and either perish or aggregate. If a company is in the poultry industry today and continues to see itself as part of it 10 years from now, this has to be considered as an investment.

The industry will have to step up to this challenge. Communication will be key. What worked against us, must be made to work for us. Distribution channels have to be sensitised to the need for higher degree of sanitisation. Production has to be calibrated to demand, to be managed very effectively and efficiently not just in the short term, but also in the long term. There can neither be surplus nor shortage. Availability in the right number will be key. Any mismanagement will only further perpetuate pricing issues and losses to each and every stakeholder in the integrated operation, which we can ill afford.

Its time to come out of our silos and put on a united front and take on these challenges head on. Not all of us will be of one mind, but this is an existential threat, which requires us to rise above any differences. Our industry has been put to and passed through several trying times. But we came out on the other side- stronger, smarter. This time should be no different, and I only hope we can add united to the words that are used to describe us.

**- O. P. Singh, Managing Director, Huvepharma SEA**



## From cold storage facilities to more hygienic rearing, Poultry farmers must ensure good health of their flock post COVID19

- Dr Ramdas Kambale, Sr. VP, Vetphage Pharmaceuticals



Dr Ramdas Kambale, Sr. VP, Vetphage Pharmaceuticals

The domestic poultry industry has lost an estimated Rs 1,750 crore over the past two months as the coronavirus outbreak leads to a slump in consumption and demand. It has forced many small scale poultry farmers to go out of business and even pushed some medium scale poultry farmers to the brink of bankruptcy. This downturn has been exacerbated by a flood of fake messages and misinformation on social media about chicken consumption's association with coronavirus. With the losses cannot be retrieved, it is important that the poultry sector modernize itself and prepare to renew its supplies post the lockdown. It must also be prepared to address misinformation campaigns while improving hygiene and storage standards for its flocks that will help improve the efficacy of the business in the long term. The government must also step forward and help the sector revive itself through relief packages and support to small farmers in restarting their business.

### The need for cold storage

The problem of demand slump was further compounded by lack of adequate cold storage facilities for farmers. Many small scale farmers had to resort to distress selling of their birds at prices as low as Rs 5-10 per kg as they did not have logistical support to preserve their meat in cold storage facilities. This meant that the only options for them were to either sell their lot at really cheap prices or cull their birds and bury them. Moreover, 92

percent cold storage units in India are owned by the private sector which mostly includes big companies leaving little safety for small and medium enterprises.

The government must make investment in cold storage for small and medium enterprises so that they can stock their culled birds as well as preserve their meat which can be sold later thereby cutting down their losses. Several large cold storage units that are easily accessible to small scale poultry farmers that they are able rent for specific amount of space as per their needs will be a welcome step for the poultry industry.

### Push for reforms to make the sector more organized

The poultry Industry in India relies mostly on wet markets as Indians have a cultural preference for buying fresh produce which is why most customers select the bird before asking the butcher to cut it. Nonetheless, fresh does not always translate to clean and hygienic as some of these makeshift establishments are really unkempt and potential disease carriers. The poultry sector has often faced criticism for unhygienic conditions and unfriendly housing facilities for poultry birds. This is another area the poultry sector must work aggressively to improve. This will help instil confidence among consumers about the safety and healthy origin of birds.

The government on its part must implement adequate quality control mechanisms for the industry. Regular hygiene and quality checks should be done and shops that do not comply with these guidelines must be penalized.

Furthermore, government must set up a committee to monitor all poultry rearing, processing and trade in the country which oversees that poultry farming is done in good conditions thereby not causing any harm to the end consumer as well as the environment. Good hygiene practices at farm level also help in reducing the mortality or birds as well as rate of subclinical infection. Overall, better hygiene results in healthier birds and serves to improve efficacy of the business.

### Need for Quality feed additives

In India poultry farmers mostly use soybean and maize which only meet minimum nutritional requirements and do not help in raising quality healthy birds. According to studies fast growing meat chickens require less than three hours to digest and absorb their feed. Since they have a short digestive tract and rapid digestion transit time they need easily digestible nutrient dense diet wherein nutrients are critical. Also, the rates of genetic change in growth and feed efficiency over the years have had a key impact on the physiology of the birds which have in turn changed their nutritional requirements to satisfy the genetic potential of the new strains. This high genetic potential of current poultry strains can only be achieved with properly formulated feeds that are protein and energy-dense.

Also poultry farmers must use regulatory approved feed additives that have been tested to destroy and prevent bacterial infections as well transmission to human by elimination of pathogenic stereotypes. Other things which poultry farm owners and managers must keep in mind are the composition and quality of feed, nutrient value, digestibility, moisture retention, palatability as well as any possible hazards that long term consumption may cause.

### Bacteriophages over Antibiotics

Antibiotics are common in the poultry industry as they are used to improve meat production through increased feed conversion and prevention of rampant bacterial diseases. However, the excessive use of antibiotics can compromise the immunity of livestock by causing gastrointestinal infections as well as other diseases. More importantly, excessive use of antibiotics results in the development of anti-bacterial resistance which upon entry in our food chain is harmful to human health.

This is why it important to use alternatives to antibiotics so that farmers can grow healthy poultry as well as prevent bacterial infections. The use of Bacteriophages as a sustainable and healthy alternative has been proven scientifically which is why farmers should make the switch immediately. Bacteriophages are bacteria eaters which are not harmful as they kill the targeted bacteria within the infected cell without interacting with human and animal cells. This makes them the better alternative to antibiotics as they are safer for both poultry and human health.

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# Hy-Line Makes History with New Breeding Program in India

*International Bird now Customized for India*



This Unique challenges, unique conditions, unique climate. Each phrase describes the growing country of India. To meet these challenges, egg farmers in India require a bird that has been tested and proven locally.

To meet this need, Hy-Line International recently initiated a breeding program in India for the Hy-Line W-80, customizing this International bird for India. This new approach is the first of its kind in the nearly 85-year history of the Hy-Line genetics program.

"The Hy-Line W-80 is on her way to becoming a unique India variety", said Dr Petel Settar, Hy-Line International's Senior Geneticist leading the India breeding program. "We chose to begin our first genetics program outside of the USA in India for the unique conditions and great potential to feed the growing population."

## Select to Excel Locally

Hy-Line is genetically selecting a special version of the Hy-line W-80 to excel under India's unique conditions. The elite birds in the India genetics program are evaluated on their ability to achieve the preferred local egg size, ever-increasing egg numbers, long persistency of lay and ideal onset of lay, with a continued commit-

ment to superior shell quality late into lay.

## Bred and Adapted for Indian Conditions

The first genetics from the breeding program will be released to the market in early 2020. All orders for Hy-Line distributors, Srinivasa, will be supplied from this program.

"We are local, we are committed," affirmed Jonathan Cade, President of Hy-Line International. We are targeting the right egg size for India and making the Hy-Line W-80 even more robust for local challenges. We succeed when the commercial layer farmer succeeds."

Comparatively, the Hy-Line W-80 already outperforms the competition with longer laying cycles. Indian egg producers can maintain the W-80 with less feed than the competition. It means more profit for producers - more saleable eggs with less money spent on resources.

Considering the projected increase in egg consumption in India and constraints in terms of availability of raw material to meet the growing demand, the Hy-Line W-80 is the best choice for the egg producer in India. This is the future for sustainable and responsible egg production, he stated.







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**Email:** appoultry@yahoo.com, appoultry@gmail.com, mprabakarreddy@gmail.com

**Tel/Fax:** +91 40 23151576 | **Website:** www.appoultry.com

# Prevention, Control and Management of Infectious Bursal Disease in Poultry

## Highlight Points

- ▶ Infectious bursal disease virus (IBDV) is the aetiological agent of the acute and highly contagious infectious bursal disease (IBD) or “Gumboro disease”.
- ▶ This virus infects and destroys developing B lymphocytes in the cloacal bursa, resulting in a potentially fatal or immunosuppressive disease in chickens.
- ▶ It is economically important to the poultry industry worldwide due to increased susceptibility to other diseases and negative interference with effective vaccination.
- ▶ Disease may appear suddenly and morbidity typically reaches 100% that lead to heavy economic losses to poultry industry so its prevention, control and management is very important.

Jigarji C Thakori\*, Dinesh.M1, Devansh Fulmalit, Manikandan.R1, Madhuri Patel1, Mayank Darji1, and Hardik Naliyaparaz.

1ICAR-Indian Veterinary Research Institute, Izatnagar-243 122, Uttar Pradesh, India

2ICAR-National Dairy Research Institute, Karnal-132 001, Haryana, India

## Introduction

Immunosuppression is recognized by the poultry industry as a problem that appears to be increasing with intensive poultry production. Among all poultry diseases, Infectious Bursal Disease (IBD) is a prime contributor causing immunosuppression and lowers the economy poultry farmer. Infectious bursal disease virus (IBDV) is the aetiological agent of acute and highly contagious disease in young chickens. Infectious Bursal Disease (IBD), or Gumboro disease, is a viral infection that was described for the first time in the '60s in Gumboro, Delaware, United States (Etteradossi and Saif, 2008) and now occurs worldwide. The disease is highly contagious, affects young chickens, and is characterized by the destruction of the lymphoid organs, and in particular the bursa of Fabricius, where B lymphocytes mature and differentiate. Viral diseases represent the predominant pathology in commercial flocks. Successful IBD vaccination is considered as a key factor in the establishment of a satisfactory control schedule.

## Etiology

The virus responsible for IBD is a member of the family Birnaviridae, within the Avibirnavirus genus (Muller et al., 1979). It is nonenveloped with a single-shelled icosahedral capsid and has a diameter between 55 and 60 nm. Two serotypes have been recognized so far by the use of mono-specific neutralizing antisera: serotype 1 causing disease in chicken and serotype 2 which is non-pathogenic (McFerran et al., 1980). Only chickens (*Gallus gallus*), develop an infectious and highly contagious disease after infection with pathogenic serotype 1 virus.

## Transmission

The disease is transmitted by direct contact with excreting

subjects, or by indirect contact with any inanimate or animate (farm staff, animals) contaminated vectors. Some researchers have suggested that insects may also act as vectors (Howie & Thorsen, 1981). Only horizontal transmission has been described, with healthy subjects being infected by the oral or respiratory pathway. Infected subjects excrete the virus in feces as early as 48 h after infection, and may transmit the disease by contact over sixteen days

## Morbidity and mortality

IBD is extremely contagious. In infected flocks, morbidity is high, with up to 100% serological conversion, after infection, whilst mortality is variable. Until 1987, the field strains isolated were of low virulence and caused only 1% to 2% of specific mortality. The hypervirulent field strains caused up to 100% mortality in specific-pathogen-free (SPF) chickens (Nunoya et al., 1992).

## Clinical signs

The incubation period is very short: 2 to 3 days. In acute cases, the animals are exhausted, prostrated, dehydrated, suffer from watery diarrhea, and feathers are ruffled. Mortality commences on the third day of infection, reaches a peak by day four, then drops rapidly, and the surviving chickens recover a state of apparent health after five to seven days. Disease severity depends on the age and breed sensitivity of the infected birds, the virulence of the strain, and the degree of passive immunity. The global situation can be divided into three principal clinical forms, as follows: (a) Classical form: It described since the early 1960s, is caused by the classical virulent strains of IBDV. Specific mortality is relatively low, and the disease is most often subclinical, occurring after a decline in the level of passive antibodies. (b) Immunosuppressive form: It principally described in the



USA, is caused by low-pathogenicity strains of IBDV, as well as by variant strains, such as the Delaware variant E or GLS strains, which partially resist neutralization by antibodies against the so-called 'classical' viruses. (c) Acute form: It first described in Europe, and then in Asia, is caused by 'hypervirulent' strains of IBDV, and is characterized by an acute progressive clinical disease, leading to high mortality rates on affected farms.

#### Pathology of IBD

The principal target of the virus is the bursa of Fabricius, which is the reservoir of B lymphocytes in birds. Infection is cytolytic. Macroscopic lesions are observed principally in the bursa which presents all stages of inflammation

following acute infection (McFerran, 1993). Birds that died during the acute phase (3-4 days following infection) reveals hypertrophic, hyperaemic, petechiae and oedematous bursa. By the 5th, the bursa reverts to normal size and by the 8th day becomes atrophied to less than a third of the normal size. The affected birds are severely dehydrated and have hypertrophic and whitish kidneys containing deposits of urate crystals and cell debris. Hemorrhages in the pectoral muscles and thighs are frequently observed, probably due to a coagulation disorder.

*jigarthakor21@gmail.com*



## Heat stress in poultry

*What oxidative stress has to do with it, why it affects gut health, and how phytomolecules support mitigation strategies*

**By Marisabel Caballero, Global Technical Manager Poultry – EW Nutrition**

**Guillermo Gaona, Regional Technical Manager LATAM – EW Nutrition**

Stress in animals can be defined as any factor causing disruptions to their homeostasis, their stable internal balance. Stress engenders a biological response to regain equilibrium. We can distinguish four major types of stress in the poultry industry: technological or management-related stress; environmental stress; nutritional stress, including due to heavy metals, mycotoxins, and low-quality ingredients; and internal stress, which is related to health status and health challenges. All types of stress lead to molecular and cellular changes that decrease health and productivity.

#### Climate change, thermoregulation, and stress

High environmental temperatures are among the most important environmental stressors for poultry production, causing significant economic losses in the industry. Climate change has increased the prevalence and intensity of heat stress conditions in most poultry production areas all over the world.

The optimum temperature for poultry animals well-being and performance – the so-called thermoneutral zone – is between 18 and 22°C. When birds are kept within this temperature range, they do not have to spend energy on maintaining a constant body temperature.

Heat stress is the result of unsuccessful thermoregulation in the animals, as they absorb or produce a higher quantity of heat than they can lose. It means that there is a negative balance between the net amount of energy flowing from the animal to the environment and the energy it produces.

#### Heat stress – contributing factors

This energy imbalance is influenced by environmental factors such as sunlight, thermal irradiation, air temperature, humidity, and stocking density, but also by animal-related factors such as body weight, feather coverage and distribution, dehydration status, metabolic rate, and thermoregulatory mechanisms. When the environmental temperature is above the thermoneutral zone, the animals activate thermoregulation mechanisms to lose heat through behavioural, biochemical, and physiological changes and responses.

Heat stress can be classified into two main categories, acute and chronic. Acute heat stress refers to a short and fast increase in environmental temperature (a few hours), whereas under chronic heat stress the high temperatures persist for more extended periods (several days). Some studies suggest that, in some circumstances, poultry animals show a degree of

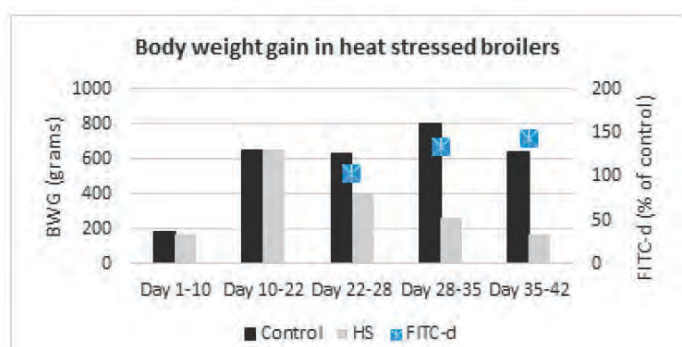


resilience to acute heat stress. However, in the long run, their compensatory mechanisms are not sufficient to maintain tissue integrity and thus health and performance.

### The animal's response to heat stress

The exposure of poultry to heat stress changes the gene expression of cytokines, upregulates heat shock proteins (HSP), and reduces the concentration of thyroid hormones. When heat stress persists, these cascades of cellular reactions result in tissue damage and malfunction.

The animals exposed to heat stress suffer adverse effects in terms of performance, which are widely known and include high mortality, lower growth and production (Figure 1), and a decline in meat and egg quality.



**Figure 1: Body weight gain of broilers exposed to chronic heat stress (35°C continuously from day 21). A marker for tight junction permeability was added to feed (FITC-d - fluorescein isothiocyanate dextran); its fluorescence (in serum) increased with heat stress exposure time, showing higher intestinal permeability. (Adapted from Ruff et al., 2020)**

### Oxidative stress— a consequence of heat stress

Oxidative stress, simply put, occurs when the amount of reactive oxygen species (ROS— such as superoxide anions, hydrogen peroxide, and hydroxyl radicals) exceeds the antioxidant capacity of the cells. Oxidative stress is regarded as one of the most critical stressors in poultry production as it is a response to diverse challenges affecting the animals.

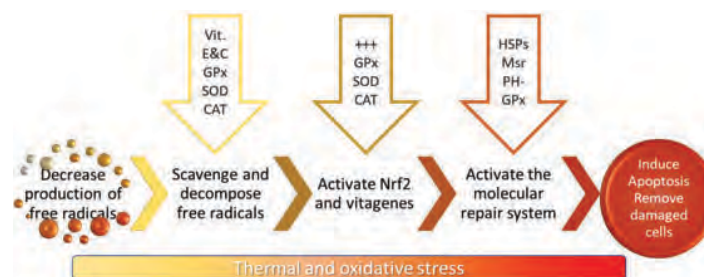
At a cellular level, the metabolism of the animal – its energy production – generates ROS and reactive nitrogen species (RNS), such as hydroxyl radicals, superoxide anions, hydrogen peroxide, and nitric oxide. These are usually further processed by antioxidant enzymes produced by the cell including superoxide dismutase (SOD), catalase (CAT), and glutathione peroxidase (GSH-Px). Nutrients such as selenium and vitamins E, C, and A also participate in antioxidant processes. When the generation of ROS exceeds the capacity of the antioxidant system, oxidative stress ensues.

Heat stress leads to higher cellular energy demand, promoting the generation of ROS in the mitochondria, which exceed the antioxidant capacity of the organism. Consequently, oxidative stress occurs in several tissues, leading to cell apoptosis or necrosis. Among these tissues, the gastrointestinal tract can be highly affected.

Oxidative stress damages cell proteins, lipids, and DNA, and reduces energy generation efficacy. Moreover, oxidized

molecules can take electrons from other molecules, resulting in a chain reaction. If not controlled, this reaction can cause extensive tissue damage.

In response to oxidative stress, all antioxidants in the organism work together to re-establish homeostasis. Several steps in the oxidative stress response have been identified. Whether they take place depends on the intensity of the stressor, with ROS and RNS acting as signalling molecules. These steps include the internal synthesis of antioxidants, the activation of transcription factors or vitagenes, and the production of protective molecules.



**Figure 2: Summary of the antioxidant response**

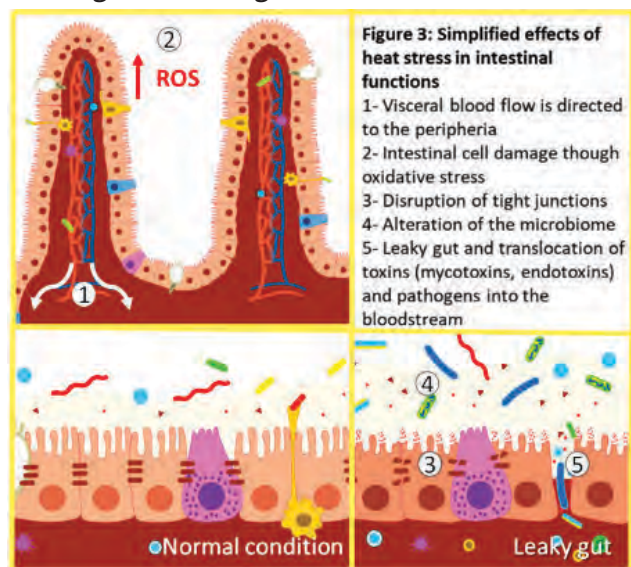
First, decrease free radical production by decreasing oxygen availability and reducing the activities of enzymes responsible for ROS production (NADPH oxidase). Second, scavenge and decompose free radicals through natural antioxidants (vitamins E & C, GSH, SOD, GPx, and CAT). Third, activate Nrf2 and vitagenes to further stimulate the synthesis of antioxidants. Fourth, activate enzymatic systems responsible for damaged molecule repair (HSP, Msr, DNA-repair enzymes) and removal (PH-GPx). Fifth, induce apoptosis and other processes to deal with terminally damaged cells. (Adapted from Surai et al., 2019)

### Oxidative stress effects on the gut

In the gastrointestinal tract, oxidative stress and the consequent tissue damage lead to increased intestinal permeability. This facilitates the translocation of toxins and pathogens from the intestinal tract into the bloodstream (Figure 3).

Under oxidative stress conditions in the gut, there is a demand for antioxidants to counteract the excess of ROS; hence, dietary antioxidants can help reduce ROS and improve animal performance. Research shows that certain phytochemicals have antioxidant properties and improve performance under conditions of oxidative stress.

### Thermoregulation: changes in blood flow



**Figure 3: Simplified effects of heat stress in intestinal functions**

- 1- Visceral blood flow is directed to the periphery
- 2- Intestinal cell damage through oxidative stress
- 3- Disruption of tight junctions
- 4- Alteration of the microbiome
- 5- Leaky gut and translocation of toxins (mycotoxins, endotoxins) and pathogens into the bloodstream

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The gastrointestinal tract is profoundly affected by heat stress: to help with heat dissipation, the thermoregulatory mechanism of the animal shifts visceral blood flow towards peripheral circulation. Organ ischemia and hypoxia follow, limiting gut motility, nutrient utilization, and feed intake. Enterocytes are particularly sensitive to hypoxia and nutrient restriction, which leads to oxidative stress.

### Changes in intestinal barrier's tight junctions

Several studies indicate that both acute and chronic heat stress increase gut permeability, partly by increasing oxidative stress and by disrupting the expression of tight junction proteins. Heat and oxidative stress in the gut result in intestinal cell injury and apoptosis. When the tight junction barrier is compromised, luminal substances leak into the bloodstream, which constitutes the condition described as "leaky gut".

### Changes in intestinal morphology

Heat stress affects intestinal weight, length, barrier function, and microbiota, resulting in animals that have lower total and relative weight of the small intestine, with shorter jejunum and duodenum, shorter villi (Figure 4), and reduced absorption areas, in comparison to non-stressed animals.

### Changes in intestinal microbiome

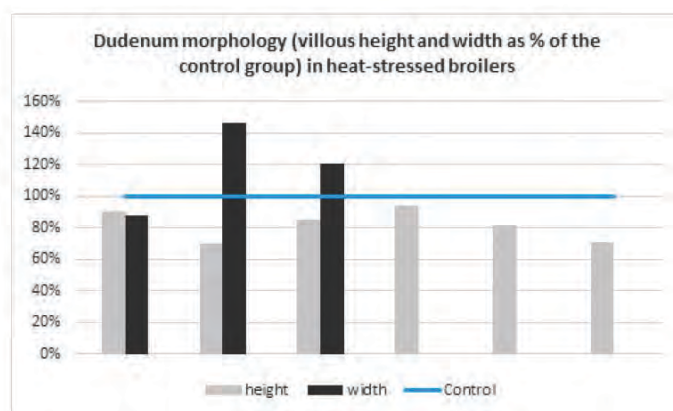


Figure 4: Villous height and width of broilers exposed to heat stress in relation to the control group (100%). Villous height is always shorter than the control group, but width can increase when the organism shows resilience to the stressful situations and aims to recover intestinal surface. (Adapted from Jahejo et al., 2016; Santos et al., 2019; Wu et al., 2018; Abdelqader et al., 2016; Santos et al., 2015 and Awad et al., 2018 – by order of appearance in the graph, from left to right)

Due to reduced feed intake and impaired intestinal function, the presence and activity of the commensal microbiota can also be modified. Heat stress can lead to reduced populations of beneficial microbes. At the same time, it can boost the growth of potential pathogens and lead to dysbiosis, increased gut permeability, as well as immune and metabolic dysfunction. Burkholder et al. (2008) and Rostagno (2020) point out that pathogens such as Clostridia, Salmonella, and coliform bacteria increase in poultry exposed to heat stress, while the populations of beneficial bacteria such as Lactobacilli and Bifidobacteria decrease.

### Necrotic enteritis

Heat stress causes damage in the gut microbiota, intestinal integrity, and villus morphology, as well as immunosuppression. Consequently, feed digestion and absorption decline. These factors increase the risk of necrotic enteritis outbreaks, one

of the most problematic bacterial diseases in modern poultry production.

In a study by Tsiouris et al. (2018), cyclical acute heat stress was found to increase the incidence and severity of necrotic enteritis in broilers challenged with *C. perfringens*, and to produce the disease in animals that were not exposed to the bacteria. Other signs, such as growth retardation and a reduced pH of the intestinal digesta, were also observed in the heat-stressed birds.

By lowering feed digestibility, increasing gut permeability, and compromising immunity, heat stress leaves animals more susceptible to gut-health related issues such as dysbacteriosis and necrotic enteritis – and thus increases the need to use antibiotics.

### Mitigation strategies

Most intervention strategies deal with heat stress through a wide range of measures, including environmental management, housing design, ventilation, sprinkling, and shading, amongst others. Understanding and controlling environmental conditions is always a part of heat stress management: it is crucial for ensuring animal welfare and achieving successful poultry production.

Feed management and nutrition interventions are also recommended, together with environmental management, to reduce the effects of heat stress. They include feeding pelletized diets with increased energy, higher fat inclusions, reduction of total protein, supplemental amino acids, higher levels of vitamins and minerals, and adjusting the dietary electrolyte balance. Nutrition is crucial, and the use of the right diet's aids in attenuating heat stress in birds.

### Phytomolecules: powerful antioxidants

It is practically impossible to avoid stress in commercial poultry production; hence it is common for animals to experience oxidative stress at times. Phytomolecules are natural antioxidants with anti-inflammatory and digestive properties, which have been shown to improve poultry performance, including during challenging periods. The antioxidant capacity of phytomolecules manifests itself in free radical scavenging, increased production of natural antioxidants, and the activation of transcription factors.

As compounds that have low bioavailability, they can remain at high concentrations within the intestine, when provided at the appropriate dosage and through encapsulation technology. Research has found that phytomolecules can effectively reduce intestinal ROS and thus alleviate heat stress in poultry, specifically mitigating oxidative stress in the intestine.

One heat stress study, for example, found that carvacrol elevates serum GSH-PX activity, compared to non-supplemented broilers. Other studies demonstrate that cinnamaldehyde also increases the activities of natural antioxidants in heat-stressed broilers. A study by Prieto and Campo (2016) showed that dietary supplementation of capsaicin effectively alleviated heat stress, as indicated by a lower H/L ratio in supplemented animals.

Silibinin, a flavonolignan present in silymarin (milk thistle

*Continue on page 50*

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extract), is another powerful antioxidant. In the gastrointestinal tract, it can come into direct contact with cells, activating transcription factors such as Nrf2, and thus helping to up-regulate the antioxidant protection. Other phytochemicals, such as menthol and cineol, also aid animals under heat stress by stimulating the sensory cold receptors of the oral mucosa. This gives them a cooling sensation and reduces heat stress behavior.

**Summary:** Heat stress is a common reality in poultry production, its effects are quite complex and harmful and depend on the intensity and duration of the exposure to high temperatures.

The gut is affected by heat stress through several pathways,

including organ ischemia and hypoxia, as well as oxidative stress.

In heat stress challenges, the intestinal barrier is compromised because of lower tight junction protein expression, enterocyte damage, and microbiome unbalance, leading to gut health issues such as dysbiosis and necrotic enteritis.

At the gut level, phytochemicals such as carvacrol, cinnamaldehyde, capsaicin, silymarin, cineol, and menthol, among others, have been found to alleviate heat stress through their antioxidant capacities, leading to improved animal health and performance.

(\* References available on request)

Continue from page 48

## Covid-19 – An Indian Opportunity for chicken processing ?

Dr Sekhar Basak,

MD, Innovista Feeding Solutions Pvt Ltd. India



The COVID-19 outbreak could open up growth opportunities for the processed chicken segment from consumer and producer viewpoint. Boost from government and private agencies at this opportune time can see India through a mature processed poultry market.

### The Chicken Industry scenario

While the production of agricultural crops has been rising at a rate of 1.5 to 2 percent per annum, that of

eggs and broilers has been rising at a rate of 8 to 10 percent per annum. With 10 lakh poultry farmers producing around 851.8 million birds annually, poultry contributes Rs 1.3 lakh crore to the national GDP. The poultry market is predominantly fresh meat and processed meat accounts for just 5 to 10 percent depending on the geography. This share varies from 30 to 40 percent in countries such as Russia and France and 15-25 percent in South East Asian countries and Brazil. Hence there is a clear opportunity to double or even triple the size of processed poultry meat in India.

A live poultry market puts pressure on producers as fresh meat prices are impacted by supply-demand economics and unexpected market shocks which the industry has witnessed in the past 3 months even before the Covid lockdown due to fake news resulting in market collapse. A business model that necessitates continuous rearing and natural gestation period makes it difficult to vary supply with demand. Another complexity in India is that the meat consumption cycle is not constant as in other countries. Producers often bear reduced margins or even losses to sustain the farming volumes. To give a perspective, the loss suffered by the poultry industry on account of the current price crash is estimated at around Rs 22,500 crore.

### Advantages of the processed meat market

A well-developed processed meat market will benefit both producers and consumers. Processing will increase the shelf life of meat products and will enable producers to absorb demand shocks through improved inventory control. Processed meat has other advantages such as better taste, low possibility of meat-borne diseases, better life span and a high amount of



portability. The ability to store the product will shield the producers from price crashes.

With social distancing becoming a norm, the need for hygienically packed meat untouched by hand will increase. Indian customers will start asking for traceability, no antibiotics/chemicals, fresh-but-hygienic meat. Also, consumers demand a food supply that is nutritious, safe, convenient and varied. Meat processing methods and advances in technology help to make this possible. Processed meat is a logical answer as producers will be able to confirm adherence to these quality requirements. Existing players who can forward-integrate into a processed



### Poultry Processing Market In India (2018-2023)

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brand-led play could gain from this consumer trend.

### Challenges for the transition

The first challenge in the Indian context is the preference to buy fresh food. Indians are for long used to buying fresh fruits,



vegetables and poultry. Changing this consumer behaviour will need sustained investment in customer education through awareness campaigns. Industry stakeholders with the help of government agencies should play an instrumental role through a structured marketing plan. Even a bigger challenge will be to convince that the taste of the meat and its nutrient value is largely undisturbed during processing.

The flip side of chicken processing industry will be feared loss of employment among a section of wholesale traders and butchers, who could become redundant if the processed segment grows. As the processed meat industry gains share, such intermediaries often find different roles in the new supply chain network. In addition, we could see an increase in employment in processing plants which can offset the fear of losing jobs for the wholesale traders and butchers.

The third challenge is upgrading the processing and supply chain infrastructure. Capacity utilisation in India's processing plants is around 50 percent, and is hence not an issue. However, it is the supply chain infrastructure that needs to be invested in. A robust cold chain from the processing plants to storages and extending to retail refrigeration will be needed. Favourable government policies will also be needed to attract foreign investments in this area.

### The way ahead

Growth of processed meat consumption benefits both producers and consumers in the long run. India, just as many other countries, will continue to have both wet and dry markets. The key will be to create consumer awareness and change the perception towards processed meat. There are many factors accelerating this change in the Indian market-changing lifestyles and demographic profiles of families; exposure to international cuisines; growth of modern retail and restaurants.

Once end-consumer acceptance increases, capacities could be created and utilised well. Some of the Indian players could seize this opportunity to forge international tie-ups. Government regulations will continue to play a key role both in attracting investments and in promoting processed meat as safe and hygienic food. To conclude, this transition won't be an overnight journey — it could take five to ten years for India to have a well-developed processed poultry meat market.

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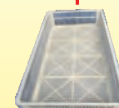
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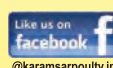


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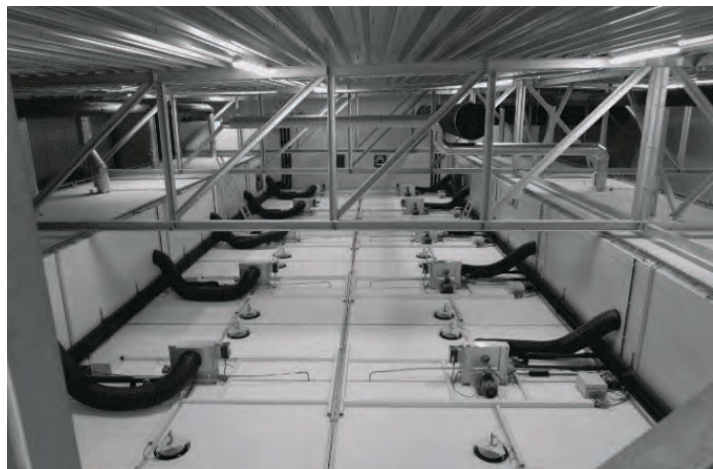


sukhisir@hotmail.com



# The role of HVAC systems in single-stage hatcheries

- Pieterjan Bulteel



Since the evolution of the hatchery industry from multi-stage to single-stage incubation, Heating, Ventilation and Air Conditioning (HVAC) systems have become an indispensable part of hatchery operations. In essence, the HVAC system does the heavy lifting when it comes to climate control in single-stage hatcheries, and thereby helps the incubators achieve an optimal yield. The importance of climate control stretches far beyond the conditioning of the air for setters and hatchers, as controlling the air conditions in every room, from the reception of eggs to the dispatch of chicks, in a single-stage hatchery is essential to achieving optimal hatchery results.

## Single-stage incubation relies on HVAC

Even though the commercial incubation industry had long adhered to the multi-stage incubation methodology (and successfully so), a new approach was required to both fulfil the worldwide demand for more poultry meat while meeting ever-stricter levels of biosecurity, and optimise the industry's efficiency and return on investment.

Apart from retraining the personnel to the single-stage way of working, it also requires adapted machinery and equipment, including a properly-dimensioned Heating, Ventilation and Air Conditioning system. An effective and customised HVAC system is indispensable for efficient single-stage operations, as this technology does the heavy lifting when it comes to heating, cooling, humidifying and dehumidifying the fresh air supply that feeds the incubators. This makes it easier for the incubators to finetune the embryo's environment for optimal hatchery results.

In this article, we focus on the four ways an effective climate control system impacts a single-stage hatchery for the better.

### 1. The right air supply at every stage

Arguably the biggest advantage of single-stage incubation is that environmental conditions can be adjusted to the needs of the embryo at every development stage, from egg to chick. Not only does this improve the hatchability and chick uniformity as a result of an improved hatch window,

but it also makes it easier to guarantee the biosecurity within the hatchery.

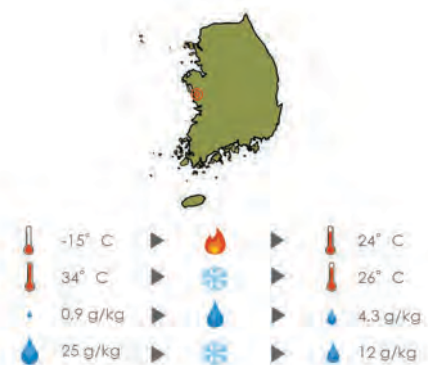
The HVAC system ensures that the correct volumes of air, conditioned both in terms of temperature and humidity, are delivered to the setter and hatcher room at all times. This allows the actual setters and hatchers to finetune the temperature and flow of the air and provide optimum and uniform environmental conditions inside the machines.

### 2. Any location, any climate

Outside climate conditions not only vary from region to region, but from season to season and even from day to night as well. That's why Petersime designs and engineers HVAC systems based on historical geographical climate data, that take into account the actual minimum and maximum temperature and variations in humidity levels during a given time span.

#### Example: A hatchery in South Korea

In South Korea, temperatures can easily range between -15°C and 34°C, while absolute humidity levels can rise from 0.9 g/kg up to 25 g/kg. A well-designed HVAC system will adjust the air conditions in the hatchery by heating the air in winter and cooling it in summer, while at the same time

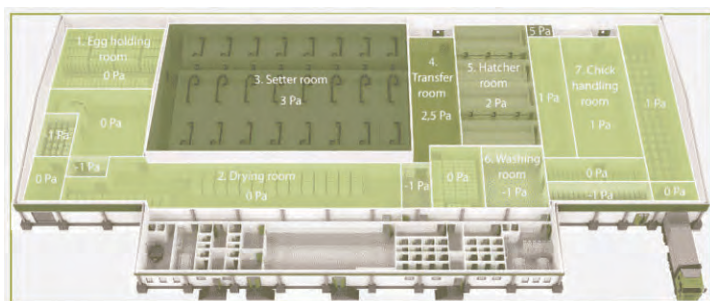


adjusting the level of humidity as required by the incubation process.

A well-designed HVAC system will increase the hatchery's level of biosecurity, as a pressure-controlled airflow is able to create different pressures in different rooms.

The highest pressure should be maintained in the setter room and the vaccine room — where cleanliness is paramount — while the lowest pressure is reserved for the washing rooms and areas that house dirty baskets. If ever a door opens, the air will always flow from the most vital and clean rooms to the dirty rooms, and especially never the other way around.

The HVAC system also filters the fresh incoming air. In fact, Petersime recommends using two levels of air filtration: first, a G4 pre-filter to keep out particles visible to the eye (>10µm); and secondly, a main F7 filter which blocks out



fine dust and particles larger than  $1\mu\text{m}$ . In this way, the hatchery only draws in clean air, while dirty air is contained in the designated rooms until being exhausted from the building.

#### 4. Keeping energy costs in check

A well acclimatised hatchery does not necessarily consume more energy. Provided it has been properly engineered, a customised HVAC system can even help hatcheries consume the lowest amount of energy possible. In fact, the same pressure control system monitors how much air is required and will only provide that specific volume of air, so no conditioned air is wasted.

Moreover, in cold climates, it is possible to recover heat

from the developing embryos, as from day nine onwards, the embryos are in their 'exothermic phase' (which means they start to produce more heat). A sustainable HVAC system can use this heat to pre-heat the cold fresh air entering the hatchery, thereby dramatically reducing the boiler's and chiller's energy consumption; indeed for the latter, this can sometimes be brought down to zero.

Leave your hatchery's HVAC to Petersime

To ensure you end up with an ideal setup for maximum output and the best quality results, it is best to have one single company design and engineer your entire hatchery, including the HVAC. Petersime's Project Department has over 35 years of experience in designing and installing tailor-made HVAC systems for hatcheries in the most varied climates.

Our experts believe that there is no single, standard solution for HVAC. Hatcheries in hot, humid climates, for example, require an air conditioning system designed for cooling and dehumidification, whereas heating and humidification is a must in cold environments. We are therefore ready to custom-build each of our HVAC systems to suit the conditions that prevail in your area. Please don't hesitate to contact us for more information.

## OIE updates disease status and control programmes for members

*Fifteen new disease status have been granted to OIE Members and an official disease control programme has been endorsed.*

Due to the global exceptional circumstances linked to the COVID-19 pandemic, the OIE General Session has been cancelled this year. Nevertheless, specific Resolutions have been proposed for adoption by the World Assembly of OIE Delegates, by virtue of the establishment of an adapted procedure.

The Resolutions pertaining to the recognition of OIE official status and the endorsement of official control programmes for eligible diseases have been maintained, considering the very important role that they play in the import-export economy of OIE Members. By reflecting the level of transparency and the quality of national Veterinary Services, OIE official disease status contribute to increase the value of the livestock sector in countries. They facilitate regional and international trade of animals and animal products, notably in the context of negotiations according to the SPS Agreement of the World Trade Organisation (WTO).

OIE Members can apply for these disease status on a voluntary basis for six priority diseases. For this year, they could also submit their official control programmes for endorsement for three of these diseases.

In addition, the official control programme for FMD of Kyrgyzstan was endorsed.

Towards the endorsement of official control programmes for dog-mediated rabies

Having an OIE endorsed control programme for dog-mediated


rabies will pave the way for Members to self-declare freedom from dog-mediated rabies. This is a key step towards the elimination of human deaths from dog-mediated rabies.

The adoption of the first list of endorsed programmes is expected during the OIE General Session in May 2021. The deadlines for applications from Members will be communicated in the upcoming days. An online questionnaire provides OIE Members with guidance on the preparation of their dossiers.

OIE Members are highly encouraged to apply for such endorsement

**15 new official disease status delivered to OIE Members in 2020**

Disease	Status	Country or zone with new status
CSF Classical swine fever	Free	Croatia, Kazakhstan, Malta
FMD Foot and mouth disease	Free where vaccination is not practised	Chinese Taipei (one zone)
	Free where vaccination is practised	Brazil (one zone) Colombia (four zones)
CBPP Contagious bovine pleuropneumonia	Free	Bolivia Russia
PPR Peste des petits ruminants	Free	Lesotho
BSE Bovine spongiform encephalopathy	Negligible risk	Bolivia United Kingdom (one zone: Jersey)

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## 5 COVID-19 trends affecting backyard and commercial poultry

In the past few months, coronavirus has created major shifts in the poultry industry. While the illness cannot be transferred between birds and humans, all workers are at risk of exposure from family, friends, or colleagues.

Production protocols have changed as a result, and the following five trends must be taken into consideration.

### Pricing

While some meat has increased in price due to COVID-19, poultry prices are on a downward trend. This has resulted from lower demand from restaurants and an increase in euthanasias due to production factory closures. In March 2020 prices were about \$.79/lb, compared to the three-year average of \$1.02/lb. In April, the USDA composite price went down by \$.32/lb within the first two weeks. The result of these price drops is slower chick replacement, and this will have long-term effects on the industry.

### Realigning processing workstations

Any processing that is done with people from multiple



households should follow the CDC guidelines. The following procedures are being put into wide practice, and are highly recommended:

Partitions separating workers from each other.

Do not position workstations so that workers are facing each other. If no other options are available, ensure the workers are six feet apart.

To prevent aerosol/airborne spread, do not angle fans so that the air blows across multiple people.

Designate handwashing stations, or hand sanitizer stations with 60 percent alcohol.

Keeping a separate set of clothes and shoes for working with poultry. These clothes should not be worn more than once without washing. When washing, the clothes should be handled with gloves, and cycled at the warmest setting.

PPE (Personal Protective Equipment) such as gloves and face

masks should be worn at all times when handling and processing poultry.

\$5/chick (of a common breed), or \$25/hen

\$150-6,000/coop, depending on the size and material

\$3-100/feeders

\$13-25/50lb bag of feed

\$5/bale of bedding

\$5-10/simple nesting boxes or perches

### Maintaining a clean environment

Cleaning procedures should be undergone more frequently than before, particularly in regard to personal hygiene. Some measures to take include:

Another consideration is that, while coronavirus does not transfer from birds to

humans, salmonella does. The same cleaning and hygiene procedures used to prevent salmonella should be maintained through the coronavirus outbreak.

### Increased demand for chicks

The popularity of raising chicks in the backyard has increased massively during COVID-10. Consumers are producing their own food in order to avoid illness or contamination. However, many Americans are unaware of the time and money it takes before production can begin. Chickensandmore.com estimates the following costs:

On top of the costs of raising chickens, some new owners do not realize that new chicks won't produce for months. Before buying/selling chicks for backyard poultry, ensure that both parties understand the investment.

To avoid social contact when buying chicks, they can be shipped via mail, but this may be delayed due to increased demand. The main concern when receiving chicks is touching surfaces with the virus and then touching the eyes, nose, or mouth. The virus stays on cardboard surfaces for 24 hours, and stays on plastic and steel for two to three days. Gloves should be worn at all times, and hands should be washed as soon as the gloves are removed.

### Screening

Screening is essential so that all poultry handlers stay healthy; illness means that the chickens have less help, and production will be stalled. Proper screening includes taking temperatures before working or handling. No one with a temperature of 100.4 degrees or higher should help in production. Additionally, everyone should be asked if they have symptoms like a cough, chills, or difficulty breathing. With backyard coops, this may mean assessing neighbors and other visitors before they enter the home or yard.

The trends created by COVID-19 will likely continue for months to come. Therefore, it is important to acknowledge them right now, and assess how they change or develop as information about the virus is updated.







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## Ensures High Immunity and Stress Endurance



Kemin Industries South Asia Pvt. Ltd.

#C-3, 1st Street, Ambattur Industrial Estate, Chennai-600 058, Tamil Nadu, India. | Tel: 044 42202800,

Email: mail.india@kemin.com | Web: www.kemin.com

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