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HIND POULTRY

Vol. XX December 2021 No. 6

Venworld Conducted Technical Seminars in Namakkal & Coimbatore 03



TET Evolve 2021 conducted by Kemin 06

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Venworld Conducted Technical Seminars in Namakkal and Coimbatore

Venworld has conducted two technical seminars in Namakkal and Coimbatore, Tamil Nadu, on 22nd & 23rd November. Dr. Prakash Reddy, DGM, Technical Services, Ventri Biologicals, presented on the 'Risk analysis and critical control points over IBH and Mycoplasma'. He has spoken elaborately on the evolution and emergence of new serotypes of Fowl adenovirus in India and how critical to match the serotypes by vaccination in controlling the disease. He told Ventri's updated IBH/HPS inactivated vaccine can give complete protection against the circulating



Fowl Adenovirus serotypes in India and recommended vaccination in breeders and day old vaccination in commercial broilers for best IBH control. He has also presented on the control measures of mycoplasmosis in breeders by drug program and VHMKGK vaccination. He showed the trial results for the effectiveness of VHMKGK

(inactivated vaccine) against *Mycoplasma gallisepticum*. It was clear that performances of the vaccinated flocks were better than the unvaccinated flocks. Mr. M.R.I. Magdum, GM, Venkateshwara Hatcheries Pvt. Ltd, has also joined the meeting and emphasized on the biosecurity of the poultry farms. Broiler breeder customers, consultants and VHL technical persons attended the seminar and appreciated the information. Dr. Baburaj, DGM, Marketing, Venworld, welcomed the customers. Dr. Vijayanand, Zonal Manager, Mr. Chi1nnaraj, Zonal Manager, Dr. Kandasamy, AGM, Technical and other team members participated in the meeting. The meeting was followed by cocktail dinner and discussions. 🍷



Mr.M.R.I. Magdum
GM, VH Pvt.Ltd.



Dr. Prakash Reddy
DGM, Technical



Dr. N. Baburaj
DGM, Marketing



MONTHLY POULTRY MAGAZINE

VOL. XX No. 6 December 2021

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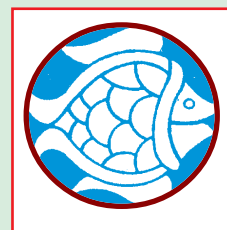
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Poultry Dressing Plants

Type of Plants	Models & Capacity upto
Mini Plants	4 Models- 2000/ Day
Hybrid Plants	2 Models- 4000/ Day
Container Plants	2 Models- 4000/ Day
Conveyorised Plants	6 Models- 2000/ Hour



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Chicken Fat	1 T - 2 T / Day





“TET Evolve 2021” conducted by Kemin




Kemin Industries South Asia hosted the first of its kind virtual event ‘Transformation of Enzyme Technology in Animal Nutrition - TET Summit’ on Wednesday, 17th November, 2021 to deliberate on the recent advancements and prospects of enzyme applications with the focus on nutritional efficiency and health of poultry, layer, ruminant and aquaculture in 2021. This event has recorded 1187 registrations & 608 participants across the globe. Key highlight of the event, it had 12 sessions, 7 international speakers, 4 species & 3 virtual booths. Kemin has started Transformation of Enzyme Technology (TET) in year 2020 and TET Evolve is the second edition in the series. TET has been a benchmark event for animal feed industry in South Asia and this year was no exception and participants experienced yet another immersive virtual event.



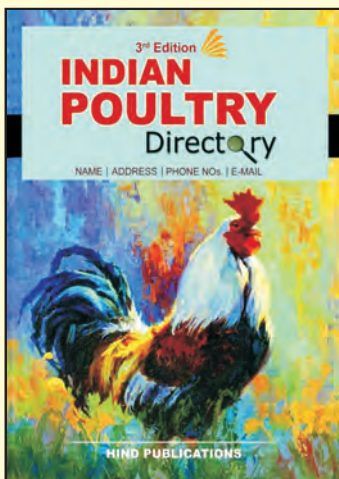
Kemin invited around 10 practitioners working across diverse sectors within animal health and enzyme portfolio which enabled TET to go beyond borders and get global representations. The TET Evolve Summit 2021 opened with a warm welcome note from Dr. Chris Nelson, President & CEO, Kemin Industries Inc., USA for the general session followed by Sureshkumar. R, President-Kemin Industries South Asia Private Limited.



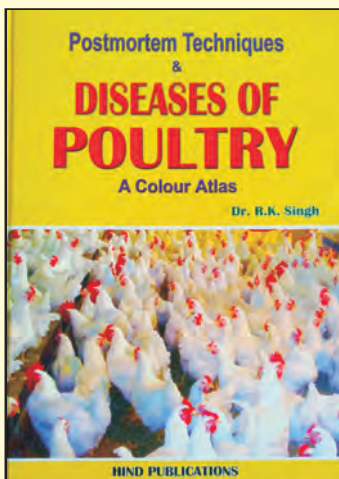
The Transformation of Enzyme Technology in Animal Nutrition-TET Summit-2021 has been a wonderful experience for the Kemin South Asia team, as well as for the participants from the industry. The event has drawn the attention of the industry to Kemin, and indirectly supports Kemin to conduct such similar events in the future. 



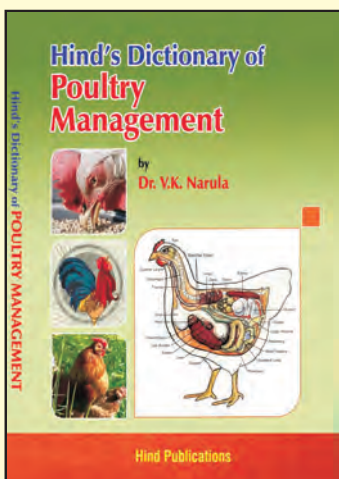
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Mr. Bouke Hamminga

Mr. Bahadur Ali

Major hatchery expansion for India's IB Group

IB Group has chosen Royal Pas Reform as its partner for their multi-location hatchery expansion programme across the Indian sub-continent. These state-of-the-art installations will feature single-stage incubators, fully integrated climate-control systems and complete hatchery automation – making them amongst the most modern facilities in India.

IB Group (ABIS Exports India Pvt Ltd) AEPL, which is based in Rajnandgaon, Chattisgarh, believes that adopting a single-stage incubation process – giving superior post-hatch performance, in terms of growth, mortality and feed conversions – is pivotal to producing high-quality broiler chicks.

Mr. Bahadur Ali, Founder & Managing Director of IB Group says: “IBG’s ambition is to play a major role in the future growth of the Indian poultry industry. During the course of 2020 we made a long-term strategic plan with our team, which needed a multiple-location expansion for our hatchery operations.

“It was an obvious step for us to go for single-stage, fully automated hatcheries technology. Choosing Royal Pas Reform – the world’s leading single-stage incubation and integrated incubation-project specialist – was therefore the logical choice for us.”

BoukeHamminga, Royal Pas Reform Director International Sales & Business Development says: “We are delighted that IB Group – a leading technology driven poultry company in India – has chosen to work with us to deliver its ambitious plans. I am sure that, as a global integrated hatchery solutions supplier, we can prove to be a key partner for decades to come.” 



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3	HOUSE TYPE-3	45'x220'	14,192	576/-	81,74,592	2	13	6	22,13,952	3.7 yrs

* Prices are valid until 31st of March, 2022 and exclusive of taxes, erection, installation, transportation charges, subject to any revision from the company.

** ABW- (Average Body Weight) as per industry average norms .

*** GC- (Growing Charges) will be revised post completion of every 8 batch based on the electricity charges and labour charges.

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A Good Start to Achieve a Strong Finish

By Melchior De Bruin, Yvonne Van Der Horst and Morvarid Rezvani

The immediate post-hatching period is critical for chick development and ultimately, chick performance. Integrating nutrition, farm management and gut health can optimise chick performance, even when suboptimal conditions threaten production potential.

Just as Olympic athletes begin their training early in life, successful poultry producers also rely on a solid start to achieve a strong finish. But unlike human champions, achieving outstanding poultry performance starts much earlier – in the hours and days post hatch.

A strong start begins with achieving baseline quality metrics. Measuring day-old chick (DOC) parameters such as weight, length, uniformity, navel quality and activity helps to optimise both broiler and layer production systems. These metrics serve as good predictive value indicators for first-week performance and provide feedback on hatchery procedures and parent stock health to incrementally improve chick quality.

Within 24 hours of hatching, enterobacteria and streptococci colonise the bird's caeca and expand to the rest of the intestinal tract. While the basic process of intestinal tract colonisation takes about three days, shifts and developments in the microbiome continue until well after two weeks of age. Developmental processes in the bird that build a healthy and functional microbiome encounter external and internal threats. For example, the first exposure to avian pathogenic *Escherichia coli* (APEC) typically occurs in the hatchery and can potentially lead to high first-week mortality.

Table 1. European production efficiency factor for different treatments (days 0-35)

Treatment	EPEF*
Control	327
Selacid Green Growth	380

*EPEF, European production efficiency factor or EBI (European broiler index) = ((ADG x % survival rate) / FCR) / 10.

Functional diets for young birds

The first few days of poultry production traditionally focus on technical management, which is widely recognized as the basis for a good start. In addition to technical management, the practice of providing specially-designed feed formulations for young animals, containing high quality raw materials and a tailored package of feed additives, is rapidly gaining in popularity. Young animal nutrition draws on the synergy between multiple modes of action uncovered by poultry scientists, to improve animal performance and reduce the need for antibiotics. A broad-spectrum approach includes improving chicks' gut integrity, actively steering gut microbiome development, safeguarding against (clinical and subclinical) mycotoxin and endotoxin exposure and efficiently enhancing digestion.

Mode of action drives benefits

Organic acids have long been used in feed and water to reduce or even eliminate pathogens before uptake by the animal and support processes in the gut. In young animals, gastric acid production does not always keep up with growth and development. Suboptimal nutrient digestion related to a higher gizzard pH and subsequent absorption challenges provide a good opportunity for organic acids to help lower the pH in the upper part of the digestive tract. Furthermore, both short chain fatty acids (SCFAs) and medium chain fatty acids (MCFAs) may act as antimicrobial agents in the animal. These offer both direct bacteriostatic or bactericidal effects and indirect benefits (by stimulating 'good' bacteria at the expense of pathogens or through acidification of the bacterial environment and decreasing colonisation potential). Additionally, synergistic beneficial effects between SCFAs and MCFAs have been reported. Developed by Trouw Nutrition, Selacid Green Growth is a blend of free and buffered SCFAs combined with MCFAs. This functional feed additive has been shown to leverage the combined synergistic effects of ingredients to safeguard performance and deliver improved mechanisms to aid digestion and help manage gut health challenges.

Performance validated globally

An independent validation trial in the United Kingdom showed that this synergistic blend of SCFA and MCFA ingredients helped a broiler flock reared without any antibiotics achieve an impressive recovery following a troubled first

week with a relative high mortality (Table 1). A higher number of microbial genera has repeatedly been associated with greater gut health resilience and better livestock performance. Specific bacterial genera play different roles in the gastrointestinal tract, such as generating compounds for digestive support, strengthening gut wall integrity, developing host-defence mechanisms and reducing the colonisation of harmful bacteria through competitive exclusion. Different types of feed additives have demonstrated modes of action to help build or maintain a stable microbiome. Even at low levels, combinations of additives create synergies which contribute to improved efficiency.


Presan-FY, a combination of organic acids, medium chain fatty acids, slow release C12, target release butyrates and an encapsulated capsicum extract, has been shown to be effective in increasing microbial diversity in broilers. A trial in Spain evaluated the pyrosequencing profile of the microbial community in broiler jejunum and showed that Presan-FY increased microbiota diversity by 22%. In India, broilers fed Presan-FY in a trial had significantly reduced *Escherichia coli* counts while *Clostridia* tended to be reduced during the first three weeks of life. The findings indicated that the blend of ingredients is effective in helping birds maintain a stable microbiota across various production phases. While broilers are commonly used as models to study the effect of various feed additives, research indicates that the benefits of feed additives extend to pullets, layers and broiler breeders, as well.

Improved performance equal to AGPs

An Australian study showed that Selacid Green Growth alleviated the impact of *Clostridium perfringens* and *Eimeria* (coccidiosis) challenges, delivering equal performance with an antibiotic growth promoter (AGP). These findings further illustrate the potential of specialised organic acid blends,

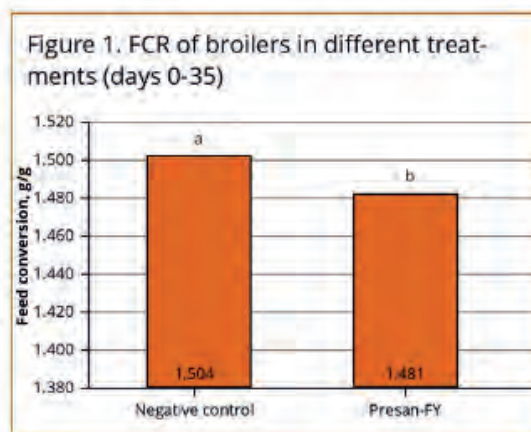
even in antibiotic-free production environments. An early start to a healthy microbiome translates into improved performance throughout production. Another external validation trial demonstrated that FCR can significantly improve in *Clostridium spp.* and *Eimeria spp.*-challenged broilers fed this synergistic combination of organic acids, medium chain fatty acids, slow release C12, target release butyrates and an encapsulated capsicum extract, compared to broilers fed a standard diet without any AGPs (Figure 1).

Gold standard

Whether on the Olympic podium or on the poultry farm, a strong performance begins early. Together with the best possible technical and veterinary management, specialised high quality feeds containing blends of synergistic feed additives are becoming the gold standard for poultry production globally. 

References available on request.

Within 24 hours of hatching, enterobacteria and streptococci colonise the bird's caeca and expand to the rest of the intestinal tract.




Commerce Ministry issues draft order for Exports of Eggs, Egg Products

The commerce ministry has come out with a draft order as per which eggs and egg products would be subjected to quality control or inspection prior to exports. The commerce ministry has come out with a draft order as per



which eggs and egg products would be subjected to quality control or inspection prior to exports. According to the draft order, export of egg and egg products would be prohibited in the course of international trade unless it conforms to the standards applicable and every consignment is accompanied by a certificate of export worthiness

issued by a designated agency. In exercise of the powers conferred by a section of the Export Inspection Council (Quality Control and Inspection) Act, 1963, "Central government, after consultation with the Export Inspection Council being of

the opinion that it is necessary and expedient to do so for the development of the export trade of India hereby...notifies that the egg and egg products shall be subjected to quality control or inspection or both prior to export," It also stated that fresh eggs shall have clean and sound shell and free from cracks, leaks and fecal contamination. 



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Aviagen India Expands Diagnostics Laboratory for Quality of Service to Customers

Aviagen India has announced a major expansion of its Great Grandparent (GGP) diagnostic laboratory in Tamil Nadu. The laboratory is used to regularly monitor the health of Aviagen breeding stock, ensuring that customers receive the highest-quality chicks. Designed to comply with International Standards Organization (ISO) requirements, the new larger laboratory includes an additional molecular diagnostic unit, and is equipped with the latest technology, including an energy-efficient heating, ventilation and air conditioning (HVAC) system with cross-contamination control to optimize bird welfare and biosecurity. Further maximizing biosecurity, it has separate rooms for bacteriology, serology and molecular diagnostics, with no cross-over between these processing areas.

Supporting this modern laboratory's efficient operation and ability to produce accurate, repeatable results is a state-of-the-art laboratory information management system (LIMS). LIMS enables traceability from sample collection until the final interpretation of test results.

On the expansion, Marc Scott, Business Manager for Aviagen India, commented, "Aviagen is committed to continuously innovating and improving to promote the success of our customers and the health and welfare of their birds. The updated laboratory features advanced technologies to enable fast and precise flock health monitoring, giving our customers assurance of consistent-quality breeding stock." Dr Kavitha Natarajan, Head of Veterinary Services, added "Quality is a cornerstone of our breeding program at Aviagen India. The laboratory's improved and upgraded elements will strengthen customer success through optimal biosecurity and disease protection. 🏠

Suguna Foods launches Layer Chicken Feed in Bihar

Suguna Foods has launched 'Layer chicken feed' in Bihar. Layer chickens, are a breed of hens having a significantly enhanced capacity for producing eggs from 18-19 weeks of age and continue till 80 weeks and above. It has launched 4 types of Layer feed, each designed to be given to the hens at various stages during the bird's life cycle. Layer Chick Crumble feed is recommended from 0-8 weeks which helps in gut development and strives to improve growth rate, weight gain and enhances the immunity of the flock. This highly nutritive formulation aims to reduce early chick mortality (ECM) and consequently improves the livability of the flock. Layer Grower Crumble feed is recommended from 9 - 17 weeks. It helps to maintain the skeletal body frame and organs development. This nutritious feed has been meticulously formulated to reduce pullet mortality and ensure flock uniformity. Layer Crumble feed has been formulated for two phases, based on stage of the birds. Phase 1 is recommended between 18- 52 weeks while Phase 2 can be used from 53 weeks onwards. At both the stages, this wholesome feed aids in maintaining peak egg production and helps in achieving optimum egg weight and ensure strong egg shells. Commenting on the launch Suguna Foods said, "Suguna Feeds takes immense pride to extend their nationwide operations by launching their Layer feed range in Bihar. 🏠





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Improving food & health

Picking a leaf from the experience of Nigeria it is right time to take a quick decision to extend the deadline of importing de-oiled soya cake



Indian Government's timely action to allow the poultry industry to import de-oiled soya cake (DOC) in the month of September 2021 has resulted in survival of several poultry farmers across the country who were on the verge of collapse due to high price of feed. Import of de-oiled soya cake had resulted in correcting its prices which had rose abnormally

It is to be noted that the import of allowed quantity has not been completed and it is absolutely necessary to extend the deadline at least till March 2022 to complete the import. Earlier last week Mr. Bahadur Ali, Secretary- All India Poultry Breeders Association and Managing Director IB Group has also said that if Centre Government does not intervene, and extend the deadline, there may be consequences.

While taking a final decision Government of India should also keep in mind that how Africa's most populous country Nigeria is experiencing chicken shortage as farmers have shut down their poultry farms over the high cost of feeds and other key inputs. Kingsley Imasuen, chairman of Poultry Association of Nigeria had said that there may be a price hike of poultry products ahead of the festive period consequent upon the prevailing issue of ingredients used in feed production He had also said that "Nigerian Poultry Industry is already experiencing shortages ahead of the Christmas season. As of now, there are a lot of small farmers that have shut down their business. The only people in the market are those doing large production. Most of the small farmers are folding up. The inputs, particularly maize and soya beans, are very expensive, hence the prices of birds are rising and that's why many businesses have ceased to operate because they are not able to cope.

Picking a leaf from the experience of Nigeria it is right time for Government of India to take a quick decision to extend the deadline of importing the de-oiled soya cake (DOC) till March 2022 so that not only poultry industry can survive but the consumers can also get the egg and chicken at right price. 🇮🇳

Auspicious Karthika month takes toll on Poultry farmers as rates crashes

Karthik mass is now over its end and poultry industry is hopeful of picking up the consumption but so far Poultry farmers across the country are facing severe losses after sudden fall in chicken prices. Many farmers are selling chicken in the open market at a lower price to avoid huge losses. Karthika mass is considered very auspicious in our country. Hindus believe that one should practice non-violence during this month and stay away from eating non-vegetarian food. As a result, consumption of chicken, mutton, fish and other non-vegetarian food fell all of a sudden. Chicken which cost Rs 295 per kg on November 5 has plummeted to Rs 190 per kg. "Chicken price remained stable for last three months. Consumption also increased after Covid-19 second wave as people preferred protein-rich food. Sale usually comes down in Karthika month by 30 per cent. But we are witnessing abnormal fall in prices this year but it is becoming tough for poultry farmers to bear the expenses of feeding them. It usually costs Rs 160 per kg for live birds at farm, but we are getting only Rs 110 per kg now," Poultry farmers are looking at Government to intervene and announce subsidies for poultry farmers to help them recover from the losses. Poultry markets in most of the cities are witnessing a deserted look even on Sunday due to the impact of Karthikamaas. Meanwhile, chicken shops and eateries selling non-veg dishes are offering huge discounts to attract the consumers result of which Chicken prices fell significantly but still there is no encouraging response from buyers. 🇮🇳

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Bacillus subtilis can create a protective Biofilm on the intestinal Epithelium

These aspects were clarified in 2008 by Cartman *et al.* The research showed that orally-administered *Bacillus subtilis* spores germinate in the chicken's GIT (Cartman *et al.* 2008). Continuous administration of an effective *Bacillus subtilis* probiotic is advisable to achieve persistent benefits (Latorre *et al.* 2014). Another point of discussion has focused on whether spore-forming *Bacillus spp.* are transient organisms in the gut or if they could attach somehow to the intestinal epithelium. This led to two schools of opinion in the scientific community. To answer to this question, the Innovation Department of Chr. Hansen, A/S performed a special fluorescence experiment in collaboration with the Department of Animal Nutrition, of the Kielanowski Institute of Animal Physiology and Nutrition, Polish Academy of Sciences, Jab³onna, Poland.

A Recent Study Answers the Debate

The most recent study was conducted to investigate the effects of commercially- available spores of Chr. Hansen *Bacillus subtilis* spore-based probiotic in diets at 1.6×10^6 cfu/gram of feed. Performance parameters and microbiota activity in the broilers were assessed. Fluorescence in situ hybridization (FISH) was performed to investigate the spatial organization and the formation of *Bacillus subtilis* biofilms in intestinal samples from various GIT locations in 6 broiler chickens. Tissue sections from each chicken were analyzed in duplicate and visualized by fluorescence microscopy with a 40x objective.

Do *Bacillus Subtilis* colonize the gut or are they transient? Both.

Indeed, the first picture (Figure 1), describes very well how *B. subtilis* colonize the intestinal epithelium in the intestine. We can see very clearly the red fluorescence on the surface of the villi of the intestine.

In the second picture (Figure 2) a different fluorescence is observed. Some luminescence inside the lumen of the intestine is seen, which clearly shows that transient *Bacillus* are in the intestine. The bacteria are alive and multiplying into the lumen of the gut content.

Bacillus are at the right place to act!

This picture is interesting, it clearly depicts that *Bacillus* are able to colonize the surface of the villi. This is an excellent place to be in the intestine. The top of the villi represents one of the most sensitive sites of the epithelium. This is the place where a lot of nutrients are absorbed due to the full development of the microvilli. This is also the place where most of the pathogens are acting to destroy the mucosae (*C. perfringens*, *E.coli*, *Salmonella*).

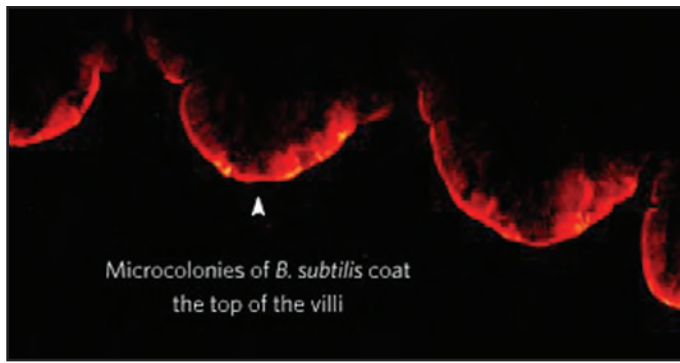


Figure 1. *Bacillus subtilis* biofilm covering caecum villi surface

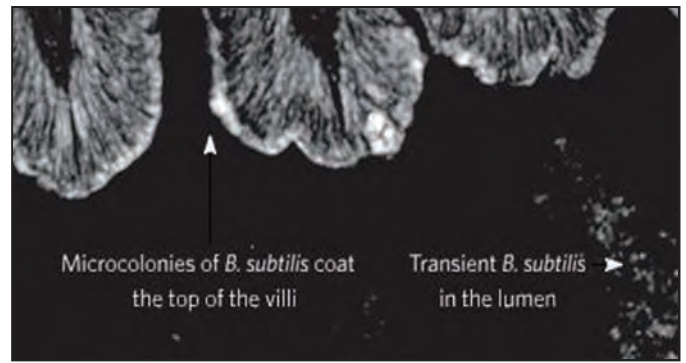


Figure 2. *Bacillus subtilis* on the villi surface and in the digesta

Several advantages can be deduced by coating the epithelium surface.

Presence on the villi equates to improved total intestinal surface

Many different publications have documented that the use of Chr. Hansen probiotics result in an increase in the length of villi and an increase of the very well-known Villi length/Crypt Ratio (Borojeni F.J. *et al*, 2018). This indicator is typical of enhanced intestinal functionality. It is easily understandable that when the surface of absorption is increased, the efficiency of the nutrient absorption through the epithelium correspondingly improves. By coating the surface of the villi, *Bacillus* are able to protect the integrity of the villi and microvilli and subsequently prolong the life cycle of the cells (typically about 4 to 5 days) before their expulsion in the lumen of the intestine.

Presence on the villi results in bacteriocin effectiveness

Some *Bacillus* spp. are specifically strong in bacteriocin production. A bacteriocin can be defined as inhibitory peptide against unfavorable bacteria. For instance, those peptides are known to inhibit the growth of *C. perfringens* but also more recently of *E. coli* and *Salmonella*.

Presence on the villi improve metabolite and enzyme production *Bacillus* spp. can produce and release multiple active enzymes in the intestinal tract. The principal objective of these enzymes is to digest the undigestible part of the feed which may be in the micro-environment surrounding the bacilli colonies. Once these enzymes are released, they continue to act and cut the complex insoluble or indigestible fraction of feed into smaller pieces which are then readily absorbable by the microvilli. The presence of the *Bacillus* on the surface of the epithelium makes these enzymes act exactly as

necessary for the bird's absorption. On top of this, a recent paper demonstrated the capacity of increased butyrate production in the intestine (Konieczka P *et al.*, 2018).


Conclusions

This most recent research helps to further understand an important part of the mode of action of effective *Bacillus* probiotics.

Therefore, *Bacillus* probiotics:

- Can germinate in the gut and become an active part of the bacteria microbiome in poultry.
- Can be transient, live organisms in the flow of the intestinal content.
- Can colonize the surface of the intestinal villi resulting in three major benefits for the bird's intestine:
- Protection of the surface of the villi, thus prolonging and protecting this very important part of total nutrient absorption,
- Creating the right place for bacteriocin production, resulting in an unfavorable micro-environment for pathogens such as *C. perfringens*, *Salmonella* and *E. coli*,
- Releasing enzymes and butyrate locally, close to the brush surface epithelium. This enables the digestion of the indigestible part of the feed and improves the digestibility of key elements of the feed.

Over years of controversial debate, the answer from science is showing us again that we are just scratching the surface of the probiotic potential in poultry production. This study confirms there is a bright future for this technology, and it is supported by science-based evidence.

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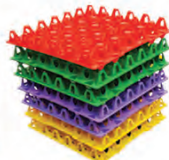
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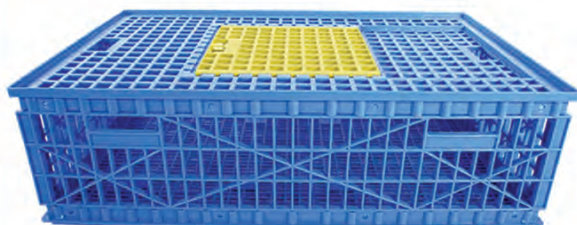
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Large Scale Adoption of Automation in the Poultry Sector is the need of the hour for Sustaining Growth in demand in coming Decades



Ricky Thaper,
Treasurer, PFI

India's poultry sector, despite the challenging times of 2020 and 2021, has been one of the fastest growing segments of Indian agriculture and allied sector. In fact, while the agricultural production has been growing at around two percent, in the last decade, the production of eggs and broilers has been rising in the range of around eight to ten percent on an annual basis. The Poultry sector especially is growing at a compounded annual growth rate (CAGR) at a constant 10.5% and playing critical role in promoting livelihood options in the rural economy. Due to this steady growth, India has emerged as the world's third largest egg producer and sixth largest producer of broiler meat. Economic growth, rise in urbanization and stress on consumption of protein rich food have contributed to steady growth in demand for poultry meat and eggs.

Despite several field and raw material rates challenges, the business-to-consumer demand for poultry remains good. Consumers are looking for additional sources of protein rich foods and poultry meat is preferred over other meat products as it is considered more hygienic and supplies are uninterrupted throughout the year in relatively economical prices compared to prices of mutton and fish. According to Basic Animal Husbandry Statistics, 2020, India's poultry meat production was 4.34 million tonnes, contributing more than 50% of the total meat production in 2019-20. The egg production stood at 114.38 billion in 2019-20.

According to the National Action Plan for egg and poultry - 2022 prepared by Department of Animal Husbandry, Dairying and Fisheries, more than 80 percent of India's poultry output is produced by organized commercial farms. Major poultry companies have vertically integrated operations which comprise approximately 60-70 percent of the total poultry meat production. The broiler meat industry is witnessing growth because of adoption of the backward integration system. The companies, which are integrators, have

hatcheries, feed mills, and primary processing facilities. The integration model ensures that farmers (who own farms with 5000 - 10,000 broilers capacity) are insulated against fluctuations in market prices as under the contract they remain assured of getting predetermined fixed prices. Directly and indirectly this poultry sector provides employment to around six million small and medium farmers. However, for meeting rising demand for poultry products in the coming years, the poultry farmers need to adopt automation for ensuring efficient production system and improving infrastructure at the existing wet market. A large chunk of the broiler and layer farms in India do not have climate control system, which exposes the broilers or layers to various climate changes, which could adversely impact productivity. Latest farming technologies such as climate-controlled farm houses, automated feeding lines etc. can help improve the productivity in farms. Feeding, water supply, temperature and humidity control are some of the variables that require automation in poultry farming.

With rising cost of labour as well as reduction in supplies of workforce in parts of the country, the automation at farm level has to be installed for bringing in efficiency in the production at broilers and layers farms. According to industry sources, automatic feeding system could reduce the labour cost and improve farming level and Feed Conversion Ratio (FCR) efficiency.. With automation, FCR is bound to improve further thus making India's poultry meat production more




efficient. The broiler and layer farmers usually refer to feed costs as the critical component of controlling and lowering production costs.

There has been gradual adoption of environmentally controlled (EC) sheds by commercial broiler farmers. The EC sheds ensure bigger harvests, better feed conversion and economy both on capital and revenue investments. Keeping air and floor temperature in the house fully under regulation are essential during brooding. Some of the elements of EC sheds include temperature and humidity maintenance, supplementary levels of heating and cooling at all times, increase of biomass in the shed and floors are prepared for keeping the even heat distribution. The Commercial production of eggs and chicken meat on scientific principles has been well standardized, while the marketing system of eggs and broiler meat are not fully organized. Eggs are sold mostly from retailer next door for meeting the daily needs of consumers. Eggs go through the value chain of wholesale dealers, sub-dealers, retailers etc. Broilers are sold live or slaughtered openly in the live market and according estimates around 90% of broiler meat is sold through wet market. There is need for creating infrastructure for hygienic slaughter. There is need for investment in improving marketing infrastructure

for both broiler birds and eggs for attracting more health-conscious consumers especially in the post-COVID phase. Hence, there is a need for setting up of broiler meat processing plants in the near future and sale of processed chicken to increase both to cater domestic as well as export markets.

The demand supply situations witness significant seasonal fluctuation in broiler and eggs prices. The prices as well as demand mostly decline during religious festivals. The major industry players attempt to support prices by reducing chick placements when demand falls. However, the industry needs to put in place robust market information in advances by assessing demand pattern. The demand for poultry and processed poultry products has seen an expansion especially since middle of 2020. There has been huge increase in e-commerce with expansion of home delivery as a response to COVID-19 lockdowns and the fear of exposure by shopping in traditional wet markets. The online segment is expected to continue to drive broiler and eggs consumption in the coming years thus by pushing increasing per capita consumption of poultry meat and eggs.

Recently the Government had announced Special Livestock sector package amounting to Rs.9,800 crore over the next five years starting 2021-22. The poultry meat as well as egg sectors must take advantage of this financial assistance to boost infrastructure. A capital subsidy should be there on setting up EC sheds with improvement in infrastructure in the wet market that would boost demand as well as consumption. 

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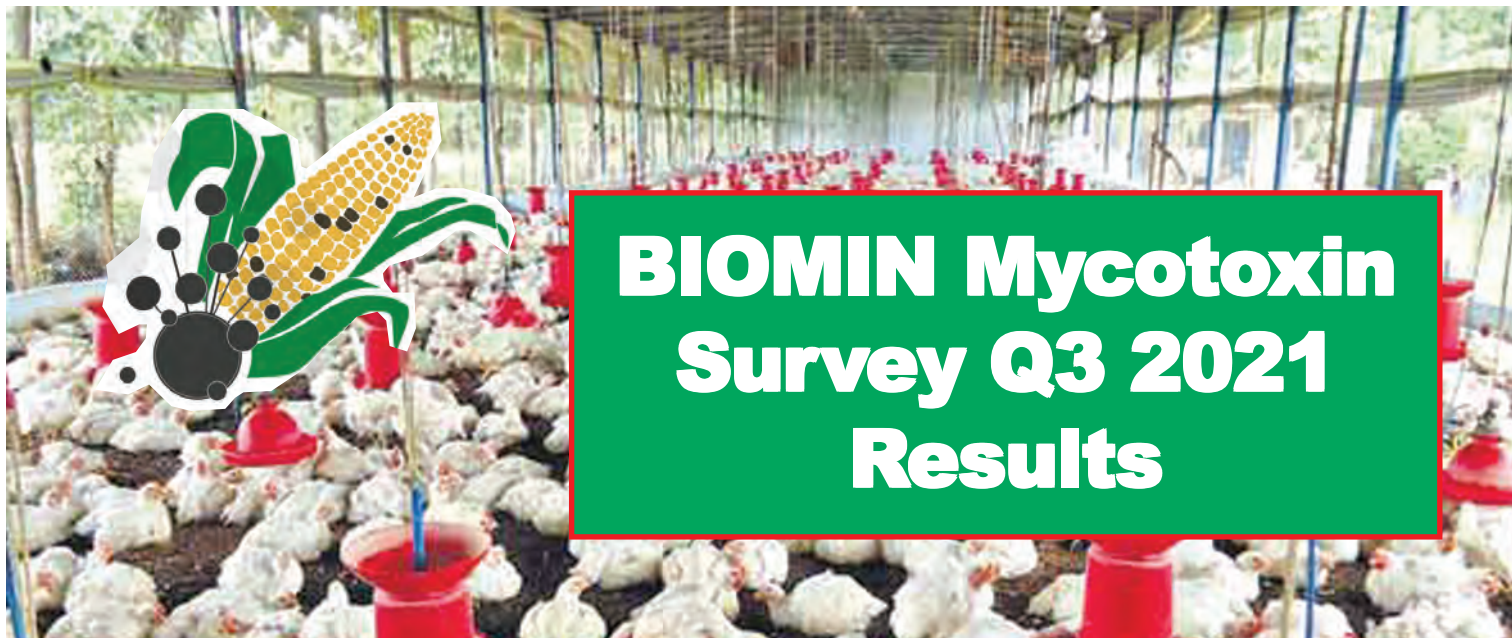
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BIOMIN Mycotoxin Survey Q3 2021 Results

This is a review of the occurrence of major mycotoxins between January and September 2021. In total, 76,300 analyses were conducted on 16,164 finished feed and raw commodity samples originating from 74 countries.



Asia Pacific

Risk is extreme in South Asia, China and Taiwan. In Southeast Asia and East Asia risk is severe. Compared to the same time period last year (January-September 2020), abundance of Afla, ZEN, DON, FUM and T-2 stayed almost the same and is very high for FUM, DON, ZEN but also for Afla. Ochratoxin A (OTA) increased its prevalence from 17% to 23%.

Corn stays heavily affected with a very high abundance of Fusarium toxins (FUM 90%, DON 80%, ZEN 71%) and high average concentrations of these three mycotoxins (FUM 1,824 ppb; DON 1,041 ppb and ZEN 234 ppb). Co-occurrence is high: 94% of all samples contained more than one mycotoxin. In corn also Afla is a threat to animal health, as it is found in 26% of the sample at an average of 92 ppb.

While in China/Taiwan and East Asia Fusarium toxins are the main concern, Aflatoxins are the second most prevalent mycotoxins found in all samples from Southeast Asia (58% with an average of positives of 32 ppb). In South Asia, Afla is the most abundant toxin detected in 79% of the samples (average 45 ppb), followed by OTA (72%) and FUM (70%).

In Oceania, risk of mycotoxin contamination continues to be moderate.

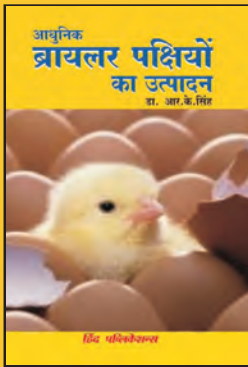


North America

Risk in North America stays severe with deoxynivalenol (DON) being one of the main concerns in all commodities. This mycotoxin was present in 68% of all samples (average of positives 1,049 ppb).

Corn kernels are highly affected by DON and fumonisins (FUM). DON prevalence is 69% with a high average concentration of positive samples of 1,302 ppb. However, in corn, FUM has the highest prevalence (73%) and reaches an average concentration of 2,450 ppb. Average contamination level is also increased for zearalenone (ZEN) with 268 ppb and 32% prevalence

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32%, as well as aflatoxin (Afla) (65 ppb), which is found less frequently (7%).

Finished feed samples also contain levels of Fusarium toxins that can be harmful for livestock. DON, FUM and ZEN are present in 81%, 64% and 29% of the samples, respectively. Levels are lower than in corn but still high: on average 846 ppb (DON), 1,840 ppb (FUM) and 162 ppb (ZEN).



Central America

In this region risk decreased slightly but is still severe. FUM and DON are most frequently found (in 73% and 68% of all samples, respectively). Average concentration in all positive samples found reaches 929 ppb for FUM and 409 ppb for DON. In corn from Central America, FUM is present in 95% of all samples and average levels are elevated (1,474 ppb), but a bit lower than in North America. Mexican corn seems to be more severely affected. FUM is found in almost all samples (94%) and the average concentration exceeds 2,000 ppb (with an extreme maximum found: 34,916 ppb).

South America

Risk in this region stays severe. Fusarium mycotoxins are the most prevalent, with FUM present in 66% of all samples, followed by DON (46%) and ZEN (40%). Aflatoxin was found in 28% of the samples (average of positives 7 ppb). Risk to livestock is mainly due to DON but also FUM concentrations. Corn shows high prevalence of FUM (83%, average of positives 1,618 ppb) and DON (47%, average of positives 519 ppb).

Interestingly in soybeans, the most prevalent mycotoxin found is ZEN (61%), followed by T-2, a trichothecene, (49%) and Afla (46%).



Europe

Risk in Europe ranges from moderate to high. The most prevalent mycotoxin is again DON (52%), followed by ZEN (46%) and FUM (40%). DON is the main threat to livestock, particularly for swine and poultry.

Highest levels of DON have been detected in wheat grains. In this commodity every second sample contained this mycotoxin at a high average of 1,147 ppb and a maximum concentration of 42,925 ppb. Concentrations are even higher in Central Europe (average of positives, concentration of DON is 1,557 ppb). These high levels are mainly due to samples from this year's harvest, which shows hot spots of high contamination with DON in wheat and barley in some European countries. In Central Europe, all barley samples from January to September show presence of DON in almost every third sample at an average concentration of 629 ppb.



Middle East


The Middle East shows severe risk, mainly due to the high abundance of Fusarium toxins. Most abundant in all samples is FUM (90%), followed by ZEN (65%), DON (58%) but also Afla (27%). Risk to animal

species is mainly due to DON and ZEN (average of positives 734 ppb and 110 ppb, respectively). Finished feed samples show a high co-contamination: all samples analyzed contained more than one mycotoxin.



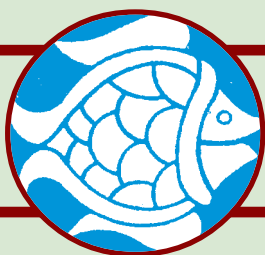
Africa

In Sub-Saharan Africa, risk is severe. Fusarium mycotoxins are highly abundant: DON is present in 81% of the samples and thus increased in abundance compared to the same time period last year (January to September 2020: 75%). FUM is the second most prevalent mycotoxin, present in 51% of the samples, followed by ZEN in 44%. DON is the highest concern for livestock, average of positives is elevated with 548 ppb. Finished feed shows a high co-occurrence of different mycotoxins with 90% of the samples containing more than one mycotoxin.

South African corn shows particularly high abundance with DON in corn (90%, average of positives 607 ppb). Corn gluten samples from this region are heavily contaminated with DON, FUM and ZEN, all present in 100% of the samples. In this commodity DON reaches 1,483 ppb on average. 

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Poultry Producers across the world are ramping up their Production which would essentially create an opportunity for Feed Manufacturers

With the increasing global population and rising demand for poultry meat across various sectors of fast-food restaurants, poultry producers across the world are ramping up their production to meet consumer demands. According to a report by the EU Agricultural And Rural Development, the consumption of poultry meat is estimated to reach 12,443.0 metric tons by 2030 because poultry is considered a cheap, healthy, and sustainable product option by consumers. Therefore, the increased production demand for healthy and nutritious poultry meat is anticipated to propel market growth.

Eggs are considered a low-carbohydrate, low-calorie, and low-cost source of protein. They are extremely nutritious and provide a complete set of proteins required by humans and have a rich supply of key vitamins and minerals. With

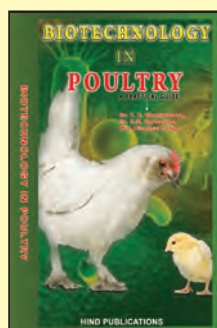


increasing health consciences among consumers, the demand for eggs is increasing. Moreover, with the pandemic outbreak, the consumers are being prescribed to consume eggs and more meat in order to increase their immunity. Thus, animal protein will play a significant role in increasing the demand for meat and eggs which will play a major role in increasing poultry feed in the future. Poultry is considered as one of the most economical sources of protein, owing to which poultry products such as egg and

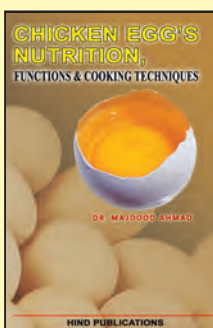
meat are consistently witnessing growth in demand. Furthermore, the rising incomes of the consumers and increasing Urbanization in Asia - Pacific region are leading to increased demand for poultry products, which in turn, is leading to the growth of the market studied.

The Chinese poultry industry benefits from government incentives to support recovery and restocking. The increasing growth of the poultry industry is subsequently leading to the growth of the market studied in the country. Poultry feed manufacturers in India have been focusing on enriching feeds with prebiotic and probiotic supplements, to enhance the productivity and quality of poultry products. This would essentially create an opportunity for feed manufacturers also. 🇮🇳

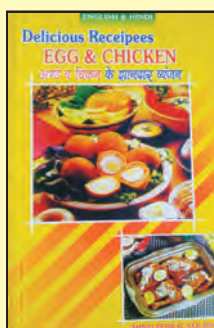
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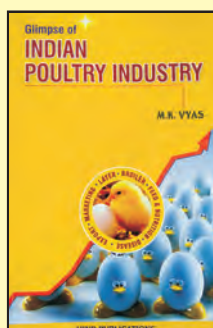
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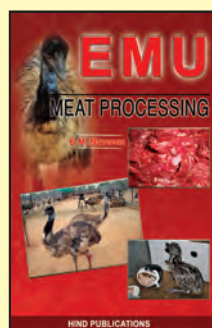
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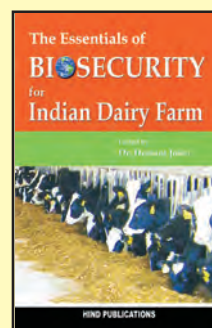
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Soyabean Meal export down by 70 Percent this October 2021


Export of soyabean meal in October stood at 30,000 tonne, down by over 70 per cent from the corresponding period a year ago due to lack of price competitiveness for Indian soya meal and curtailed crushing. Overseas shipment of soyabean meal in the first month of the new oil year was recorded at 30,000 tonne as against 1.35 lakh tonne in the same period a year ago, according to Soybean Processors Association of India (SOPA). Data compiled by the body of soyabean processors has estimated crushing of soybean meal in October at 4.79 lakh tonne as against 7.58 lakh tonne.

Davish Jain, chairman, SOPA said, "Soybean crushing appears to be curbed significantly below potential in October/December due to large imports of soya meal, low vegetable oil import duties and lack of price competitiveness for Indian soya meal in the world market." In October 3.30 lakh tonne of non-GMO soyabean meal was imported by India to cater to the demand of the domestic poultry sector left baffled due to skyrocketing prices of feed. According to SOPA, consumption of soyabean meal by poultry feed in October was little higher at 5.50 lakh tonne as against 5 lakh tonne from the same period a year ago. Higher prices of locally produced soyabean meal in the international market has raised worries among exporters low on orders at the start of the new oil year. Earlier this month, SOPA estimated a 13.71 per cent rise in soybean output at 119 lakh tonne in India as compared to last year. 

AIPBA seeks extension of deadline for import of soya cake

Mr. Bahadur Ali, Managing Director of IB Group and Chairman of All India Poultry Breeders Association has written to the Government of India, seeking extension of the deadline for importing de-oiled soya cake (DOC). In a letter to the Ministry of Animal Husbandry, Dairy and Fisheries Mr. Bahdur Ali demanded the extension to complete the import of 12 Lakh MT DOC which was allowed by the Government of India in view of rising prices of Soyabean in domestic market. The industry was given time till January 31, 2022, to receive the imports, of which 6.5 lakh tonnes have already arrived. DOC is the



protein-rich solid left after oil is extracted from soyabean. It is the basic raw material used in poultry feed. Mr. Bahadur Ali said that if the Centre Government does not intervene, and extend the deadline, there may be consequences. The All India Poultry Breeders Association has sought steps such as extending the deadline of imports till March 31, 2022, ban on trade in soyabean on commodity exchanges and strict action against hoarders. Mr. Bahadur Ali pointed out that the government's intervention in the month of September this year has resulted in price correction of DOC from Rs 100/kg to Rs 70/kg. 



Hind Poultry's booth at V- Connect, Indonesia showcased its various publications, videos and magazines. It was a great opportunity to make the deal from international leaders. Hind Poultry also put their Booth at this Exhibition. People accessed its activities, various publications, videos and our magazines on Hind Poultry's booth at V- connect. People also took part in over 14 top-notch sessions on the topics like cage-free egg production, Newcastle disease, Antimicrobial Resistance (AMR), usage of Black Soldier Fly Larvae, and many more!



Environmentally Controlled House - “Sustainable Poultry Production”



Dr. Jeyapriya S



**Dr. Rushikesh
A. Kantale,**



Dr. Mehak Jandyal

Ph.d Scholar, Department of Livestock Product Technology, Gadvasu, Ludhiana

Introduction

- In this poultryhouses, the optimum requirements of the bird is provided inside a completely enclosed and insulated house without windows.
- fresh air is brought-in and stale air is removed mechanically.
- Artificial light is provided to illuminate the interior.
- On most occasions, animal heat is used and additional heat is used mainly for brooding period

Structure

- Good foundation and a gable roof
- Insulation is compulsory
- Overhang need not be as extensive as in case of open-sided

houses because, sides are completely covered

- Both sides and the top of the building should be given protection.

Ventilation

Hot and Cold Weather Ventilation:

- Ventilation system in a poultry house consists of fans, air inlets, evaporative cooling system and controller/thermostats.
- Houses are designed to deal with both cold and hot weather extremes.

During Cold weather:

- Negative pressure ventilation is used to provide fresh air, remove moisture and minimize heat loss. Fans exhaust air out of the house

creating a slight negative pressure inside the house.

- Fresh air is pulled into the house through air inlets installed either high on the house side wall or in the ceiling.

- The fresh air should be directed towards the roof to mix with warm air and then circulate throughout the shed.

- Distribution of inlets uniformly around the perimeter of the building, size of the fans and inlets are critical if all areas of the house are to be ventilated.

- The location of the fans and air inlets depends upon the width of the building. Fans should be placed in one side wall for buildings up to 40 feet wide.

- Buildings more than 50 feet wide need fans on both sidewalls. Air inlet size is critical to proper functioning of the ventilation system.

- The air inlet velocity must be high enough to ensure fresh air reaches all portions of the facility. However, the air velocity must not be so high that the birds are subject to draughts.
- Computer controlled system can be used to determine when the fans operate and for how long.

Older Birds and in Hot Weather:

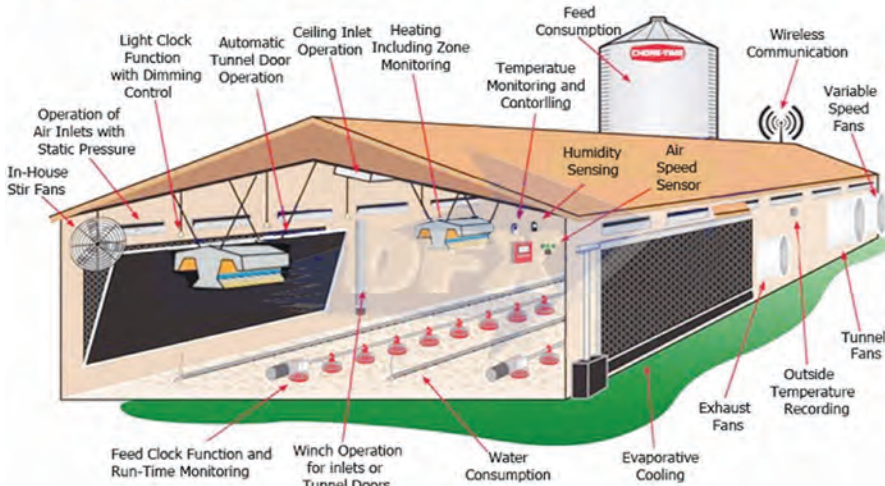
- The incoming air is directed down towards the birds and helps to keep them cool. Evaporation cooling pads can be placed in the air inlets to keep birds cool in hot weather.

Product Description



CHICKEN POULTRY HOUSE

1. Building System



Foggers

FOGGER SYSTEM

Low pressure fogging

- Inject fine water particles
- Low cost fogging system
- High quality and durable PVC Pipes are used

High pressure fogging

- Micro mist fog size (10-15 μ)
- Fogger in true sense discharges fog not water
- Operated intermittently or designed to avoid excessive water
- High pressure and durable Stainless Steel Pipes are used



- Tunnel ventilation is the most effective ventilation system for large houses in hot weather.
- Tunnel ventilation systems consists of fans at one end or middle of the house and larger air inlets at the opposite side.
- Evaporative cooling pads are located at the air inlets. When tunnel ventilation is not sufficient

to cool the house, the evaporative cooling system is activated.

- Energy in the form of heat is used to evaporate water lowering the air temperature. Sometimes water will not evaporate which led to wet litter problems.
- This problem is corrected by moving the evaporative cooling system outside of the house.

Construction of Shed

- Poultry houses are constructed with wood or steel trusses and supports. The houses are clear span structures from side wall to side wall.
- The trusses are engineered to support the weight of the roof without the need of support posts.
- The floor of the shed is compressed dirt that is covered with bedding material.
- For controlled-environment housing of layers, multi-tier cage systems are common. House dimensions are usually 40-50 ft wide, 400-600 ft long with 8 ft high sidewalls.

Ceiling and Side Walls

- To improve ventilation and reduce heating costs, most houses are constructed with dropped ceilings.
- Insulation can dramatically affect the level of supplemental heat and ventilation requirements.
- Dropped ceilings protect the trusses and ceiling insulation by acting as a vapor barrier.
- Dropped ceilings reduce the ceiling surface area and allows for the installation of ceiling insulation to reduce heat gain in during hot weather and heat loss during cold weather.
- Modern houses are well insulated with blown in cellulose or fiber glass insulation. The effectiveness of insulation is measured by its R-value.
- Insulation values of at least R-21 and R-7 are recommended in the ceiling and walls, respectively. Houses are constructed with solid side walls which provide better insulation, reduce air leaks,

Insulation

- A well-insulated building is needed for EC houses
- It prevent condensation on the inside surfaces, reduce heat loss in cold weather, and reduce solar heat gain in warm weather



Automatic controls

- To maintain the indoor temperature and provide air exchange as weather changes hourly and seasonally
- Regulate the supplemental heating rate
- Solid state controllers and computer systems capable of controlling the inlet and outlet opening and supplemental heaters



provide better light control and allow the house to be heated more efficiently.

The use of solid side walls provides a smooth surface compared to open sides walls with posts. This improves air speed during tunnel ventilation that will increase the cooling of birds next to the wall.

Cooling

- When outside temperature exceeds 29.4, it is mandatory that poultry houses must be cooled by any of the following methods.

Low-pressure Fogging System

- Fogging nozzles are installed at regular intervals throughout the building or over the birds in cages
- So that, as and when necessary, fogging can be practiced.
- The details of calculation of pad and fan requirements are given under "Mechanical ventilation".

However, the two types of this system namely,

Pad-and-fan System

The details of calculation of pad and fan requirements are given under "Mechanical ventilation".

1. Pressurised system
2. Vacuum system
3. Fog-and-fan system
4. High-pressure fogging system
5. Additional cooling: by using white washing

Light Control

- Environment-controlled houses are light-proof
- Where fans are installed in the side, light-traps must be installed to prevent light seeps into the building by providing a hood on the outside of the building over an opening extending down far enough to prevent light from entering.
- However, light-traps are likely to obstruct air movement and hence a floor requirement increases.

Control of House Environment

- Almost all modern houses rely upon electronic controllers.
- Through the use of controllers, it is possible to keep house temperatures within five degrees of the desired temperature regardless of outside temperature.
- The controller monitors house environmental conditions and adjusts the heating, Humidity, ventilation and cooling equipment as necessary to keep temperatures constant.
- The controller operates equipment in the house including: brooders, fans, inlet machines, curtain machines, evaporative cooling systems and lights.
- Alarms are used to notify if there is loss of power or if the house internal temperature gets too high or too low in relation to the desired temperature or for other malfunction. 🚨

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Eggs Transportation by Rail is Free from GST


The Karnataka bench of the GST Authority of Advance Rulings may have put an end to the debate on whether or not eggs are an agricultural produce. The AAR was approached by SAS Cargo, which transports consignments across India using leased railway containers. It sought clarity on applicability of goods and services Tax (GST) on transportation of eggs. The AAR said, in view of the notification No. 12/2017 dated June 28, 2017, eggs are indeed an agricultural produce. Thus, transportation of eggs will not attract GST. According to this notification, agricultural produce means any produce out of cultivation of plants and rearing of all life forms (except rearing of horses), for food, fibre, fuel, raw material or other similar products. The notification also requires that no further processing should be done on such items. Or, processing done by the cultivator or producer should be such that it does not alter the essential characteristics of the produce but makes it more marketable for the primary market. The GST commissioner whose comments were sought by the AAR was of the view that the intention of the notification appears to be to give relief to farmers who, in addition to cultivation, may undertake certain agro-based activities like animal husbandry, sericulture, etc. Whereas operating a hatchery and production of eggs is a commercial activity. However, the AAR held that 'fresh eggs in shell', on which no further processing is done, are covered under the definition of agricultural produce. Thus, transportation of eggs by rail from one place in India to another would be exempt. 

Indian Poultry Science Association (IPSA) elects Dr. A. S. Ranade, Dean, Mumbai Veterinary College, Nagpur as President and Dr. Jeetendra Verma and 3 others as Vice Presidents

The Indian Poultry Science Association (IPSA) engaged in promotion and welfare of poultry in the country, held its elections to elect the new Executive Committee of the Association. Due to pandemic it was decided and ballot papers were dispatched by Dr. Arun Kumar Panda, Election Officer for IPSA election, during 1st to 4th September 2021. The last date for receipt of sealed ballot papers in the office of the Election Officer was 12th October, 2021. The results were declared on 21st October, 2021. Dr. A. S. Ranade, Dean, Mumbai Veterinary College, MAFSU, Nagpur is elected as President unopposed. Four Vice Presidents elected are Dr. D. Kannan, VCRI, Udumalpet, Dr. Deben Sapkota, CVSC, Guwahati, Dr. Sanjeev Kumar, ICAR-CARI, Izatnagar and Dr. Jeetendra Verma, Bangalore. Dr. Jagbir Singh Tyagi, ICAR-CARI, Izatnagar and Dr. Avishek Biswas, ICAR-CARI, Izatnagar were elected as General Secretary and Treasurer respectively unopposed.

The General body also elected following 11 executive members:

Dr. S. C. Edwin, VCRI, Tirunelveli, Dr. Mukund Kadam, Nagpur Vety College, Nagpur, Dr. Surya Kanta Mishra, ICAR-CARI-RC, Bhubaneswar, Dr. M. Hanumanta Rao, College of Vety Sci., Hyderabad, Dr. Krishnamurthy T. N., Vety College, Shivaaamogga, Dr. T. Sujatha, ICAR-CIARI, Port Blair, Dr. Amitav Bhattacharyya, DUVASU, Mathura, Dr. K Nagaraja Kumari, NTR College of Vety Sci., Gannavaram, Dr. Chandra Deo, ICAR-CARI, Izatnagar, Dr. Om Prakash Dinani, College of Vety Sci., Anjora, Durg and Dr. Giriraj Goyal, College of Vety Sci., Rewa.

The new team led by Dr. A. S. Ranade will continue to look for the solutions to different issue in poultry academia and industry. Indian Poultry Science Association was formed with certain well defined objectives with a view to promote poultry development activities and knowledge base in the field of poultry science. The Association is registered with the Registrar of Societies, Bareilly (UP), India. The IPSA is administered by a group of professionals who are both elected by the General Body and/or nominated by the President. 



Dr. Jeetendra Verma



Dr. A S Ranade



Dr. Mukund Kadam



Dr. Amitav
Bhattacharyya



Dr. Chandra Deo



Dr. D. Kannan



Dr. Deben Sapkota



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Dr. Giriraj Goyal

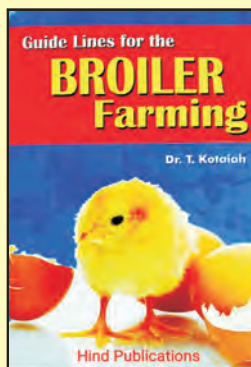


Dr. Jagbir Singh Tyagi

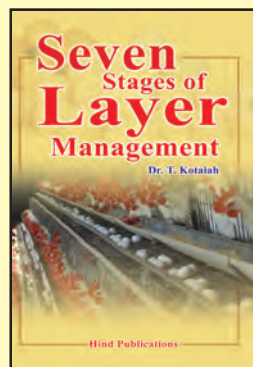


Dr. Sanjeev Kumar

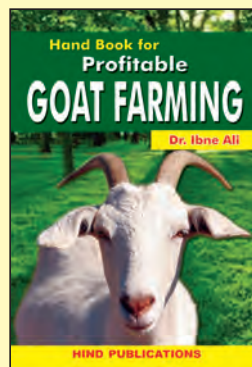
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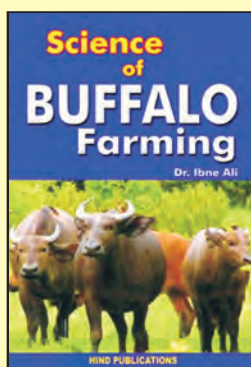
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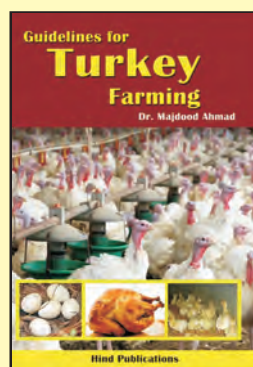
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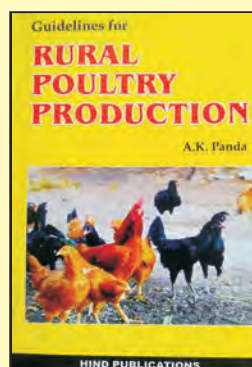
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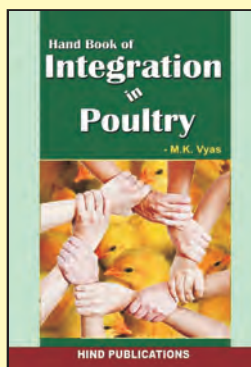
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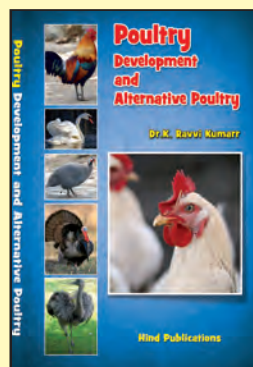
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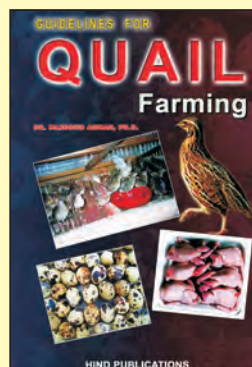
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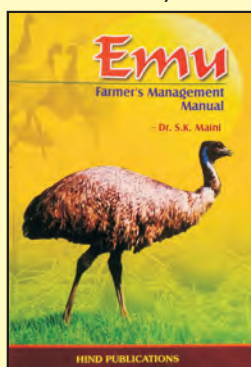
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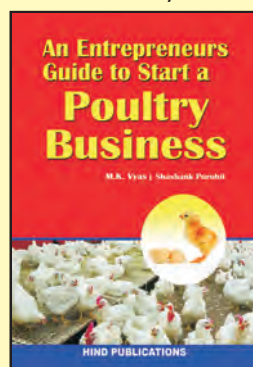
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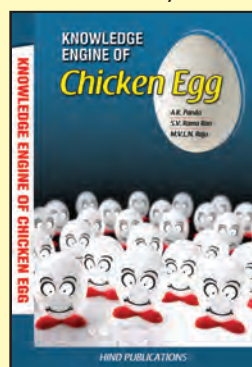
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AHIDF implementing the credit facility of Rs. 15,000 crores

The Department of Animal Husbandry & Dairying is implementing AHIDF under the Atmanirbhar Bharat Abhiyan. Under AHIDF scheme, credit facility of Rs. 15,000 crores have been made available with the scheduled banks and other lending institution for encouraging the investments across the followings:

- Processing & value addition in dairy.
- Meat processing and value addition infrastructure.
- Animal feed plants.
- Breed improvement & multiplication through technology interventions including technologically assisted poultry farms.

Following are the eligible entities (EEs) for support under AHIDF:

- Farmer Producer Organization
- Private companies.
- Individual entrepreneurs.
- Micro Small and Medium Enterprises.

The scheme has been devised to encourage investment by providing following benefits

- Loan upto 90% of estimated/ actual cost from lending institutions.
- No upper/ lower limit on loan amount and interest subvention amount.
- Three percent (3%) interest subvention by the Government of India on project loan sanctioned by lending institutions.
- Credit Guarantee covering up to 25% of the total borrowing to beneficiaries falling under MSME category.

INTRODUCTION

Fly infestations pose a significant challenge for poultry operations. Whether concentrated in a pit system, holding shed, or on a litter floor, poultry manure is an ideal medium for fly reproduction. Large fly populations can cause discomfort, stress, and decreased production in egg-laying chickens, pullets, and breeders. Flies also serve as a vector of both bird and human diseases. In extreme cases, failure to control flies may result in poor community relations or even litigation. Fly control and prevention is essential for success in the rearing and production of egg-laying chickens.



Figure 1. *Musca domestica*.

FLY BIOLOGY AND ECOLOGY

A basic understanding of the life cycle of flies and their interaction with their environment is important for developing strategies to reduce their impact. The following is focused on the house fly (*musca domestica*), a major pest on poultry farms.

Health Risks of Flies

Flies are known to be vectors for many diseases of both humans and livestock, and are considered a sign of unsanitary conditions. Flies may transmit disease by carrying viruses, bacteria, parasites, and fungi on their bodies, or through their mouthparts after contacting or ingesting infectious materials. Chickens may eat flies at any life stage, and can become infected by ingesting the insects or by direct contact. Fly populations may also create a reservoir for disease on poultry farms, making disease treatment and elimination more difficult. Figure 2 outlines several major diseases of concern for poultry that flies may carry, though there are many more^{2, 3, 5, 6, 8, 9}.

Disease	Health Risk?	
	Chicken	Human
Avian Influenza	Yes	Yes
Botulism	Yes	Yes
Coccidiosis	Yes	No
<i>E. Coli</i>	Yes	Yes
Newcastle Disease	Yes	Yes
Roundworms	Yes	Yes
Salmonellosis	Yes	Yes
Tapeworms	Yes	Yes

Figure 2. Diseases of risk associated with flies.

Life Cycle

Flies pass through four distinct life cycle stages: egg, larva (maggot), pupa, and adult fly. The lifespan of flies from egg to adult is usually 2-3 weeks, but can vary depending on environmental factors including temperature, and be as long as 3 months under cool conditions. Figures 3 and 4 give an overview of these life stages⁹.

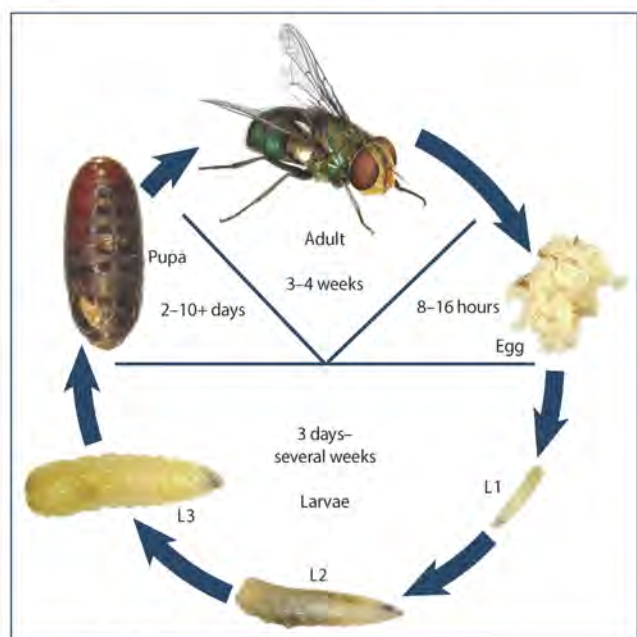


Figure 3. Life cycle of the fly.

Life Cycle Stage	Life Span	Key Features
Egg	8–16 hours ¹	<ul style="list-style-type: none"> • White, shiny, and difficult to see with the human eye • Laid in damp organic material (e.g. manure, garbage)
Larva	3 days–several weeks	<ul style="list-style-type: none"> • Account for 80–90% total fly population in most infestations. • Progress through 3 different phases (“Instars”) as they eat and grow.
Pupa	2–10+ days	<ul style="list-style-type: none"> • Encased in reddish-brown exoskeleton. • Adult fly emerges within days depending on environmental conditions. • May remain dormant in soil/substrate under extreme weather conditions for extended periods of time.
Adult Fly	3–4 weeks	<ul style="list-style-type: none"> • Grey-black, winged insect, 6–9 mm long • Rest on horizontal surfaces when not eating or reproducing. • Females may lay 700+ eggs during life.

Figure 4. Life stages of the fly.

Breeding Sites

Flies reproduce and lay their eggs in rotting, decayed, or fermenting organic matter (e.g. garbage, manure, etc.) with moisture content between 50–85%. Fresh poultry manure has approximately 75–80% moisture content, making it highly desirable as a medium for development of fly populations⁵.

Diet

Fly larvae have chewing mouth-parts, and consume any rotting organic material in their environment. Adult flies have sucking mouth-parts (proboscis), and must consume food that is already in a liquid state, or can be dissolved by their acidic saliva. Eggs and pupae stage flies do not eat, and survive entirely on stored energy⁹.



Figure 5. Flies breeding.

Behavior and Distribution

As with diet, the behavior and distribution of flies varies by life-stage. Eggs are laid in organic material with 50–85% moisture content. Larvae remain in this environment, burrowing into the material. They must remain near the surface where conditions are moist, and they have access to oxygen. Their only activities are feeding and hiding. As the larvae mature they seek out drier material, and dig deeper beneath the surface (1–3 cm)⁹.

After the adult fly emerges it is mainly active during daylight hours when it breeds and eats. Adult fly populations may have an activity range of 0.8–3.2 km (0.5–2.0 miles). They can travel much further by “hitching a ride” in a travelling car or truck. At night and any time when they are not eating or breeding, adults are considered at rest, or “roosting.” Adults roost on any stable surface they can find (floors, walls, ceilings, furniture, plants, fences, garbage cans, etc.), preferring locations close to breeding or feeding sites. They may also adapt their activity somewhat to artificial lighting schedules^{5,9}.

Adult flies are most active at temperatures between 20–25°C (68–77°F) with low humidity. At higher temperatures (greater than 95°F/35°C), they will spend more time resting, and may prefer to be outdoors. At temperatures below 10°C (50°F), adult flies and pupae may remain alive, but dormant⁹.

MONITORING

Systematic monitoring of fly populations helps in decision making about when and where to deploy insecticides. It also can provide for a legal record in the event of a public health or nuisance complaints relating to flies originating from the farm. A consistent and reliable fly surveillance method provides a more accurate reference point for fly numbers than simple observation of adult flies.

Sticky fly tape is inexpensive and may help with identification of fly species. Hanging of tape in the aisles of chicken houses must be done strategically in areas where flies are more likely to circulate (such as near manure belts, or water lines), or fly numbers may appear lower than they really are. Additionally, tape may become clogged with dust making them ineffective within just a few days. An alternative use of is to take a moving tape count; walking a routine area of likely fly activity in each house (304 m/1,000 ft), while holding tape and counting the number of flies caught.

Fly speck cards are another inexpensive means of fly monitoring (Figure 6). White index cards (8x12 cm/3x5 in) can be hung from the ceiling or rafters of the manure pit and other fly resting areas. Fly specks (brown spots left when flies land on the cards) are counted weekly. Fifty spots/card per week is a standard beyond which fly treatment with bait and residual adulticides is called for. 100 spots/card per week or more indicates use of a contact adulticide. Cards should be checked and changed at least once a week, but may need to be screened and changed more often if fly numbers are high. Cards should always be strategically positioned in the same location. Cards are easily dated and filed for record-keeping purposes.

Fly traps can be hung from wire or placed on the floor of manure pit. Traps should be checked and bait replaced at least once a week. Traps are more costly to set up and change than speck cards, but they kill flies and allow for identification of fly species.

Screening for larvae in the manure pit is as important as monitoring for adult flies. The manure pit should be walked daily to screen for wet spots or areas where flies are visibly concentrated. Manure can be dug up to look for eggs and larva just below the surface. This provides an opportunity for precise application of larvicide and manure drying chemicals. Daily manure production covers treated areas, necessitating regular inspection of the pit^{6,9}.



Figure 6. Examples of fly speck cards from a manure pit. Date, location, and number of spots are marked on card fronts.



Figure 7. An egg with many fly spots indicates a fly problem.



Figure 8. Flies are attracted to feed. This reduces feed efficiency for the flock and increases the risk of contamination.

FLY CONTROL STRATEGIES

Developing an effective fly control program is important for the success of any poultry operation. The most successful programs combine multiple control methods with diligent monitoring to minimize the economic and health threats posed by flies.

Sanitation

Manure management is the single most important aspect of fly control in poultry operations. Drying manure to less than 50% moisture content makes it a poor environment for fly reproduction. The manure pit must be walked daily to screen for fly blooms and wet spots. When wet spots are found the source of excess moisture needs to be identified and corrected. Common sources include leaking water lines, condensation from faulty insulation, improper ventilation (drying failure), and leaks from outside. Ventilation of the manure area with exhaust fans and air-circulating fans in the manure pit is important to aid in manure drying. Both indoor and outdoor manure and feed spills should be minimized and cleared as soon as they are noticed.

Dead birds, as well as cracked, dirty, and floor eggs should be disposed of quickly and securely as far from the chicken house as possible. Maintain clean office, entry, and break areas. Clearing grass, weeds, and clippings near the facility's perimeter or in nearby features like drainage ditches eliminates potential outdoor fly resting areas^{5, 6, 9}.

Structural Defenses

Maintenance of biosecurity barriers prevents outdoor flies and other pests from entering bird areas. Look for and seal cracks and breaches in the barn and connected structures such as feed bins and manure loadout sheds. Doors should be opened only when absolutely necessary.

Generally, enough force is produced by exhaust fans in the chicken house or manure pit to prevent flies entering against active airflow. However, when fans are not running they provide an ideal access portal for flies to enter the building. Fan louvers should always be closed to prevent flies entering the building when fans are off. If exhaust fan louvers, or any other area, must remain open for passive airflow, the opening should be screened with a fine, securely installed mesh.

Physical fly traps placed near major access points can attract flies away from breeding areas. Baited traps can be made from jugs, cans or buckets and placed near portals or hung from the rafters of the pit. Sticky fly tape is less expensive and may serve the same purpose. Both of these traps also can be used for fly monitoring, but must be regularly checked and replaced to remain effective. Electrocuter light traps ("bug zappers") are effective, but costly, and are therefore of greater value in human working (offices, egg sorting rooms, etc.) and egg storage and transfer areas^{6, 9}.

Biological Defenses

Maintaining populations of other organisms that compete with or prey on flies can help to compliment other elements of a fly control program. Special attention must be paid in selecting which species to use for fly-control so as not to introduce a new pest. For example, hister beetles are well-known predators of fly eggs, and dump flies can successfully outcompete house flies, but both of these species can still carry and transfer poultry diseases. Certain mites thrive in poultry manure (*Macrocheles muscae domesticata* and *Fuscurooda vegetans*) and feed on fly eggs and larvae, but care must be taken not to confuse them with other mite species that are parasitic to chickens. Parasitic wasps can be purchased commercially, and introduced near fly breeding areas. When they emerge, they will seek out fly pupae and lay eggs inside them, killing the fly at this life stage. Large fly populations can quickly overwhelm biological control methods, so they should always be used in conjunction with other strategies^{2, 3, 8}. In integrating parasitic wasps into a control strategy, it is important to be aware that many knockdown adulticides will also kill the wasps.

In addition to insects, microorganisms that harm flies may be introduced into the farm system. The bacterium *Bacillus thuringiensis* causes disease in flies, but not chicken or people. Where available, it may be spread on chicken manure directly, or fed through the chicken as a feed additive⁷.

Chemical Control

There are four basic types of chemical insecticide fly control: larvicides, residual adulticides, baits, and contact adulticides.

Larvicides include contact larvicides and insect growth regulators (IGRs). They may be sprayed onto maggot infested areas directly, or, when manure is very wet, may be applied as a dry granule.

Residual adulticides are sprayed on surfaces where newly emerged flies are likely to rest. Residues may last from days to months depending on the product, and the surface it is applied to (porous surfaces like wood may absorb the chemical rapidly).

Examples of residual adulticides by class are outlined in Table B. **Follow local regulations regarding the use of fly control products in poultry facilities.**

Baits will attract flies and can be used in traps or as spot-on treatments indoors and outdoors. Some neonicotinoid, ryanoid, and carbamate class baits are outlined in Table C.

Contact adulticides can be fogged, misted, or sprayed as a last resort when other control measures fall short. These are generally pyrethrin or permethrin class products. Refer to Table D for example contact adulticides^{2, 4, 5, 6, 8, 9}.

TABLE A: LARVICIDES FOR FLY CONTROL		
Class	Active Ingredient	Example Brands
Insect Growth Regulator (IGR)	Cyromazine	Flynexx, Larvadexx, Neporex

TABLE B: INSECTICIDES USED FOR RESIDUAL TREATMENT IN FLY CONTROL	
Class	Example Brands
Organophosphates	Durashield, Rabon
Pyrethroids	Lambda, Optashield, Stanguard, Tempo
Permethrin	Permacap
Imidacloprid	Credo, Exile

TABLE C: INSECTICIDES USED IN TOXIC BAITS FOR FLY CONTROL		
Class	Compounds	Example Brands
Neonicotinoid	Imidacloprid	Quickbayt
	Nithiazine	Quik Strike
	Thiamethoxam	Agita
Carbamate	Methomyl	Golden Malrin
Ryanoid	Cyantraniliprole	Zyrox

TABLE D: KNOCKDOWN INSECTICIDES FOR FLY CONTROL	
Class	Example Brands
Permethrin	Permethrin, Pyranon
Pyrethrin	BP-100, BP-36, Riptide, Microcare

Resistance and Rotation

Unfortunately, overuse of popular insecticide products over the years has led to the development of resistant fly populations. Rotation of the product used can help reduce the likelihood of resistance emerging. When rotating products changes should be made on the basis of chemical class (e.g. organophosphate or pyrethroid) rather than the brand.

Precise use of insecticides can help to reduce the development of resistance, as well as reduce the cost of treatment. Overuse of insecticides in manure areas may kill helpful biological defenders against flies. An effective monitoring program can guide decisions about precise and prudent insecticide applications^{1, 2, 8}.

Human Health Risks

Always read and follow the manufacturer's instructions for safe handling and personal protection whenever handling insecticides. Have appropriate gloves, goggles, clothing, footwear, respiratory protection, and any other personal protective equipment (PPE) indicated by the chemical's safety labeling. When in doubt, request an SDS (safety data sheet) from your vendor or supervisor.

In addition to direct human and animal health cautions, insecticides and cleaning chemicals may contaminate birds or eggs, rendering them unfit for consumption. For example, the chemical fipronil, present in some insecticides, can be passed into eggs if ingested by or applied on chickens. Be certain to use only products labeled for use around chickens in areas where bird contact is possible.

FLIES OF THE WORLD

House flies tend to predominate in poultry regions of the United States, but other species like the ones below may be more common in other areas of the world.



Figure 9. Blow fly.



Figure 10. Garbage fly.



Figure 11. Lesser house fly.



Figure 12. Soldier fly.



Figure 13. Stable fly.

REFERENCES

1. Bailey, D.L., D. W. Meifert, and P. M. Bishop. "Control of house flies in poultry houses with larvicides." *Florida Entomologist* (1968): 107–111.
2. Catangui, M. "Controlling disease-carrying house flies in poultry houses." *Poultry Outlook* Spring 2017. (2017): 11–14.
3. Catangui, M. "Getting to know the dump fly." *Poultry Outlook* Summer 2017. (2017): 10.
4. Catangui, M. "To larvicide or not: is that the question?" *Poultry Outlook* Summer 2017. (2017): 13–15.
5. Kauffman, P.E., D.A. Ruiz, and C.W. Pitts. *Pest Management Recommendations for Poultry*. The Pennsylvania State University. (2000)
6. Lyon, W.F. *Poultry Pest Management*. The Ohio State University Extension Bulletin 853. (1995)
7. Merdan, B.A. "*Bacillus thuringiensis* as a feed additive to control *Musca domestica* associated with poultry houses". *J. Basic & Appl Zoology* (2012) 65: 83–87.
8. Rowland, R. Chapter 11: Insect Problems in Poultry Production Facilities Chapter for Risk Management for Disease Prevention in the Poultry Industry. *A Practical Guide for Managing Risk in Poultry Production*. 2nd edition. Jacksonville: American Association of Avian Pathologists, Inc. (2017). 151–157.
9. World Health Organization. Chapter 6: Houseflies. *Vector Control – Methods for Use by Individuals and Communities*. 1997. 302–323. Online Edition.

IMAGE SOURCES

- **Figure 1:** Anagoria (username). "2013 Naturkundemuseum Berlin musca domestica anagoria." 9 March 2013. Online image. Wikimedia Commons. 27 October 2017. https://commons.wikimedia.org/wiki/File:2013_Naturkundemuseum_Berlin_musca_domestica_anagoria.JPG. Creative Commons license at <https://creativecommons.org/licenses/by/3.0/deed.en>.
- **Figures 2–4:** Hy-Line International.
- **Figure 5:** André Karwath. "Anthomyiidae sp. 1 (aka.jpg." 8 September 2005. Online image. Wikimedia Commons. 28 March 2018. [https://commons.wikimedia.org/wiki/File:Anthomyiidae_sp._1_\(aka\).jpg](https://commons.wikimedia.org/wiki/File:Anthomyiidae_sp._1_(aka).jpg). Creative Commons license <https://creativecommons.org/licenses/by-sa/2.5/deed.en>.
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The advertisement features a laptop on the left displaying the Hind Poultry logo. The background is blue with a yellow horizontal band and two vertical red lines on the right. Text on the right side reads: "Our WEBSITE Got a New Makeover", "Visit Today", and "www.hindpoultry.com".

SAMPLE FLY CONTROL PROGRAM

The following is a generalized program for a deep pit layer house, but should be adapted to the unique regional and structural component of a layer or layer breeder operation. Always follow all local regulations for chemical application and handling in bird areas⁸.

1. A farm culture of biosecurity, sanitary maintenance of the premises, and regular inspection and maintenance of manure holding areas should be instituted and practiced by all farm personnel and support staff.
2. Fly speck cards are placed throughout the house, work areas, and egg holding area. Check at least once/week. If there are 50 fly specks/card or more proceed treat with a residual adulticide. If there are 100 fly specks/card or more, deploy a contact adulticide.
3. Spot treat all areas where maggots are present in litter piles (e.g. wet spots) with a selected larvicide every 1–3 weeks during peak fly season.
4. Apply fly bait or place baited traps every 3 m (9 ft) in the manure pit at the start of the peak season or during cleanout. Replace bait weekly as needed.
5. Apply a selected residual adulticide to vertical surfaces in the pit areas. Do NOT apply directly to litter piles. Repeat every 2–4 weeks during fly season. Repeat every 6–8 weeks during colder months.
6. Apply the same residual adulticide as in (5) to all outdoor surfaces where flies are observed resting. Repeat every 2–4 weeks.
7. In cases of large adult fly blooms, or if fly numbers are at 100 fly specks/card/week or more, A fogged pyrethroid contact adulticide should be used.
8. Rotate class of adulticide used between each flock, OR if fly numbers have not declined after application of a contact adulticide as in (7).



CONCLUSION

Fly control is a daily activity in egg layer facilities. Depending on season, fly numbers can reach critical levels in a matter of days if adequate measures are not taken for prevention. Flies are a major irritant to chickens, as well as those working with them. They also harbor and carry diseases that impact both birds and people. Reducing fly numbers enhances bird performance and improves food safety.

An infographic for a hard-boiled egg. It features a cracked egg with a yellow yolk and white egg white. The title 'Egg (Hard Boiled)' is prominently displayed. Below the title, there are two yellow boxes with checkmarks: 'Low-Sodium' and 'Gluten-Free'. A text block states: 'While they are high in saturated fat, hard-boiled eggs are also a good source of protein and other nutrients'. Surrounding the egg are several circular callouts with nutritional information: '5G FAT', '0G FIBER', '6G PROTEIN', '0.6G CARBS', and '78 CALORIES'.

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✓ Low-Sodium ✓ Gluten-Free

While they are high in saturated fat, hard-boiled eggs are also a good source of protein and other nutrients

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0.6G CARBS

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