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POULTRY LINE
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PRESS RELEASE

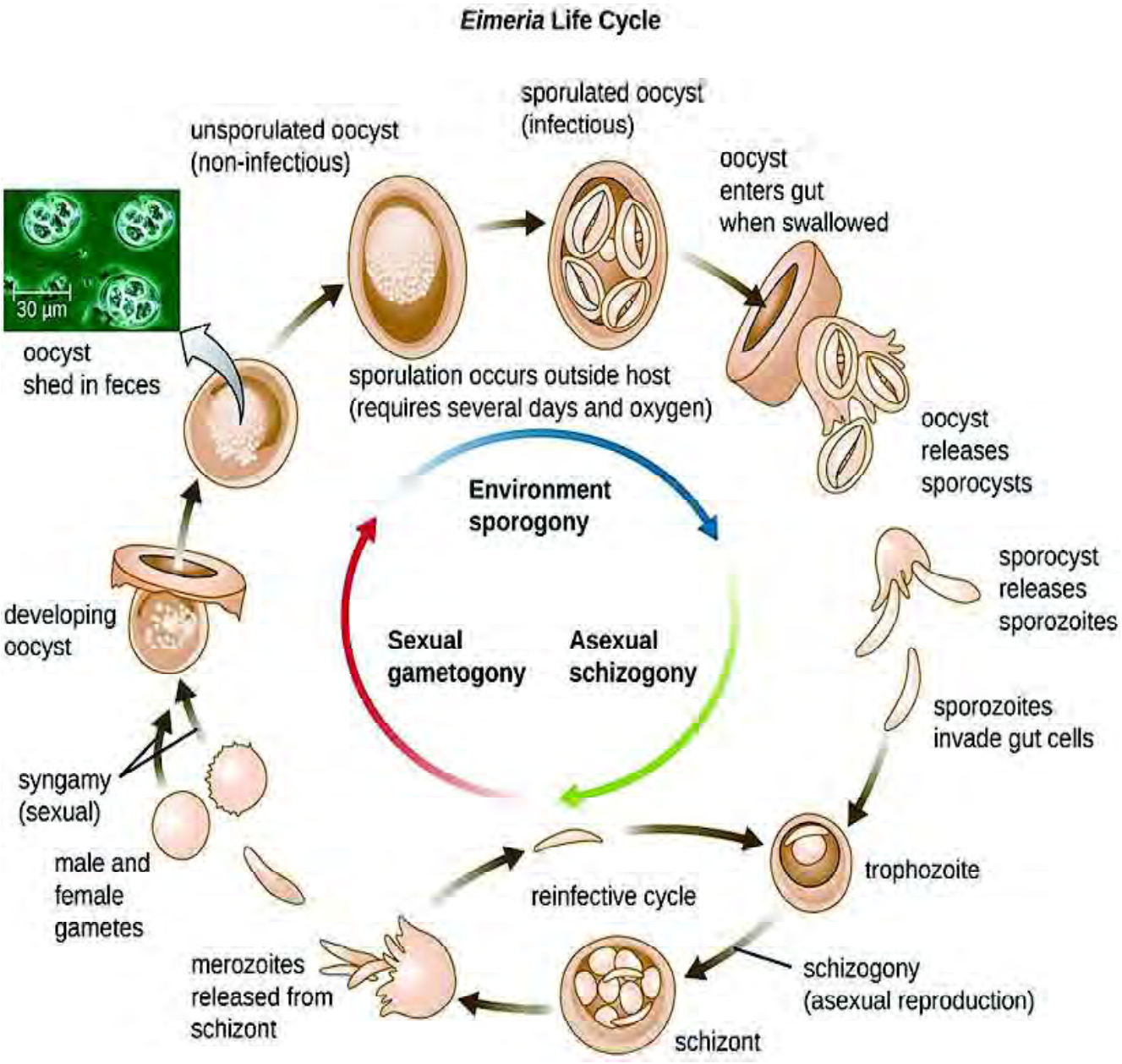
GLOCREST

Prevention of Coccidiosis: Shuttle Program Solutions by GLOCREST

Dr Ramdas Kambale

CocciCare CocciCare-M CocciCare-L

Avian coccidiosis is a parasitic disease caused by protozoa of the genus Eimeria spp.



Eradication of coccidia has proved impossible and the transmission stage of the parasite — known as oocysts — can be found in the litter of most commercial broiler houses. The transmission of this coccidia within the facility or even between farms is carried out in a feco-oral way, or through vectors, whether they are contaminated materials, or by live vectors, such as rodents, worms, flies or beetles

- clinical coccidiosis in which the affected birds show typical symptoms of the disease, such as bloody droppings and increased mortality, and
- subclinical coccidiosis because the affected birds do not show visible symptoms of the disease but when a random sample of birds is examined, the presence of the gross lesions and the coccidia are found

In order to minimize the risk of resistance to coccidiostats, it is common to carry out rotation or shuttle programs, in which different synthetic coccidiostats and ionophores are used in each production cycle or even within the same cycle.

Combination products, consisting of either a synthetic compound and ionophore (e.g., Monensin+Nicarbazin+Vit K3 + Curcumin extract- CocciCare, Maduramicin+ Nicarbazin+Vit K3 + Curcumin extract - CocciCare-M Lasalocid sodium +Vit K3 + Curcumin extract - CocciCare-L

Shuttle and Rotation programs

In general, ionophores have a similar mechanism of action against the parasite, whereas chemicals have different modes of action; therefore, a strain that develops resistance to an ionophore may be controlled by a chemical, and vice versa. The poultry industry has taken advantage of this with the introduction of shuttle and rotation programs that have helped slow the development of resistance.

A shuttle program involves utilizing a different drug in different feeds provided to the growing chick. For example, one frequently employed shuttle program involves the use of Nicarbazin in the starter feed and an Ionophore in the finisher diet. A rotation program involves using different drugs in successive flocks

Ideally, a cleanout should follow the first two flocks to help reduce the numbers of any drug-resistant parasites that may be present. The drug-sensitive vaccine strains will repopulate the poultry house when the vaccine is employed, which helps improve the efficacy of in-feed anticoccidials in subsequent flocks

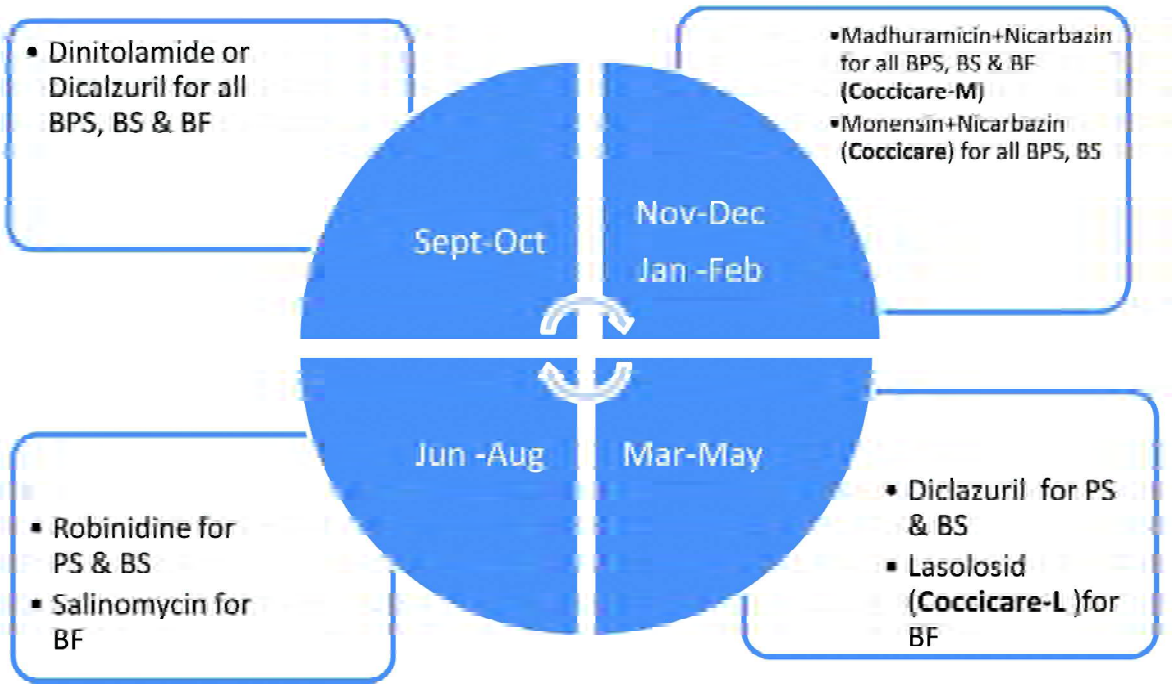
For many years coccidiosis prevention and control relied on the use of synthetic anticoccidials, commonly referred to as **chemicals**. In many cases, resistance to these drugs quickly occurred - within 1 to 3 years - and they became ineffective. Of this group, only nicarbazin remains effective today

When the same ionophore anticoccidial is added to the starter and grower feeds, this is popularly referred to as a **straight program**. These are commonly used in spring and summer. In some straight programs, the concentration of the anticoccidial may be increased in the grower feed to provide maximum protection at the time of peak coccidial oocyst shedding (3-4 weeks). This is known as a **step-up program**, in other cases, the concentration of the anticoccidial may be decreased in the finisher feed, this known as a **step-downprogram**.

In other cases, a chemical anticoccidial is added to the starter feed, grower feed and an ionophore anticoccidial to the finisher feed, this is popularly referred to as a **shuttle program**.

Curcumin Extract:

One of the natural compounds is curcumin, theextract from herbal plant *Curcuma longa,*known for its antioxidant and antimicrobialproperties which may be effective in reducing Coccidia infection in poultry.



Note: This shuttle program may vary based on prevalence and recommended by veterinarians

BROILER LIFTING RATES FOR THE MONTH OF DECEMBER 2022

Place	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Hyderabad	102	100	102	103	108	108	108	104	104	106	108	110	112	114	114	114	116	121	121	121	121	121	118	118	118	118	114	114	114	115	115
Karimnagar	102	100	102	103	108	108	108	104	104	106	108	110	112	114	114	114	116	121	121	121	121	121	118	118	118	118	114	114	114	115	115
Warangal	102	100	102	103	108	108	108	104	104	106	108	110	112	114	114	114	116	121	121	121	121	121	118	118	118	118	114	114	114	115	115
Mahaboobnagar	102	100	102	103	108	108	108	104	104	106	108	110	112	114	114	114	116	121	121	121	121	121	118	118	118	118	114	114	114	115	115
Kurnool	102	100	102	103	109	109	109	104	104	106	108	110	112	114	114	114	116	121	121	121	121	121	118	118	118	118	114	114	114	115	115
Vizag	97	97	99	104	110	110	110	110	109	109	109	109	109	109	109	109	111	116	116	116	116	116	116	116	116	116	116	116	116	116	116
Godavari	102	100	102	105	110	110	110	113	106	106	108	110	112	112	112	112	114	119	119	119	119	119	119	119	119	119	119	119	119	119	119
Vijayawada	102	100	102	105	113	113	113	113	106	106	108	110	112	112	112	112	114	119	119	119	119	119	119	119	119	119	119	119	119	119	119
Guntur	105	103	105	108	113	113	113	118	109	109	111	113	115	115	115	115	117	122	122	122	122	122	122	122	122	122	122	122	122	122	122
Namakkal	112	112	100	100	102	104	104	104	106	106	106	106	106	106	106	108	108	111	111	111	113	113	113	113	113	113	106	108	110	112	112

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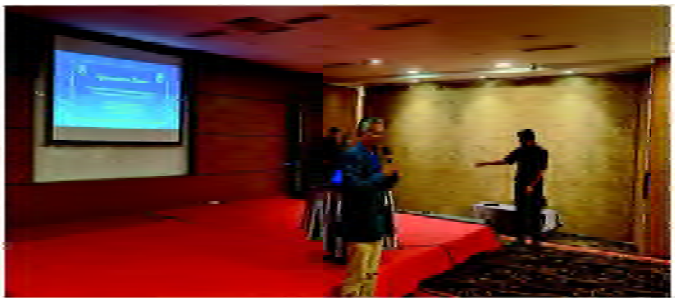
During the recently concluded 14th Poultry India Expo, Hyderabad, Bentoli® India hosted **an appreciation dinner** in Hotel Daspalla, Hyderabad on 23rd November,2022 for being awarded by the Industry Outlook magazine as amongst the top 10 animal health companies in India.



More than 100 guests from India, Bangladesh and Nepal joined with the Bentoli® team to celebrate.

Dr. Victor Suresh, Managing Director, Bentoli® India welcomed all the guests and expressed his gratitude for their support in past years. He also shared the vision and objective of Bentoli® Inc in the South Asian market.

Valued customers, channel partners and all other stakeholders appreciated the product and services offered by Bentoli®.

ABOUT BENTOLI®

Bentoli® is dedicated to providing our customers with the highest quality products, services and consultative solutions that will tangibly improve their operational and financial performance.

The company manufactures preservatives, processing and nutritional additives for aqua and animal feeds. It employs a comprehensive and methodical approach to develop optimal solutions for feed manufacturers and farmers. Working closely with feed manufacturers and livestock operators to thoroughly understand their specific needs, the company uses a consultative, collaborative approach to identify problems, develop solutions and continuously monitor performance to achieve desired results for our customers. It has an active R&D involving labs and animal rearing facilities. Bentoli® has manufacturing facilities in North America and Asia and serves customers through an extensive network of sales offices and valued distributor partners throughout the globe.

PRESS RELEASE

Novus India launchesBreeder Management and Nutrition: Moving the industry forward book during Poultry India Expo 2022

Novus's latest publications how cases insights and experience of industry experts around the world

BENGALURU,INDIA (November 23,2022)–The Novus India team held a successful launch of our latest book, *Breeder Management and Nutrition: Moving the industry forward,* during Poultry India Expo 2022 at Hyderabad. One hundred twenty breeder operators, media, and business partners from India, Bangladesh, and Nepal shared their overwhelming responses to the new publication during the event.

Novus Executive Manager for Global Poultry Solutions Hugo Romero-Sanchez, PhD., was joined by a fellow book author virtually to present highlights from the book on the topics of progeny, macro minerals, and male breeder nutrition.

The book's 14 chapters were carefully curated to serve as a reference for current broiler breeder production best practices and considerations as well as to be a catalyst for new ideas in management, nutrition, and industry sustainability.

Those in the industry and academia will likely recognize the book's contributors: Eddy Decuypere of KULeuven, Aitor Arrazola of Perdue University, Rickvan Emousand Annemarie Mens of Wageningen Livestock Research, Henk Enting of

Cargill, Dinabandhu Joardar of Cargill, EdgarO. Oviedo-Rondón of North Carolina State University, Rebecca Forder of the University of Adelaide, Johan Buyse of KULeuven, Juan Carlos AbadandRobinJarquinofCobb-Vantress, David Cavero Pintado and Xabier Arbe Ugalde of H&N International, and Stanislaw Budnik, Juxing Chen, Silvia Peris, Hugo Romero-Sanchez, and Mercedes Vázquez-Añón of Novus.

"It was important to have contributors from recognized academia, as well as experts from the industry and breeding companies, to properly cover the vast array of topics ranging from practical management, nutrition (quality and quantity), welfare, (epi)genetics and physiology," Buyse said.

To download a free digital copy of the book, visit https://lnkd.in/gDeH9SMn

Formoreinformation,visitwww.novusint.com.

###

Novus International, Inc. is a leader in scientifically developing, manufacturing, and commercializing nutrition and health solutions for the animal agriculture industry. Novus's portfolio includes ALIMET®, MFP®, and MHA® feed supplements, MINTREX® bis-chelated trace minerals, CIBENZA® enzyme feed additives, NEXT ENHANCE® feed additive, ACTIVATE® nutritional feed acid, and other feed additives. Novus is privately owned by Mitsui & Co., Ltd. and Nippon Soda Co., Ltd. Headquartered in Saint Charles, Missouri, U.S.A., Novus serves customers around the world. For more information, visit www.novusint.com.

NATIONAL EGG CO-ORDINATION COMMITTEE

DAILY / MONTHLY EGG PRICES DECLARED BY NECC AND PREVAILING PRICES AT VARIOUS PRODUCTION CENTRES (PC) AND CONSUMPTION CENTERS (CC) JANUARY 2023

Name Of Zone / Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Average
NECC SUGGESTED EGG PRICES																																
Ahmedabad	573	575	577	577	577	582	585	590	592	596	600	605	608	-	-	610	610	610	-	595	580	580	580	580	545	530	530	530	495	-	-	577.38
Ajmer	551	551	551	551	540	556	560	561	570	571	571	571	571	570	570	571	571	561	550	550	517	517	517	500	490	490	470	445	-	-	-	541.57
Barwala	544	544	544	544	544	549	553	557	565	568	571	571	571	571	571	571	571	551	551	551	515	515	515	-	470	470	470	426	426	-	-	534.61
Bengaluru (CC)	560	565	565	565	565	565	565	565	575	575	575	575	575	575	575	575	575	575	575	575	550	550	550	550	550	520	-	495	495	-	-	559.82
Brahmapur (OD)	554	557	560	560	560	560	563	566	571	571	573	577	577	582	582	585	585	585	585	565	565	555	535	535	530	525	510	495	485	-	-	557
Chennai (CC)	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	550	550	550	550	535	520	520	500	-	-	563.79
Chittoor	568	568	568	568	568	568	568	568	568	568	568	568	568	568	568	568	568	568	568	568	568	543	543	543	543	528	513	513	493	-	-	556.79
Delhi (CC)	566	566	566	566	566	566	568	575	582	590	590	590	592	592	592	592	592	592	573	570	570	540	530	530	510	510	495	480	-	-	-	562.54
E.Godavari	534	537	540	540	540	540	543	546	551	554	556	559	561	563	565	567	567	567	555	555	540	540	515	515	510	505	490	480	480	-	-	538.45
Hospet	520	525	525	525	525	525	525	525	535	535	535	535	535	535	535	535	535	535	535	535	510	510	510	510	510	480	-	455	455	-	-	519.82
Hyderabad	538	541	541	541	541	541	545	549	553	556	559	561	563	563	563	563	563	563	550	530	530	530	530	510	490	490	490	470	-	-	-	538
Jabalpur	550	560	555	555	543	551	560	570	570	575	575	565	565	565	572	572	577	577	560	548	533	533	533	533	515	505	500	490	-	-	-	550.25
Kolkata (WB)	605	608	608	608	608	608	611	615	617	620	625	625	630	635	639	639	629	624	624	605	605	585	585	570	570	570	540	530	500	-	-	601.31
Ludhiana	543	543	543	543	543	543	550	556	560	566	566	568	568	568	568	568	568	568	553	551	536	521	516	-	496	486	471	471	441	-	-	538.36
Mumbai (CC)	596	599	602	602	602	602	602	606	610	614	617	620	622	624	624	624	624	624	624	610	590	590	590	590	570	550	550	550	530	-	-	598.55
Mysuru	562	567	567	567	567	567	567	567	577	577	577	577	577	577	577	577	577	577	577	577	550	550	550	550	550	520	520	495	495	-	-	559.83
Namakkal	550	555	555	555	555	555	555	555	565	565	565	565	565	565	565	565	565	565	565	565	545	545	545	545	545	515	515	490	490	-	-	550
Pune	593	595	595	595	595	595	595	598	601	604	607	610	610	610	610	612	614	614	614	600	590	590	590	590	590	580	560	550	530	-	-	594.38
Raipur	560	560	560	560	550	560	570	570	570	580	580	580	570	560	565	565	570	570	555	545	530	530	533	530	515	500	500	490	-	-	-	551
Surat	580	585	585	585	585	590	595	600	600	605	610	615	615	-	-	620	620	620	-	600	590	590	590	590	570	550	550	550	530	-	-	589.23
Vijayawada	534	537	540	540	540	540	543	546	551	554	556	559	561	563	565	567	567	567	555	555	540	540	515	515	510	505	490	480	480	-	-	538.45
Vizag	550	552	555	555	555	555	558	558	560	562	565	568	570	572	575	575	575	575	575	575	575	550	550	530	530	520	500	480	480	-	-	551.72
W.Godavari	534	537	540	540	540	540	543	546	551	554	556	559	561	563	565	567	567	567	555	555	540	540	515	515	510	505	490	480	480	-	-	538.45
Warangal	540	543	543	543	543	543	547	551	555	558	561	563	565	565	565	565	565	565	552	532	532	532	532	512	492	492	-	472	-	-	-	541.78
Prevailing Prices																																
Allahabad (CC)	586	586	586	586	586	590	600	610	614	619	624	624	624	624	624	610	605	605	600	590	590	571	562	552	543	538	524	500	490	-	-	584.93
Bhopal	-	555	560	565	565	565	570	-	590	600	600	580	575	575	-	580	580	580	580	565	565	550	550	530	530	-	515	505	-	-	-	563.75
Indore (CC)	-	560	560	560	560	560	570	-	590	590	580	575	570	570	-	570	575	570	560	550	535	535	535	525	515	-	500	500	-	-	-	554.79
Kanpur (CC)	576	576	576	576	576	586	595	595	614	614	614	614	614	614	614	614	595	586	586	562	562	548	548	533	505	505	505	490	467	-	-	571.03
Luknow (CC)	600	600	600	600	600	610	616	616	630	630	630	630	630	630	630	630	617	617	617	617	610	603	600	590	573	573	563	563	550	-	-	606.03
Muzaffurpur (CC)	601	601	601	598	598	604	611	620	-	625	625	633	633	628	630	630	630	612	612	600	585	580	560	560	535	535	515	515	480	-	-	591.32
Nagpur	560	560	550	555	555	560	560	570	570	570	582	582	582	570	570	570	570	570	560	550	550	540	540	535	510	510	510	510	-	-	-	554.32
Patna	601	601	601	598	598	604	611	620	-	625	625	633	633	628	630	630	630	612	612	600	585	580	560	560	535	535	515	515	480	-	-	591.32
Ranchi (CC)	601	601	600	600	590	595	600	610	-	619	619	619	619	619	619	624	624	619	614	610	590	586	576	571	562	548	533	524	500	-	-	592.57
Varanasi (CC)	616	616	607	607	607	607	616	623	-	633	633	633	633	633	633	633	627	620	610	600	593	583	583	583	567	550	533	533	523	-	-	601.25

Poultry waste management: An approach for sustainable development

Dr. Pallabi Das[1], Dr. Akshay R. Bariya[2] and Dr. Bhavesh I. Prajapati[3]
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[2]Assistant Professor (Department of Livestock Products Technology), Kamdhenu University, Junagadh
[3]Assistant Professor (Department of Veterinary Public Health), Kamdhenu University, S.K.Nagar
*Corresponding author: akshaybariya196@gmail.com

Abstract
The Indian poultry industry has experienced phenomenal expansion since the late 1970s. Poultry is one of the livestock species that is raised the most intensively and provides significant quantities of animal protein to the world. They frequently provide some environmental threats to both human and animal lives through water/soil and air pollution, in spite of their enormous socioeconomic benefits in terms of the production of eggs, meat, and jobs. These wastes include, but are not limited to, litters, on-farm fatalities, bird excrement, and waste from hatcheries. These wastes cause severe pollution issues if they are not utilized properly. Due to their abundance in keratin proteins and amino acids, poultry feathers can be used to make important goods including feather meal, biodiesel, biodegradable plastic, and fertilizer. Additionally important as a source of fertilizer, methane, and power is poultry manure. This review goes into great length regarding the potential for using various poultry wastes. A lot of poultry waste is produced. The trash can still be recycled into valuable items, but cost-effective technologies have not yet been discovered.

Keywords: Waste, poultry, Environment, Biofuel, Sustainable management

Introduction

The poultry business is expanding quickly on a global scale and helps to meet important national development objectives as well as raise people's standards of living by reducing poverty and opening up job opportunities. claimed that the issue associated with chicken farming is the manure that needs to be dealt with because improper treatment or disposal can be dangerous for the environment and humans. According to UN Environment Programme Data (2021), the annual production of solid waste is currently anticipated to be 11.2 billion tonnes, and by 2025, this will rise to 19 billion tonnes annually. The generation of municipal solid waste (MSW) due to the 7.8-billion-person world population was calculated to be approximately 2.01 billion tonnes annually (Global Waste Generation, 2020). Large volumes of various wastes produced by the poultry business, such as faeces, mortalities, and postprocessing abattoir wastes, necessitate a regular and dependable management approach as well as quick removal from the slaughterhouse (Ferreira *et al.*, 2018). For instance, if manure is not handled appropriately, it may contribute to the spread of illnesses and contaminate soil and groundwater resources. Anything that is no longer usable and needs to be rid of is considered waste. Additionally, garbage can be categorized based on the kind of production it is and the location, such as agricultural, domestic, industrial, and mining. Large amounts of wastewater and solid waste are produced by the chicken business. The solid waste is made up of bedding materials, excreta (manure), feed, feathers, shells, sludge, abattoir waste (offal, blood, feathers, and condemned carcasses), mortality, and hatchery trash (empty shells, infertile eggs, dead embryos, and late hatchlings). The article also discusses the future needs for the development of efficient technologies for the recovery of value-added products like keratin and biofuel generation. These opportunities and difficulties are related to proper solid waste management.

Classification of poultry waste

The following waste items from chicken farms must receive special attention because they are the primary cause of environmental pollution:

1. Feathers: About 91% of the nutrients in chicken feathers are protein (keratin), 1% are lipids, and 8% are water. The amino acid composition of a chicken feather is identical to that of other feathers and shares many similarities with the keratins found in the claws of reptiles. The primary amino acids in the amino acid sequence are cystine, glutamine, proline, and serine. Histidine, lysine, tryptophan, glutamic acid, and glycine are essentially absent, though. The most prevalent amino acid in chicken feathers is serine (16%). Feathers contain more than 90% protein and are a good source of hydrophobic amino acids like cystine, arginine, and threonine, feathers are also processed into feather meal, which is used as animal feed, organic fertilizers, and feed additives. The hydrothermal technique, which digests feathers at high temperatures and pressures, is one of the most popular ways to produce feather meal.

When lime (calcium hydroxide) is used to cure chicken feather keratin, a liquid product rich in amino acids and polypeptides is produced that can be added to animal feed. Biodiesel from feather meal is produced using environmentally sustainable procedures. In order to make biodiesel, feather meal must first be extracted of its fat in boiling water (70°C), and then it must be trans-esterified with potassium, nitrogen, and methane to provide 7–11% biodiesel (on a dry basis). The nonwoven textile products made from chicken feathers are incredibly adaptable and have numerous uses in the industry of technical textiles. Through a process known as polymerization, chicken feathers are also transformed into biodegradable plastics. Feathers from chickens are used to create a nitrogen fertilizer with a gradual release.

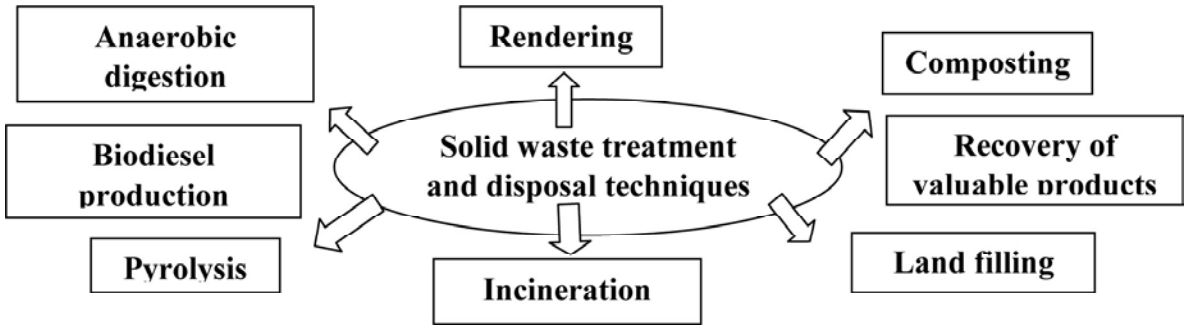
2. Poultry offal: Blood, feet, heads, bones, trimmings, and organs are among the organic solid by-products and wastes produced during the raising and slaughter of broilers. Offal has 0.6 to 0.9% methane generation potential, 32% proteins, 54% lipids, and 5.3% of the total Kjeldahl nitrogen. Meat-bone meal, which is a byproduct of rendering, can be composted, utilised as fertilizer, animal feed, or further processed by anaerobic digestion. Rendering also yields fat, which can be utilised as fuel, in chemical industry products, or as animal feed. Because formic acid is a strong source of proteins and vitamins and is used as animal feed, slaughterhouse byproducts are stored with it. Rich in proteins and lipids, poultry offal, blood, and bone meal demonstrated substantial methane production at various volatile solids concentrations. Methane was quickly created by blood and bone meal. Offal's slower methane synthesis is likely caused by the suppression of long chain fatty acids.

3. Poultry litter/manure: In addition to bedding material, dung, feathers, water that has been spilt, and leftover feed from the production process are all included in poultry litter. The primary source of biomass used as bedding has a high carbon content, which raises the energy content of the waste. In the majority of nations, manure or poultry litter is utilised as animal feed. The majority of the poultry waste utilised for animal feeding comes from broiler operations and laying hen operations, both caged and uncaged. Before spreading it on the ground, composting the litter can improve soil structure and plant growth. The anaerobic digestion of organic waste results in the production of biogas, which contains around 38% carbon dioxide and 60% CH_4 (CO2). Water vapor, NH_3, and hydrogen sulphide make up the final 2%. Although there are many ways that CH_4 might be used as an energy source, it has often been burned directly for heat or as fuel for internal combustion engines. One of the waste products from chicken poultry farms is chicken litter, which is a complex source of organic nutrients with an impact on the ecosystem. These wastes can be employed in the production of energy. By burning wastes and releasing various harmful air pollutants such carbon monoxide, Sulphur dioxide, nitrogen oxides, and particulate

Advantage and Limitations of Poultry waste disposal methods

Method	Advantage	Limitations
Burial	Predominant disposal option for catastrophic mortality events or infectious outbreaks	The poor site selection, such as sandy soils or areas with high water tables, may pose a threat to groundwater
	Simplest and economical methods	
	Safe method	
Burning	Easy and economic	Atmospheric pollution
Incineration	Most effective methods for destroying potentially infectious agents	The air emission, process conditions, and the disposal of solid and liquid residues need to be strictly controlled
	Eliminating the threat of disease	It requires proper sources of fuel and supervision, otherwise smoke and odour can create nuisance complaints
	The residue is mostly harmless and does not attract rodents or insects	Expensive method
Compositing	Resultant products are much more environmentally acceptable than raw litter for land application	Loss of nutrients like nitrogen.
	Economic method	Land area required for the compositing
	Kill pathogens, control disease outbreaks	Odour problems
	Reduces the risk of nitrogen and phosphorus entering the water systems	Emission of greenhouse gases such as methane and nitrous oxide
Rendering	Rendering products can be used as feed, fertilizer	Emission of gas and odour leads environment concern
	Fat product can be used for soaps, washing powders, cosmetics, fuel	

Fig: Solid waste treatment and disposal techniques



matter, inappropriate solid waste disposal significantly degrades air quality (Kumar and Prakash V, 2020). These air pollutants have the potential to seriously harm human health and cause a variety of diseases.

Conclusion

Poultry waste is one of the major pollutants if it is not properly disposed of. Poultry feathers can be chemically treated or biologically treated with microorganisms to boost the nutritional content of

feather wastes that can be used as animal feed. They can also be biologically converted into biofuel, biodegradable plastic, organic fertilizer, and feed additives. Methane gas produced by chicken excrement can be converted into electricity using a novel process. Chicken wastes can be efficiently used to produce a range of value-added items, including fertilizer, biodiesel, animal feed, electricity, bone meal, and biodegradable plastic when handled properly to minimize negative effects. It is essential to make efforts to educate the community about garbage segregation at generation points in order to manage solid waste effectively. Efforts must also be made to lower costs by implementing new, low-cost, sustainable processing methods for the treatment of poultry and slaughterhouse waste, where waste effluents could be successfully handled and value-added waste products could be recovered and upgraded for a variety of commercial uses.

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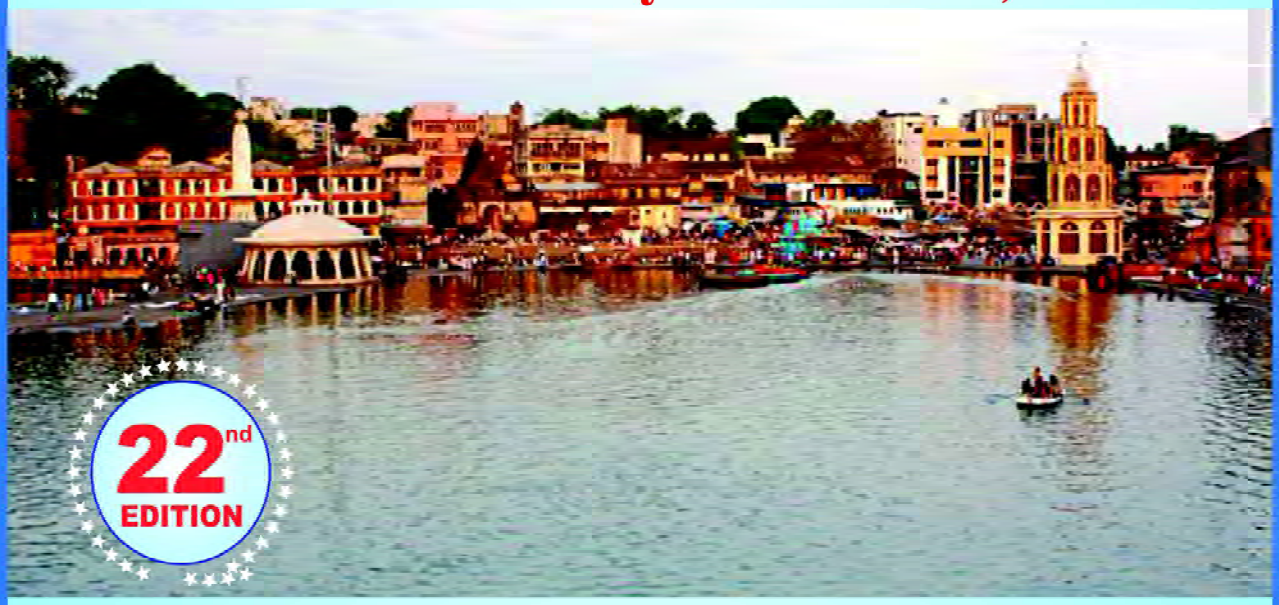

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Colossal and magnificent participation of INDIAN HERBS in POULTRY INDIA EXPO, 23–25 November, 2022

INDIAN HERBS, pioneer and global market leader in Herbal Animal Health Care Products Industry since 1951, participated in POULTRY INDIA 2022 held at Hitex Exhibition Complex, Hyderabad, India, 23rd to 25th November, 2022 with its strong technical and marketing team. It was a colossal and magnificent visit of our esteemed business partners, customers, consultants and poultry nutritionists at **INDIAN HERBS** stall. The sales and marketing team extended a warm welcome to all the visiting customers and consultants at **INDIAN HERBS** stall.

Being a pioneer of Veterinary Ayurveda, **INDIAN HERBS**has been continuously innovating to give the world innovative phytogenic feed supplements and healthcare products. Innovation is what always keeps us at the forefront of discoveries in phytogenics. With the holistic approach of 'Traditional Glory and Modern Science', **INDIAN HERBS**is dedicated to transform 'Herbalism' into a 'Dynamic, scientifically validated and evidence based science'. **INDIAN HERBS** offer unique phytogenic alternatives for synthetic products with superior efficacy at lower cost which are free from side effects and residual toxicity. The company is catering to wide range of animal species including poultry, ruminants, equine, swine, pets, aquatic and other animal species for more than seven decades. Realizing the emerging challenges of animal industry, **INDIAN HERBS**innovated natural alternates in segments such as Antimicrobial Growth Promoter, Immunopotentiator, Metabolic Stimulant, gut enhancers, Respiratory Anti-septic, Anti-stress &adaptogen for different species. INDIAN HERBS phytogenic solutions are unique since there is an advantage of combination of several plant-derived bioactive and phyto-compounds, and their synergistic effects than a single component that empowers our products to exploit the animals full genetic potential, promote growth, immunity & for control of diseases. On basis of advanced scientific techniques, safety, efficacy and mechanism of action of products is deciphered successfully.

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The stall of **INDIAN HEBRS** attracted a large number of visitors, including feed millers, integrators, large farmers, consultants, nutritionist and distributors etc. All the queries of the visitors were answered by the technical team of **INDIAN HERBS** to their best satisfaction. With a re-affirmation of our vision and following a path to sustainability and global well-being, **INDIAN HERBS**is committed to support animal healthcare industry and esteemed customers by all means. **INDIAN HERBS** is committed to foster the wellbeing of animals through nature's bliss and caters antibiotic free, residue and resistance free, environment friendly, cost effective phytogenic solutions for animal healthcare and ensuring feed to food safety.

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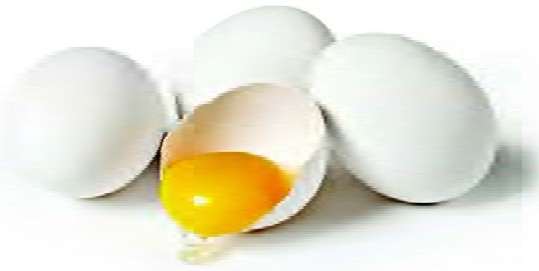

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Weeks Above 90%	34	Feed Cost Per Egg Upto 89 Weeks @ Rs. 26/KG	Rs. 3.12/-
Weeks Above 95%	15		
Hen House Eggs	409.86		
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Wedding of Mr. Harsha Rayudu Chitturi of Srinivasa Farms at Hyderabad

Wedding of Mr. Harsha Rayudu Chitturi, Grandson of Srinivasa Farms Founder & Chairman Sri Jagapathi Rayudu Chitturi and son of Mr. Suresh Rayudu Chitturi & President of International Egg Commission (IEC).The wedding was held on dt: 18 Dec 2022 at Anvaya Convention, Hyderabad. The event was graced by distinguished guests from different spheres of society.

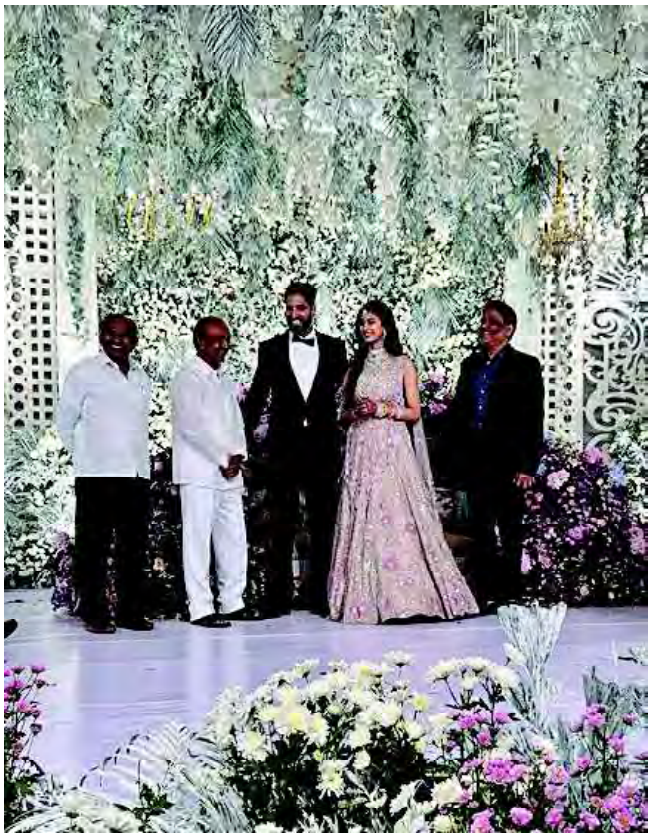
Wedding Set

N. Chandrababu Naidu, C.Jagapathi Rao, C. Suresh Rayudu & C. JAHNAVI

Jagapathi Rao & Mangayamma

Reception was held on 20 Dec 2022 at N Convention, Hyderabad.

The elegance of Couple, amidst magnificently decorated venue with multi coloured flowers and with gathering of attendees in large numbers raining blessings on the newly-wed was something to be cherished for days to come. Rich feast of multi-cuisine food delicacies were appreciated and savoured by the guests.



Jagapathi Rao with Eatala Rajender

Srinivasa Farms Team

PRESS RELEASE

Photographs with different personalities taken during Road show of India Poultry Expo in Maharashtra

The Editor with Bentoli Staff at Poultry India

Dr. S.V.Ramarao with Chembond Chemicals Staff at Poultry India

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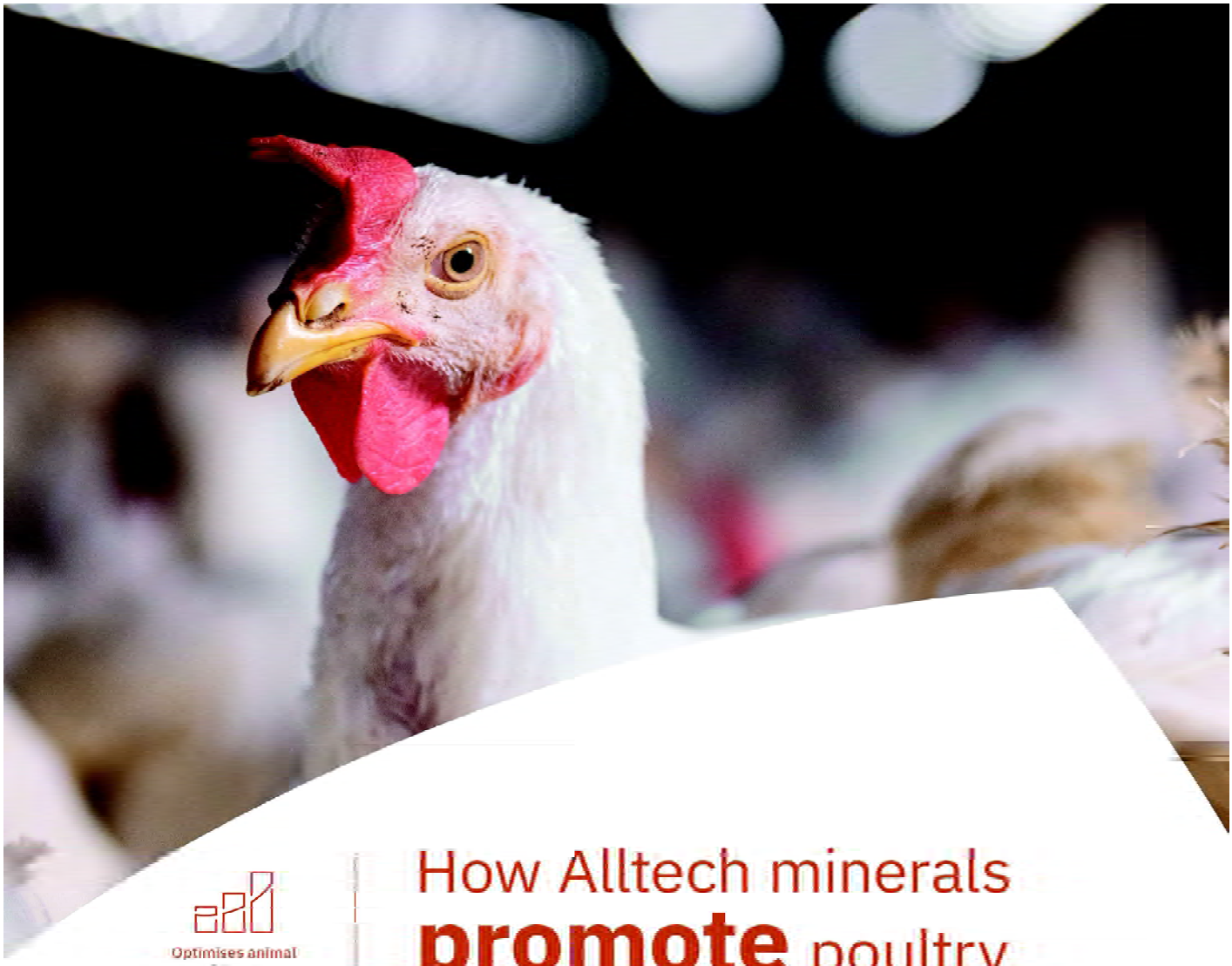

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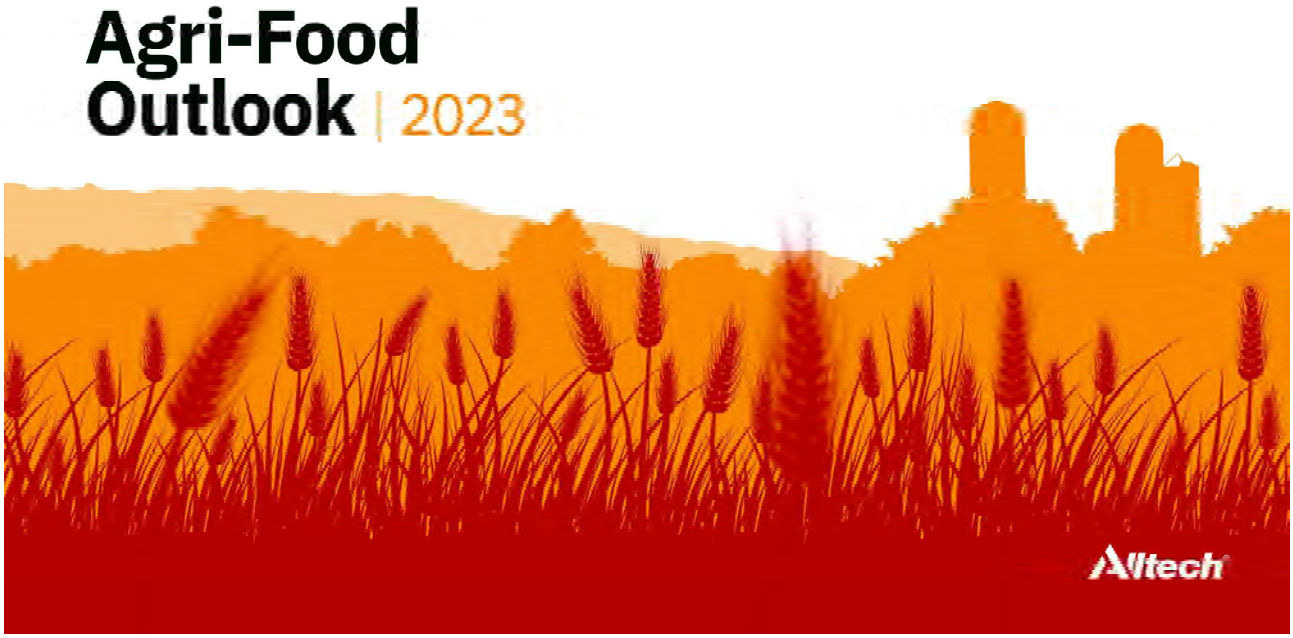
PRESS RELEASE

2023 Alltech Agri-Food Outlook shares global feed production survey data and influencing trends in agriculture

Data collected from 12th annual global feed survey estimates world feed productionremains steady with a slight decrease of 0.42% to 1.266 billion metrictons. Pet feed shows most significant growth while beef feed begins to moderate



The 2023 Alltech Agri-Food Outlook revealed global feed production survey data and trends.

[LEXINGTON, Ky.] – Alltech released its 2023 Alltech Agri-Food Outlookon January 23rd, highlighting global feed production survey data. Despite significant macroeconomic challenges that affected the entire supply chain, global feed production remained steady in 2022 at 1.266 billion metric tons (BMT) in 2022, a decrease of less than one-half of one percent (0.42%) from 2021's estimates. The annual survey, now in its 12th year, includes data from 142 countries and more than 28,000 feed mills.

Europe bore the brunt of the impact, including significant disease challenges, severe weather and the impacts of the invasion of Ukraine. The global COVID-19 pandemic has had major impacts on the agri-food sector, contributing to supply chain challenges and accelerating the adoption of new technology and environmental sustainability practices.

The top 10 feed-producing countries over the past year were China (260.739 million metric tons [MMT]), the U.S. (240.403 MMT), Brazil (81.948 MMT), India (43.360 MMT), Mexico (40.138 MMT), Russia (34.147 MMT), Spain (31.234 MMT), Vietnam (26.720 MMT), Argentina (25.736 MMT) and Germany (24.396 MMT). Together, the top 10 countries produced 64% of the world's feed production, and half of the world's global feed consumption is concentrated in four countries: China, the U.S., Brazil and India. Vietnam experienced a great recovery in terms of its feed tonnage in 2022, entering the top 10 ahead of Argentina and Germany and crowding out Turkey, which reported reduced feed tonnage. Russia overtook Spain, where there was a significant reduction in feed production.

Key observations from the survey:

- Feed production increased in several regions, including Latin America (1.6%), North America (0.88%) and Oceania (0.32%), while Europe

decreased by 4.67%, Africa by 3.86% and the Asia-Pacific region also dropped 0.51%.

- Globally, increases in feed tonnage were reported in the aquaculture, broiler, layer and pet food sectors, while decreases were reported in the beef, dairy and pig sectors.
- Although it experienced a narrow reduction in feed production, China remains the largest feed-producing country in the world, followed by the United States and Brazil.

Notable species results:

- The **poultry** sector experienced increases in both layer and broiler feed production.
- Avian influenza, other diseases and the high costs of raw materials affected the **layer** sector in many markets, especially in Asia, Europe and Africa. On the other hand, growth in the sector was boosted due to bigger challenges in other sectors that led to increased demand for eggs. Overall, layer-sector feed production increased by 0.31%.
- While the overall tonnage in the **broiler** sector increased by 1.27%, there were significant differences from country to country. Overall, feed production growth in the broiler sector was reported mainly from the Middle East, North America and Latin America.
- **Pig** feed production was down globally in 2022 by almost 3%. ASF and high feed prices depressed pig production in many countries. However, in Vietnam, China, South Africa, Brazil and Mexico, better pork prices and other market conditions led to growth in the sector.
- **Dairy** feed tonnage decreased by 1.32%, mainly due to the high cost of feed combined with low milk prices, which caused farmers to reduce their numbers of cows and/or rely more on non-commercial feed sources. Some exceptions included Ireland, where drought caused farmers to rely more on commercial feeds, and New Zealand, where milk prices were higher.
- **Beef** feed production decreased slightly by 0.34% globally. The downward trend continued in Europe, but increases were seen in almost all other regions. In Australia, the reduction in feed tonnage was a result of plentiful grass and not a reflection of any changes in the demand for beef.
- The **aquaculture** sector experienced a total global feed production growth of 2.7%. The Top 5 aquaculture feed countries are China, Vietnam, India, Norway and Indonesia. Significant increases were reported in China, Brazil, Ecuador, the Philippines and the U.S. Aquaculture feed production was one of a few sectors that saw growth in Europe.
- **Pet** feed production had the highest increase among the sectors, with a global average 7.25% rise in production. This significant increase is largely due to the rise in pet ownership amid the COVID-19 pandemic. North America and Europe continue to be the top pet feed-producing regions.

Notable regional results:

- **North America** reported an increase of 0.88% (2.272 MMT) and the U.S. remained the second-largest feed-producing country globally, behind China. Growth was reported in the broiler, beef and pet food sectors.
- **Latin America** experienced growth of 1.6% (3.066 MMT), and Brazil remained the leader in feed production for the region and ranked third overall globally. Most of the growth was reported by Mexico, Brazil and Chile.
- **Europe** saw the largest decrease in feed production of 4.67% (-12.882 MMT) in its feed production due to issues that include the invasion in Ukraine and the spread of animal diseases, such as African swine fever (ASF) and avian Influenza (AI).
- **Asia-Pacific** remained flat as decreases reported in China, Pakistan, Thailand and Malaysia were offset by increases in Vietnam, the Philippines, Mongolia and South Korea. The region is home to several of the top 10 feed-producing countries, including China, India and Vietnam.

- **Africa** experienced a decrease of 3.86% in feed tonnage (-1.718 MMT), mainly because of reductions reported in Egypt, Morocco, Kenya and Nigeria. South Africa**,** on the other hand, saw an increase of more than 2%, and Namibia also reported higher feed tonnage in 2022.
- The **Middle East** region is up significantly at 24.7% (6.301 MMT), as a result of more accurate reporting and efforts by the Saudi Arabian government to increase broiler production as part of its Vision 2030 plan.
- **Oceania** was flat, with a small reduction reported by Australia that was offset by a slight increase reported by New Zealand.

Alltech works together with feed mills and industry and government entities around the world to compile data and insights to provide an assessment of feed production each year. Compound feed production and prices were collected by Alltech's global sales team and in partnership with local feed associations in the last quarter of 2022. These figures are estimates and are intended to serve as an information resource for industry stakeholders.

To access more data and insights from the 2023 Alltech Agri-Food Outlook, including an interactive global map, visit alltech.com/agri-food-outlook.

-Ends-

Note to editors: Interview requests may be submitted by email to Dr Manish Chaurasia at mchaurasia@alltech.com

Contact: Dr. Manish Chaurasia, Marketing Manager, South Asia

mchaurasia@alltech.com; +91 8130890989

About Alltech:

Founded in 1980 by Irish entrepreneur and scientist Dr. Pearse Lyons, Alltech delivers smarter, more sustainable solutions for agriculture. Our diverse portfolio of products and services improves the health and performance of plants and animals, resulting in better nutrition for all and a decreased environmental impact.

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We believe agriculture has the greatest potential to shape the future of our planet. Our more than 5,000 talented team members worldwide share our purpose of Working Together for a Planet of Plenty™. Together, we can provide nutrition for all, revitalize local economies and replenish the planet's natural resources.

Headquartered just outside of Lexington, Kentucky, USA, Alltech serves customers in more than 120 countries, has five bioscience centers, and operates more than 80 manufacturing facilities across the globe.

For more information, visit alltech.com, or join the conversation on Facebook, Twitter and LinkedIn.

A Brief Note on Living Pattern of Ostrich (*Struthio camelus*)

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Introduction

Ostriches are flightless birds that are built for running. It shares the order Struthioni-formes with the kiwis, emus, rheas and cassowaries with distinctive in its appearance having a long neck and legs. They are the fast runners of any birds or other two-legged animal and can sprint at over 70 km/hr, covering up to 5m in a single stride aided by just two toes on each foot with the large nail on the larger, inner toe resembling a hoof. It can easily kick hard enough with its strong legs, i.e up to 500 psi to kill a human or even a lion. The chicks grow about 10 inches per month for the first year and weigh about 100 pounds at 12 months of age. An adult male will stand nearly 8 feet in height and weigh between 140 to 230 pounds (63-105kg) and the females are slightly smaller. The feathers of adult males are mostly black with some white at the wings and tail. Females and young males are greyish-brown with a bit of white. The wings reach a span of about 2 metres and are used in mating displays, to shade chicks, to cover the naked skin of the upper legs and flanks to conserve heat and as "rudders" to help them change direction while running. Ostriches don't have the special gland to waterproof their feathers, so they can get soaked in the rain. The normal body temperature range of the ostrich is between 103 to 104^0F. During hot weather, it lifts and fans its wings, while during cold it covers its thighs with its wings. Ostriches usually live for 30 to 40 years and some live for more than 50 years.

Distribution and Habitat

Ostriches occur naturally on the Savannahs and semi-deserts of Africa: in the open dry grasslands of East Africa, South Africa and in the Sahara and adjacent Sahel area.

Behaviour and Ecology

Ostriches normally spend the winter months in pairs or alone and during breeding season and sometimes during extreme rainless periods they live in nomadic 'herds' of five to 50 birds led by a top hen, that often travel together with other grazing animals such as zebras or antelopes. It is diurnal, but may be active on moonlit nights. It is adapted to a type of life that depends on running to escape predators. It is nomadic that wanders wherever food is most readily available and never strays very far from water as it needs a gallon-and-a-half a day. An ostrich's eye is the largest eye of any land animal having almost 2 inches across. It can sense predators very far away with its acute eyesight and hearing. They are social birds, sometimes gathering in flocks of 100 or more. The groups have a pecking order, with a dominant male that defends the flock's territory and a dominant female called the "main hen". Territorial fights between males for a harem of two to seven females usually last for few minutes, but they can easily cause death through slamming their heads into opponents. The male ostrich warns its flock of danger by making a "boo-booo-boooo" call that sounds like a lion's roar.

Feeding

Ostrich chicks may not eat for the first 24 hours while subsisting on the yolk sac. They are omnivores, chowing down on whatever is available. Their diet is mostly plants especially leaves, seeds and roots, but they'll also eat insects and small animals like lizards. They chase the insects and small reptiles

they're planning to eat in an awkward zigzag pattern. Ostriches can eat things, which other animals can't digest because their intestines are especially long and tough and help them absorb nutrients. They also have a gizzard, which along with the stones and sand they swallow, helps grind up the food they eat. They drink by scooping water with their beak. Therefore, they need a depth of water sufficient to immerse their beak and a long enough distance to move across to adequately drink.

Mating

Ostriches are polygamous. Domesticated ostriches reach maturity at 2-to-3 years of age. Females mature about 6 months earlier than the males. The breeding season for ostriches begins in March and April and can last until September. Breeding season length largely depends on food availability, bird condition and weather. It performs a complex mating ritual consisting of the cock alternating wing beats until he attracts a mate, when they will go to the mating area and he will drive away all intruders. Their lead-blue skin colour usually becomes scarlet over the beak, on the forehead and around the eyes during the mating season. They graze until their behaviour is synchronized, then the feeding becomes secondary and the process takes on a ritualistic appearance. The cock will then excitedly flap alternate wings again and starts poking on the ground with his bill. He will then violently flap his wings to symbolically clear out a nest in the dirt. Then, while the hen runs circle around him with lowered wings, he will wind his head in a spiral motion. She will drop to the ground and he will mount for copulation. All of the herd's hens place their eggs in the dominant hen's 3m-wide nest though her own are given the prominent centre place; each female can determine her own eggs amongst others. The giant eggs are the largest of any living bird at 15cm long and weighing as much as two dozen chicken eggs, i.e nearly 3 pounds, though they are actually the smallest eggs relative to the size of the adult bird. The eggs are incubated by the dominant female by day and by the male by night, using the colouration of the two sexes to escape detection of the nest, as the drab female blends in with the sand, while the black male is nearly undetectable in the dark. When the eggs hatch after 35 to 45 days incubation, the male usually defends the hatchlings and teaches them to feed, although males and females cooperate in rearing chicks.

Status and conservation

The wild ostrich population has declined drastically in the last 200 years with most surviving birds in reserves or on farms. However, its range remains very large (9,800,000 square kilometres (3,800,000 sq mi)), leading the IUCN and Bird Life International to treat it as a species of Least Concern. Out of its 5 subspecies, the Middle Eastern Ostrich (*S. c. syriacus*) became extinct around 1966 and the North African Ostrich (*S. c. camelus*) has declined to the point where it now is included on CITES Appendix I and some treat it as Critically Endangered.

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PRESS RELEASE

Emerging Challenges & Opportunities for Sustaining Future Expansion of Poultry Sector

- **Ricky Thaper,** Treasurer, Poultry Federation of India

Sustained consumer demand continues to drive the poultry meat sector, while there is a need to step up investment in infrastructure in the value chain as well as ensuring reliable feed supplies.

Ricky Thaper

Livestock sector plays a critical role as a subsector of agriculture in the Indian economy. The sector has huge potential in terms of its contribution in total economy, employment generation and world trade. The sector comprising dairy, poultry meat, eggs and fisheries witnessed a compound annual growth rate (CAGR) of 8.15 per cent during 2014-15 to 2019-20 (at constant prices). As per the estimates of National Accounts Statistics, 2020 for sector wise GVA of agriculture and allied sectors, the contribution of livestock in total agriculture and allied sector GVA (at constant prices) has increased from 24.32 per cent (2014-15) to 29.35 per cent (2019-20). Livestock sector contributed 4.35 per cent of total GVA in 2019-20. Development of the livestock sector has led to improvement in per capita availability of milk, eggs and meat.

According to FAOSTAT production data for 2020, India ranks 3rd in egg production and 8th in meat production in the world. Egg production in the country has increased from 78.48 billion in 2014-15 to 122.11 billion 2020-21. The per capita availability of eggs is at 91 eggs per annum in 2020-21. Meat production in the country has increased from 6.69 million tons in 2014-15 to 8.80 million tons in 2020-21. The average per capita consumption of meat in the country is around 5.7 kg per annum.

As per the Department of Animal Husbandry and Dairying, more than 85% of India's poultry meat is produced by organised commercial farms and the rest is produced by backyard poultry, mostly in the rural areas. Out of commercial broiler production, major poultry companies who follow vertically integrated operations have a share of around 60-65%. The poultry sector at present provides employment opportunities to around 6 million small and medium farmers (who own farms with 5,000-10,000 broiler size).

Driving demand of Poultry Meat

In the last three decades, the India poultry market has undergone significant transformation, and the region has emerged as one of the major sectors of the economy. The poultry market in the country is being largely driven by the rising disposable incomes and changing consumer food habits. In the post Covid19 pandemic phase also because of demand for the protein rich food like poultry meat and eggs have increased sharply. The growing awareness regarding health and wellness is further driving the demand for a protein-rich diet.

According to industry estimates, the Indian poultry industry in 2022 was valued at around $28 billion. Aided by the increasing popularity of online services and growing online food delivery channels, the market is expected to witness a further growth in the next 5 to 10 years with a growth in CAGR of 8.1%.

As per Agricultural and Processed Food Products Development Authority (APEDA) data, in 2021-22, India exported 3,20,240 tons of poultry products valued at Rs 529 crore ($ 71 million). Traditional export destinations have been Oman, Maldives, Indonesia, Vietnam and Russia. Malaysia for the first commenced importing eggs from Namakkal (Tamil Nadu) recently. Though both the quantity and value of the exported processed poultry products have increased during the last few years and efforts have

been made to increase poultry exports from India, the trade is very small in comparison to the global trade.

To support the livestock sector, the government has initiated several measures. The Animal Husbandry Infrastructure Development Fund (AHIDF) of Rs 15000 crore is being implemented from June 2020. The key objectives of the scheme is to fulfill the objective of protein enriched quality food requirement of the growing population of the country and prevent malnutrition. As far as poultry development is concerned the fund has provisions for technologically assisted layer farms with environmentally controlled systems, broiler breeder farms with environmentally controlled systems and hatcheries with environmentally controlled facilities. The support is also provided for Meat processing and value addition infrastructure and establishment of animal feed plants including poultry feed.

Under AHIDF farmer producer organizations (FPOs), Micro Small and Medium Enterprises, Section 8 Companies, Private Companies and individual entrepreneur availing credit facilities will get 90% loan for which 3% interest subvention is provided by the Central Government. The Central Government is also providing Credit Guarantee of 25% of total borrowings for those projects which are fulfilling the definition of MSME projects.

The National Livestock Mission has been revised and realigned with an outlay of Rs.2300 crore for the five years commencing from 2021-22. The mission aims at development of entrepreneurs in rural poultry. The central Government is currently providing 50% subsidy up to Rs 25 lacs to establish parent farm, rural hatchery, brooder cum mother unit for production of hatching eggs with minimum 1000 parent layers and chicks and rearing of the said chick up to four weeks in the mother unit.

The Self Help Group, Farmers Producer Organizations organization's (FPO)/Farmers Cooperatives organization's (FCOs) /Joint Liability Groups (JLGs) and Section 8 companies can avail financial assistance under the mission. Department of Animal Husbandry and Dairying has developed an online portal for a completely digitized Process with all the important documents to be uploaded on the portal nlm.udyamimitra.in.

Key future challenges

Rising consumption of poultry meat, supply of feed in the coming years has to be sustained to avoid volatility in the prices. Poultry feed comprises maize and soya meal and the country needs to increase supplies of feed in the coming years. Another key challenge is that soybean productivity has largely stagnated in the last few years. In August 2021, as an exception due to domestic supply constraint, the government had allowed import of 1.2 million tons of genetically modified (GM) soybean meal to help the poultry industry tide over higher feed prices.

The government must take steps to increase feed supplies and allow cultivation of GM hybrid soybean so that future feed supplies could be assured. For the future demand of poultry meat, the government must liberalize imports of GM soybean meal and maize.

Trust on creating infrastructure of Poultry Processing

Processing and marketing of poultry range from live bird markets to highly sophisticated, fully automated, adhere to International Standards Organization (ISO) certified facilities and ready-to-eat convenience products. Lack or inadequacy of refrigeration is probably the biggest challenge poultry industry faces

The poultry industry in the country is consistently growing due to the use of modern technology and there has been a gradual shift in demand from live bird to fresh chilled and frozen poultry product market. Although the wet market continues to dominate the poultry industry, there has been a significant increase in e-commerce with the expansion of home delivery of various poultry meats and processed meat.

Hence, there is an urgent need for setting up of modern poultry processing plants to cater to both domestic as well as export markets. The better transportation infrastructure for live birds and more cold storage facilities for the processed meat will go a long way in modernizing the industry while sustaining the future growth prospects of poultry meat. The government must step in supporting the sector in creating infrastructure for reducing losses in the poultry value chain.

PRESS RELEASE

33rd Annual General Body Meeting (AGM) of Poultry Federation of India (PFI) at Chandigarh

Poultry Federation of India (PFI), an apex and renowned association of Poultry Farmers, Breeders, Equipment Manufacturers, Pharmaceutical Companies and all allied Industries, organized its 33rd Annual General Body Meeting (AGM) at Hotel Hyatt Regency, Chandigarh on Thursday December 22, 2022.

Event commenced with registration in the morning and a very warm welcome address given by President, Mr. Ranpal Dhanda. First of all he expressed his gratitude to all visitors (650+); who came on time on such cold and Foggy morning and also thanked Sponsor companies for their contribution in various categories. He also expressed his sincerest gratitude to various Ministers of Government of India and Department of Animal Husbandry and Dairying for their work for the upliftment of poultry farmers through the published Commercial Contract Guideline for Broiler Production and demanded to increase growing charge to 70% from 25% for the farmers as mentioned in the guidelines. He also requested to Ministers of Government of Punjab to implicate and follow these guidelines in their state.

Mr. Ravinder Singh Sandhu, Secretary, addressed all delegates about all the activities of Poultry Federation of India during the year and further assured that Poultry Federation of India in ensure much more drastic steps which shall help the Indian Poultry Farmer in future as well. Accounts were presented by Ricky Thaper, Treasurer, which were concurred and approved by the member delegates. The session ended with a Public address by Mr. Ramesh Chander Khatri, Chairman, who

appreciated all delegates and the team for their rigorous efforts for the betterment of the poultry farmers.

The AGM session was followed by technical session wherein presentations on varied aspects were given by various speakers namely Dr. P. K. Shukla, Dr. Deepak Singh, Dr. P Mahesh, Mr. Susil Silva Dr. Ajit Ranade, Mr. Vijay Sardana, and Dr. Lipi Sairwal respectively. The content of these presentations covered various fields including the incentives and schemes for promotion of poultry farming by Government of India.

The Chief Guest of the AGM was Shri Kuldeep Singh Dhaliwal ji, Cabinet Minister, Rural Development & Panchayats, NRI Affairs, Agriculture & Farmers Welfare, (Government of Punjab) and Guest of Honor Shri Laljit Singh Bhullar ji, Cabinet Minister, Transport, Animal Husbandry, Fisheries and Dairy Development (Government of Punjab).

During the welcome address of Chief Guest Mr. Ranpal Dhanda raised a serious issue regarding contract farming. He further indicated that poultry farmers cannot survive in present situation because companies are not giving fair price to the farmers and they cannot even earn their expenses. Flock after flock theirs losses are increasing. He presented a calculation of fixed cost and variable Cost for a flock. That indicates that farmer's loss Rs. 27 per bird in a single flock when all the actual costs are taken into consideration. He requested the Hon'ble Chief Guest to kindly take into considerations all the costs before implementing these guidelines on a serious note.

Post his address, Broiler Federation, Punjab conveyed their concerns regarding contract farming to the Hon'ble Chief Guest which was in tune with the aspects covered by President, Poultry Federation of India. He further presented the research papers and recommendations by a GADVASU, Ludhiana, Punjab that studied the financial aspects and found in its report that the contract farmer is actually making severe losses.

Upon these deliberations, the Chief Guest Sh. Kuldeep Singh Dhaliwal Ji promised that this exploitation of farmers should stop across India and Punjab will be the first state to take action against such exploitation of poultry farmer setting an example for the entire country. He further gave his assurance that the Government shall support the Punjab Poultry Farmer and entire poultry sector in all concerns in future as well. He further expressed his desire for opening of first Poultry Produce Market in Punjab as poultry farmers of Punjab face an immense challenge due to non availability of such markets in the state and also assured of making deliberations regarding market fees on Bajra, Maize etc that should bring relief for the poultry sector in Punjab and entire India. He also emphasized that Poultry chicken and egg is the best and purest form of protein which is essentially required for eradication of malnutrition in India.

Concurring the assurances given by the Hon'ble Chief Guest, the Guest of Honour, Sh. Laljit Singh Bhullar Ji stated that the Government of Punjab will become the first state in the entire nation that will bring various rulings that shall favor the Indian poultry farmer and will always stand by the poultry farmers of Punjab including the implementations of the guidelines for contract farming. He also assured that the government of Punjab is more than willing to work towards the poultry farmer and Government of Punjab will try to set an example to the entire nation for the betterment of poultry farmer of the state. Being a farmer himself, the Hon'ble Guest of Honor expressed his support to Poultry Federation of India across India for improving the economic state of the poultry farmer of entire nation.

The event concluded with a vote of thanks by Mr. Sanjeev Gupta, Vice President (HQ), Poultry Federation of India who also expressed his gratitude to both ministers for their support for the welfare on poultry farmer. The event was hosted by Dr. Devender Hooda, Executive Member, Poultry Federation of India.


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POULTRY FEDERATION OF INDIA
33rd Annual General Body Metting
on Thursday, 22-Dec-2022
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POULTRY FARMING ESTIMATIONS PROVIDED BY PFI

Fixed Cost for 10, 000 Poultry Birds:

1.	Cost of Half Acre Land (20 Lac) considered as Zero	=	0
2.	Cost of land development Approximately 22 000 X 3.5 Feet soil (77 000 x 6)	=	4 62 000
3.	Construction other than Poultry Shed (Boundary wall, feed store, labour quarter, tubewell etc)	=	3 00 000
4.	Construction cost for 10 000 Sq. Feet farm (including parda (jaali, equipment feeder, drinker, electrical fitting, Water Fitting etc)	=	30 00 000
5.	Ventilation Fans (5 Fans and Control Panel etc)	=	2 00 000
6.	Cooling Pad (with motor and accessories)	=	90 000
7.	Miscellaneous Expenses.	=	10 000
8.	Generator (30 Kw)	=	5 50 000
9.	NOC (Pollution, Town Plan, Panchayat)	=	40 000
10.	Mortality Disposal Incinerator	=	2 00 000
	Total Fixed Cost	**=**	**48, 52, 000**

Below are the interest cost per year

Bank Interest 9% pa and other banking fees	=	4 36680
Rent of ½ Acre per month (Rs. 30000 yearly)	=	30 000
Total expense	=	4 66 680

Per bird interest on fixed cost in one year: 466680/10000/5 =Rs. 9.33 Per Bird, Per Flock
(5 Flock in One Year)

Variable cost for per flock for 10000 birds:

1.	White wash, Disinfection & Fumigation (Safedi, Chuna)	=10000
2.	Bedding for litter (Rice Husk, Saw Dust etc 2500 kg X Rs.11 / kg)	=27500
3.	Brooding Expenses (Heating by gas burner, saw dust/ buraada, diesel)	=20000
4.	Maintenance of Housing Building	=8000
5.	Maintenance of Water Lines and feeding Systems	=3000
6.	Maintenance Cost (Tools, Machines & Equipments)	= 8000
7.	Labour Cost (2 Pair Male + Female= 32000X2.5)	=80000
8.	Electricity Bill (2.5 months x 15 K.W.)	=37500
9.	Farmer expenses(Motorcycle petrol, motorcycle service etc)	=5000
10.	Gen Set Diesel Exp.	=14000
11.	Mortality Disposal Incinerator Expenses (Wood)	=8000
12.	Miscellaneous Cost	=5000
	Total Cost	**=2, 26, 000**

- We shall now assume 7% mortality in flock of 10000 and average weight of bird as 2 K.G. in every flock. This is not possible but we assume it.

  10000 - 7% = 9300 x 2 = 18600 K.G weight sold

- The figure of 7% average mortality ratio is very rare to achieve today
- Per K.G. cost of production = 226000 / 18600 = Rs. 12.15 per kg (Rs. 24.3 Per Bird)

Summary:

		Rs.
Interest on Fixed Cost (Per Bird)	:	**9.33**
Variable Cost (Per Bird)	:	**24.30**
Depreciation on Machinery, Building	:	**11.65**
Total cost	:	**45.28 Per Bird, Per Flock**

LOT DETAILS			
LOT DETAILS		Performance	
Lot Number	[redacted]	First fortnight MORT %	1.90
Hatch Date	29.01.2022	Total Mortality %	21.140
Chicks Housed (Nos)	24409.000	FCR	2.050
Mortality (Nos)	5160.000	Lifting %	78.860
Birds Lifted (Nos)	19249.000	Avg. Wt	1.722
Shortage (Nos)	0.000	Mean Age	39
Birds Weight (Kg)	33154.900	Farmer Profit/KG	1.77
Feed Consumption (Kg)	67965.000	MSP /KG	0.00
Lot Grade	F		

PRODUCTION COST DETAIL			
Particular	Quantity	Rate	Amount
Chicks	24409.000	25.00	610225.00
Feed	67965.000	40.00	2718600.00
Medicine	0.000	0.81	48657.30
Admin	24409.000	3.00	73227.00
		Total	**3450709.30**
		Production Cost /KG	**104.08**

GROWING CHARGES DETAIL			
Growing Charges	Amount	Deduction	Amount
Rearing Charges	311656.06	Production Cost Recovery	370174.46
	0.00		0.00
Total Growing Charges	**311656.06**	**Total Deduction**	**370174.46**
		Net Growing Charges	**58518.40-**

Std.Prd.Cost =81.75 Act.Prd.Cost =104.08 Excess=22.33

Net Growing Charges:	**58518.40- Rs.**
Less TDS 1.00 % :	**0.00 Rs.**
Less AMCT:	**0.00 Rs.**
Total Amount Payable:	**0.00 Rs.**
In Word: only	

Prepared By: Checked By: Audit By: Approved By:

Estimation for 10000 Broiler Farm

Contract Farming by Poultry Integrators

S.No	Production Cost Calculations	Responsibility	Est. Cost/Bird (in INR)	Criteria Used
1	Chicks / DOC	Sponsor	1.00	
2	Feed	Sponsor	1.00	
3	Vaccines & Medication	Sponsor	1.00	
4	Labour	Farmer	1.00	8
5	Litter & Saw Dust	Farmer	1.00	2.75
6	Heating / Cooling Energy	Farmer	1.00	2
7	Lighting / Electricity/ Diesel	Farmer	1.00	6
8	Water, Water Treatment & Watering	Farmer	1.00	0.1
9	Cleaning & disinfection of Poultry House	Farmer	1.00	0.2
10	Biosecurity Arrangements	Farmer	1.00	0.5
11	Interst on Fixed Cost Per Bird	Farmer	1.00	9.33
12	According to Industry norms Depreciation (Avg. 12%) of the Housing Building (10%), Machinery (15%)	Farmer	1.00	11.65
13	Maintenance of Housing Building	Farmer	1.00	0.8
14	Depreciation of water lines & feeding systems	Farmer	1.00	0
15	Maintenance of Water Lines and feeding systems	Farmer	1.00	0.3
16	Depreciation of Tools, machines & equipments	Farmer	1.00	0
17	Maintenance of Tools, machines & Equipments	Farmer	1.00	0.8
18	Mortality Management & Waste Disposal	Farmer	1.00	0.8
19	Interest Cost on working Capital	Farmer	1.00	0.5
20	Miscellaneous Cost	Farmer	1.00	0.5
21	Motor Cycle Maintenance, Petrol	Farmer		1
22	Personal Supervision Cost of Farmer	Farmer	1.00	0
23	Other Overheads	Farmer	1.00	0
24	**Total Cost / Bird**			**45.23**
25	**Current Rates of Contract Farming (Rs. 9 Per K.G.)**			**18**
26	**Loss / Gain per Bird to Farmer**			**- 27.23**

Loss to Farmer Rs. 27.23 Per Bird in Per Flock

Estimation for 10000 Broiler Farm

Contract Farming by Poultry Integrators

S.No	Production Cost Calculations	Responsibility	Est. Cost/Bird (in INR)	Criteria Used
1	Chicks / DOC	Sponsor	1.00	
2	Feed	Sponsor	1.00	
3	Vaccines & Medication	Sponsor	1.00	
4	Labour	Farmer	1.00	8
5	Litter & Saw Dust	Farmer	1.00	2.75
6	Heating / Cooling Energy	Farmer	1.00	2
7	Lighting / Electricity/ Diesel	Farmer	1.00	6
8	Water, Water Treatment & Watering	Farmer	1.00	0.1
9	Cleaning & disinfection of Poultry House	Farmer	1.00	0.2
10	Biosecurity Arrangements	Farmer	1.00	0.5
11	Interest on Fixed Cost Per Bird	Farmer	1.00	9.33
12	According to Industry norms Depreciation (Avg. 12%) of the Housing Building (10%), Machinery (15%)	Farmer	1.00	11.65
13	Maintenance of Housing Building	Farmer	1.00	0.8
14	Depreciation of water lines & feeding systems	Farmer	1.00	0
15	Maintenance of Water Lines and feeding systems	Farmer	1.00	0.3
16	Depreciation of Tools, machines & equipments	Farmer	1.00	0
17	Maintenance of Tools, machines & Equipments	Farmer	1.00	0.8
18	Mortality Management & Waste Disposal	Farmer	1.00	0.8
19	Interest Cost on working Capital	Farmer	1.00	0.5
20	Miscellaneous Cost	Farmer	1.00	0.5
21	Motor Cycle Maintenance, Petrol	Farmer		1
22	Personal Supervision Cost of Farmer	Farmer	1.00	0
23	Other Overheads	Farmer	1.00	0
24	**Total Cost / Bird**			**45.23**
	GROWING CHARGES			**??**

Readymade Garment Job Work Sheet		
S. No.	Particular	Expenses Per Piece
1	Stitching Cost	40
2	Press, Packing	7
3	Staff Expenses	8
4	Electricity	3
5	Machine Maintainance	2
6	Sub Total (A)	60
7	Job Work Charges (70% of A)	42
8	Total Cost	102

Feed Mill Job Work Sheet		
S. No.	Particular	Expenses Per Ton
1	Electricity Bill	300
2	Boiler	175
3	Labour	175
4	Die + Maintenance	75
5	Staff	50
6	Administration	50
7	Sub Total (A)	825
8	Job Work Charges (70% of A)	577.5
9	Total Cost	1402.5

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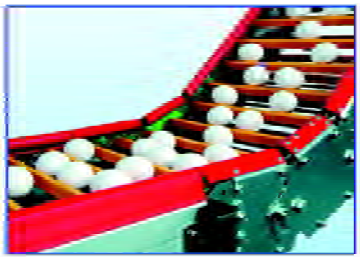

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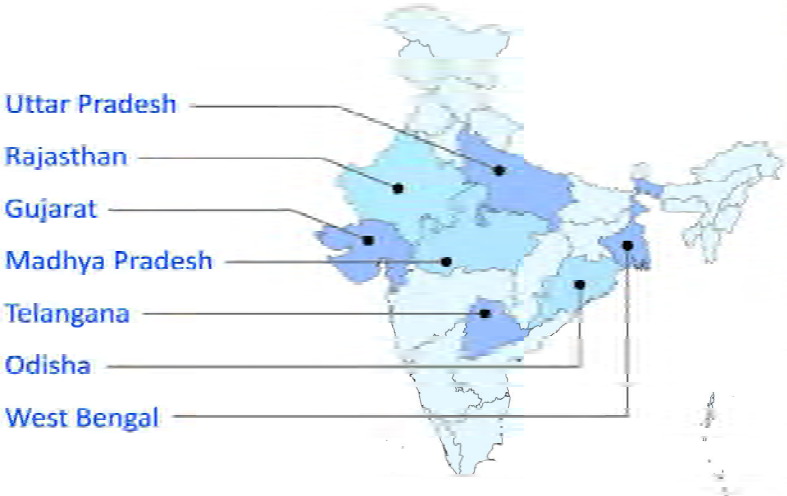

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