English monthly from Hyderabad, India RNI Regn. No. 72452/99

Poultry Fortune

Estd. 1991

• Production • Nutrition • Management • Marketing

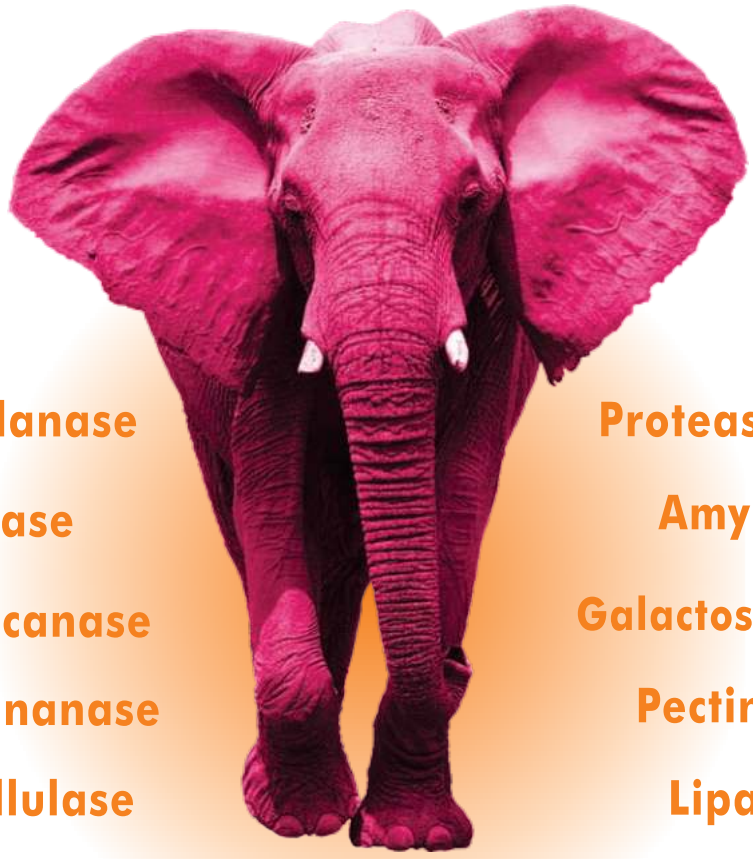
April 2023 Annual Subscription: Rs 800 Foreign $ 100

Inside...

LUMIS ENZYMES

Lumis offers unique single and customized multi-enzyme products that provides the customers, flexibility to choose alternate economical raw materials while ensuring efficient digestion and optimum nutrient availability thus reducing the feed cost.

POWER OF LUMIS ENZYMES



Xylanase
Phytase
ß-Glucanase
Mannanase
Cellulase

Protease
Amylase
Galactosidase
Pectinase
Lipase

Email : info@feedenzymes.com
Web : www.feedenzymes.com

FAMIQS GMP Quality TÜV NORD ISO 22000:2018

World No.1 Layer Bird Now Ready to Rule India

Great Place To Work. Certified SEPT 2022 – SEPT 2023 INDIA

- Local Breeding Program
- Maximum No. of Saleable Eggs
- Ability to Recover From Diseases
- Lowest Feed Per Egg
- Superior Livability
- Unmatched Technical Services

Young Flock Performances

Our Chicks Practically Pays for Itself by 20th Week

Name of the Farm	State	Week hit 90% Production
D.S.P P F	Andhra Pradesh	23
Rubiya Hitech P F	Karnataka	
R M Traders	Maharashtra	
Kaliyannan P F	Tamil Nadu	
Ashok Poultries	Telangana	
Uddanam Agro Farms	Andhra Pradesh	24
Riddhisiddhi P F	Gujarat	
Nandi P F	Karnataka	
Sikandar P F	Rajasthan	
Velusamy P F	Tamil Nadu	
Sri Venkataramana P F	Telangana	

Name of the Farm	State	Week hit 90% Production
Asha P F	Andhra Pradesh	25
Emen Agri Farms	Andhra Pradesh	
Sulabha P F	Odisha	
Santosh Dhanawade P F	Maharashtra	
Mulani P F	Rajasthan	
RASUL ALI P F	Rajasthan	
Shri Om Bana P F	Rajasthan	
Sri Raja Rajeshwara P F	Telangana	
M. Kanchana Rao	Andhra Pradesh	26
Sri Rajkamal Agro P F	Andhra Pradesh	
Vijaynagar Egg Farm	Karnataka	
Mahadev P F	Rajasthan	

Final Flock Performance

451.4 Eggs in 97 Weeks

SUNRISE EGGS FARM, JEYPORE, ODISHA

Mr. GVS Jagadish Vara Prasad

- Peak Production 96%
- Weeks Above 90% 35
- Weeks Above 95% 6
- Feed Per Day (Laying Period) 105g
- Feed Cost Per Egg Upto 97 Weeks @ Rs. 26/KG 3.16

Anand Poultry Farm, Namakkal, T.N

Mr. AMR Anand

ON THE PATH WAY TO MAKE ₹ 150 - 200 MORE PER BIRD

Flock Age	:	85 Weeks (Still continuing)
Peak Production	:	93%
Weeks Above 90%	:	13
Hen House Eggs	:	391.66
Cumulative Feed per Egg	:	112 g
Feed Per Day (Laying Period)	:	95 g
% Achievement of standard H.H Eggs	:	98%
Feed Cost Per Egg Upto 85 Weeks @ Rs. 28/KG	:	Rs 3.13/-

SrinivasaFarms

Srinivasa Farms Private Limited

(CIN : U01222TG1983PTC003979)

Registered Office : Plot No. 82, Kavuri Hills, Phase II, Madhapur, Hyderabad - 500081, Telangana, India.

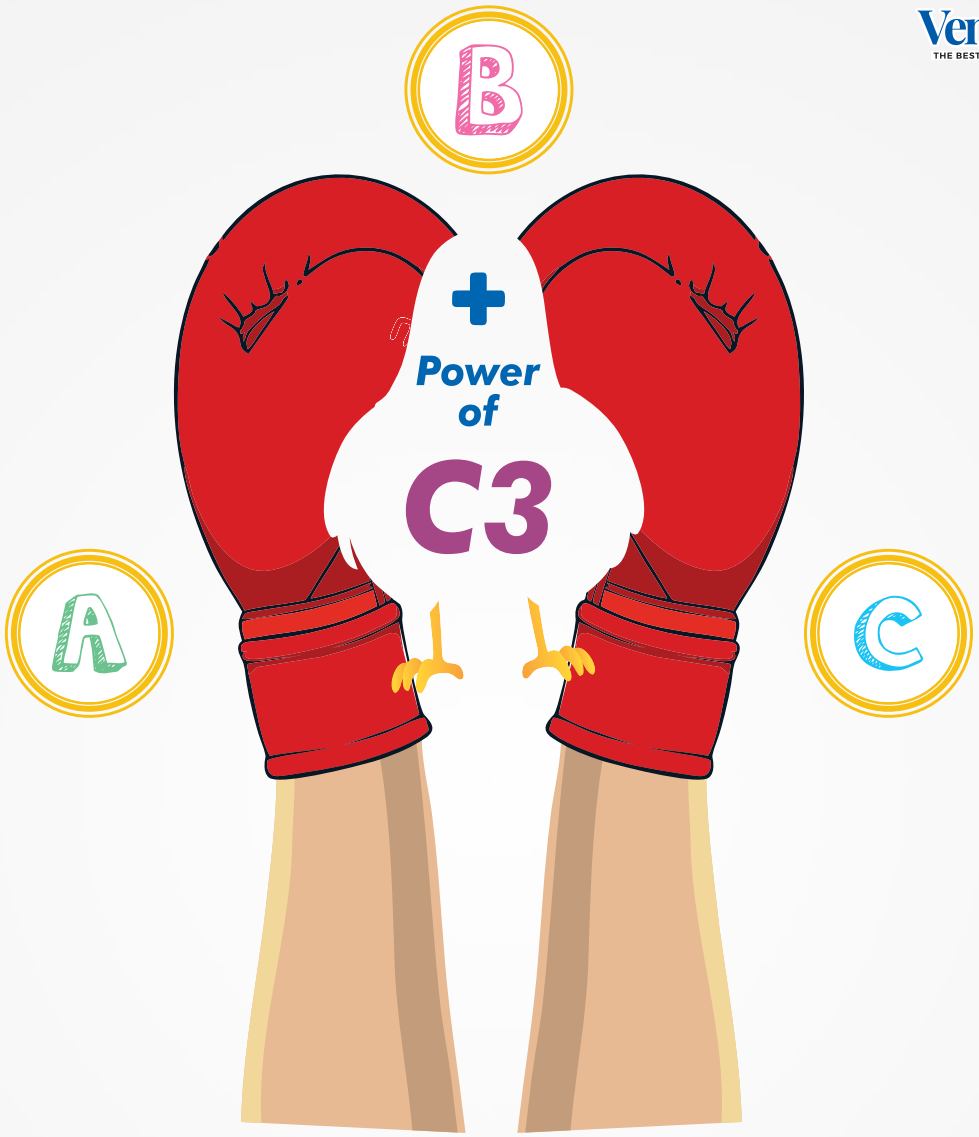
E-mail : contact@srinivasa.co

Phone : +91 40 23633500 / 501, +91 91000 21340

www.srinivasa.co | Follow us on

28/3/2023

Venworld®
THE BEST IN ANIMAL HEALTHCARE



VH-COR4

Infectious Coryza Vaccine Inactivated

Effectively Redefined For Current Challenges

VENTRI BIOLOGICALS
(Vaccine Division of VHPL)

'Venkateshwara House', S. No. 114/A/2, Pune Sinhagad Road, Pune 411030. **Tel.:** +91 (020) 24251803, **Fax:** +91-20-24251060 / 24251077.

Email: ventri.biologicals@venkys.com **www.venkys.com**

PROCID®

Protected Organic Acids by
JMT(Joint Matrixcoating Technology)

- Improves gut health as an effective antibiotic alternative
- Unique protection technology ensures high intestinal availability and digestibility
- Reduces harmful pathogens for optimal performance & immunity

For more information
www.mbiok.co.kr
morningbio@mbiok.co.kr

FAMIQS
MORNINGBIO

SUCCESS BREEDS SUCCESS

ROSS 308 AP DELIVERS FOR ASHU BREEDING FARM

"For Ashu Breeding Farm, the proof is in the results, and the Ross® 308 AP comes through for us each time. The support from Aviagen India, and hard work of our own team, helps us maximize the excellent genetics."

MR. MOHAN GADA
Managing Director of Ashu Breeding Farm

ASHU BREEDING FARM We focus on business sustainability goals by supplying the best-quality products to our customers.

SUCCESSFUL FARMERS in India **CHOOSE** the Ross 308 AP for:

- 1.5 to 2 points of FCR improvement annually
- Average 10 - 15 more chicks per hen than the competition
- High meat yield and excellent meat quality

To learn more, visit our website at https://ap.aviagen.com or follow the QR Code below.

Aviagen India Poultry Breeding Company Private Limited
+91 4252 233 650
info@aviagen.com
www.aviagen.com

Aviagen® | ROSS

SmiStyle

FOCUS ON BIO-FERMENTATION FOR 20 YEARS

Animal gut health solution

High value

Feed enzymes & probiotics

Phytase	Protease	Xylanase	Amylase
Cellulase	Glucanase	Mannanase	Pectinase
Bacillus Subtilis		Bacillus Licheniformis	
Clostridium Butyricum		Enterococcus Faecium	

BEIJING SMILE FEED SCI. & TECH. CO., LTD

Rm 908, Building 1, Tianzuo International Center, No.12,
Zhongguancun South Street, Haidian District, Beijing 100081, P.R.China

Contact with us:

Email: asia2smile@chinaphytase.com
Tel/ WhatsApp: +8615801003874
www.chinaphytase.com

atomes

Atomes India Chemicals Pvt Ltd

Give your Poultry a Healthy Gut & Improved Digestion

ATO GROWTH X55®

BENEFITS of ATO GROWTH X55

- *Reduces the acidity of the intestinal tract to limit the growth of pathogenic bacteria, such as E. coli and Salmonella.*
- *Stimulates improved feed digestion.*
- *Promotes the formation of a protective layer on the mucous epithelia to assist in the protection against absorption of harmful toxins or metabolites.*
- *Improves feed efficiency, absorption of nutrients and quality of manure*

Our Products are Exclusively Biodegradable, Environment Friendly, Non-Toxic, Non-Corrosive, Non-Carcinogenic and Safe to Handle

ATOMES INDIA CHEMICALS PVT LTD exclusive distributor in India 4E (A) Srivari Vaibhav 4th Floor, Mettupalayam Road, Kavundampalayam
Coimbatore - 641030, Tamil Nadu, +91 88704 42014
Info@atomesindia.com - www.atomesindia.com

US Army Published Article For Ebola Control
US Army Published Article for Decontaminating Bio-warfare Diseases
US Army Study & Approval Against COVID-19

Approved By Health Canada
Approved By Canadian Food Inspection Agency CFIA

An imbalanced Gut
leads to production loss...

SINCE 1930

Multi-strain probiotic

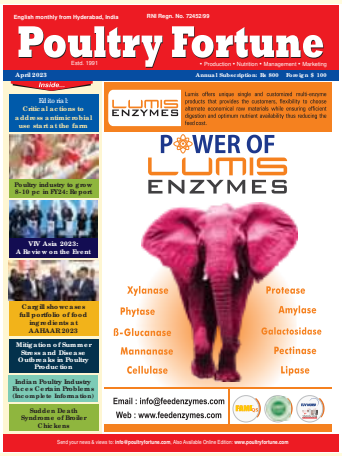
Prebiotic from an Herbal source

Phytobiotics

The next generation synbiotic

- Better immunity
- Bile and acid tolerant
- Better villi crypt ratio
- Better digestion
- Thermostable at 100°C

Himalaya Wellness Company
Makali, Bengaluru 562 162, India
www.himalayawellness.com
E-mail: write.to.us@himalayawellness.com



Poultry Fortune

English Monthly Magazine
(Established in May 1991)

Volume 24 Number 09 April 2023

Editor & Publisher
M. A. Nazeer

Editorial & Business Office:
POULTRY FORTUNE
NRS Publications,
BG-4, Venkataramana Apartments,
11-4-634, A.C.Guards,
Hyderabad - 500 004, India.
Tel: 040 - 2330 3989, 70329 19554
E-mail: info@poultryfortune.com
Website: www.poultryfortune.com

Annual Subscription
India : Rs. 800
Foreign Countries : US $ 100
or its equivalent.

Poultry Fortune will be sent to the subscribers in India by Book Post, and to foreign subscribers by AirMail.

Edited, printed, published and owned by M. A. Nazeer and published from BG-4, Venkataramana Apts., 11-4-634, A.C.Guards, Hyderabad - 500 004, India. Printed at Srinivasa Printers.
Registered with Registrar of Newspapers for India with Regn. No. 72452 / 99. Postal Regn.No. RNP/HD/1067/2021-2023.

Views and opinions expressed in the technical and non-technical articles/ news are of the authors and not of Poultry Fortune. Hence, we cannot accept any liability for any loss or damage arising from the use of the information / matter contained in this magazine.
- Editor

NRS PUBLICATIONS
www.poultryfortune.com

CONTENTS

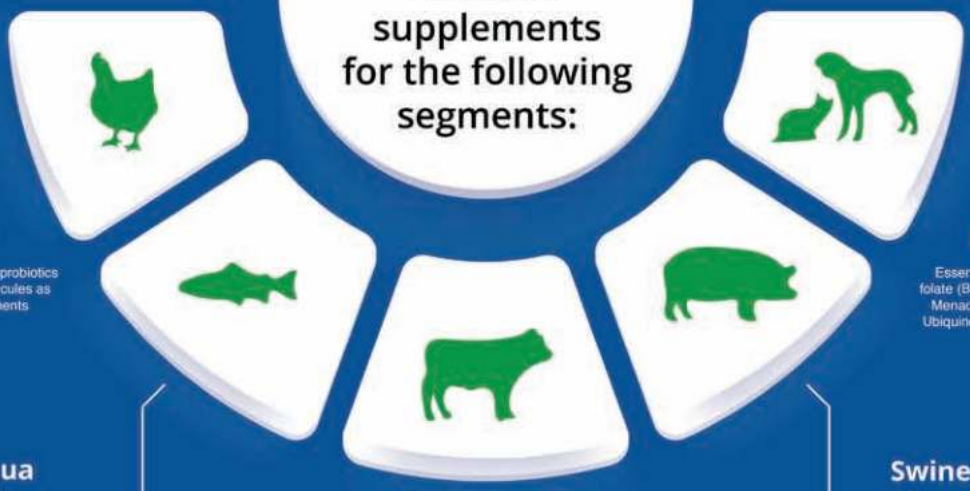
ADVERTISERS' INDEX

Subscriptions for Poultry Fortune, English monthly, should be sent to:
The Circulation Department, Poultry Fortune, BG-4, Venkataramana Apartments, 11-4-634, A.C.Guards, Near Income Tax Towers, Hyderabad - 500 004, India. Email: info@poultryfortune.com

Innovative Nutritional and Customised Solutions for Animal Health.

Anthem BioSciences
Creative Spirit, Intelligent Application

Anthem offers animal feed enzymes and essential supplements for the following segments:



Poultry
Enzymes, enzyme blends, probiotics and naturally extract molecules as effective feed supplements

Pet Food
Essential nutrients like L-methyl folate (Bioavailable form of folic acid) Menaquinone 7 (Vitamin K2) and Ubiquinol acetate (Coenzyme Q 10)

Aqua
Anthem innovative solutions for controlling vibriosis, white spot syndrome, and Ecoli for aquatic animals.

Swine
Enzymes, Probiotics to enhance the productivity and overall growth.

Ruminants
Ensure healthy animals forming, high milk yield, high SNF, and better productivity

Our Animal Health portfolio includes:

- Feed Supplements
- Nutritional Supplements
- Enzymes
- Probiotics
- API's

- Emerging Biotech Company at Bangalore, offering customer specific products with promise of quality & services.
- State of the art cGMP compliant synthesis and fermentation plants. AAALAC Accreditation GLP certified preclinical ADME-Tox and Microbiology Laboratories offering studies suitable for regulatory submission

Cater to major Pharmaceuticals, Biopharmaceuticals Animal health, Agro science and Biotech companies worldwide.

Dwipen Bhagawati
dwipen.b@anthembio.com

Satish Sharma
satish.s@anthembio.com

Santhosh Kumar
santhosh.k2@anthembio.com

+91-80-6672 4000 (Ext: 4168 / 4050) | www.anthembio.com

+91-819 729 8530 / 994 531 1779

Anthem Biosciences Pvt. Ltd.,
#49, F1 & F2 Canara Bank Road, Bommasandra Industrial Area Phase-I, Hosur Road, Bangalore-560099, Karnataka, INDIA

Critical actions to address antimicrobial use start at the farm

International Poultry Council brings International leaders, representing over 15 percent of the global broiler production, include six associations and two companies and together they represent a collective effort in reducing reliance on antimicrobials globally.

Many companies are involved in manufacturing and marketing of Phytase Enzyme for use in poultry feeds, to make phosphorus available to the birds, by hydrolysing the phytate complex's present in the feed ingredients, releasing the phosphorus simultaneously sparing the inorganic phosphorus and preventing soil contamination, but they never give full details of the product being promoted. Phosphorus plays a major role in several metabolic pathways in the birds body, it is required along with Calcium and Vitamin D3 for the bones and the egg shells.

Dear Readers,

The April 2023 issue of **Poultry Fortune** is in your hands. In the news section, you may find news about ....

The International Poultry Council and Poultry Federation of India signed an agreement to Endorse Antimicrobial Use Stewardship Principles on 8 March 2023 at a program during VIV Asia, Bangkok. On behalf of PFI, the agreement was signed by Mr Ricky Thaper, Treasurer, PFI. International leaders, representing over 15 percent of the global broiler production, include six associations and two companies and together they represent a collective effort in reducing reliance on antimicrobials globally. These organizations were recognized as leaders for adopting the antimicrobial use stewardship principles and serve as an example for others that want to make a tangible impact on global health security. Mr Robin Horel, President, International Poultry Council said that *critical actions for addressing antimicrobial use start at the farm*.

The domestic poultry industry is expected to grow 8-10 per cent in 2023-24, driven by volumes and realisations following stable demand and higher penetration of processed chicken as well as value-added products. However, earnings are expected to be volatile owing to fluctuations in the raw material prices particularly maize and limited ability of players to fully pass on cost increases. In the report, ICRA said it expects the domestic poultry industry's revenues to grow at a steady pace of 8-10 percent in FY-24 due to growth in both volumes and realisations. The recent widespread global bird flu outbreaks are a reason for alarm and remain a significant vulnerability for the Indian chicken business, it said.

Although there are now only a few isolated instances in India, the report said the demand could be negatively impacted in the event of a widespread outbreak, leading to substantially lower realisations.

Bird flu was confirmed in Ranchi on March 3, 2023 after samples collected from the chickens being reared at the Jail More residence of Union tribal affairs minister Arjun Munda tested positive. Thereafter, the district administration declared the 1-km radius from the epicentre as infected zone for culling of all poultry items. It also imposed a ban on the sale of poultry within the 10-km radius from the epicentre for 21 days. With no further report of any outbreak, the administration is hopes to return to normalcy soon. Vipin Bihari Mahta, the director of Kanke-based government-run Institute of Animal Health and Production (IAHP), which is monitoring the situation, said, "As per the protocol, the issuance of sanitisation certificate to the district administration by the animal husbandry director is expected within the next one or two days. The certification would mean scientific culling and disinfection in the affected areas has been done and there is no further threat. This will pave the way for reopening of sale of poultry in the restricted zone."

The event VIV Asia 2023 delivered a dynamic, expansive marketplace to the large attendees

Contd on next page

NRS GROUP

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.

TALK TO US

SEND AN EMAIL:
info@poultryfortune.com
Please do not send attachment.

FOLLOW US:
facebook.com/poultryfortune,
twitter.com/nrspublications

Send a letter: *Letters to the Editor must include writer's full name, address and personal telephone and mobile numbers. Letters may be edited for purposes of clarity and space. Letters should be addressed to the Editor:*

POULTRY FORTUNE, BG-4, Venkataramana Apartments, 11-4-634, A.C.Guards, Near Income Tax Towers, Masab Tank, Hyderabad - 500 004, T.S, India.
Tel: +91 040 - 2330 3989, 70329 19554. Website: www.poultryfortune.com

which featured Feed to Food products and services from more than 1,186 global manufacturers and suppliers representing over 57 countries. The expo concluded successfully, as a robust platform for B2B international business. Over three days, 8-10 March 2023, the show facilitated face-to-face interactions, networking, knowledge-sharing and a lively marketplace at Bangkok, Thailand. According to a note from the organizers, with 47,527 visitors from 112 countries, the event maintained its stable attendance and even slightly exceeded the previous edition. Despite the global circumstances and the past three long years of Covid-19 restrictions, the show's international appeal for the Feed to Food industry remained evident, confirming its significance as a World Expo. Poultry Fortune editor M.A. Nazeer, participated in the event and interacted with global experts, entrepreneurs and exhibitors.

Zoetis opened the region's first BioDevice Learning Center in Pathumthani, Thailand, to support not only its purpose and response to rising biodevice demand, but also to improve customer experience and field-service colleague competency development. Furthermore, having the Embrex Biodevice products on site allows a true touch-and-feel experience for customers who are considering adopting the technology to learn more about its features and benefits. The purpose of this center is to provide customers and colleagues, not limited to only biodevice teams from around the world, with the opportunity to experience our next-generation biodevice technological equipment and to leverage this learning center for the purposes of learning and development.

Cargill has unveiled a range of exciting offerings at AAHAAR 2023 with the theme ***Re(discover) what's possible together***, Cargill is showcasing product applications under health and nutrition, fusion baking and innovation, that have been co-created with its bakery partners for Indian consumers. Cargill highlighted its innovative solutions in Health and Nutrition, showcasing products under the theme ***'Healthy for me'*** that help customers stay on trend with their consumers' preferences and be relevant futuristically. The healthy solutions include healthy jaggery and sesame cookies, high protein cookies and whole wheat cakes made with Nature Fresh Professional (NFP) Lite and Elite Choice that have zero trans-fats, gluten free, low sugar and high in protein and vitamins.

Cargill and the Baker's Association Kerala signed a Memorandum of Understanding (MoU) to co-create healthier and innovative food solutions for the Indian Food and Bakery industry. This partnership enables Cargill to bring its global expertise in food ingredients, product formulation, technology and innovation to consumers in Kerela and will revolutionize the state's vibrant bakery community.

In the Articles section – *Mitigation of Summer Stress and Disease Outbreaks in Poultry Production,* *authored by* **Dr R.N. Sreenivas Gowda** said that in this summer season, as the temperature increases, poultry suffers from the condition called heat stress, also known as summer stress. This is a condition due to imbalance between heat generation and heat loss in the body. This condition not only brings poor performance in birds but is also responsible for huge economic losses in terms of poor growth, lowered production and higher mortality. The negative effects of heat stress on breeders, broilers and laying hens range from reduced growth and egg production to decreased poultry and egg quality and safety. The poultry farmers have to take all the precautionary measures to handle the heat problem to save the birds from heat catastrophe. Keep monitoring on the antibody levels and follow suitable remedies by boosting the levels with revaccination and proper treatment to save them from heavy mortality.

Article titled ***Indian Poultry Industry Faces Certain Problems (Incomplete Information),*** *authored by* ***Dr S.K. Maini*** says that many companies are involved in manufacturing and marketing of Phytase Enzyme for use in poultry feeds, to make phosphorus available to the birds, by hydrolysing the phytate complex's present in the feed ingredients, releasing the phosphorus simultaneously sparing the inorganic phosphorus and preventing soil contamination, but they never give full details of the product being promoted. Phosphorus plays a major role in several metabolic pathways in the birds body, it is required along with calcium and Vitamin D3 for the bones and the egg shells, and is required for the energy metabolism at the cellular level, for synthesis of protein and for the transportation of sodium and potassium across membranes.

Marketing companies and their distributors / promoters of their products never speak of the needed points, they claim sparing of DCP or MCP in the feed, reducing the environmental contamination, and making many trace minerals, vitamins and amino acids available that were earlier trapped by the phytates etc., the fact is total DCP or MCP should never be stopped, as the phytase enzyme releasing the required phosphorus is uncertain and dependent on several factors not in the control of any nutritionists or promoters of Phytase enzyme.

Another article titled ***Sudden Death Syndrome of Broiler Chickens,*** *authored by* ***J. Jeyasri*** and ***Dr G. Srinivasan*** informed that sudden death syndrome also known by several other names, such as 'acute death syndrome', 'heart attack', 'dead in good condition', 'flip-over disease' and 'lung oedema'. Sudden death syndrome is a condition in which healthy broiler chickens die suddenly for no visible or understandable cause. Mortality occurs in apparently healthy, fast growing broilers which die suddenly with a short, wing beating, convulsive attack and approximately 60 – 80% are males. Most affected broilers die on their back, hence the name 'flip-over disease'.

The cause of sudden death syndrome is unknown, but it is likely a metabolic disease. Disease can be confirmed by the farmers itself by its ethology (Supine Position). Long dark periods may be effective in reducing the number of deaths in broiler chickens from sudden death syndrome.

There are no specific gross or microscopic changes. Affected birds appear healthy, are well fleshed and usually have feed in their digestive tract. There may be small hemorrhages in the liver and kidney. Usually the gall bladder is empty. Kidneys may be pale. Lungs are often congested and edematous. Lower carbohydrate energy intake by changing feed texture, mash or density, and feed restriction may help in reducing the mortality.

Another article titled ***Backyard Duck Farming in India: Emerging Trends,*** *authored by* ***Dr Rambabu.D*** discussed that in India, duck farming is significant in addition to chicken farming. They make up roughly 10% of all poultry and generate 6 – 7% of all eggs produced in the nation. Up until recently, tiny and marginal farmers mostly in southern and eastern coastal regions, north-eastern India and Jammu & Kashmir were the

M.A.Nazeer
Editor & Publisher
Poultry Fortune

valvin™ SAKTHI

MINERAL MANAGEMENT

BENEFITS FOR BREEDERS / BROILERS / LAYERS

- ✓ Better absorption, utlilization, bio-availability and retention of minerals
- ✓ Improves performance including fertility, egg production & hatchability
- ✓ Higher immune response and antioxidant defense system

OUR SOLUTIONS

- ValMin Zn (15%, 20%)
- ValMin Mn (15%, 20%)
- ValMin Fe (15%)
- ValMin Cu (10%, 12%)
- VALSe-Selenium Yeast (2000 ppm)
- VALCr-Chromium Yeast (1000, 5000 ppm)
- SAKTHI*
- SAKTHI PLUS*
- SAKTHI LAYER*
- CUSTOMIZED PACK*

*Organic mineral concentration, refer product specification sheets or contact Valvin representative.

Quality & Safety is our allegiance to our customers. Our production process follows international quality standards & systems with highly stringent protocols and follow ups.

20Kg Poly-laminated paper bags

Bengaluru/Namakkal/Pune/Coastal Andhra

Contact us on +91 99851 75726.
Email: valvinsales@gmail.com

Valvin Nutraceuticals, No. 10, 3rd Floor, Golden Square Centre, Esteem Mall, Kempapura Main Road, Hebbal,Bengaluru 560092, Karnataka, India.

+91 94297 76666 info@valvin.in www.valvin.in

Cargill showcases full portfolio of food ingredients at AAHAAR 2023

From left: ***Simon George, Managing Director, Cargill's Food Ingredients Business - South Asia, Kamal Kant Pant, Principal & Secretary of IHM Pusa, New Delhi, inaugurating Cargill's booth at AAHAAR 2023.***

Delhi: In line with its commitment to consistently create healthy and innovative food solutions for the Indian Food and Bakery industry, Cargill has unveiled a range of exciting offerings at AAHAAR 2023. Joining AAHAAR, one of India's largest food ingredients exhibitions with the theme **Re (discover) what's possible together**, Cargill is showcasing product applications under health and nutrition, fusion baking, and innovation, that have been co-created with its bakery partners for Indian consumers.

Cargill's booth at the expo was inaugurated today by **Mr Kamal Kant Pant**, Principal & Secretary of IHM Pusa, New Delhi along with **Mr Simon George,** Managing Director, Cargill's Food Ingredients Business - South Asia and is witnessing strong footfalls.

Through the expo, Cargill is emphasizing its role as a **fully integrated food ingredients and solutions partner** in the South Asian food ingredients market. The products and solutions showcased reflect the company's focus on health and nutrition, combining consumer trends and Cargill's proprietary Trends Tracker powered by its global innovation capabilities. This will enable Cargill's customers to stay ahead of consumer trends and embrace a futuristic approach to evolving food consumption preferences.

Speaking at the occasion, **Simon George** from Cargill said, "The world around us is rapidly changing with consumers demanding healthier and tastier options. Cargill's deep global knowledge in innovations, combining with our local expertise has enabled us to develop a tailored portfolio of integrated food solutions that cater to Indian palates. Our focus on innovation, global trend tracking capability and proprietary market insights come together to make us a trusted, reliable supplier of food ingredients for our customers and their go-to partner for growth and innovation".

Healthy Food Solutions

Cargill highlighted its innovative solutions in Health and Nutrition, showcasing products under the theme 'Healthy for me' that help customers stay on trend with their consumers' preferences and be relevant futuristically. The healthy solutions include healthy jaggery and sesame cookies, high protein cookies and whole wheat cakes made with Nature Fresh Professional (NFP) Lite and Elite Choice that have zero trans-fats, gluten free, low sugar and high in protein and vitamins.

Fusion Baking

Food applications in the 'fusion baking' category demonstrated by Cargill chefs at the expo included innovative combinations such as gulab jamun cheese cake, masala healthy yoga bars and baked mathri cookies that have ingredients such as Nature Fresh Professional (NFP) Lite, White compound and Elite Choice that combine Indian spices and desserts with global cuisine.

Insights-led Innovation

Aligned with global consumer trends of conscious consumption, experientials, convenience and high functionality, Cargill presented a selection of food ingredients that demonstrated its proprietary research

Cargill India at AAHAR 2023

Now Available
in India

VAXXITEK®
HVT+IBD

GET THE FULL
POTENTIAL

Intact bursa • Immune foundation

THE NUMBERS TELL IT ALL
100BILLION
BIRDS VACCINATED
From the first launch in 2006

Boehringer Ingelheim India Pvt. Ltd.
Unit No. 202 and part of Unit no. 201, 2nd Floor, Godrej 2, Pirojsha Nagar
Vikhroli (E), Mumbai 400079 | Tel.: (+91) 22 71456477

Boehringer Ingelheim

capabilities. These applications included EpiCor® postbiotic to promote digestive health, Radipure TM, a sustainable plant-based pea protein and chocolate compounds. In early 2022, Cargill had opened its first state-of-the-art Food Innovation Center in Gurgaon India to address growing consumer demand for healthy, nutritious food solutions. This also connects Cargill's customers in Asia Pacific, Middle East and Africa to a global network of 10 other innovation centers and over 2,300 food scientists worldwide.

Nature Fresh Professional – Product Highlights

The event also saw a special focus on Nature Fresh Professional products including Classic Gold, a one-of-its-kind Puff pastry fat in Indian market, Elite Choice, a trans-fat free proprietary fat for premium cookie category, Classic trans-fat-free, a healthy puff pastry fat and Lite, a flavored and low melting fat for bakery category. Many of these are unique products created especially for the Indian market, where there is a rise in demand for snacks that are healthier yet tastier, and keeping in mind the needs and challenges of the domestic bakery industry.

Talking about Cargill's participation **Mr Kamal Kant said,** "IHM Pusa prides itself in promoting the eat right movement and eliminating plate waste. It grooms next generation chefs to prepare healthy and authentic dishes. We value the association we have had with Cargill, an organization that comes with 155 years of experience in sustainable food supply chains and deep insights into food innovation and product development. We are excited about exploring new opportunities of collaboration with Cargill not only to harness the full potential for the mutual benefit of both our organizations, but to serve the consumers by addressing together their ever-evolving needs in this country".

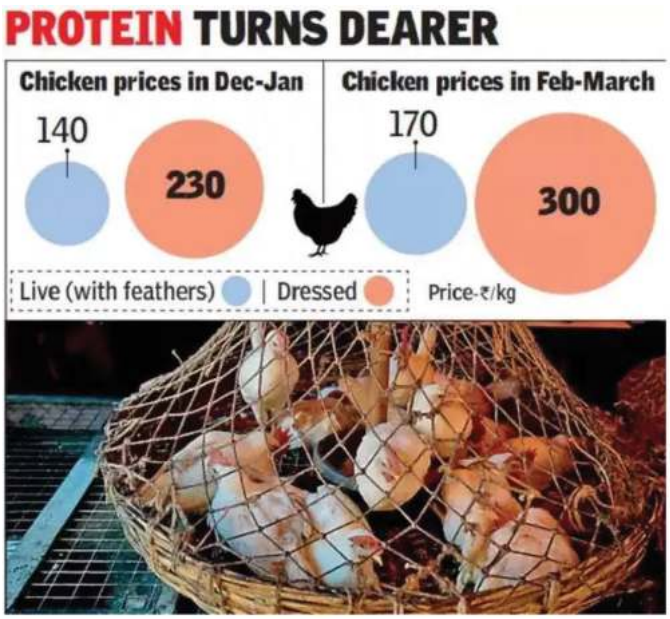
Demand-supply gap pushes up chicken price to Rs 300/kg in Kolkata

Kolkata: A sharp dip in production and surge in demand at weddings has resulted in the price of dressed chicken shooting through the roof across retail markets in the city.

On March 14, a majority of retail outlets sold chicken at Rs 300 per kg. Poultry farmers blamed long dry spells and heat stress behind the high mortality rate of chicks.

Chicken is one of the cheapest sources of animal protein available in the city markets. The fluctuations in prices often affect households. "Prices fluctuate because of high mortality rates of chicks due to heat stress and higher cost of poultry feed. Poultry farmers may face major losses if the mortality continues," said Madan Maity, secretary of the Bengal Poultry Federation.

"We're buying chicken at Rs 160 and selling it alive at Rs 170 a kg. We lose 40% of the chicken's weight in feathers, skin and other redundant portions. Selling it below Rs 300 becomes a loss-making proposition," said Satyajit Sinha Roy, a retail vendor at Lake Market.



"The majority of the poultry farms are at least 150-200 km away from the city. During the transit from the farm to the wholesale market, the mortality remains too high, pushing the prices further up," said Maity. The chicken prices last year around this time hovered around Rs 220-230. This time because of higher demand, mutton prices also rose to Rs 850-880 a kg.

"I was shocked to find chicken prices soaring all of a sudden. A week ago, it was hovering around Rs 230 per kg. 15 days ago, the prices were even cheaper. This time, I asked the retailer to give me smaller chunks. My kitchen budget has already gone haywire because of steep rises of all the necessities in the kitchen," said Amit Dasgupta, a retired teacher from Barisha.

The marriage season has had a major impact on chicken prices. "We find it difficult to supply chicken to marriage ceremonies, leaving the retail markets dry. This leaves a gap between the demand and supply," said Hyder Ali, a wholesaler at New Market.

"The price rise has already compelled us to think of revising the prices of chicken rolls," said Shankar Prasad, owner of the Roll corner at Wellington Square. "Chicken biriyani and chicken curry will be costlier if the dressed chicken price stubbornly remains high even after the marriage peak season is over, said Arya Vaid, Pice Hotel and Eatery Owners Association.

Source: The Times of India

CHROMISAC™-C vit

Chromium proteinate with natural Vitamin-C substitute for thermal stress

For any enquires please mail to : info@zeusbiotech.com

www.zeusbiotech.com

Zoetis unveils the 1st Biodevice Learning Center to support biodevice business expansion in Asia Pacific

- *Zoetis has opened the first learning center in Pathumthani, Thailand, to enhance customer service support through regular colleague trainings and routine device demonstrations for Zoetis customers on the Embrex® line of in ovo vaccination biodevices.*
- *This initiative reinforces Zoetis' commitment to continuous learning of colleagues that supports a customer-centric approach.*
- *Worldwide, Zoetis is the largest supplier of in ovo vaccination equipment and leads the industry in customer satisfaction[1]*

Pathumthani, Thailand (March 8, 2023): Zoetis has committed to advancing animal care and humankind across a continuum of care by driving innovative growth, enhancing the customer experience, and cultivating a high-performing organization. Zoetis opens the region's first BioDevice Learning Center in Pathumthani, Thailand, to support not only its purpose and response to rising biodevice demand, but also to improve customer experience and field-service colleague competency development. Furthermore, having the Embrex Biodevice products on site allows a true touch-and-feel experience for customers who are considering adopting the technology to learn more about its features and benefits.

In addition, Zoetis has training facilities in Madrid, Spain, and Durham, North Carolina, the United States. The Zoetis learning centers enable regular service specialist training and upgrade programs, as well as customer visits for device demonstrations.

Zoetis India Team, from right: ***Dr Anupam Srivastava, National Technical Manager; Ashwini Deshpande, General Manager – India & BNS (Distributor Markets) and Dr Bhushan Gangurde – Group Product Manager***

Arkhom Cheewakriengkrai, Vice President of Southeast Asia and South Asia and distribution markets, states that *"We have observed a noticeably expanding demand for sophisticated biodevice equipment for in ovo vaccination and service among the proprietors of hatchery businesses and those who operate hatcheries throughout Southeast Asia and South Asia. Because our colleagues are the primary force behind our company's success and are what sets us apart from the competition in the market, we have made it a priority to contribute to the learning and advancement of our biodevice colleagues to accommodate both the expansion of our company and the ambitions they have for their professional careers. Today, we are delighted to open the first Zoetis Biodevice Learning Center in the Asia Pacific region. The purpose of this center is to provide customers and colleagues, not limited to only biodevice teams from around the world, with the opportunity to experience our next-generation biodevice technological equipment and to leverage this learning center for the purposes of learning and development."*

For over 30 years, Embrex® BioDevices from Zoetis have delivered exceptional performance and unmatched support. The introduction of automated in ovo vaccination by Embrex® in 1992 with the Inovoject® system, the world's first commercial in ovo vaccination biodevice, fundamentally changed how poultry companies approach vaccine delivery at the hatchery. Using automated in ovo vaccination with Embrex technology helps address labor challenges, improves and provides earlier immunization,[2] benefits bird health,[2] and drives hatchery efficiency when compared with competitor single needle in ovo vaccination and

Zoetis Biodevice Learning Center APAC

Amantro Agro

OUR PRODUCT RANGE

- SOYABEAN MEAL
- FISH MEAL
- RAPESEED MEAL
- CALCIUM CARBONATE
- AMINO ACIDS

  DL-Methionine, L-Lysine, L-Threonine, L-Tryptophan
- DCP, MCP, SODIUM BI CARBONATE

Animal Feed Supplements
DRIED & HOMOGENISED

email : amantroagro017@gmail.com
Call : **8853455127, 7318153787**

Bio Device Learning Centre Inaugural day, from right:
Ms Jessica Alderman, Senior Marketing Manager, Global Bio Devices; Satinder Wahi, Commercial Lead, Global Bio Devices – Asia Pacific; Arkhom Cheewakriengkrai, Vice President – South East Asia, India & Distributor Markets; Ulrich Ginting, General Manager – Indonesia and Jecee Singayan-Fajardo, L&D Director Asia Pacific

subcutaneous vaccine administration.[2]

In 2018, Zoetis released the next generation of the Inovoject® system, the Inovoject® NXT. Building on the gold standard Embrex brand, the Inovoject NXT system brings together patented loop-wire design with Haylo™ technology for gentle egg handling, EmbrexAccusight™ technology for egg identification, and EmbrexPrecixion™ technology for up to 100% injection-site accuracy[3] in order to optimize the vaccination process.[4] The Inovoject NXT system is the result of decades of poultry health and biodevice equipment experience working with poultry producers to effectively immunize chicks and address disease challenges while advancing productivity in the challenging hatchery environment.

"Every year, Embrex® BioDevices® injects more than 20 billion eggs in over 40 countries, and this number is increasing year after year. We are pleased to provide more impactful learning opportunities to our field service colleagues on Embrex in ovo vaccination technology by establishing a learning center in the Asia Pacific region. In-person and hands-on training not only improves our colleagues' skills and capability and their comprehensive understanding of the device, but it also reinforces our commitment to providing exceptional service to our customers." **Curtis Shuey,** Vice President of Global BioDevices and Site Leader, says.

A Service and Support-based Model for Customer Success

Zoetis backs its Embrex products with best-in-class, dedicated technical support available 24 hours a day, every day, helping ensure trouble-free operations that empowers customer success. This unsurpassed and inclusive service with no hidden fees enables continuous hatchery improvement through sustained attention to best practices and utilizing science-based tools to achieve consistent results. Customers have access to subject matter experts to gain insights for process improvement and maintain their success over time.

Inovoject NXT system Customer demonstration by Service Engineers

The team includes some of the world's foremost in ovo vaccination experts, so customers receive guidance from leaders in the field and assistance from technicians who support through:

- Site inspection to determine the hatchery readiness status
- Device installation, initial start-up, and hatchery staff training for operation
- Maintenance, emergency service, process evaluations and spare parts
- Zoetis continues to be recognized for its service, equipment and technology of the Embrex portfolio and has earned a higher satisfaction rating compared to any other supplier.[1]

[1] *International and US NPS Score Surveys, 2022*

[2] *Barbosa T, Williams C, Villalobos T. Efficacy and Marek's disease protection comparison between different vaccination methods, in Proceedings. 18th Congress World Veterinary Poultry Association 2013;217.*

[3] *Data on file, Study Report Nos. 02-18-70R7D PS-5802CDI SR, 02-18-70R7D PS-5802B SR, 02-18-70R7D PS-5802C SR, 02-18-70R7D PS-5802CD SR, 02-18-70R7D PS-5802D SR and 02-18-70R7D PS-5802I SR, Zoetis Inc.*

[4] *Data on file, Study Report No. 05-18-70R7D, Zoetis Inc.*

Inovoject NXT system at Display

Flavour trove
Animal Health

NatuXan-Y

NATURAL YELLOW PIGMENT

Natuxan-Y is a saponified, stabilised source of xanthophylls derived from marigold flowers. It helps to achieve uniform colouration in egg yolks naturally.

- Natural
- Highly bioavailable
- ₹ Cost Effective
- Thermostable
- Made in India

USAGE

Layer | Broiler | Breeder

Connect with us to learn more about our products & its benefits

B41/A, Veersandara Industrial Estate, Hosur Road, Bangalore 560100, Karnataka, India
Email: ahp@flavourtrove.com | **Tel:** +91 96633 65755 | **Web:** www.flavourtrove.com

The International Poultry Council and Poultry Federation of India sign Agreement to Endorse Antimicrobial Use Stewardship Principles in Bangkok during VIV Asia

On March 08, 2023, The International Poultry Council (IPC) at a program during VIV Asia in Bangkok, Thailand was pleased to announce eight private-sector organizations that have recognized the importance of responsible antimicrobial use and are endorsing the council's antimicrobial use stewardship principles.

These international leaders, representing over 15% percent of the global broiler production, include six associations and two companies and together they represent a collective effort in reducing reliance on antimicrobials globally. These organizations were recognized as leaders for adopting the antimicrobial use stewardship principles and serve as an example for others that want to make a tangible impact on global health security.

1. Poultry Federation of India (PFI)
2. Brazilian Association of Animal Protein (ABPA)
3. Federación Nacional de Avicultores de Colombia (FENAVI)
4. Unione Nazionale Filiere Agroalimentari Carni e Uova (UNAITALIA)
5. Thai Broiler Processing Exporters Association (TBA)
6. Vietnam Poultry Association (VIPA)
7. DABACO Group, a Vietnam-based company
8. Kenchic Limited, a Kenya-based company

The International Poultry Council is the unified voice of the global poultry sector that represents 86% of poultry meat exports and 73% of the volume of poultry meat production. IPC works to strengthen communication between the industries of different countries, promotes a common global understanding of and confidence in poultry products, represents the global poultry sector with international organizations and agencies, shares science-based solutions and information across the whole poultry supply chain, promotes a balanced regulatory framework to support a fair global playing field and promotes, supports and encourages the sustainable development of animal production for global food security.

Poultry Federation of India, the foremost national level Organization established in the year 1988, being the voice of the Indian Poultry Industry, signed a agreement with International Poultry Council to endorse the antimicrobial use stewardship principles. On behalf of PFI, this agreement was signed by Mr Ricky Thaper, Treasurer, Poultry Federation of India in the presence of PFI Executive members Dr Jeetendra Verma, Dr Dinesh Arora, Mr Parveen Kumar, Mr Robin Horel, President and Mr Nicolo Cinotti, Secretary General, International Poultry Council.

While addressing the gathering, Mr Ricky Thaper told the audience that Poultry Federation of India is constantly working and committed towards the protection, welfare and the overall growth and development of the poultry sector.

"Critical actions for addressing antimicrobial use start at the farm," said Robin Horel, President, International Poultry Council. "We commend these organizations for acknowledging the importance of intentional antimicrobial use not only for the benefit of animals, but for the impact on human health by reducing the risk of resistant pathogens spreading around the world."

"We know that human health is linked with the health of animals," said Annie Kneedler, Chief of Party for TRANSFORM. This is the latest initiative from TRANSFORM, a project created to advance market-driven animal health solutions that increase global health security and increase access to safe and affordable animal-sourced nutrition.

PROMOIS
ПРОМОИС
INTERNATIONAL

AMINO ACID

- DL-Methionine
- L-Lysine Hcl
- L-Threonine
- L-Tryptophan
- L-Valine
- L-Isoleucine

BULK PRODUCTS

- Di Calcium Phosphate (DCP)
- Monocalcium Phosphate (MCP)
- Sodium Bicarbonate
- Premix (Layer)
- Premix (Broiler)

FEED SUPPLEMENT

- Choline Chloride (CCL)
  Liquid 75% /Powder 60%
- Toxin Binder
- Betain Hcl
- Acidifier
- Phytase
- Multienzyme

VITAMINS /ANTIBIOTICS

- Chlortetracycline (CTC)
- Tylosin Phosphate 10%
- Tiamulin10,45,80%
- Vitamin
  A,C,E,K3,D3,B3,B4

MEALS

- Soyabean Meal
- Fish Meal
- Rapeseed Meal

Contact us :
What's app:
+91 7991715797
+91 7524871004

PROMOIS INTERNATIONAL
sales@promoisinternationallt.com
www.promoisinternational.com

Led by a private-sector consortium that includes Cargill, Ausvet, Heifer International and IPC, TRANSFORM aims to drive lasting, systemic change through animal health data applications, antimicrobial use stewardship and on-farm practices that support animal health and economic sustainability.

Other eminent speakers at the conference were Mr Thanawat Tiensin, Director, FAO, Mr Nicolo Cinotti, Secretary General, International Poultry Council, Dr Daniel Schar, Advisor, USAID and Mr Dennis Erpelding.

Avitech Nutrition in VIV Asia 2023, Bangkok

Avitech Nutrition team with their MD Rahul Kapur in VIV ASIA 2023

Avitech Nutrition participated in the VIV Asia 2023 exhibition held at the Impact Exhibition Centre in Bangkok from 8th – 10th March 2023. VIV Asia is considered to be the largest and most comprehensive exhibition for the animal feed, health, breeding and processing industry in Asia.

Organised by VNU Netherlands, VIV Asia 2023 was held after a gap on 4 years due to the Covid pandemic and drew a huge response this year. Avitech Nutrition showcased the products of the Avitech range and the PhyGeno range. The PhyGeno division specialises in providing plant-based solutions for the feed industry. Avitech Nutrition announced the launch of Nanosel which offers improved Selenium absorption through nanotechnology.

The Avitech-PhyGeno booth received good footfall from across the world representing different stakeholders of the feed industry.

Poultry industry to grow 8-10 pc in FY24: Report

The recent widespread global bird flu outbreaks are a reason for alarm and remain a significant vulnerability for the Indian chicken business, the report said.

Mumbai: The domestic poultry industry is expected to grow 8-10 per cent in 2023-24, driven by volumes and realisations following stable demand and higher penetration of processed chicken as well as value-added products.

However, earnings are expected to be volatile owing to fluctuations in the raw material prices particularly maize and limited ability of players to fully pass on cost increases, it said.

In the report, ICRA said it expects the domestic poultry industry's revenues to grow at a steady pace of 8-10 per cent in FY24 due to growth in both volumes and realisations.

In addition to stable demand, the revenues will be supported by increased penetration of processed chicken and value-added products, which are growing consistently, it added.

According to the report, maize prices have grown significantly by 32 per cent on an annual basis in the first nine months of FY23. This was due to the growing global demand for Indian maize following the Russia-Ukraine conflict, which has subsequently resulted in an increase in the average feed price.

Earlier, the rising soybean prices had been putting pressure on feed costs, which have moderated in the current fiscal, the report said.

ICRA said it expects poultry companies to invest towards forward integration in the medium-term, that is, towards setting up processing plants to enable shift towards higher margin value-added products.

The recent widespread global bird flu outbreaks are a reason for alarm and remain a significant vulnerability for the Indian chicken business, it said.

Although there are now only a few isolated instances in India, the report said the demand could be negatively impacted in the event of a widespread outbreak, leading to substantially lower realisations.

VBFA-400™

High level disinfectant

Venworld®
THE BEST IN ANIMAL HEALTHCARE

"A highly effective protection against all pathogens!"

Proven effective against the tested organisms at used dilutions

Test Organism:
E. coli, Pseudomonas aeruginosa, Salmonella typhi, Staphylococcus aureus, Shigella flexneri, Proteus mirabilis, Klebsiella aerogenes, Bacillus subtilis spores, Candida albicans, Aspergillus, Streptococcus

DISINFECTANT TO DESTROY THE INFECTIVITY OF CHICKEN ANAEMIA VIRUS

VENKATESHWARA B.V. BIOCORP

VENKATESHWARA B.V. BIOCORP PRIVATE LIMITED
(An ISO 9001:2015, OHSAS 18001:2007 & GMP Certified Company)
Venkateshwara House', S. No. 114/A/2, Pune-Sinhagad Road, Pune-411030
Tel.: (020) 24251803, Fax: +91-20-24251060/24251077, Website: www.venkateshwarabvbiocorp.com

Chicken weed can boost stamina, build muscles!

Vadodara: 'Nani luni' can stop athletes and sportspersons from hazarding their lives using banned anabolic steroids to boost their strength and add muscles. Reason? Botanists have found a treasure trove of phytochemicals that can help athletes build muscles and body in this wonder weed found abundantly in agricultural farms.

Nani Luni or chicken weed in English is a well-known herb that is used to ease hypertension in western countries.

An LCMS (Liquid chromatograph mass spectrometers) study conducted by professor M Daniel and his team at the Gujarat Biotechnology Research Centre (GBRC), Gandhinagar, has identified at least eight phytochemicals which improve stamina, reduce fatigue, builds muscles and accelerate other anabolic activities in the plant species.

"Athletes and sports persons can use this plant instead of the banned anabolic steroids. These compounds are permitted as they are from plant foods. It is also very useful to combat depression and hypertension which is so rampant in the post-Covid era," Prof Daniel, former HOD of Botany and ex-dean of MS University's Faculty of Science told TOI. "Through the study we identified at least eight phytochemicals like vinaginsenoside, biliverdin, testosterone, glucuronide, and coumestrin," he said.

"We also found more than a dozen compounds including nicergoline, ganglioside, crocin among others which are neuroprotective, can reduce depression and insomnia, induce sleep and rectify Alzheimer's and Parkinson's diseases," he said.

"The cardiotonic (heart-friendly) compounds located are panogenin (that reduces platelets aggregation), epicatechin (thins blood), lupeol (reduces cholesterol) and 7-hydroxy ticlopidine (thins blood, strengthens cardiac muscles). We have also identified eight anticancer compounds in Nani Luni apart from other compounds which are antibacterial and antiviral," he said.

Additionally, this herb is found to contain a large number compounds (more than 800) consisting of essential chemicals like phospholipids (including sphingolipids needed for membranes, brain, heart, neurons) , many free fatty acids, fatty alcohols, free amino acids, plant hormones, minerals and co-enzymes which form a metabolic pool of compounds useful in the regular growth of human body. "The alcoholic extract of this plant is found to contain a total of 997 compounds, of which 899 have been identified at GBRC, Gandhinagar," he said.

Source: The Times of India

Ban on poultry and pig import in Assam amid bird flu scare

Guwahati: The Assam government has banned the import of poultry and pig from other parts of the country amid rising cases of bird flu and African Swine Fever (ASF) outside of the northeast.

The ban came into force on March 11.

An order issued by the state government stated that in view of the outbreak of the highly pathogenic avian influenza in Jharkhand and Bihar, a temporary ban has been imposed on the entry of poultry through the western border of the state to prevent its spread in Assam and the rest of the northeast.

The order, however, said intra-district and inter-district transportation of live pigs is allowed in the state in the interest of local farmers, subject to adherence to biosecurity measures.

While Jharkhand capital Ranchi has witnessed a bird flu outbreak, Bihar is

INDIAN HERBS

NEW PRODUCT LAUNCHED at

VIV ASIA 2023
BANGKOK, THAILAND

BioEmulsin

Novel natural nutritional emulsifier

A RESEARCH BREAKTHROUGH TO MAKE YOUR FLOCK MORE FAT AND ENERGY EFFICIENT

BioEmulsin is a novel natural emulsifier designed to naturally trigger fat emulsification, digestion, absorption and assimilation of dietary fat and fat soluble nutrients. The addition of BioEmulsin contributes to better fat digestibility, limits fat excretion, improves feed-to-gain ratios, optimizes feed costs, improves meat quality to some degree, and provides energy savings and a better return on investment.

INDIAN HERBS SPECIALITIES Pvt. Ltd.

C-215, 2nd Floor, Elante Offices, Plot No. 178-178A, Industrial & Business Park
Phase - 1, CHANDIGARH (U.T.) - 160002, Ph. No. 0172 - 5011470, 4181014, +91 9023247217
E-mail : ihspl@indianherbs.org, Website: www.indianherbs.org

also on the alert to prevent the avian flu. Though Assam only recently got relief from the ASF that destroyed piggeries of thousands of farmers last year, the decision to ban pig import has been taken in the wake of reports of ASF from parts of central and western states of the country.

State animal husbandry and veterinary minister Atul Bora said though no ASF case has been reported in Assam of late, the government is concerned about the spread from other states.

"The consumption of pork is far higher than pig production in Assam and other northeastern states. Thus, pigs are brought in large volumes from states like Punjab and Haryana," Bora said, justifying the ban to save the remaining pig population in the state.

The state government order cautioned that ASF, which is a highly infectious hemorrhagic viral disease of pigs, and the occurrence of the same had been reported from about 120 epicentres in the state. More than two-and-a-half years have elapsed since the first outbreak of ASF in Assam. Whereas the SOP for transportation of live pigs is still in force, the order said the entry of ASF-infected live pigs will endanger the population of ASF-free areas in the state.

Bora also discussed issues related to developing piggery & poultry sectors in Assam and the problems faced by the farmers in a meeting earlier in the day.

"Urged AH & Vety Dept officials and associations to take measures to prevent price rise of pork & chicken meat as transportation of pig & poultry to Assam has been banned," he tweeted.

ASF had gripped 22 districts of the state last year. About 40,482 pigs died of ASF in the state since the time it was detected in 2020.

Assam's pig population is about 20 lakh. This figure excludes wild boars.

Source: The Times of India

Ban on poultry in 1-km radius of infected zone to continue

Ranchi: The district administration is likely to get a sanitisation certificate soon from the state animal husbandry directorate after completion of the disinfection exercise undertaken in the infection zone last week in the wake of the bird flu outbreak.

Bird flu was confirmed in Ranchi on March 3 after samples collected from the chickens being reared at the Jail More residence of Union tribal affairs minister Arjun Munda tested positive.

Thereafter, the district administration declared the 1-km radius from the epicentre as infected zone for culling of all poultry items. It also imposed a ban on the sale of poultry within the 10-km radius from the epicentre for 21 days.

With no further report of any outbreak, the administration is hopes to return to normalcy soon.

Vipin Bihari Mahta, the director of Kanke-based government-run Institute of Animal Health and Production (IAHP), which is monitoring the situation, said, "As per the protocol, the issuance of sanitisation certificate to the district administration by the animal husbandry director is expected within the next one or two days. The certification would mean scientific culling and disinfection in the affected areas has been done and there is no further threat. This will pave the way for reopening of sale of poultry in the restricted zone."

He, however, said, "As per the GOI's action plan, samples have to be collected and sent for lab tests every 15 days for three months. Within 1-km radius, poultry trade will remain banned."

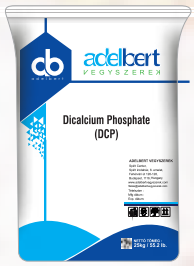
He added that they were regularly sending samples from across the state to Bhopal for testing and all samples have turned negative. "Even today, we despatched 800 poultry samples," he informed.

Meanwhile, sources in the district animal husbandry department said the seven-member team engaged in culling has been put under 15-day isolation. "The central team had advised for 15-day isolation after which the culling team was stationed on the IAHP campus. None developed any health issue as all the prescribed protocols were followed," said an official.

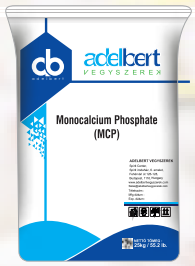
Source: The Times of India

Read and Advertise in
Poultry Fortune
English Monthly Magazine
Annual Subscription Cost: Rs. 800
Contact: **NRS Publications**
BG-4, Venkataramana Apartments, 11-4-634, A.C. Guards,
Hyderabad - 500 004, Telangana, India.
Tel: 040-2330 3989 Mobile: 96666 89554
Email: info@poultryfortune.com • www.poultryfortune.com

adelbert
VEGYSZEREK



Dicalcium Phosphate
(DCP)



Monocalcium Phosphate
(MCP)

Sodium Bi Carbonate

Choline Chloride (CCL)
Liquid / Powder
75% - 60%

Amino Acids

DL-METHIONINE
L-LYSINE HCL
L-THREONINE

Others Products

- Poultry Antibiotics
- Toxin Binder
- Acidifier
- Multienzymes
- Phytase
- Chlortetracycline (CTC)

Are Meals

SOYABEAN MEAL
FISH MEAL
RAPESEED MEAL

+91 9369832334
+91 9026713634

sales@adelbertvegyszerek.com | www.adelbertvegyszerek.com

VIV Asia 2023: A Resounding Success Underpinning the Leading Market Position

10 March 2023, Bangkok, Thailand: The event VIV Asia 2023 delivered a dynamic, expansive marketplace to 47,527 attendees which featured Feed to Food products and services from more than 1,186 global manufacturers and suppliers representing over 57 countries, said a note from the organizers.

VIV Asia 2023 concluded successfully, as a robust platform for B2B international business. Over three days, 8-10 March 2023, the show facilitated face-to-face interactions, networking, knowledge-sharing and a lively marketplace at Bangkok, Thailand. With 47,527 visitors from 112 countries, the event maintained its stable attendance and even slightly exceeded the previous edition. Despite the global circumstances and the past three long years of Covid-19 restrictions, the show's international appeal for the Feed to Food industry remained evident, confirming its significance as a World Expo.

The event featured more than 1,186 exhibitors from 57 countries, representing five continents, showcasing the latest developments in their respective sectors in the three Challenger halls at Thailand's mega-venue IMPACT, in a collective of more than 31,544 sqm exhibiting space.

In addition, the co-location with Meat Pro Asia, the premier trade platform for processing and packaging solution in the meat industry consolidating the Feed to Food industry under one roof. The animal protein sector responded positively to this powerful co-location, resulting in high attendance.

This achievement represents another significant milestone in the VIV global series of events. "VIV Asia is the first VIV show in 2023 and it represents – and rightfully so – our goal to connect the markets and enhance industry trade both locally and globally," stated Birgit Horn, Managing Director of VIV Worldwide, during the event.

"It's always pleasing when a new trade fair is warmly received and this was certainly the case with this first edition of Meat Pro Asia," adds Mr Richard Li, Executive Director, Messe Frankfurt (HK) Ltd. "More importantly, however, it was encouraging to see a high number of energetic business discussions taking place throughout the fairground. From the feedback we have received, it's clear that holding these two fairs concurrently is popular among buyers and exhibitors alike – it consolidates so many resources together in one place. I think everybody will conclude that Meat Pro Asia is a valuable new addition to the trade fair calendar in South East Asia".

A global feed and food system reimagined

VIV Asia serves as the primary platform for sector leaders in Asia to showcase their latest developments. This year's innovations spanned a wide range of topics, including safe and effective farming automation tools, ingenious medical and medicinal products, and efficient broiler house control systems. Other exciting innovation-related events included a regional seminar on Innovations in Good Farming led by the Federation of Asian Veterinary Association, as well as a seminar presented by Tony Hunter of Future Cubed on new technologies for a future sustainable and equitable global food system. "We need to reimagine the food system using the new technology. The industry needs to think about this issue as they are in the business of supplying food. VIV Asia and Meat Pro Asia is a really great place to gather new information on this new and important topic. I am very impressed with the show", commented Hunter.

Knowledge-stacked programs were a major highlight at the event. With more than 120 sessions spread over four days, attendees could gain an all-round understanding on industry insights, technologies and best practices. The day before the show, the Aquatic Asia Conference organized by International Aquafeed of Perendale Publications and VIV, featured a variety of industry experts with

JAPFA®
MAKE GOOD. ALWAYS.
FEED | FARM | FOOD

A HOLISTIC RANGE OF ANIMAL FEED FROM ASIA'S LEADER IN LIVESTOCK'S NUTRITION.

We offer a carefully curated range of animal feeds that cater to the specific needs of poultry, cattle, swine, and aqua species. Our products are developed using advanced technology and precise nutrition based on extensive research, ensuring superior returns for your livestock.

Poultry Feed I Cattle Feed I Fish Feed I Swine Feed

ECHOIC 2023

Japfa Comfeed Indian Pvt. Ltd, Sakore Nagar, Viman Nagar. Pune – 411014
96077 77008 customercare.jcipl@japfa.com www.japfaindia.com

ASIA'S FINEST AGRO-INDUSTRIAL FOOD COMPANY

captivating presentations on the latest in fish and shrimp nutrition. On the first of the show the Asian Inspiration brought together key speakers that discussed the latest on local and sustainable farming based on the Netherlands model.

Most of the sessions were fully booked with very few possibilities of walk-ins finding availability – a fact that showed how important are the sessions presented during VIV Asia to an audience that is keen on learning and following the industry trends.

Looking ahead, VIV Asia will return 12-14 March 2025, carrying on the tradition of providing a premier platform for the animal protein industry to connect, learn and innovate. VIV Asia will undoubtedly be another landmark event in the VIV series of events around the world, with a strong commitment to delivering a top-quality trade show and knowledge programs.

The show organizing team, its partners, which included over 60 industry media titles, 45 global industry associations and the exhibitors are grateful to everyone who came out to support this event in Bangkok.

Poultry Fortune and Aqua International Editor M.A. Nazeer from India, the most qualitative and well read magazines on Poultry and Aquaculture sectors, participated in the event and interacted with global experts, entrepreneurs and exhibitors.

A view of visitors in VIV ASIA 2023

VetDose
Automatic Vaccinators

MAKE IN INDIA

- Simple Operation
- High Quality Construction
- Accurate Dose

Automatic Vaccinators / Veterinary Injectors

Sizes: 0.5ml, 1ml, 2ml, 5ml, 10ml

VetDose Prime
Vial Holder Set (VHS)

VetDose Prime
Bottle Mounted Set (BMS)

- Durability
- Reliabilty
- Comfort

VetDose Prime
Feed Tube Set (FTS)

VetDose Classic
Mixed Dose Full Metal Body (FMB)

All spare parts easily available

TOP SYRINGE
MANUFACTURING COMPANY PRIVATE LIMITED
Manufacturer and Exporter since 1964

Top Syringe Compound,
W. E. Highway, Pandurang wadi, Mira Road (East),
Thane 401 104. INDIA | **Mob: +91 8169678186**
sales@topsyringe.com www.topsyringe.com

Poultry Fortune participates in VIV Asia 2023

Glimpses of VIV Asia 2023

Poultry Fortune and Aqua International Editor M.A. Nazeer with Ms Phatanee Leksrisompong, Executive Vice President, Feed Technology, Charoen Pokphand Group Co Ltd, during VIV Asia 2023 in Bangkok on March 9.


TavSan


SALMET

SALMET



MOBA

foodmate



HUZMAR
FAMSUN



Butirex C4

arkable by nature



POWER OF
ENZYMES
PROTEASE
PHYTASE
MULTI-ENZYMES
MULTI-IMPACT PROBIOTICS



ADISSEO

Cargill and Baker's Association Kerala partner to boost innovation in the Bakery industry

Kochi, March 28, 2023: Cargill and the Baker's Association Kerala (BAKE) have signed a Memorandum of Understanding (MoU) to co-create healthier and innovative food solutions for the Indian Food and Bakery industry. This partnership enables Cargill to bring its global expertise in food ingredients, product formulation, technology, and innovation to consumers in Kerela and will revolutionize the state's vibrant bakery community.

The MoU was signed at Cargill Innovation Center in Gurgaon in the presence of Mr Vijesh Vishwanath, the President of BAKE and Mr Simon George, Managing Director of Cargill's Food Ingredients business, South Asia.

As part of this collaboration, Cargill will conduct workshops and seminars to enhance the skills and knowledge of bakers in Kerala. In addition, Cargill will provide customer feedback on fats to help bakers understand the requirements and preferences of consumers, today and in future. Thus, enabling bakers to develop superior bakery products that meet the evolving needs of their customers.

Furthermore, Cargill will conduct 'train the trainer' programs for upcoming bakers in Kerala. These programs will help junior bakers learn new skills and techniques that will enhance the quality of bakery products available in Kerala. Cargill will also test all new products developed at its facility in the Innovation Center in Gurgaon, to ensure products meet the highest standards of food safety and quality.

From left: ***Vijesh Vishwanath, the President of BAKE, Simon George, Managing Director, Cargill's Food Ingredients business - South Asia***

This initiative represents the shared commitment between Cargill and BAKE to support the **growth of local bakers and small businesses in Kerala.** It is a significant step towards bringing **global innovation to Kerala's bakery industry** and promoting **knowledge sharing and skill development** in the bakery industry, leading to **better and more sustainable food products across the bakery industry.**

Mr Simon George, Cargill India, said, "Cargill and BAKE coming together in research and innovation will help small and medium enterprise bakeries in the state of Kerala a big way. Cargill will work on specific product innovation, driving health, wellness, and freshness, using its global trends, insights and innovation, and regional technical expertise in the Bakery category in close collaboration with BAKE. We see this association mutually beneficial and huge possibilities to what we can achieve together in the future."

Speaking on the partnership, Mr Vishwanath, BAKE said, "As a densely populated and upper-middle-class driven economy, the bakers in Kerala need to adapt to the changing needs of their consumers. While traditional sweets and savories continue to have a stronghold, the need to innovate in baking, combining global trends around health and sustainability is gaining popularity in the state. With robust growth rates projected for the bakery segment, we as an association, are always exploring new possibilities and bring that back to our consumers. This collaboration with Cargill will give us endless opportunities to do just that."

When does 1+1=3?

When You Combine Postbiotics and Essential Oil Compounds.

SCAN ME

Scan to Add Up Performance Now

Dia-V MB PRO LS

Diamond V
a Cargill brand

Provimi Animal Nutrition India Pvt. Ltd.
Email at: info_info@cargill.com | Call at: +91-9606077510

For consumer feedback, please write to:
Consumer Care Cell, Provimi Animal Nutrition India Pvt. Ltd.
IS-40, KHB Industrial Area, Yelahanka New Town, Bengaluru - 560 064, India

Sri Lanka imports 2 million eggs from India to meet shortage

The trade ministry said the Indian-origin eggs would be allowed to be used only in the bakery industry after necessary quality checks.

Sri Lanka has imported two million eggs from India to ensure food security in the crisis-hit island nation, Trade Minister Nalin Fernando said on Thursday.

Fernando told Parliament that the shipment imported by the State Trading General Corporation had arrived and the stocks would be released in the market within three days.

The decision to import eggs was based on a decision by a cabinet committee to ensure food security, Fernando said.

In January when the market shortages were noticed, the Animal Production and Health Department declined to approve the import of eggs from India or Pakistan as both countries reported bird-flu outbreaks in the past six months.

Director General of the Health Department Himali Kotelawala had said that the country of origin of eggs must be free of bird flu for at least six months.

"India had recently experienced severe outbreaks of bird flu, so importing eggs from India is contrary to the Animal Health Disease Act in Sri Lanka. The Import and Export Controller General cannot be allowed to import eggs from India", she told reporters then.

The trade ministry said the Indian-origin eggs would be allowed to be used only in the bakery industry after necessary quality checks.

The local poultry farmers association said that imports must come from countries free of bird flu such as Thailand, Malaysia, Australia, New Zealand, Brazil, and the United States of America.

Nutrex NV in VIV Asia 2023, Bangkok

SINCE 1930

Egg Breakage

...could impact your profit!

Optimal calcium absorption (Hadjod)

Endurance optimizer (Cr, Lasuna, Shatavari, Amalakki and Ashwagandha)

- Improves fertility and hatchability
- Improves egg production
- Improves eggshell quality

Himalaya Wellness Company
Makali, Bengaluru 562 162, India
www.himalayawellness.com
E-mail: write.to.us@himalayawellness.com

Mitigation of Summer Stress and Disease Outbreaks in Poultry Production

Email: drrns.gowda@gmail.com

Dr R.N. Sreenivas Gowda
Former VC, KVAFSU, Bidar, Director, IAH&VB and
Prof. of Pathology, Veterinary College, Bangalore

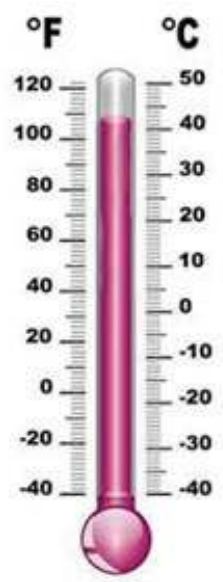
There is forecast on the warmer than average this year due to weather phenomenon and global warming. Even temperature of North India was more than average in February month itself indicates that there will be more summer heat than the normal. Therefore, the prediction is likely increase in average temperature than the normal. In this summer season, as the temperature increases, poultry suffers from the condition called **heat stress**, also known as **summer stress**. This is a condition is due to imbalance between heat generation and heat loss in the body. This condition not only brings poor performance in birds but is also responsible for huge **economic** losses in terms of **poor growth**, **lowered production** and **higher mortality.** The poultry farmers have to take all the precautionary measures to handle the heat problem to save the birds from heat catastrophe.

What is heat stress ?

When the Birds are 'heat stressed' they have difficulty in achieving a balance between body heat production and body heat loss. This can occur at all ages and in all types of poultry. Poultry is most comfortable in an environmental temperature around 22-28°C (known as their thermoneutral zone). In other words, 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. Exposure of birds to high environmental temperature generates behavioral, physiological and immunological responses, which impose detrimental consequences to their productivity.

Cold isn't really a problem for chickens - they have feathers to protect them - and tend to do well in the winter - even in very cold climates.

But heat can be a very serious issue.



In areas of high humidity (above 50%), temperatures above just 25°C (75°F) will cause some mild heat stress.

Above 30°C (85°F), heat exhaustion will increase rapidly.

At 35°C (89°F) the bird will not be able to lose heat fast enough and is likely to suffer a stroke brought on by the heat.

In areas where humidity is not an issue chickens can survive (but not necessarily be comfortable) until the temperature reaches 40°C (104°F).

At that point, problems can become severe and quickly lead to heat stroke. And heat stroke in chickens generally proves fatal, if not managed properly.

Why the poultry are more prone to heat stress?

The poultry birds are susceptible to high environmental temperature due to their physiological buildup such as absence of sweat glands making it impossible for them to dissipate heat, their full body of feathers, their higher body temperature, and the fatty nature of the birds. The heat or summer stress not only brings lowered performance in poultry but also leads to **immunosuppression** issues, which can result in disease outbreaks and cause heavy mortality. In this, males are found to be more prone to heat stress than females. Therefore, breeders have to take extra care in summer to prevent fertility problems in breeder males.

What are the contributory Factors of Heat stress?

1. Environmental factors such as sunlight, thermal irradiation, air temperature, humidity, when the environmental temperature is above the thermoneutral zone, the animals activate thermoregulation mechanisms to lose heat through behavioral, biochemical, and physiological changes and responses.

Provet
Excellence through Innovation

AVINOVA™

IMMULATOR®

The Superlative Immunity Booster

Enhance Immunity & Fight The Invaders

Provet Pharma Private Limited
No. 9, 1st Floor, Chakrapani Street, 2nd Lane,
Narasingapuram Extension, Maduvankarai, Guindy, **CHENNAI - 600 032. INDIA**
Telefax: +91 44 2244 2124 / 27 | E-mail: info@provet.in

www.provet.in
provetppl provetppl provetppl

2. At temperature above 35°C bird is likely to experience heat stress as having a high body temperature of 41°C and absence of sweat glands makes it difficult for them to dissipate their heat to surrounding.
3. Stocking density, more birds in the shed increase heat and humidity.
4. Bird related factors such as body weight, feather coverage and distribution, dehydration status, metabolic rate, and thermoregulatory mechanisms.
5. 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), the former acute condition there will be more mortality.

What are the signs of heat stress in poultry?

- Panting.
- Prostration.
- Spreading the wings away from the body.
- Increased respiratory rate.
- Squatting/low to ground.
- Reduced feeding.
- Increased drinking/resting.
- Cause pale wattles and comb,
- Lethargy, limp, unsteady gait, or unconscious.
- Heat stress causes **acid-base disequilibrium**, or the inability to cool the body to maintain normal body temperature.

Behavioural, neuroendocrinal and **physiological** changes are observed in birds during heat stress. Behavioural changes can include decreased feed intake, increased water intake, panting, less walking, and elevated wings. Physiological changes include oxidative stress, acid-base imbalance, and respiratory alkalosis. Internally the bird may experience decreased protein digestion and absorption, increased metabolic disorders, Increased chances of disease prevalence, and fertility issues. Production challenges can include reduced feed intake, poor feed conversion ratio, reduced body weight, impaired meat, and egg quality, and, increased mortality (fig, 1)

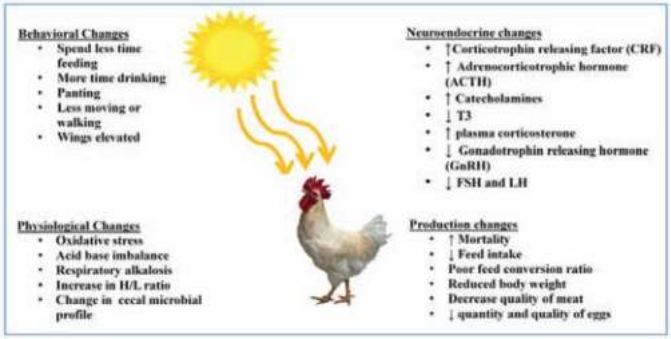


Fig: 1. Impact of heat stress during summer
(Source: Journal of Applied Animal Ethics Research 2020)

Effect of heat on food safety

There is an increasing evidence to demonstrate that heat stress can have a significant deleterious effect on food safety through a variety of potential mechanisms.

- The negative effects of heat stress on broilers and laying hens range from reduced growth and egg production to decreased poultry and egg quality and safety.
- Chronic heat exposure negatively affects fat deposition and meat quality in broilers.
- Productivity of laying hens flocks also be affected by a multitude of factors, which is probably one of the most commonly occurring challenges in many production systems.
- Decreased feed intake is very likely the starting point of most detrimental effects of heat stress on production, leading to decreased body weight, feed efficiency, egg production and quality.
- Heat stress leads to reduced dietary digestibility, and decreased plasma protein and calcium levels.
- Heat stress during the growth period of broilers has been associated with undesirable meat characteristics and quality loss.
- Transportation of broilers from farms to processing facilities under high temperature conditions have also been shown to cause meat quality losses.
- In laying hens, heat stress has been shown to negatively affect egg production and quality.
- During heat stress, foodborne pathogens, such as *Salmonella* and *Campylobacter* colonize and disseminate along the human food chain causing a major public health and economic concern in poultry and egg production.

Why disease incidence is more in summer?

- Alters **antibody and cell-mediated immune responses**, thereby **immunosuppressing effect** and increasing susceptibility to pathogens.
- Vaccine failures are common in summer season.
- Summer stress also results in **immuno-deficiency** and disease outbreaks in poultry.
- Heat stress in summer leads to reduced feed consumption, lower body weight gain, high feed conversion ratio (FCR) and dehydration.
- It also causes a variety of changes in gastrointestinal tract including alteration of the protective microbiota as well as decreased integrity of the intestinal epithelium increasing enteric infections such as Necrotic Enteritis.
- An increase in energy demands, increased culls and high mortality are observed due to heat stress.

What are the common poultry diseases during summer?

The most common infections occur are from Bacterial, Viral, Fungal and Parasitic are shown in the below table 1.Newcastle and bronchitis vaccine reactions can occur in birds hyperventilating because of heat stress. Vaccination

Beat NOT JUST the HEAT
But, EVERYTHING that HEAT BRINGS

HEAT STRESS

SUPPRESSED GUT HEALTH

SUPPRESSED IMMUNITY

with Vetogen's

Summer's Sole Solution

Vetilyte Forte®

ELECTROLYTES & ANTIOXIDANTS

NATURAL IMMUNOMODULATORS

PROBIOTICS

vetogen
Animal Health

VETOGEN ANIMAL HEALTH®
(A WHO-GMP & ISO Certified Company)
164, 1st Cross, 1st Stage, AECS Layout, RMV 2nd Stage, Sanjay Nagar,
Bengaluru - 560094, Karnataka, India
Phone : +91-80-4220 0559 Email : info@vetogen.com

failure is mainly because of Stress like extreme temperature or relative humidity causing immunosuppression.

Summer favours increase in vector population such as flies, beetles and mosquitos and these act either as intermediate hosts or carriers of infectious agents including Newcastle disease and Avian Influenza. House flies are considered intermediate hosts for tapeworms and may transmit ascarids to caged birds. Flies mechanically carry ascarid and other nematode eggs on their feet from manure to pens, feed, and water and rats in the shed transmits salmonella and tapeworms.

Table 1. Common diseases in summer season

Sl no	Bacterial	Viral	Fungal	parasitic
1	Salmonella	Fowl Pox	Aspergillosis	Ascaridiasis
2	Mycoplasma-MG,MS	vvND	Candidiasis	Tapeworms
3	Colibacillosis, E.coli	IB		
4	Infectious Coryza	ILT		
5	Pasteurellosis	HPAI		
6	Campylobacter	IBD		

Disease monitoring during summer season

Accelerate monitoring of bird's health with advanced diagnostic testing. Serum Antibody levels decrease during summer months. Evaluating antibody titers for various poultry pathogens, has become an important flock management tool for poultry. Determination of the presence, absence or level of specific antibodies to a disease entity may be determined through the use of certain serological tests eg ELISA tests, plate agglutination tests, hemagglutination tests and micro or tube agglutination tests. Consulting reputed serological labs is important to prevent any disease outbreak. Adopt prevention is better than cure policy.

Serological Monitoring required for the following infections

Broiler Breeders : Newcastle Disease (NDV), Infectious Bronchitis Virus (IBV),Infectious Bursal Disease (IBD),Avian encephalomyelitis (AE), Egg Drop Syndrome (EDS), Marek's disease (MD), Chicken Anaemia Virus (CAV),Avian Influenza (AI), Avian Pneumovirus (APV), REO virus, Salmonellaand Mycoplasma gallinarum / synoviae (MG/MS).

Layers: Newcastle Disease (NDV), Infectious Bronchitis Virus (IBV), Avian encephalomyelitis (AE), Egg Drop Syndrome (EDS), Avian Influenza (AI) ,Salmonella, Mycoplasma gallinarum / synoviae (MG/MS).

Broilers: Newcastle Disease (NDV), Infectious Bronchitis Virus (IBV), Infectious Bursal Disease (IBD), Salmonella, Mycoplasma gallinarum / synoviae (MG/MS).

General management tips in poultry farming in summer:
The main concern is to Keep the birds cool: The following steps can help birds combat heat stress in summer months

1) Housing Management 2) Water Management 3) Feed Management 4) General Management

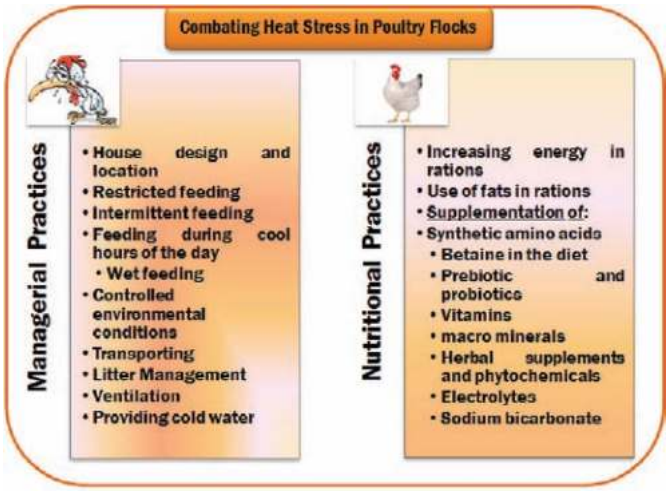


Fig: 2. Combating Heat stress in poultry operations by Management and Nutrition practices.

1) Housing management

House management consists of both inside shed management, and outside shed management.

Outside the shed:

1. Provide 1meter overhang to cut the direct sun and rain into the house.
2. Thatching of the roof with green grass or agricultural waste can help reduce shed temperature. Paddy straw can be used for this purpose.
3. Whitewashing the roof with lime helps to reduce the temperature inside the shed.
4. Applying sprinklers above the shed to cool the roof.
5. The use of gunny bags on the side walls (grill) of the shed over which drip water is set.
6. Allowing trees to grow near the shed to provide shade on the shed.
7. Prohibit wild birds, which can carry diseases like Avian Influenza, from entering the shed.
8. Provide ridge ventilation to help remove hot air from inside the shed.

Inside the shed

1. Use cooler fans
2. Use of a foggers
3. Provide a continuous supply of cool water (if not possible, periodically flush the water to provide cooler water for birds)
4. Reduce litter thickness (ideally around 400-450 grams per square foot) in deep litter rearing.

Reduce your feed costs

Ensure optimal feed digestibility and supply of nutrients

Nutrase®
BXP 200 TS

Improve growth and FCR

Improve gut health

Complete & versatile multi-enzyme

nutrex Your valued partner in feed additives

Follow us

www.nutrex.eu
feedadditives@nutrex.eu

DISCLAIMER : Not all products are available in all countries, not all claims are applicable for each product, not all claims may be authorized in all countries. This publication is for international marketing purposes only and does not imply availability of all products or authorisation of all claims in every country or region.

EUROPEAN QUALITY

2) Water management

1. Water management is crucial in heat stress management. In summer, water consumption goes up 3-4 times feed intake. So, a good quality cool water supply is essential.
2. A water hygiene process must be followed because bad bacteria can prevail rapidly under poor conditions, which will lead to disease conditions.
3. Water pipelines must be cleaned well and flushed with organic acids or hydrogen peroxide periodically. Treat water with a quality acidifier and sanitizer. In general, try to balance the water pH in acidic conditions.
4. As feed intake is less during times of increased temperatures, nutritional water acidifiers should be used to help combat heat stress.
5. Protect the storage water tank with wet gunny's or provide shade on the roof top to avoid direct sun light on it.
6. Avoid exposure of water supply pipes to direct sun light, if it is inevitable insulate the pipes with heat protecting material.
7. Give electrolytes in water. Especially in the morning and evening water.
8. Additional vitamins and minerals are essential to improve resistance and to overcome heat stress.

3) Feeding Management resistance

1. Research shows feed intake is reduced by 1.25% with every 1° rise in temperature. Further, it is observed that there is a decline in feed intake by almost 5% with every degree rise in temperature from 32-38° C. Knowing this it's best practice to feed a good quality feed during times when heat stress can occur.
2. Feed consumption is reduced in summer. To overcome nutritional and productive losses it is suggested to supplement the diet with 10-15% more amino acids, vitamins, and minerals rather than increasing the protein level directly.
3. Feeding should be done during the cooler hours of the morning or evening but too much gap in feeding time is not advisable.
4. Increase the number of feeders and drinkers during feeding time to reduce competition among birds.
5. Adding antioxidants is shown to be helpful to reduce stress and improve feed consumption while maintaining or improving body weight gain. (Vitamin E, Vitamin C, Selenium).
6. A high-energy diet should be provided during summer because birds lose more energy while panting.
7. Energy in feed should be supplemented with oil rather than grain because fat has the lowest heat increment value compared to carbohydrates and protein.
8. Increase calcium and phosphorus levels to overcome thin eggshells more often seen during summer due to respiratory alkalosis (more carbon dioxide is lost due to panting). Provide sodium bicarbonate in the feed.
9. Instances of viral challenges increase during this time as immunosuppression is common. Fumaric acid is shown to have good antiviral properties and can help to reduce viral challenges. A combination of coated benzoic acid and fumaric acid may be used as an acidifier.
10. Chelated trace minerals, a supplement of organic trace minerals such as selenium, zinc, copper, or manganese, and methionine source.
11. Essential oils have a broad range of action from being Immunomodulators to performance enhancers. Adding essential oils – especially thymol and carvacrol – to the diet can help mitigate summer stress challenges and improve meat yield and overall performance.
12. Use of MOS and B- Glucans during heat stress conditions is convincing due to the possibility to reverse or compensate physiological alterations induced by heat stress and by restoring immune function and promoting robust inflammatory responses.
13. The addition of ammonium chloride, potassium chloride, and/or sodium bicarbonate has shown improved performance in broilers by improving water quality and feed intake.
14. Probiotics can be used to help control the corticosterone level and the excessive release of pro-inflammatory agents. Lactobacillus-based probiotics enhance goblet cell count in the duodenum and jejunum of heat-stressed broilers thereby improving the feed conversion ratio.
15. Since a hot humid climate favors the growth of moulds/ fungi in feed the consistent use of an antifungal is recommended.

4) General Management

1. Vegetation around poultry shed so as to give shelter on the shed
2. Insulation of roof.
3. Providing fans and air coolers.
4. Farmers should do the shifting, transportation, de-beaking, and vaccination during the night or cool hours of the day.
5. Birds severely heat stressed may be dipped in cold water for 2-3 minutes keeping their neck and head above water level.
6. Control movement of visitors as they may carry disease causing infectious agents
7. Control of flies as they increase in summer months.

Conclusion

Heat stress is one of the most important environmental stressors challenging poultry production worldwide. There is more heat experienced in recent years due to climate change and global warming. The negative effects of heat stress on breeders, broilers and laying hens range from reduced growth and egg production to decreased poultry and egg quality and safety. However, a major concern should be the negative impact of heat stress on poultry welfare. Institution of precautionary measures to keep cool in the summer months is inevitable. Adoption of all measures are required to save the birds is essential. Keep monitoring on the antibody levels and follow suitable remedies by boosting the levels with revaccination and proper treatment to save them from heavy mortality.☐

Team Agrotech

YOUR STEPPING STONES IN SUCCESS!!

TEAM AGROTECH PVT LTD

Country Representative of
CPM ASIA

Your Single Stop Source for

CPM Pellet Mill

CPM Lineator

Complete Project management of Turnkey Solutions in the following areas:

- Integrated Feed plants for Poultry, Floating Fish, Sinking Fish, Shrimps, Cattle etc.
- Balance of plant equipments for Pre/Post processing
- Complete Plant Automation Solution, on GATE In to GATE Out concept.
- Environmental Controlled Sheds for Large Scale Poultry
- In-house design and manufacturing of Pre Fabricated steel structures for Plants, Warehouses, Grain Storage Silos etc.

CPM Lineator Technology: Remotely Control the distance between roll and die surface, even when the pellet mill is on. This technology provides swift, accurate and safe roll adjustment, with no downtime , so no production loss.

Contact Today:

Team Agrotech Pvt Ltd
1-4, 249, Hill Road, Gandhi Nagar,
Nagpur, Maharashtra - 440 010, India
Email - info@teamagrotech.com; www.teamagrotech.com
Call Us - +91 - 96505 59095

For Queries Contact

Scan me

In Ovo-Juvenile Nutrition Feeding for Optimising Growth Rate and Feed Efficiency in Poultry

Email: sirisharamayan55@gmail.com

Dr R. Shirisha, Assistant Professor and Dr K. Vijaya lakshmi, Professor and University Head, Department of Poultry Science, College of Veterinary Science, Mamnoor, Warangal, Telangana.

Concept

- Physiological changes occurring during the pre to post hatch period.
- The use of the egg nutrients by the embryo during incubation.
- Early strategy for feeding was developed.

EMBRYONIC DEVELOPMENT

Fertilization:

Fertilization is the process of combining the male gamete or "sperm", with the female gamete or "ovum".The product of this combination is a cell called a zygote.

PERIODS IN EMBRYONIC DEVELOPMENT

Establishment of germ

Embryo completion

Emergence of chick

Highlight Points

- Poultry nutrition moves towards higher standards.
- Economic sustainability, consumer confidence and food security.
- Poultry nutrition has had a rich and fruitful history, utilizing feed Ingredients and feed manufacturing technology to supply nutrient for optimum productivity.
- Over the past 25 years, poultry nutrition has focused on production efficiency, today, it strives to maximize the biological and economical performance.
- Growth performance and meat yield of commercial broilers and turkey has improved linearly each year with greater input efficiency during the past 4 decades.
- Neonatal development by in ovo feeding.
- The intestinal epithelium has a major role in determining the developmental potential of the hatched chicks.
- Enhancement of development of oviparous species by In-Ovo feeding – (Uni and Ferket 2003).

IN OVO FEEDING

Healthy and faster growth of the embryo can be obtained by:

1. Supplying extra nutrients to the breeder hen, so that these extra nutrients will be deposited in the egg for

THE ORIGINAL ALPHA D3

1980s
Research at University of Georgia

1989
Patent granted for the Alpha D3 metabolite

2010
Alura launches Alpha D3 in poultry

2010
1α OH-D3
Alura bring Alpha D3 to India

AlphaD3™
Vitamin

Revolutionising poultry performance since 1989

Ever since 1989, the miracle metabolite Alpha D3 has been a catalyst in helping the poultry industry attain sustainable higher production performance rates with increased profitability. Alura is the only company to have brought the original and patented vitamin Alpha D3 to market.

WHAT MAKES ALURA ALPHA D3 UNIQUE?

- Increased bioactivity in comparison to regular Vitamin D3 and other metabolites
- Improve body weight gain and FCR
- Prevents black bone syndrome
- Improves egg shell quality and maximises production of saleable eggs
- Synergetic and Complementary effects with Phytase
- Proven ROI in Broilers & Layers
- Thermostable for palletisation
- Extensively studied product dosage rates for optimum performance.

USAGE

LAYER | BROILER | BREEDER

THE ORIGINAL VITAMIN ALPHA D3 SINCE 1989

EXTENSIVELY TESTED & VALIDATED

We are the only company to have extensively tested the efficacy of this metabolite through academic papers, clinical trials, and field tests. More than 40 published reviews in scientific journals proves Vitamin Alpha D3 produces more chicken protein, with a better quality at a lower cost.

Alura™
Animal Health & Nutrition

Imported & distributed by:
Sapience Agribusiness Consulting LLP
sales@sapienceagri.com
+91 97403 99994

sapience

utilisation by the embryo.

2. Pressure differential dipping of the hatching eggs in nutrient/ probiotic solutions.
3. In-ovo injection of nutrients into the egg.

Pressure differential dipping of hatching eggs

Hatching eggs will be dipped in chilled nutrient solution having micro & macro nutrients, probiotics, antibiotics and performance enhancers for about 10 minutes. The solution must be atleast $^{10^{\circ}c}$ cooler than the egg, so that the pressure inside the egg will be reduced. This negative pressure sucks some fluid into the egg. Take eggs out, dry the surface quickly, by keeping under fan or blowing hot air, then set in the incubator.

In-ovo injection of the nutrients

Done on 7, 14th & 18th day of incubation. About 0.5 ml of nutrient solution will be injected form the broad end of the egg, using "in-ovo ject" used for m.d. vaccination. The hole will be sealed after injection with hard parafin for normal hatch of the egg. The nutrients include vitamins, Pre-igested proteins, amino acid mixture, sugars and performance enhancers. This will increase chick weight.

Why In-Ovo feeding ?

1. Depletion of all nutrients during hatching process.
2. Late access to feed / fasting.
3. Immature gastro intestinal tract in chicks.
4. 2-5% of hatchlings do not survive the critical post hatch period due to limited body reserves.
5. Stunted growth in chicks during initial phase i.e 24-48 Hrs post hatch.
6. Weight loss between hatching & removal of chicks from hatcher is approx.0.18g/hr.
7. Embryonic period & first week represents a larger portion i.e 45% of the whole life span of the broiler(Anthony et al.,1989 ;Bigot et al., 2003) .
8. Body weight of broilers is increased three to four fold during the first week.
9. Considerable changes in gut & muscle weight (Jin et al.,1998).
10. Yolk is the sole source of energy & nutrition during incubation, it is rich in lipids & low in protein & carbohydrates.
11. After hatch yolk is absorbed through both the yolk sac membrane and Meckel's diverticulum (Santos et al., 2010) .

Insufficient Nutrient Supply

- Most people think the first meal the chick consumes is when it hatches, but in-fact the first meal is when that embryo consumes the amniotic fluid as it hatches" "Dr Peter Ferket"
- (Researcher at North Carolina State University).
- Modern broiler increases its body weight by 50 folds from hatch until market age.
- Deficiency of glucose towards the end of incubation because of high requirement for hatching activities (Christensen et al., 2001; Freeman 1965; John et al.,1987).
- Egg production and other stress.

IN OVO FEEDING

"Injecting Nutrients into the Amnion during Incubation of Egg"

- The timing and form of nutrients supplied post-hatch is critical for development of gastrointestinal tract
- Providing feed to the developing embryo which affect the performance of hatching chicks

Many potential nutrient supplements can be included in the *in-ovo* feeding

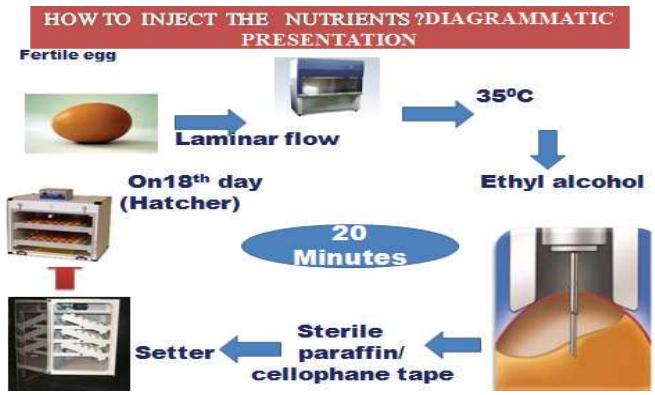
- Carbohydrate
- **ß-hydroxy-ß-methylbutyrate (HMB)**
- Vitamins and minerals
- Amino acids

Degree of response to *in Ovo*-Feeding

- Breeder hen age
- Egg size
- Incubation conditions (Source :-Ferket, 2004)

How to make the hole in egg ?

- During in ovo injection, a small hole poked in the large end/narrow end of the egg using a needle.
- The embryo need more oxygen than can be provided through the tiny holes (pores) in the shell.
- Making the injection hole allows oxygen to flow freely into the egg and increased hatchability.



Applications in *in-ovo* technique

Inovoject Machine

- EMBREX has developed and marketed the INOVOJECT, an automated egg injection machine that improves poultry production efficiency
- This smaller device can inject between 12,000 to 20,000 eggs per hour

Advantages

- Improves digestive capacity (Chen et al.,2009)
- Increases growth rate and feed efficiency (S.K. Bhanja et al., 2011)

AIVLOSIN®, THE MYCOPLASMA TREATMENT FOR LAYERS

ZERO DAY EGG WITHDRAWAL

With its outstanding results against mycoplasmal infections, Aivlosin® saves you eggs and labour

- ☑ Outstanding results
- ☑ Tailored flock treatment
- ☑ Proven efficacy
- ☑ Palatable
- ☑ Sustained egg quality
- ☑ Low therapeutic dose
- ☑ Zero Day Egg withdrawal

VALOSIN® Stay Ahead

AIVLOSIN® Stay Ahead

www.aivlosin.com

Aivlosin® and Valosin® are registered trademarks of ECO Animal Health Ltd, London, United Kingdom
Registered claims and packaging may vary from country to country

TIMOEVA

No. 11, Second Floor, Sneha Nagar, First Cross, Amruthahalli, Bangalore - 560092
For Suggestions & Feedback: E-mail : feelings@timoeva.com | Ph: +91 9902071269 / +91 80 48663242

MANUALJECT MACHINE

INTELLILAB MACHINE

- Reduces post hatch mortality and morbidity (Foye et al.,2008)
- Improves immune response to enteric agents (Oliveira.,2008)
- Reduces incidence of developmental skeletal disorders (Uni et al., 2010)
- Increases muscle development and breast muscle yield (Uni et al., 2009)
- Development of critical tissues of the perinatal chick about 2-3 days (Ferket et al.,2009)
- Increased villus dimensions & pancreatic activity for carbohydrate digestion
- (Noy and Uni 2010)
- Reduce the cost of production per kg of consumable poultry meat (Uni and Ferket 2003)
- It also enhance the protective function of enteric mucosa (Oliveira., 2010)
- In ovo injection of Vitamin A & C may influence the embryonic development Vitamin E or B 1 required for early post hatch growth Vitamin E & B6 has role in immunocompitence of broilers (Bhanja et al 2012)
- Improves bone development (Uni et al., 2009)
- Enhances expression of nutrient transporters, SGLT-1, PEPT-1 (Tako et al., 2010)
- Advances morphometic development of the intestinal tract and mucin barrier (Smirnov et al., 2009).

Conclusion

- In ovo feeding offers promise of sustaining progress in production efficiency and welfare of commercial poultry.
- Selection for fast growth rate and meat yield may favour the modern broiler to become a more altricial.
- Proper early nutrition and in ovo feeding may help these birds adopt to carbohydrate –based diet and metabolism of at hatch.
- In ovo feeding has established a new science of neonatal nutrition and we are gaining greater understanding of the developmental transition from embryo to viable chicks.☐

Read and Advertise in

Poultry Fortune

English Monthly from Hyderabad, India

Updating Knowledge on Poultry since 1991

SUBSCRIPTION RATES

1 Years INR 800
2 Years INR 1500
3 Years INR 2000
5 Years INR 3000

NRS Publications
BG-4, Venkataramana Apartments,
11-4-634, A.C. Guards,
Hyderabad - 500 004, Telangana, India.
Tel: 040-2330 3989
Mobile: 70329 19554
Email: info@poultryfortune.com
www.poultryfortune.com

UT Glysomin GOLD

UTTARA IMPEX PVT. LTD.

Feed Supplement Division, Venkateshwara House, Pune.

For trade Enquiry Contact : North India – Mr. Hariom Singh Chauhan / +919552526901,
East India – Mr. Kunal Goswami -/ +918888858839, T.N – Mr. Michaelsamy -/ +918778408835,
Maharashtra – Swapnil Ballal -/ +919689948713, Telangana/ Andhra Pradesh
Orissa – Mr. Shankar Reddy -/ +918008802148

Collaboration with :

pancosma makes sense

B-TRAXIM® Fe Cu Zn Mn

Backyard Duck Farming in India: Emerging Trends

Email:

Dr Rambabu. D, *MVSc, Ph.D, MBA,*
Associate Professor, Dept. of Poultry Science,
College of Veterinary Science, Korutla,
PV Narsimha Rao Telangana Veterinary University,
Jagtial Dist – 505 326, Telangana State, India.

Comparable to a chicken raised in a courtyard, ducks produce around 25 more eggs per year. Duck eggs are 10-15 grammes larger than chicken eggs in size as well. As a result of laying eggs in both the second and third years of their lives, they are more productive and prodigious. As a result, the cost of food will be reduced. Ducks typically lay their eggs in the morning since it is so simple to gather them and they are less worried about losing them.

Since rice cultivation and duck farming are interdependent, paddy cultivation and ducks can be coupled in all paddy agriculture areas. Given their intelligence, these birds may easily learn to perform their daily task, which reduces the need for monitoring. They are fairly tough birds who can endure pain and are immune to common avian diseases. Broiler or green ducks mature much more quickly than chicken and have better feed efficiency.

Duck farming is a growing industry in India that can be created in various locations by farmers for their own personal interests. It wants individuals to be much more conscious in order to improve their ability to predict the future. Duck farming is a tremendously successful industry. Ducks are raised for their flesh and eggs and are highly prized as pets.

In India, duck farming is significant in addition to chicken farming. They make up roughly 10% of all poultry and generate 6% to 7% of all eggs produced in the nation. Up until recently, tiny and marginal farmers mostly in southern and eastern coastal regions, north-eastern India, and Jammu & Kashmir were the only ones who practically raised ducks. Different people raise ducks for various purposes. Some people raise ducks for breeding, while others do it for the meat, eggs, or both. On a farm with cattle, others may raise ducks to control the fly population.

Benefits of duck farming include:
Compared to raising other species, duck farming is simple because of the following benefits:

Highlight Points

In India, duck farming is significant in addition to chicken farming. They make up roughly 10% of all poultry and generate 6% to 7% of all eggs produced in the nation. Up until recently, tiny and marginal farmers mostly in southern and eastern coastal regions, north-eastern India, and Jammu & Kashmir were the only ones who practically raised ducks. Different people raise ducks for various purposes. Some people raise ducks for breeding, while others do it for the meat, eggs, or both. On a farm with cattle, others may raise ducks to control the fly population.

Ducks flourish in scavenging environments and require less care. Highly resistant to common avian illnesses; requires less acreage for duck farming

- **Able to consume all available feed kinds.**

The size of the duck egg is about 15 to 20 gms greater than the hen egg, and ducks lay more eggs per bird per year than chickens.

- **Live a longer, more successful life. Even in the second, they laid well.**

Ducks lay 95-98 percent of their eggs in the morning before 9.00 AM, are fairly resilient, and are easier to brood. thus reducing labour and time requirements.

Duck rearing systems
Raising ducks can be done in a variety of ways. Farmers can actually modify this rearing strategy to fit their particular requirements and the resources at hand.

The free-range system
Only at night are the ducks confined inside. The ducks can freely graze outside during the day in search of food. A little additional food is placed in the shelter at night to lure them inside. Just a nest for egg-laying and a place to spend the night are all the ducks need. If you treat the ducks nicely, they will stay close by. The ducks go to the feed and get it themselves, which is a benefit of this arrangement. By doing this, farmers can access nutrients that they otherwise would not be able to.

eXolution
Bacterphage F

We took an already great product and made it even better.

eXolution is now Xcelsio.
Our relentless effort to make the world a safer and healthier place has led us to create Xcelsio. After years of cutting-edge research in Korea, we have come up with an advanced formulation to make Xcelsio more potent than before.

Xcelsio comes with a more concentrated cocktail of bacteriophage and is fortified with more Bacillus subtilis. This new and improved formulation, created specifically for use in poultry, is simply unmatched in controlling pathogenic bacteria– giving you Total Gut Control.

Each of our bacteriophages is painstakingly selected using our proprietary Bacterphage F technology to target and eliminate specific bacteria; leaving other beneficial bacteria completely unharmed. This natural surgical strike on disease-causing bacteria is the safest, non-toxic, and most effective prophylactic alternative to antibiotic growth promoters.

Xcelsio

Natural Feed Additive

BENEFITS TO THE FLOCK

Natural:
No Toxins, No Residues, No Side-effects, No Withdrawal Time

Surgical:
Targets and eliminates specific bacteria, even those resistant to antibiotics

Protective:
Maintains gut bio-balance by retaining beneficial bacteria

Probiotic:
Enriched with Bacillus Subtilis

Flexible:
Compatible with all Performance Enhancers, Growth Promoters, Acidifiers, Anti-Oxidants, Minerals & Enzymes

BACTERIA IT CONTROLS

Salmonella
Typhimurium Gallinarum Choleraesuis, Derby, Dublin, Enteritidis, Pullorum

E. Coli
F4 (K88), F5 (K99) , F6 (987P), F18, F41

Clostridium Perfringens
Type A, C, B, D, E

Staphylococcus Aureus

FOR USE IN
BROILERS, LAYERS
& BREEDERS

MADE IN KOREA BY:
CTCGLOBAL INCORPORATION

MADE IN SOUTH KOREA

NATURAL & EFFECTIVE 100% ALTERNATIVE TO ANTIBIOTICS

MARKETED BY:
Sapience Agribusiness Consulting LLP
328 HRBR Layout, 4th A Cross
3rd Block, 3rd Main, Kalyan Nagar
Bangalore 560043, Karnataka (KA), INDIA

sapience

Enclosed system

The ducks are permanently confined, either in an enclosed structure (an indoor system) or in an outdoor run. Ducks remain in the same location. It is simple to monitor and examine them. It is simpler to provide the ducks with access to water when they have an outside run because the open run space can accommodate a pond.

Indoor apparatus:

The indoor method is used in large-scale duck farms where production is automated to save money on labor. Compared to the other two housing systems, this one requires a larger financial commitment. The farmer is responsible for providing all feed, water, and routine cleaning. Growth may be quick and output can be cheap with the right management. Give the ducks access to a sizable, shallow container of water so they may wash and bathe. They should be situated over a drained area with a wire or slatted floor, similar to open drinkers.

Systems for Integrated Duck Rearing

Duck farming works well with other types of agriculture. In these systems, the various modes of production work in harmony, resulting in improved productivity and greater financial gain for the farmer. Byproducts and waste are utilized.

Paddy cultivation combined with duck keeping

Ducks in rice fields consume hazardous insects and snails, which benefits the paddy while also providing a healthy diet for the ducks. Farmer disperses risks. For instance, there is still a yield of eggs and duck meat if the rice yield is minimal. Poor agricultural laborers in South India engage in the practice of migratory duck farming. By raising ducklings, the farmer begins raising ducks in December. Large farmers were contacted for ducklings. By February, after the second crop of paddy has finished being harvested, the workers begin migrating with the ducks.

In general, the paddy farmers in Tamil Nadu and Kerala are happy to see the ducks. The ducks consume snails and small fish as well as leftover paddy grains from the field. When the water becomes muddy, the ducks' activities move the water, which reduces photosynthesis and prevents the growth of weeds. Their actions also promote the growth of the rice stalk, root, and leaves, hastening rice growth. Additionally, the ecological system benefits from less pesticide and fertilizer use. The ducks stay in the fields at night. The ducks are released an hour or two after sunrise, when egg-laying is virtually finished and eggs can be easily gathered. Duck eggs are provided to landowners as payment. By eating paddy fields, the ducks thrive and the fields are fertilized by the castings of the ducks.

Duck farming combined with fish ponds

In integrated duck-fish farming, the waste from the duck shed can be recycled and used for fish cultivation. This boosts the ponds' natural food production, which in turn boosts the fish population. The culture of duck and fish can be combined to produce greater rewards. This result the farmers' positive outcomes. The faeces can be evenly distributed in the ponds and used as a good fertilizer if the ducks are free to swim around in the fishponds. These help to reduce the cost of fish feed, supplemental feed and fertilizer. Due to the ducks' presence, the fishponds' biological productivity is increased and aquatic weed growth is inhibited. The amount of oxygen in the ponds rises as a result of the ducks' swimming activity.

Ducks do not require additional feed because they consume the weeds, insects, larvae, worms, and other organisms that are present in the pond. Only fish longer than 10 cm should be provided in duck-cum fish culture since fish shorter than this could be consumed by the ducks. Ten thousand fish seeds per hectare can be sown. The stocking density may change depending on the type of fishpond and the availability of fish seeds.

The species of ducks that are raised depend on their ability to lay eggs. An important factor in getting more meat and eggs from the duck-fish culture is effective management. The shed should have adequate ventilation, and waste water should not stand still. 200 ducks are enough to fertilise a pond that is 1 hectare in size. The pond itself serves as the natural food source for ducks. They can easily survive on household garbage, rice bran, broken rice, and legumes.

Duck, fish and paddy cultivation

Duck and fish can be raised on the same field as paddy is being grown.

Management of Duck Feeding

Between hatching and four weeks of age, the majority of duck farmers feed their flocks broken rice, rice bran, powdered coconut stems, or similar things. In some places, market-purchased grains and sago are fed to ducklings as food. Reddy claims that the Tamil Nadu duck farmers fed their ducklings various meals based on their age. Insects, snails, kitchen scraps, paddy grains, and weeds are the next sources of food for ducks after their foraging-derived diet.

The rice paddies receive fertilizer from the duck excrement. According to Reddy, adult ducks primarily ate fish, snails, and insects from ponds and waterlogged areas as well as grains from post-harvest rice fields. In Kerala, Andhra Pradesh, and Tamil Nadu, duck farmers feed adult ducks a combination of locally accessible feed ingredients.

Watering of Ducks

Contrary to the widespread belief among farmers, even though ducks are water birds and love the water, water for swimming is not necessary at any stage of rearing. However, the depth of the water in drinkers or water channels supplied inside the home should be sufficient to let only their heads to submerge. If they are unable to accomplish this, their eyes may become crusted and scaly, and blindness may eventually set in. Additionally, they regularly wash and clean their banknotes to keep them tidy.

HATCH MASTER

Incubators Hatchers

HATCH MASTER
Hatchery Equipments

Best Incubator for all eggs

INCUBATOR KING

KARAMSAR POULTRY APPLIANCES (REGD.)

Office : C-120, Hari Nagar Clock Tower, New Delhi-110064 (INDIA) Phone : 25121373, 25495919, 9810057387
Works : B-70, Maya Puri Industrial Area, Phase-I, New Delhi-110064 (INDIA) Phone: 011-49093780, 42403001,
E-mail : karamsarpoultry@live.com • E-mail : karamsarpoultry70@gmail.com
Website : www.karamsarincubators.com • Website : www.karamsarpoultry.com
9810157638, 8800315001, 7098000001, 9851400001

Ducklings brooding management

Ducklings can be raised on a wire floor, in litter, or with the help of batteries. Layer ducklings are capable of brooding for 3–4 weeks. Two to three weeks of brooding are sufficient for meat-type ducklings. In general, the brooding period might last up to one or two weeks longer during the winter months. Give each duckling 90 to 100 square centimeters of hover space beneath the brooder. 30–40 ducklings can be raised using a 100 watt bulb. Throughout the first week, a temperature of 32°C is maintained. Until it reaches 24°C during the fourth week, it drops by around 3°C each week.

Up to three weeks of age, each bird needs 0.5 square feet in a wire floor and 1 square foot in a litter. Water in the drinkers should be 5.0 to 7.5 cm deep, just enough to drink without dipping oneself. To absorb the excess moisture in the ducks' excrement, deep litter brooding requires litter that is at least 3 cm thick. The heat of the brooding shed is retained by creating "Closed tents" (Tent brooding) to supply the necessary temperature in the large system, which does not need artificial heating. After the brooding stage, the ducks are free to swim in the water.

Grower Management

Both intensive and semi-intensive systems can be used to raise ducks. Up to 16 weeks of age, a floor space of 3 sq.ft per bird is enough in an intensive system. For the free flow of birds up to 16 weeks under the semi-intensive technique of rearing, a floor space of 2-2.5 square feet per bird for the night shelter and 10–12 square feet per bird for the outdoor run is required. To let their heads to fully submerge, the water in the drinkers should be 10 to 12 cm deep. Ducks can be controlled with partitions between the pen and run that are 60 to 90 cm high. Straight run ducklings (male and female) are raised in rural duck farming until they are 10 to 15 weeks old.

Layer Management

A floor space of 4 sq. ft. per bird is required for an intense system. In a semi-intensive system, each bird needs a floor space of 3 square feet for a night shelter and 10 to 12 square feet for an outdoor run. It takes 10 cm of feeding area for wet mash and 7.5 cm of feeding space for dry mash or pellets per bird. A nest box of 30x30x45 cm must be provided for the gathering of clean hatching eggs at the rate of one nest box for every three ducks. It need 14 to 16 hours of light per day to produce eggs at their best. In intensive farming, Khaki Campbell ducks can lay their first egg at 120 days, produce 50% of their eggs by 140 days, and lay 320 eggs annually. During the laying stage, depending on the pace of egg production and body weight, the daily feed intake ranges from 120 to 140 g. At 40 weeks of age, the body and egg weigh, respectively, 1.8 kilogramme and 68 grammes.

Management of breeding

The ideal sex ratio for ducks is 1:15–20 for an extensive rearing system and 1:16 for an intensive rearing system. Farmers maintain a wide sex ratio of 1:20–25 when raising ducks in rural areas, but they nevertheless experience reasonable good fertility of 70–80 percent. Drakes frequently mate while swimming.

Medical Care

Compared to chicken and turkeys, ducks are sturdier and less prone to disease. If infections do arise, they are almost certainly the product of poor management, an unsanitary environment, or a genetic weakness brought on through breeding.

To determine whether a duck is ill, you must first understand what a healthy duck looks like. Regularly observing ducks for a little period of time will help you become familiar with how a healthy duck seems. This does not imply that you must pick up every duck every day; instead, simply spend about 10 minutes watching the flock of ducks as they forage, noting their appearance and if they appear to be feeding well. The two most crucial factors in avoiding ducks from getting sick are practicing good cleanliness and immunizing them.

Vaccinations

It is worthwhile to vaccinate the ducks to protect them from some diseases because they are so contagious or widespread. It is especially important to vaccinate your duck if duck keeping is widely popular in the area.

S. No	Name of the Vaccine	Route	Dose	Age of ducks
1.	Duck Cholera (Pasteurellosis)	Subcutaneous	Ducklings, Adults 1 ml	3-4 weeks
2.	Duck Plague	Subcutaneous	Adults 1 ml	8-12 weeks

Breeds of Ducks That Lay Eggs

Khaki Campbell:

The English-bred Khaki Campbell duck is a medium-sized breed that weighs 1.5 to 2 kg at two months of age, lays white eggs, and produces 250 to 300 eggs annually.

Indian Runner:

Indian Runner Ducks are a small-sized duck breed that are white in color and stay well in both ground and water. They lay about 250 eggs a year and are native to India.

Breeds of Bangladeshi Egg-laying Ducks:

Small breed that is native to Bangladesh, lays 60–70 eggs annually, and is well suited to the climate of Bangladesh and other Asian nations.

Duck the Magpie:

They are English-born, have huge, white eggs that are black and white in colour and lay 220-290 eggs annually.

Ancona:

Ancona Ducks an English invention, 240 eggs are laid annually by medium-sized breeds of chickens that produce a variety of white, cream and blue-green eggs.

For Effective Branding & Promotion of your Products and Services in Indian Poultry Industry Advertise in

Poultry Fortune

English Monthly on Poultry since 1991

For Subscription & Advertisement enquiries, contact:

NRS GROUP

NRS Publications

Hyderabad - 500 004, India

Tel: 040 - 2330 3989, Mobile: 70329 19554

Email: info@poultryfortune.com

Website: www.poultryfortune.com

Updating Knowledge on Poultry industry since 1991

Nutrition of duck eggs

Duck eggs have more protein than chicken eggs, slightly more cholesterol than chicken eggs, slightly more fat, more vitamins and minerals, and a higher amount of omega-3 fatty acids. Duck eggs can be consumed by people who are allergic to chicken eggs.

FEEDING FOR DUCKS

The majority of Indian farms employed the country-side approach of feeding the ducks. Furthermore, the farmers of the farms are tired of having to feed the ducks wheat, rice, rice bran, coconut stem powder, or some other food. In certain farms, the farmers give their chickens very good care and feed them wholesome meals purchased from marketplaces. According to a report, duck farmers in Tamilnadu feed their ducklings varied diets depending on their age. Insects, snails, kitchen scraps, paddy grains, and weeds are consequently used as food by ducks in addition to the foraging-derived feed. The faeces from ducks is used as rice fields' fertilizer. Kerala, Andhra Pradesh, and Tamil Nadu duck farmers mix locally available feed ingredients to feed mature ducks. Ducks must never be allowed access to areas where there is no water to eat.

Birds must always have the right to eat during the first eight weeks, but as they become older, they can start getting two meals a day, one in the morning and one in the late afternoon. Up until the age of 20 weeks, Khaki Campbell ducks consume approximately 15.5 kg of feed. Following that, the amount of food consumed per bird every day varies between 120 g and more, depending on the availability and rate of production of greens. The recommended nutritional requirements for layer and broiler ducks, the feed scale for Khaki Campbell ducks, the normal living weight and feed intake of broiler ducks, and the feed processes monitored at the duck farm are all given.

WATERING OF DUCKS

Although ducks are water birds and enjoy being in the water, contrary to the widespread farmer myth, water for swimming is not required at any stage of upbringing. However, the depth of the water in drinkers or water supply canals inside the home must be sufficient to allow for the absorption of only their heads and not themselves. If they fail to do so, their eyes may get scratchy and irritable, and in some circumstances, sightlessness may set in.

BROODING OF DUCKS

Ducklings may be incubated in a battery, litter, or wire ground. For 3–4 weeks, layer ducklings go through a dark period. Ducklings of the animal protein variety only require 2-3 weeks of darkness. Typically, the brooding period might last up to one or two weeks longer than the stable period during the winter. Per duckling, provide 95–100 square centimeters of hover space throughout the brooding season. 30–40 ducklings can be hatched under a 100 watt bulb. During the first week, 32°C remains the temperature. It cools down by around 3°C per week until the fourth week, when it reaches 24°C. Up to three weeks of age, 0.5 square feet per bird on a wire floor and 1 square foot per bird in a litter is acceptable. Drinkers should have a depth of water between 5.0 and 7.5 cm, just enough to allow for drinking without having to lean over. In order to entice the excess humidity in the ducks' composts, the depth of the litter during deep litter brooding will be 3 cm and above.

Duck egg production

Ducks typically start laying at around 6-7 months of age, and within 5 weeks after the start of laying, they should be laying at a rate of about 90% (i.e., 100 ducks laying 90 eggs each day).

Duck eggs take 28 days to hatch, but Muscovy eggs take 35 days. By putting duck eggs underneath a broody duck or even a broody chicken hen, duck eggs can hatch spontaneously. At a temperature of 37.5-37.2°C (99.5-99° F), good results are obtained in artificial incubators. Incubation should last for the first 25 days at 30-31°C (86-88° F), and the final three days of hatching should be at 32.7-33.8°C (90-92° F). From the second day until the 25th day, eggs are sprayed with lukewarm water containing sanitizer once daily and allowed to cool for a maximum of 30 minutes. Candling is finished on the seventh day. Every hour, the eggs are rotated. On the 25th day, the eggs are transferred to the hatcher.

Adult stock rearing

Duck strains with high egg production begin to deposit eggs between 16 and 18 weeks of age. By nine in the morning, 95–98% of eggs are laid. For every three ducks, a nest box of 30 x 30 x 45 cm (12 x 12 × 18") should be available. A mating ratio of 1 drake to 6-7 ducks is appropriate for breeds that deposit eggs. The ideal amount of light per day is between 14 and 16 hours.

Factors to increase egg production include

- Offer nutritious food.
- The right amount of feed is necessary for maximum production; a duck should consume no more than.35 pounds of feed per day from the time she is three weeks old until she is laying well, or else she will gain weight.
- Clean water.
- Adequate lighting: From January to June, as the days grow longer, sexually mature ducks begin to lay eggs; from July to December, this process is slowed. For up to 17 hours, alternate natural and artificial light.
- Reduced stress.

In India, duck farming is significant in addition to chicken farming. They make up roughly 10% of all poultry and contribute 6-7% of the nation's overall egg production. Duck farming may be both profitable and pleasant. Raising ducks successfully requires creating a safe breeding habitat and paying attention to egg handling and production.□

Virkon™ S

Kills Avian Flu , Newcastle Disease and Infectious Bronchitis virus in a minute

LANXESS BIOSECURITY SOLUTIONS

Shaping the Future of Biosecurity

LANXESS Energizing Chemistry

Zoetis India Limited
31, 3rd Floor, Kalpataru Synergy, opp. Grand Hyatt, Santacruz (East), Mumbai- 400 055
• Web: www.zoetis.in • Email: indiaanimalhealth@zoetis.com

zoetis

Indian Poultry Industry Faces Certain Problems (Incomplete Information)

Email: vesstar.reports@gmail.com

Dr S.K. Maini,
General Manager (Technical), Vesper Group, Bengaluru.

Many companies are involved in manufacturing and marketing of **Phytase Enzyme for use in the poultry feeds**, to make phosphorus available to the birds, by hydrolysing the phytate complex's present in the feed ingredients, releasing the phosphorus simultaneously sparing the inorganic phosphorus, and preventing soil contamination, but they never give full details of the product being promoted.

Phytates and Phytic acid are a naturally occurring anti-nutritional factor in plants, that binds with certain minerals, vitamins and amino acids, forming complexes. Incorporating phytase enzyme in the feed of poultry, increases the nutritional bioavailability while reducing significant Phosphorus (P) build up in manure, which creates environmental complications such as water contamination, algae growth, fish mortality, and changes in plant and animal life.

Phosphorus (P) is a key and essential component of plant cells, and it plays a role in energy metabolism, acid production, and cell membrane biosynthesis. This is also a key macronutrient for plant growth and developmental processes. Phytic acid is a primary source of biological phosphorus in the soil, accounting for 10 to 50% of available organic phosphorus content. The majority of soils contain considerable levels of total soil P, which may be found in both organic and inorganic forms. Plant based feed ingredients can store phosphorus upto 80 %, as phytin phosphorus or as phytate. This phytate is an anti-nutritional complex, it can inhibit other digestive enzymes and have negative effects on the birds performance. Therefore, the use of phytase enzyme becomes essential to digest it, thus reducing the P level in soils.

Phosphorus (P) plays a major role in several metabolic pathways in the birds body, it is required along with calcium and Vit D3 for the bones and the egg shells, and is required for the energy metabolism at the cellular level, for synthesis of protein and for the transportation of sodium and potassium across membranes.

All Phytases available in the market are not same. Four distinct classes of phytase's have been characterized in the literature: histidine acid phosphatases (HAPS), beta-propeller phytases (BPPs, also referred to as alkaline phytase), purple acid phosphatases (PAPs) and protein tyrosine phosphatase-like phytases (PTP-like phytases). The first and most extensively studied group of phytases is the histidine acid phosphatases (HAPs).

Phytase Production: Certain Microorganisms are used to produce the enzyme phytase, which is scaled up utilizing bioengineering and recombinant DNA technology. Fungi and E-coli are commonly used to produce phytase enzyme. Various microbial fermentation processes and techniques, such as submerged, semi-solid state, and solid-state fermentation, are used for the phytase's production.

Phytase mode of action: Phytase (myo-inositol hexakisphosphate phosphohydrolase) catalyzes the stepwise removal of phosphate from phytic acid or its salt phytate. The removal of the phosphate group starts with a fully phosphorylated phytic acid (IP6), followed by penta- (IP5), tetra- (IP4), tri- (IP3), di- and mono-esters of inositol in descending order of preference. This means that the phytases first hydrolyze all of the available fully phosphorylated phytic acid molecules to penta-esters of inositol before they hydrolyze the latter to tetra-esters of inositol and so on, with inositol and phosphoric acid as the end products. In an ideal situation, a complete hydrolysis will result in a myo-inositol and phosphate (plus amino acids, minerals and other nutrients which are linked to phytic acid). However, in the in vivo situation, hydrolysis will be incomplete and therefore normally result in a mixture of inositol-phosphate esters.

Different Phytase enzymes are involved in different catalytic processes. When 3-phytase works on phytic acid, first it hydrolyzes the ester bond at the 3rd carbon site to liberate inorganic phosphorus, subsequently releasing phosphorus from additional carbon sites one at a time, eventually esterifying the overall phytic acid. The catalytic reaction of this enzyme needs the presence of divalent magnesium ions (Mg^{2+}).

Factors Influencing Phytase Activity: Many factors can have an influence on phytase activity, including **Phytase-related factors** such as optimal pH range, type of phytase used and resistance to protease. **Animal-related factors**

A.P. POULTRY EQUIPMENTS

Pioneers in Poultry Incubators

HI-TECH INCUBATORS & HATCHERS

Killer Cone / Halal Cutting

De - Feathering Machine:

Chicken Portioning Machine

Feed Plant (Feed Mixer & Grinder)

Solar Incubators

For Further Details Please Contact:

M. Prabhakar Reddy

Managing Partner

Mob: +91 9849212325, +91 9848123203

Office:
Villa No-45, Ramky Villas, Near HMT, Sathavahana Nagar,
Opp: KPHB, Kukatpally, Hyderabad-72. Telangana. INDIA.

Factory:
Plot No.365 & 366, Gokul Plots, Venkata Ramana Colony,
Near Vasanth Nagar, Kukatpally, Hyderabad-72. A.P. INDIA.

Email: appoultry@yahoo.com, appoultry@gmail.com, mprabakarreddy@gmail.com
Tel/Fax: +91 40 23151576 | **Website:** www.appoultry.com

include species, age of animals and retention time. **Dietary-related factors** such as phytate content, calcium levels and ingredient composition (e.g. type of substrate and intrinsic phytase activity) are important and need to be considered seriously.

Marketing Companies and their Distributors / Promoters of their products never speak of the above mentioned points, they claim sparing of DCP or MCP in the feed, reducing the environmental contamination, and making many trace minerals, vitamins and amino acids available that were earlier trapped by the phytates etc., the fact is total DCP or MCP should never be stopped, as the phytase enzyme releasing the required phosphorus is uncertain and dependent on several factors not in the control of any nutritionists or promoters of Phytase enzyme.□

Sudden Death Syndrome of Broiler Chickens

Email: 2231jeyasri@gmail.com

J. Jeyasri, M.Tech (Poultry Technology), Faculty and Dr G. Srinivasan, Ph.D., HOD,Suguna Institute of Poultry Management, Udumalpet – 642 126, Tamil Nadu

Highlight Points

The cause of sudden death syndrome is unknown, but it is likely a metabolic disease. Disease can be confirmed by the farmers itself by its ethology (Supine Position). Long dark periods may be effective in reducing the number of deaths in broiler chickens from sudden death syndrome.

Introduction

Sudden death syndrome also known by several other names, such as 'acute death syndrome', 'heart attack', 'dead in good condition', 'flip-over disease' and 'lung oedema'. Sudden death syndrome is a condition in which healthy broiler chickens die suddenly for no visible or understandable cause. Mortality occurs in apparently healthy, fast growing broilers which die suddenly with a short, wing beating, convulsive attack and approximately 60-80% are males. Most affected broilers die on their back, hence the name 'flip-over disease'.

Incidence and Distribution

Sudden death syndrome is seen in broilers due to increased feed intake and more rapid growth. Mortality may start within 72 hours of hatching and may continue up to 7 weeks of age, with peak mortality from 2 to 3 weeks. The prevalence in a rapidly growing healthy broiler flock is typically 0.5%-4%. Mortality of 0.25%-0.5% per day can occur for 1-3 days. This coincides with the age at which feed conversion is maximum.

Pathogenesis

Since there are no specific gross or microscopic changes, sudden death syndrome is considered to be a metabolic disease, in which an imbalance of metabolites or electrolytes, results in an irregularity of the heart. It is not known whether all broilers are susceptible to sudden death syndrome, or the low incidence indicates a genetic predisposition to the condition. It has been observed that genetic, nutritional and environmental factors may affect the incidence.

Symptoms

Affected chickens show no clinical signs or unusual behaviour until less than a minute before death. Death occurs within 1-2 minutes. Majority of the birds keep eating and drinking till two hours before the attack. Birds dying from sudden death syndrome are healthy, fast growing broilers moving about normally before the convulsive attack. Birds may give a loud high-pitched cry during the attack, characterized by the loss of balance, convulsions and violent flapping. Most birds die on their backs with one or both legs extended or raised, but some may die on their keel bones or sides.

Postmortem Findings

There are no specific gross or microscopic changes. Affected birds appear healthy, are well fleshed and usually have feed in their digestive tract. There may be small hemorrhages in the liver and kidney. Usually the gall bladder is empty. Kidneys may be pale. Lungs are often congested and edematous.

Diagnosis

Diagnosis of sudden death syndrome is difficult since there are no specific postmortem findings. The supine position is important when present and broilers that die are always well fleshed and usually have ingesta in the crop and gizzard. In young broilers, the liver is large and usually pale and fatty and the gall bladder is small and empty. The lungs are congested and usually oedematous. Small haemorrhages may be present on the liver and kidney. The bursa is large and normal, which again indicates that the bird was healthy immediately before death.

Control

1. Lower carbohydrate energy intake by changing feed texture, mash or density.
2. Feed restriction may help in reducing the mortality.
3. Long dark periods may be effective in reducing the number of deaths in broiler chicken from sudden death syndrome.
4. There is circumstantial evidence that ionophore anticoccidials are in some way involved with sudden death syndrome. The condition seems to be more prevalent when ionophore anticoccidials are used.□

HRIN 恒润机械

Professional Feed Machinery Manufacturer

SFSP66 Series Hammer Mill

Max capacity: 25-35t/h
The hammer screen clearance is adjustable.
Equipped a ultra wide multi-cavity grinding chamber and secondary buffer trough.

SLHSJ Series Double-shaft Paddle Type Mixer

Short mixing cycle, high mixing evenness, the CV can reach to 5% or less.
Full widely-opened twin door discharging structure : at the bottom of mixer.

HRZL Serise Pellet Mill

Suitable for manufacturing all kinds of poultry feed.
The secondary transmission is adopted by V-belt & synchronous belt combination.
Material balanced by double pressure roller before pelleting.

HRSL Series Crumbler

The roller gap can be adjusted precisely.
Less powdery, easier for maintenance.

Model	HRZL420-II	HRZL550-II	HRZL660-II
Power (kW)	55×2	75×2	110×2
Capacity(t/h)	8-11	12-16	22-25
Die. (mm)	ϕ3.5	ϕ3.5	ϕ3.5

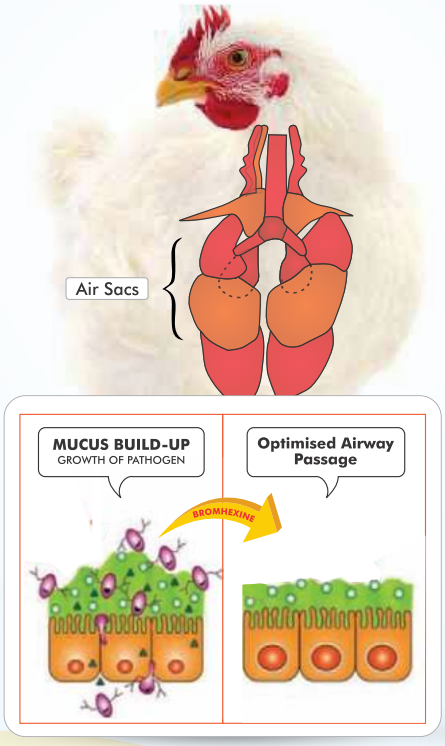
CE

ZHANJIANG HENGRUN MACHINERY CO., LTD
Shapo Industrial Zone, Suixi, Zhanjiang, Guangdong, China (524300)
Email: hirin_co@126.com
Tel: +86 759 7770818 Fax: +86 759 7769088
Web: www.hirin.cn

Venworld
THE BEST IN ANIMAL HEALTHCARE

Levofloxacin Hemihydrate

1. New third generation fluoroquinolone.
2. The bactericidal effect achieved through reversible binding to DNA gyrase and inhibition of bacterial DNA replication and transcription.
3. Quickly reaches to peak serum concentration 1-2 hrs.
4. Good oral Bio-availability
5. Half life 6-8 hrs



Bromhexine HCL

A. Proven mucolytic
- Reduction of mucus viscosity
- Increase in ciliary mobility
- Helps with the thinning of secretion and expectoration

B. Antioxidant action
- Captures free radicals.
- Inhibits hyaluronic acid degradation induced injury

C. Bacterial anti-adherent effect
Alters the ability of bacteria to adhere the upper respiratory track.

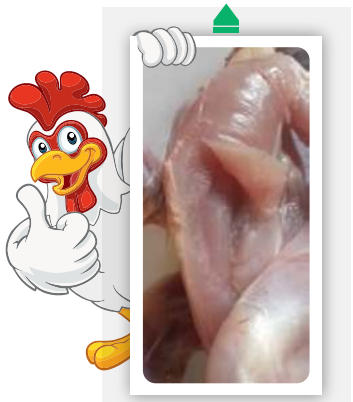
Reliable Mucoregulator

For further information please contact :
VENKY'S (INDIA) LIMITED
ANIMAL HEALTH PRODUCTS DIVISION
An ISO 9001 Certified Company
"Venkateshwara House", S.No.: 114/A/2, Pune - Sinhagad Road, Pune - 411 030 (India)
Tel : +91- 20-24251803 Fax : +91-20-24251060 / 24251077 www.venkys.com e-mail : ahp@venkys.com

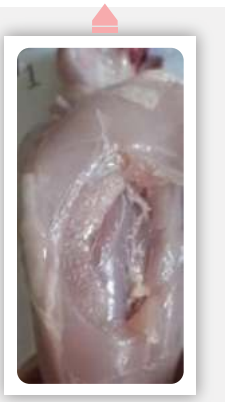
vaksindo

VAKSIMUNE® Coryza LE

Low Immunodepression : Low or no Local Reaction



VAKSIMUNE® Coryza LE
Low or No Local Reaction



Other Infectious Coryza
Killed Vaccine :
Severe Local Reaction

Control :
No vaccination-
No Local Reaction

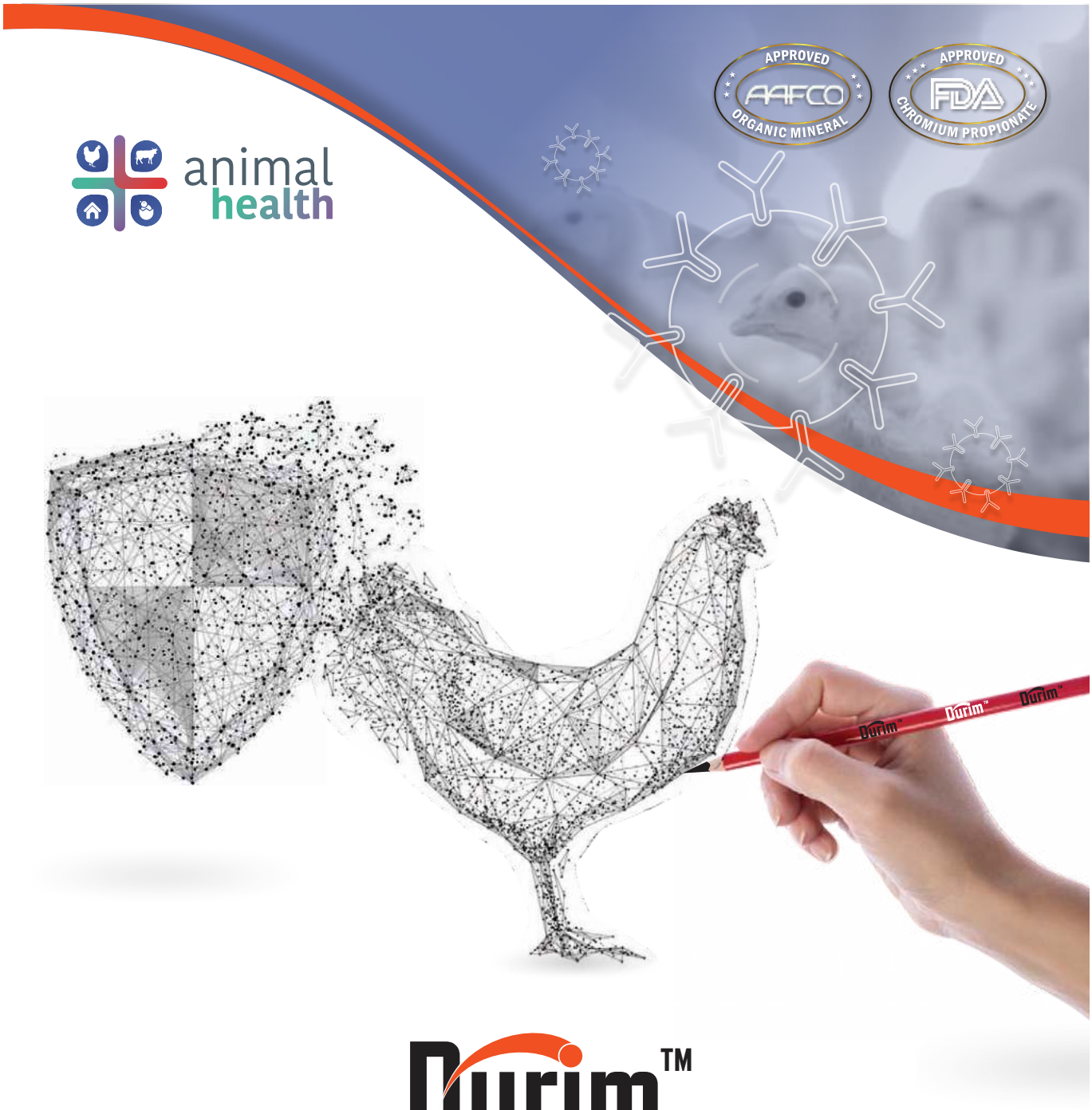
- Early and Long Lasting Protection
- Formulated Differently and Better
- Less irritation, Less stress

BEING EFFECTIVE IS GOOD ALWAYS

VAKSINDO ANIMAL HEALTH PVT. LTD. | RESEARCH BASED VACCINES

H No. 8-7-89/C/P-II/125, Ground floor, Chaitanya Nagar, Kharmanghat, Saroor Nagar, Ranga Reddy Hyderabad, Telengana- 500070. Tel: +91 40679 34239 | Web : www.vaksindo.co.id | customercare@vaksindo-india.com

Postal Regn. No. HD/1067/2021-2023
Published on 8 April 2023



Durim™

Ensures High Immunity and Stress Endurance

KEMIN®

© Kemin Industries, Inc. and its group of companies 2022 . All rights reserved. ®™ Trademarks of Kemin Industries, Inc., U.S.A.

Poultry Fortune, BG – 4, Venkataramana Apts, 11-4-634, A. C. Guards, Hyderabad – 500 004, Telangana, India.