

Livestock & Feed Trends



VOLUME - 21 • NUMBER - 1 • APRIL - JUNE 2023



ASSOCIATION OF LIVESTOCK INDUSTRY

56th Annual General Meeting (AGM) & 64th National Symposium 2023

Theme : "Livestock Sector: Looking Beyond the Present".

18th & 19th August 2023

Hotel Le Meridien,
Windsor Place Janpath, New Delhi - 110 001.

INNOFEEDTM

ANIMAL NUTRITION

Rumen Bypass Protein
(Rumen Protected Protein Meal)

Rumen Bypass Fat
(Calcium soaps/salts of long chain fatty acids)

Mineral Mixture For Dairy Animals
(Highly Bio-available Minerals for Animals feeding only)

Di Calcium Phosphate (DCP) Dihydrate
Animal Feed Grade

PRESERVO Toxin Binder

INNOSWEET Sweetener

PROFAT Feed Supplement For Dairy Animals

INNOVIT AD3E 100:40:40 Oral Liquid Water
Miscible Vitamin Supplement

INNOVIT E+ Selenium Oral Liquid Water
Miscible Vitamin Supplement

INNOVIT AD3B 12 Oral Liquid Water Miscible
Vitamin Supplement

LIQUID CALCIUM Feed Supplement for Animal
Feeding



S. A. Pharmachem Pvt. Ltd.

ANIMAL NUTRITION DIVISION

Correspondence Address

302, Sanket Heights, Nr. Akshar Chowk, Sun Pharma Road, Vadodara : 390020, Gujarat (INDIA)

☎ 93286 71702

✉ sales.innofeed@sapharmachem.com

🌐 www.innofeed.in



FARMING 
QUALITY MEAT
SINCE 1963

Nandu's®

So healthy
I love it

So tasty
they love it



Our chicken is so fresh and tender that your family will enjoy the taste of every dish you make. And because we raise it on our farms without using antibiotics or hormones, it's healthy and safe.

Choose Nandus. Choose meat you and your family will love.



Nandus **Safe-Meat** Promise

Zero Antibiotics | Zero Growth Promoters

 50+ stores across Bengaluru & Hyderabad |  Download Nandus App |  www.nandus.com
 95134 30000 | Follow Nandus Foods on   


Lic.No: 1001843002186



**BRIGHTER
FARMING**
with High Quality
Life Cycle Brands



GODREJ ANIMAL FEEDS

Healthy Livestock, Wealthy Families.

CATTLE FEED BRANDS

Premium quality cattle feed for better growth,
overall health and well-being of the cattle.



LAYER FEED BRANDS

In full feed and concentrate form to
improve egg production at lesser cost



BROILER FEED BRANDS

Premium quality feeds to improve FCR



For further details, please write to : Animal Feed, Marketing Department,
Godrej Agroveter Ltd., "Godrej One", 3rd Floor, Pirojshanagar,
Eastern Express Highway, Vikhroli (East), Mumbai - 400 079
Email : afcustomercare@godrejagroveter.com • Website : www.godrejagroveter.com

For more details, scan the QR
or WhatsApp us on [9738380000](https://wa.me/9738380000).



From the Chairman's Desk.....

Dear Friends,

Greetings!

The First Quarter April – June, 2023 of the new financial year has really had a good start for CLFMA!

In the last three months, as we spread our wings out, we continue to significantly enhance our engagement with diverse stakeholders including the government. CLFMA is investing its' significant time and efforts to protect the Livestock industry's interests.

CLFMA OF INDIA would like to extend its' heartfelt thanks to all CLFMA Members for their continued support. CLFMA has declared its' **56th Annual General Meeting and 64th National Symposium 2023 on the Theme "Livestock Sector: Looking beyond the present" 18th and 19th August, 2023 at Hotel Le Meridien, Windsor Place Janpath, New Delhi.** CLFMA requested to extend logo support for our Symposium to the Government of India and I'm thankful to the Government of India for accepting the same.

I would like to take this opportunity to brief you on CLFMA activities, which has been mentioned under the heading "**CLFMA Activity Updates**". To list a few, CLFMA celebrated World Veterinary Day on 29th April, 2023. On 2nd May 2023, CLFMA OF INDIA participated in the National Seminar on Maize and Ethanol at Vanijya Bhavan, New Delhi. Myself and Dr. Anup Kalra, North Zone President II attended the same. On 4th May, 2023, I had attended the IFIF Meeting - IFIF Nutritional Innovation Working Group meeting, CLFMA OF INDIA also celebrated World Milk Day on 1st June, 2023, Mr. Suresh Deora, B.Y.L. Nair Additional Academic Dean Mr. Satish Dharap, Ms. Chandrika Venkatesh, Executive



Director with CLFMA team were present & the National Egg Day was celebrated on 3rd June, 2023, Ms. Chandrika Venkatesh Executive Director, B.Y.L. Nair Hospital Dean Dr. Pravin Rathi were present for the said event. Milk and Egg were distributed to all the staff and patients.

I'm eagerly waiting for the 64th National Symposium 2023, where I will meet you all in person at Hotel Le Meridien, New Delhi, and your active participation will be much appreciated. Together, we will make it a grand success.

We would be grateful for your feedback or input anytime for our improvement.

With warm regards,

For **CLFMA OF INDIA**,

A handwritten signature in blue ink, which appears to read 'Suresh Deora'.

Suresh Deora
Chairman



05CHAIRMAN'S DESK

COMMODITY UPDATES.....07



22CLFMA UPDATES

PRESS RELEASE..... 28



34NEWS & VIEWS



40-49DAIRY

FISHERY.....

50-51



52-55GENERAL

CALENDAR OF EVENTS..... 58



EDITORIAL BOARD

Dr. Ajit Ranade

Dr. R. S. Masali

EDITOR

Ms. Chandrika Venkatesh

OFFICE BEARERS

Mr. Suresh Deora
CHAIRMAN

Mr. Sumit Sureka
DEPUTY CHAIRMAN

Mr. Divya Kumar Gulati
DEPUTY CHAIRMAN

Mr. Naveen Pasuparthi
DEPUTY CHAIRMAN

Mr. Sandeep Kumar Singh
DEPUTY CHAIRMAN

Mr. Abhay Shah
HON. SECRETARY

Mr. Nissar F. Mohammed
TREASURER

Printed, Published and Edited by Ms. Chandrika Venkatesh on behalf of CLFMA OF INDIA, Printed by Sugam Printers, 21/649, West View Chs. Ltd., Shastri Nagar, Goregaon (W), Mumbai 400 104 and Published from 111, Mittal Chambers, 11th Floor, 228, Nariman Point, Mumbai - 400 021. Tel. No. 91-22-2202 6103. Fax No. : 91-22-2288 0128. Editorial View are independent.

The information contained is true/correct to the best of our knowledge and belief and the opinions expressed are of the authors and not of CLFMA or Livestock and Feed Trends. We cannot accept any liability for any loss or damage arising from the use of information contained herein.

• website : www.clfma.org

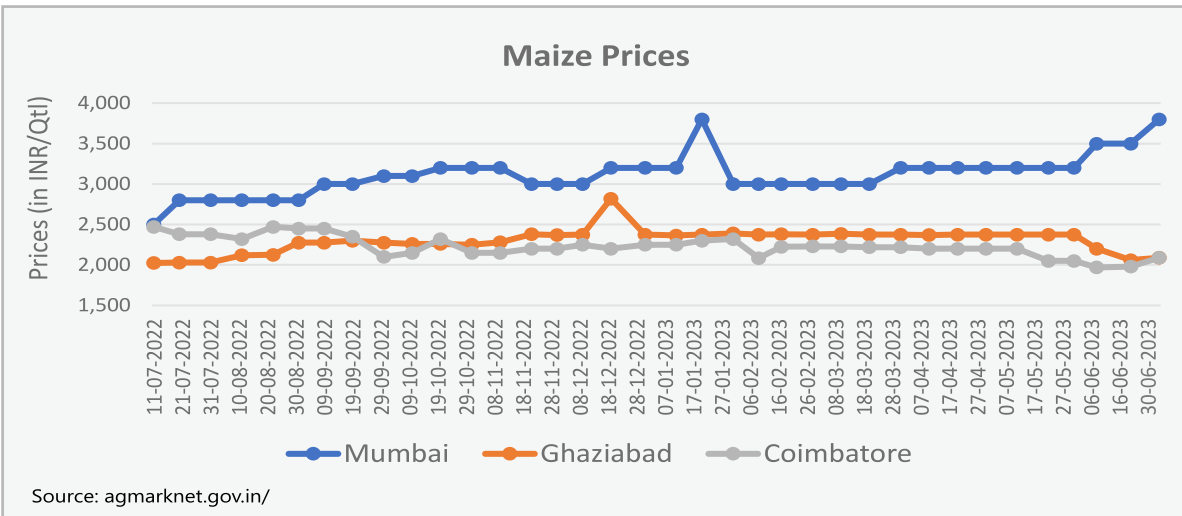
• E-mail : admin@clfma.org



Commodity Updates

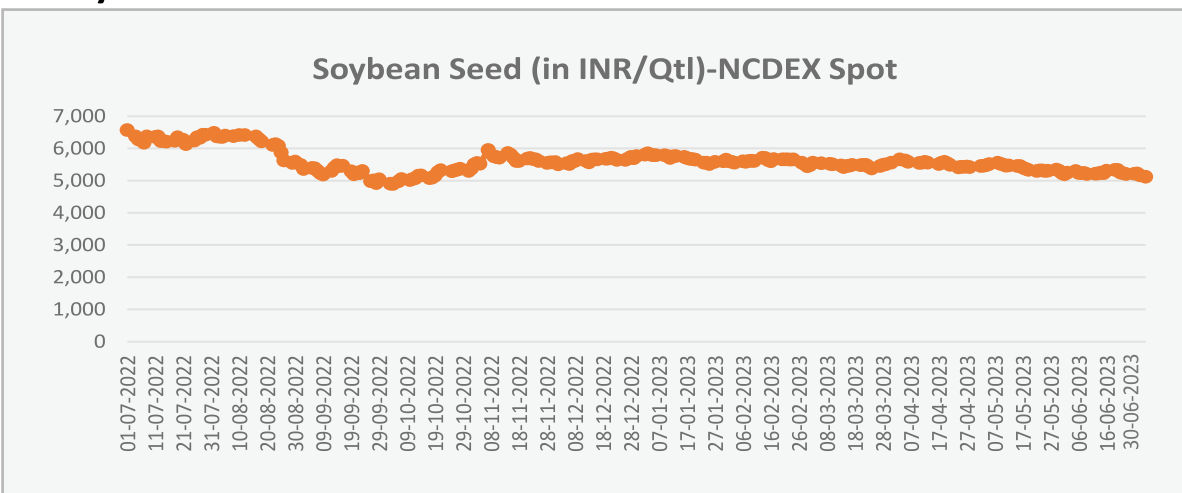
1. Domestic Prices

I. Maize



Maize Prices (INR/Quintal)		
City	30/06/2023	31/05/2023
Mumbai	3,800	3,200
Ghaziabad	2,150	2,375
Coimbatore	2,090	2,050

II. Soybean

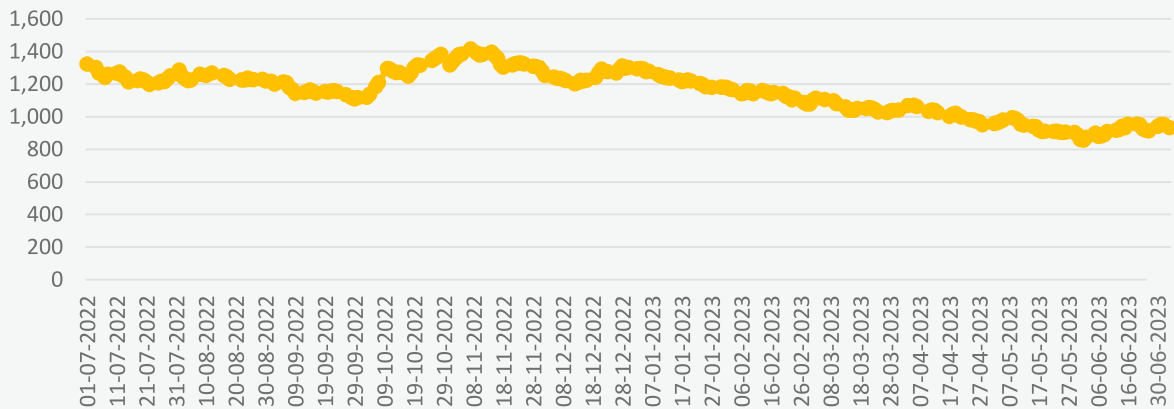


Soybean Complex Prices-NCDEX Spot

Commodity (Unit)	30/06/2023	31/05/2023
Soybean Seed (in INR/Qtl)	5,118	5,227
Ref. Soya Oil (in INR/10kg)	933	860
Soymeal (in INR/MT)	47,000	49,000

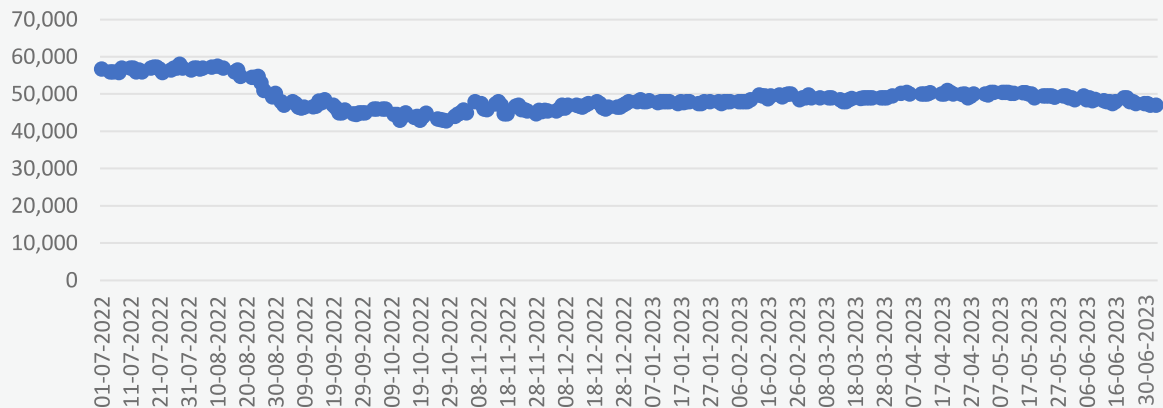
Ref Soya Oil

Ref. Soya Oil (in INR/10kg)-NCDEX Spot

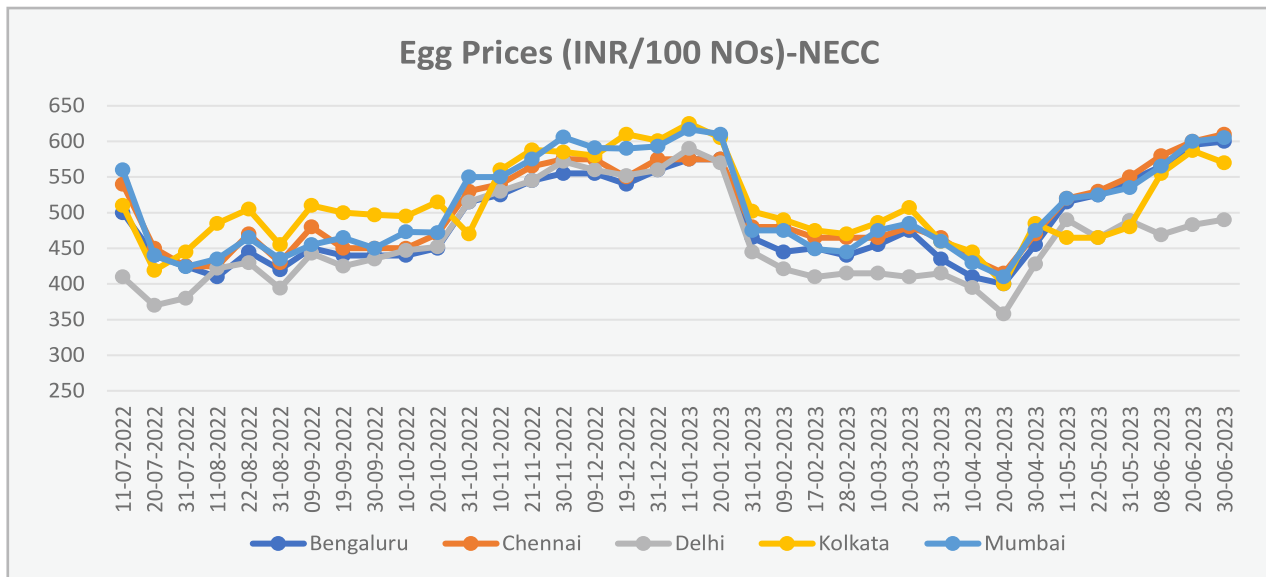


Soymeal

Soymeal (in INR/MT) -NCDEX Spot



III. Egg Rates



EGG PRICES (INR/100 NOs)

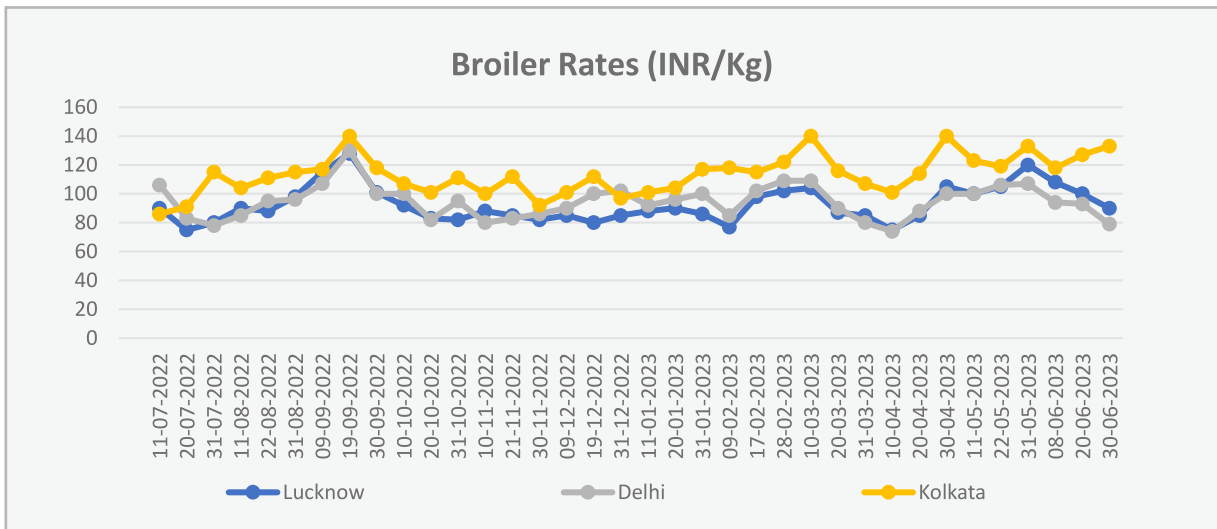
Name of Zone	30/06/2023	31/05/2023
NECC Prices		
Ahmedabad	555	505
Ajmer	492	468
Barwala	473	467
Bengaluru (CC)	600	545
Brahmapur (OD)	553	522
Chennai (CC)	610	550
Chittoor	603	543
Delhi (CC)	490	489
E.Godavari	535	505
Hospet	560	505
Hyderabad	540	480
Jabalpur	555	500
Kolkata (WB)	570	565
Ludhiana	472	468
Mumbai (CC)	605	535
Mysuru	603	550
Namakkal	550	495
Pune	605	540
Raipur	548	505
Surat	565	525
Vijayawada	535	505
Vizag	550	505
W.Godavari	535	505
Warangal	542	482

III. Egg Rates

EGG PRICES (INR/100 NOs)		
Name of Zone	30/06/2023	31/05/2023
Prevailing Prices		
Allahabad (CC)	538	509
Bhopal	545	490
Indore (CC)	525	495
Kanpur (CC)	500	500
Lucknow (CC)	533	523
Muzaffarpur (CC)	535	532
Nagpur	580	510
Patna	535	532
Ranchi (CC)	553	529
Varanasi (CC)	540	523

Source: NECC

IV. Broiler Rates



BROILER RATES (INR/Kg)		
Location	30/06/2023	31/05/2023
Delhi	79	108
Punjab	90	112
Raipur	110	125
Pune	115	124
Bengaluru	120	133
Hyderabad	140	130
Guwahati	112	123
Kolkata	133	132
Bihar	100	125
Madhya Pradesh	125	134
Lucknow	90	112

Source: SRP (Wholesale Rates)



**Taste success
with our wide range
of snacks**



**We bring
quality pre-cuts
to the table**

Godrej



For Business Enquiry email
consumerservice@godrejagrovet.com

SECURE YOUR BUSINESS WITH POULTRY FEED YOU CAN TRUST

Made with superior ingredients and using world class technology, Nouriture offers:

- Highly digestible, ideally balanced for protein and energy
- Better FCR, higher profits
- Great value for money

Also get farm level assistance to help your business flourish.



ALSO AVAILABLE - CATTLE FEED | FISH FEED | SHRIMP FEED



Scan to visit website

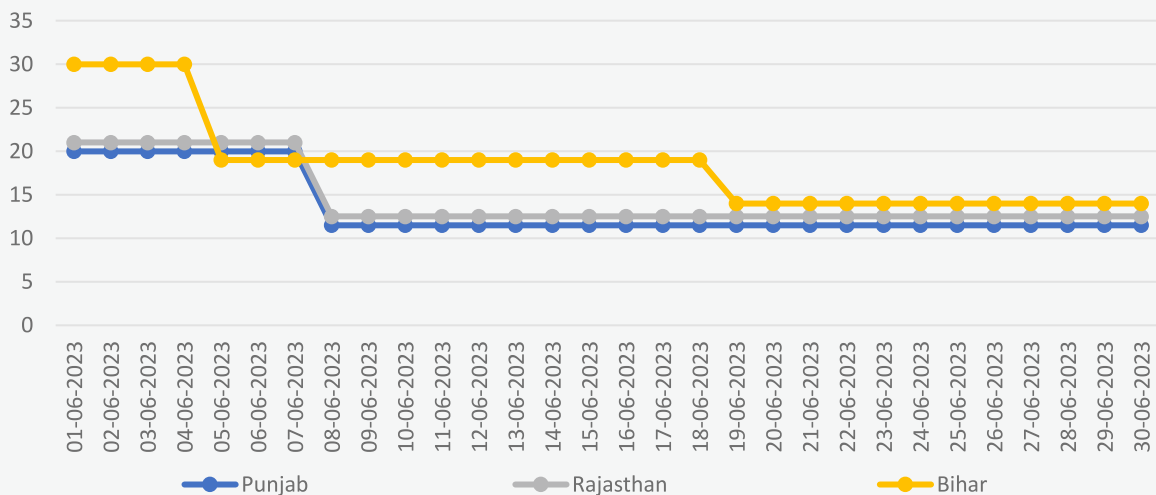
V. Day old Chicks Price

DAY OLD CHICKS PRICE (INR/Unit)

State	30/06/2023	31/05/2023
Punjab	11.5	20
Dehradun	14	24
Haryana	11.5	20
Himachal Pradesh	12.5	21
Rajasthan	12.5	21
Jammu	13	21
Andhra Pradesh	26	26
Uttar Pradesh	12	28
Madhya Pradesh	15	26
Telangana	26	22
Bihar	14	30
Jharkhand	14	30
Gujarat	15	25

Source: Poultry India TV/ SRP

DAY OLD CHICKS PRICE (INR/Unit)



VI. Fish Prices

Fish Prices Average Price (INR/Quintal)

Fish Type	30/06/2023	31/05/2023
Bata Putti	9,000	8,500
Black Dom	11,000	8,500
Blue Dom	11,500	11,500
Chilwa	9,000	9,000
Halwa	27,000	28,000
Hilsa	47,000	53,000
Katla (Small)	11,000	10,000
Malli (Big)	20,000	17,500
Malli (Small)	16,000	13,000
Pangass	8,000	7,500
Katla (Big)	14,500	14,000
Singhra (Big)	23,000	26,000
Singhra (Small)	16,000	15,000
Soli	23,000	29,000
White Dom	11,000	11,000
Rahu (Andhra)	10,500	10,500
Zinga (Zambo-B)	36,000	37,000
Zinga (Zambo-C)	28,000	32,000

Source: www.commodityonline.com
The Prices are of Delhi (Gazipur Mandi)

2. Global Commodity Prices

Commodity (Unit)	PRICE (30/06/2023)
Milk (USD/CWT)	14.92
Rapeseed (Euro/Ton)	449.75
Soybean Meal (USD/Ton)	418.9
Soybean Oil (USD/lb)	0.66
Live Cattle (USD/Lbs)	1.82
Poultry (USD/Kgs)	1.26
Eggs US (USD/Dozen)	1.11

Source: tradingeconomics; markets.businessinsider

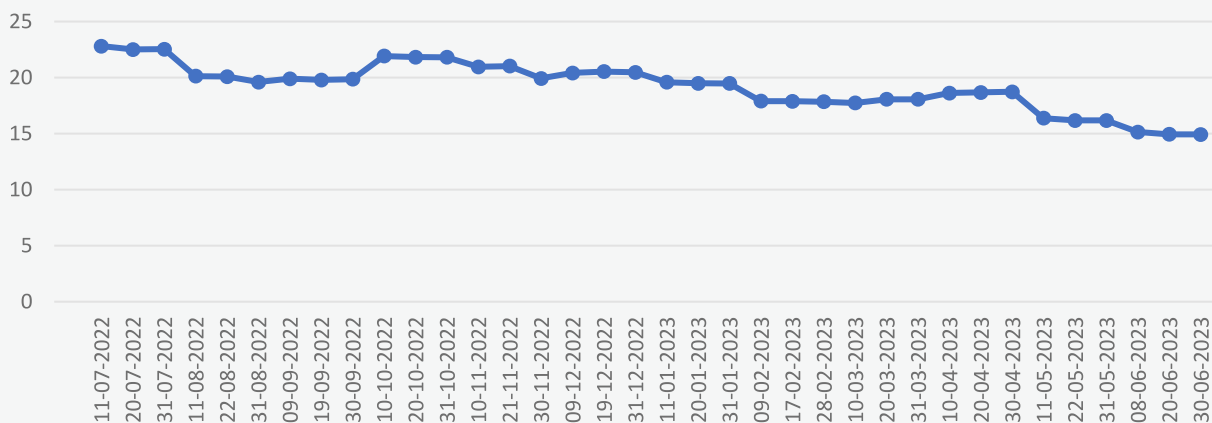
USD: United States Dollar

CWT: Short Hundredweight

Lbs: Pounds

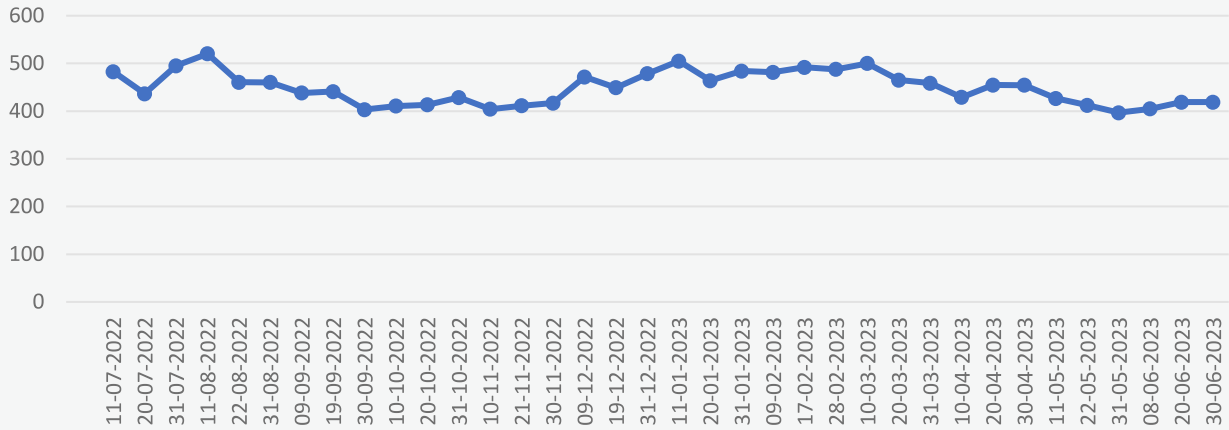
1 BRL (Brazilian Real) = 0.21 USD

Milk (USD/CWT)

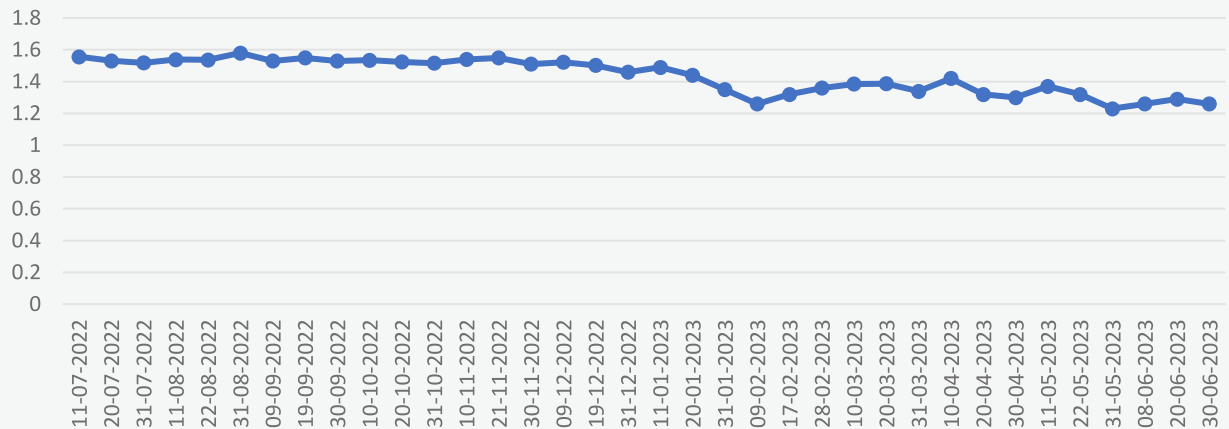


2. Global Commodity Prices

Soybean Meal (USD/Ton)



Poultry (USD/Kg)



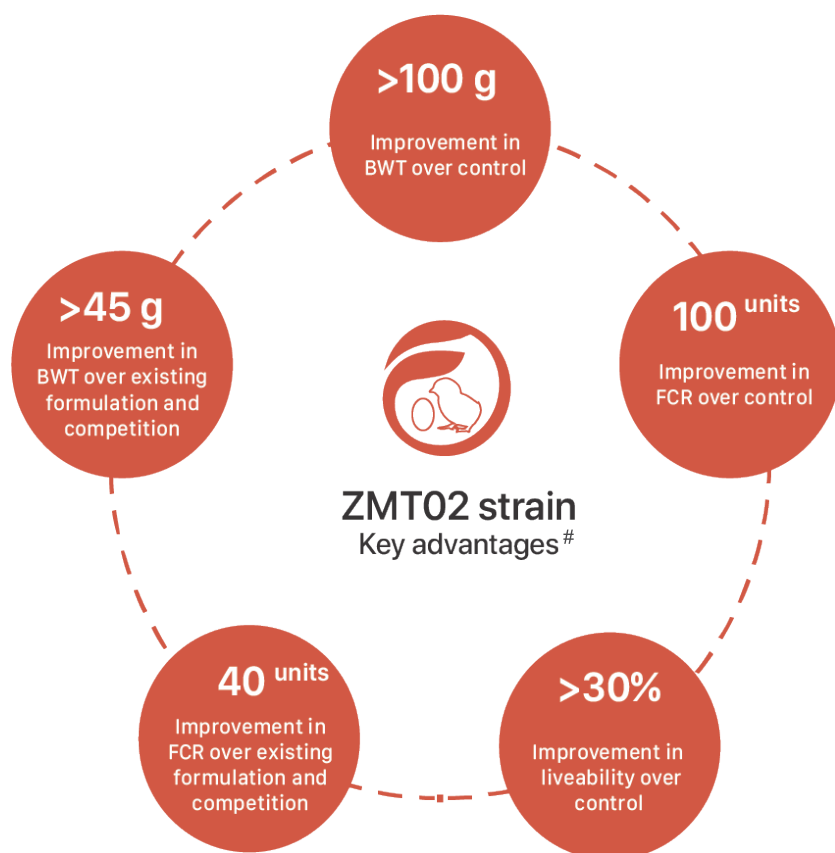


We strive to **sustainably transform** the
quality of life every day for **80% of the world**
with our products and services.

www.kemin.com

© Kemin Industries, Inc. and its group of companies 2023. All rights reserved. ® "™ Trademarks of Kemin Industries, Inc., U.S.A. Certain statements, product labeling and claims may differ by geography or as required by government requirements.

Take a **giant leap** in **performance** and **intestinal health security** of chicken with the first ever novel probiotic strain—***Bacillus siamensis* ZMT02**



[#]The indicated performance improvement refers to the data generated in controlled field trial involving male birds (Vencobb 430Y) in an experiment lasting for 35 days



The key to total gut integrity

3. Trade Details

India: Maize Export



India: Maize Import



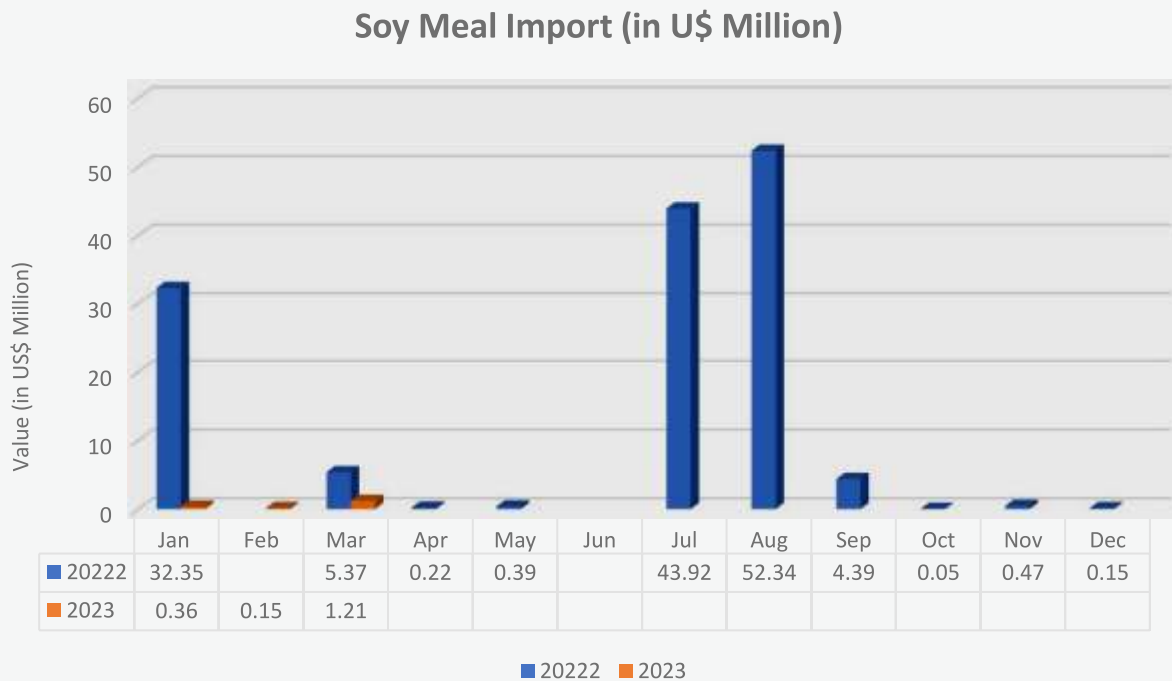
Note: This Data is sourced from the Ministry of Commerce and Industry, which was last updated in April.

India: Soy Meal Export



Source: Ministry of Commerce and Industry, HS Code-23040030

India: Soy Meal Import



Source: Ministry of Commerce and Industry, HS Code-23040030

Note: This Data is sourced from the Ministry of Commerce and Industry, which was last updated in April.

5. Market Drivers

Maize

Market Drivers	Monthly Outlook
Growing Demand for Poultry and Livestock Feed	Bullish
Rising demand for Ethanol in Auto-fuels	Bullish
Increasing Demand as a Wheat Substitute due to Wheat Export Ban	Bullish
Increasing Food Inflation	Bearish
Commercialization of Genetic Modified Maize Crop	Bullish
Increasing demand for Coarse Cereals	Bullish

Poultry

Market Drivers	Monthly Outlook
Rapid Growth in Consumer Demand for Livestock Products	Bullish
Rising Demand for White Feather Broilers	Bullish
Increasing Broiler Chicken Price Increases Due to Higher Feed Cost	Bearish
Increasing Food and Feed Inflation	Bearish
Enhancement of Backyard Poultry Farming	Bullish
Increasing the Demand of Organic Poultry Farming	Bullish

Regards,
CLFMA OF INDIA
111, Mittal Chamber, 11th Floor,
Nariman Point, Mumbai - 400 021, INDIA
Telephone: +91-22-22026103

Sourced by: IMARC Group

CLFMA ACTIVITY UPDATES

Stakeholder Outreach:

On 17th April, 2023, one of our CLFMA member (GM Biochem Pvt. Ltd.) raised a query by sending email to CLFMA. CLFMA forwarded the member's query to the Government of India and got a response from Dr. Gagan Garg, Dy. Commissioner (Trade) to contact Export Inspection Council of India for further help.

On 19th April, 2023, CLFMA received an acknowledgement letter from IFIF congratulating Mr. Suresh Deora as a Chairman of CLFMA and subsequently sent an invitation to the Chairman to join their next annual IFIF Meeting with the FAO and their 36th General Assembly in Rome, Italy on 16th - 17th November, 2023.

On 21st April, 2023, CLFMA has responded to Mr. Vijay Thakre, Director (RFS) HQ that CLFMA has no objection to the export of Wheat Bran.

On 21st April, 2023, CLFMA responded to one of our Member, AB Vista South Asia on the ban on Colistin by sending notification and updated them on the present notification of Government Approved 5th Feed additive list.

On 26th April, 2023, CLFMA OF INDIA received IFIF Calendar to attend their international event.

On 29th April, 2023, CLFMA provided data to Dr. Sujit Kumar Dutta, Joint Commissioner (AH) viz. Data on DDGS & Poultry as CLFMA got a request from them. On the same day, CLFMA provided data on Poultry, Livestock and Animal Feed Market, DDGS, the same was required for National Seminar on Maize and Ethanol, which was scheduled on 2nd May, 2023.

CLFMA sent letters on 17th to 19th June, 2023 to all Vice Chancellors of all universities of India and requested for information on certain herbal formulations, which can be used as feed supplements/additives/ingredients for Animal Husbandry viz. Aqua, Dairy, Poultry.

BIS requested that, CIB (Committee Internal Ballot) ballot under ISO/TC34/SC10: Animal Feeding Stuffs, and requested for comments and voting for project limit date extension request ISO/DIS 30024 "Animal Feeding Stuffs – Determination of Phytase Activity. CLFMA forwarded the same to Technical Committee Head Dr. A.S. Ranade for comments.

Representations / Liaisoning with Government of India:

CLFMA OF INDIA got a letter from Mr. Vijay Thakre requesting to expedite comments on the export of Maize

Bran and accordingly on 26th April, 2023, CLFMA responded to Dr. O.P. Chaudhary, Joint Secretary (NLM/PC) with a copy to Mr. Vijay Thakre that CLFMA has no objection to export Maize Bran.

On 27th April, 2023 CLFMA wrote a letter to Ms. Alka Upadhyay, IAS, Secretary AHD, New Delhi, to congratulate her on being deputed as Secretary of the Animal Husbandry and Dairying and a request is also being made by Chairman Mr. Suresh Deora for an appointment on 1st May, 2023.

On 28th April, 2023 a letter was sent to Shri. Rajesh Kumar Singh, Secretary of Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Vanijya Bhawan, 2023, New Delhi. Congratulating him on his new assignment and requesting to him for the G20 Logo Support for CLFMA Symposium, 2023 scheduled at New Delhi.

On 4th May, 2023 CLFMA sent an additional 5th Feed Additive List to Ms. Alka Upadhyay, Secretary AHD for approval of feed additives to Dr. G. N. Singh with a c.c. to Dr. Gagan Garg and Dr. Amit Mitra.

On 4th May, 2023, CLFMA provided data to Dr. Tarun Kumar Singh, Assistant Commissioner (Fisheries), New Delhi.

On 4th May, 2023, CLFMA sent letter to Dr. O. P. Chaudhary, Joint Secretary (NLM/PC) on the subject request to Government to ban Molasses Export to protect the small farmers of Livestock Industry. The same letter was sent to Ms. Alka Upadhyay, IAS secretary AHD.

On 5th May, 2023, CLFMA sent all the earlier representations letter on the subject type 3 feed to Dr. Abhijeet Mitra with a cc copy to Dr. O. P. Chaudhary for the further follow-up from CLFMA OF INDIA.

Analysis of Animal Feed Industry data provided to GOI. on 16th May, 2023.

Panel Discussion:



Fermenta Biotech Limited

Our Offerings:

**Comprehensive Nutrition
Solutions for Animal Health**

VITAMIN D

CHOLECALCIFEROL

(Crystalline Vitamin D3)

Veterinary & Feed Industries

**VITAMIN D3 500
FEED GRADE POWDER**

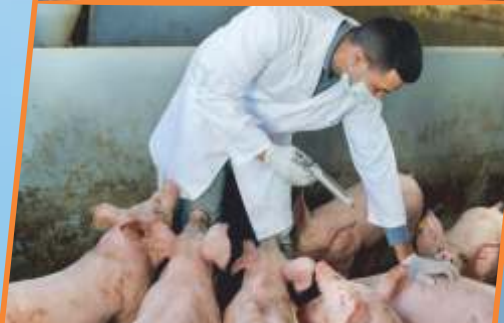
Animal Feed Supplement

VITAMIN D3 RESIN IN OIL

Animal Feed Supplement

VITAMIN E50

Animal Feed Supplement



Fermenta Biotech Limited

A - 1501, ThaneOne, 'DIL' Complex, Ghodbunder Road, Majiwada, Thane (West) - 400 610,
Maharashtra, India. | Tel. : +91 22 6798 0888

Email : info@fermentabiotech.com | Website : www.fermentabiotech.com

INDIA GELATINE & CHEMICALS LTD.

77/78/79, Mittal Chambers, 228, Nariman Point, Mumbai - 400 021. INDIA **GSTIN No. 27AAACI3676F1ZK**
Tel.: 91 - 22 - 2202 0341, 2202 3554, 2202 3556. Email : igclmumbai@indiagelatine.com, Web: www.indiagelatine.com
CIN: L99999GJ1973PLC002260



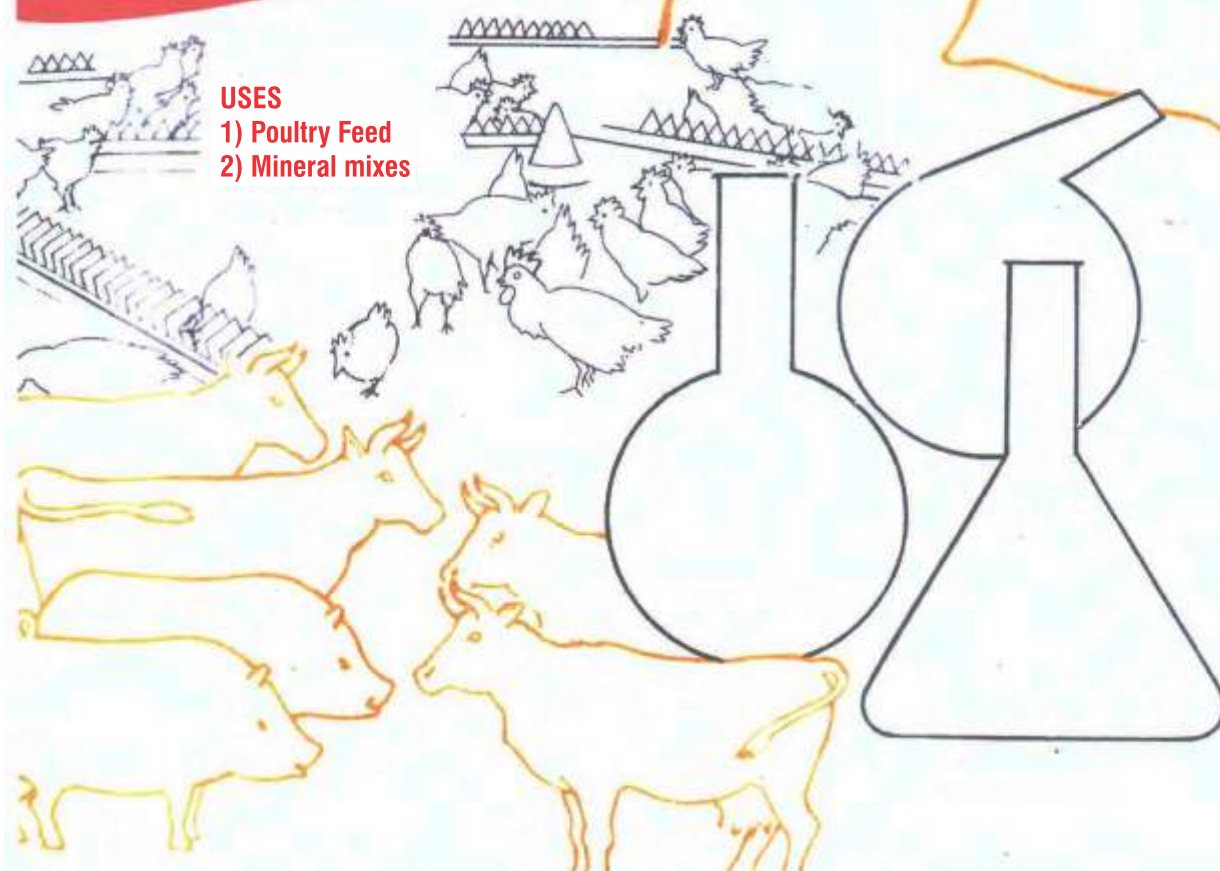
**DI-CALCIUM PHOSPHATE
(ANIMAL FEED GRADE)
($\text{CaHPO}_4 \cdot 2\text{H}_2\text{O}$)**

Serving the Indian Feed Industry for the past 50 years

IGCL
DI-CALCIUM PHOSPHATE

USES

- 1) Poultry Feed
- 2) Mineral mixes



SPECIFICATIONS

(1) Moisture content	7. 0% Max
(2) Phosphorous as "P"(Total)	16.6-18.3 %
(3) P2O5 (Total)	38-41 %
(4) Calcium as CA	23.0 % Min
(5) Acid insoluble ash	1. 0 % Max.
(6) Flourine as F	0.2 % Max.

N.B.: The contents for item (2) to (6) are on moisture-free basis.

Factory : Plot No.1/A, G.I.D.C. Industrial Estate,
National Highway,

VAPI - 396 195. (Gujarat). INDIA

Tel.: 91 - 260 - 240 1584 / 91 - 94299 61759 / 91 - 94298 95136

GSTIN No. 24AAACI3676F1ZQ

Email : igclvapi@indiagelatine.com

CLFMA Chairman, Mr. Suresh Deora nominated Mr. Jaison John, CLFMA Managing Committee Member for Times of India, panel discussion on the topic “Soy Food and Soy Seed for Quality Protein Consumption”. Accordingly, on 27th April, 2023, Mr. Jaison John, Managing Committee Member, CLFMA OF INDIA attended the panel discussion on the topic “Soy Food and Soy Seed for Quality Protein Consumption” at Hotel Ambassador, New Delhi.

Celebration of World Veterinary Day on 29th April, 2023:

CLFMA celebrated World Veterinary Day 2023 on 29th April, 2023 by sending message to all members “World Veterinary Day 2023 - Promoting Diversity, Equity, and Inclusiveness in the Veterinary Profession”.

CLFMA celebrated World Milk Day on 1st June 2023:

CLFMA celebrated National Egg Day on 3rd June, 2023:

CLFMA celebrated its 56th Foundation Day on 8th June, 2023.

Seminar:



CLFMA OF INDIA participated in a one-day Seminar dated 2nd May, 2023 on 'National Seminar on Maize to Ethanol'

CLFMA OF INDIA, Association of Livestock Industry participated a one-day Seminar dated 2nd May, 2023 on 'National Seminar on Maize to Ethanol' at Vanijya Bhavan, New Delhi. CLFMA Chairman Mr. Suresh Deora, CLFMA North Zone President II Dr. Anup Kalra participated in the Seminar and presented CLFMA's perspective.

During a one-day seminar dated 2nd May, 2023 on 'National Seminar on Maize to Ethanol', the Hon'ble Minister of Commerce and Industry, Shri. Piyush Goyal highlighted how ethanol will support maize farmers in increasing their income. When speaking at a one-day seminar on "National Seminar on Maize to Ethanol" organised by the Department of Food and Public Distribution here today, Shri. Piyush Goyal, Union Minister for Consumer Affairs, Food and Public Distribution, Textiles, and Commerce and Industry, said that the Ethanol sector has grown tremendously and has served as an example for the rest of the world. Shri. Piyush Goyal said that for the past nine years, the sugar industry has been self-sufficient, paying farmers for the preceding season in 99.9% of cases. As with sugarcane farmers, ethanol will now help maize farmers increase their income and bring about growth and stability. The creation of thousands of jobs in the rural sector thanks to investment totaling thousands of crores has had a multiplier effect on the Indian economy.

He emphasised that Prime Minister Shri. Narendra Modi has prioritized the use of environmentally friendly fuels like Ethanol, which has led to an increase in Ethanol blending of more than double in just two years and a postponement of the aim of 20% ethanol blending from 2030 to 2025. The Union Minister emphasised how India has improved by achieving greater targets in less time to become the global leader.

Shri. Manoj Ahuja, the Secretary of Agriculture, also stressed on the need for a more targeted and region-specific approach to encouraging maize cultivation across the nation. The Secretary of Petroleum applauded the notion and spotlighted the effort OMCs had made in conjunction with industry to meet the 10% blending objective last year and to



be on track to meet the 20% blending target by the deadline. As a basic requirement to meet the aim for grain-based distilleries, Shri. Sanjeev Chopra, the Secretary, F & PD underlined the need for assured procurement of Maize at MSP and an evolving enabling ecosystem for the entire sector.

Distilleries in India typically create ethanol from molasses, a by-product of the sugar industry. To meet the 20% blending objective, however, the sugarcane route alone is insufficient; as a result, ethanol from food grains, including maize, damaged food grains (DFG), and rice that are available with FCI, has also been permitted. About 1016 crore litres of ethanol would be needed for the target of blending 20% ethanol with petrol by 2025, and another 334 crore litres of ethanol would be needed for other uses. If the plant runs at 80% efficiency, then around 1700 crore litres of ethanol production capacity would be needed for this. According to estimates, 165 LMT of food grains would be needed to produce ethanol in order to meet the 20% blend target. The use of maize as a feedstock for ethanol production is still gaining traction in India, despite the fact that it uses less water and is more cost-effective globally. There is currently very little ethanol production from maize by grain-based distilleries in India; instead, they use either damaged food grains (DFG), such as broken rice, or FCI rice to make ethanol from food grains.

The production of maize in the country is consistent. However, due to low demand for maize, farmers are not getting an appropriate price for their produce. Production of ethanol from maize will increase the demand of maize and therefore will fetch a better price to farmers. At present, due to export demand, maize prices are high but generally, the market price of maize remains below MSP leading to low cultivation area for the crop. Use of maize for ethanol production would assure better prices and consistent demand for maize, leading to more cultivation of the crop, which is a less water-consuming crop as compared to paddy. Further, distilleries too shall be assured about the availability of feedstock in the market, which will not only create a win-win situation for both distillers and farmers but also would be of great help in the conservation of water and the environment.

Utilising multiple feedstocks will ensure feedstock security and alleviate any pressure on a single feedstock's availability for ethanol production. Maize-based ethanol is also more cost-effective and water-efficient.

All the participants of the Seminar involved in the discussions decided to work together to promote maize production, yield, and area. Similar to the sugarcane industry, distilleries must assist maize farmers and guarantee the purchase of their crop at the MSP pricing for maize. A medium-term stable pricing strategy on the topic has also demonstrated the Petroleum Ministry's

commitment to encourage the production of ethanol from maize. The Indian Institute of Maize Research will focus on developing better varieties, and distilleries must cooperate with the CLFMA, an Association of Livestock Industry to establish DDGS quality standards in order to take advantage of the enormous market potential. Higher profitability for farmers, distilleries, and the industry as a whole could be ensured with an integrated strategy that includes ethanol, DDGS, and other by-products from maize. This strategy would also cater to almost 50% of the demand for ethanol for fuel through grain-based distilleries.

As a result, the seminar concentrated on bringing together experts from a wide range of technological fields with the goal of exploring how to use technology as a force multiplier to understand the concerns and challenges in promoting maize cultivation as well as to identify a suggestive course of action to advance in achieving higher maize production in the country, which would undoubtedly benefit not only farmers and distilleries but would also be of great help in reducing food insecurity.

The seminar was organized to align Atmanirbhar Bharat's goal of meeting the nation's fuel energy demands through the Ethanol Blended with Petrol (EBP) Programme with the Central Government's goal of advancing the interests of the nation's maize farmers. The Seminar's main goal was to gather all key players in the maize and ethanol industries together on one stage to talk about the best ways to promote maize as the main grain used as a feedstock for ethanol production in order to meet the 20% blending target by 2025. The seminar was divided into four segments, each of which concentrated on a crucial element of the entire scenario.

Eminent specialists from various government departments, institutes, oil marketing companies, and industries attended the seminar with Secretary DFPD Shri. Sanjeev Chopra, Secretary Ministry of Petroleum & Natural Gas, and Secretary, Shri. Pankaj Jain. The seminar was attended by eminent professionals from the ethanol business, the sugar industry, representatives of CLFMA OF INDIA, and seed and equipment providers.

Meeting:

On 4th May, 2023, CLFMA Chairman, Mr. Suresh Deora attended the IFIF Meeting.

CLFMA Chairman Mr. Suresh Deora attended Stakeholder Consultation (Industry Association) Meeting through virtual mode for discussion on the preliminary draft of "The Livestock and Livestock Products Importation Exportation Act, 2023 dated 25th May, 2023 at 04:30 pm under the Chairmanship of Shri. G. N. Singh, Joint Secretary (Admin, Trade & IC), DAHD, New Delhi. An Email was received from Dr. Aniruddha Udaykar, Assistant Commissioner (Trade), Department of AH&D, Ministry of Fisheries AH&D, Krishi Bhavan, New Delhi on 22nd May, 2023 regarding the same.

On 31st May, 2023, CLFMA OF INDIA had a networking meeting with USSEC at the CLFMA Secretariat Office, Mumbai. Mr. Jaison John, Team Lead – India, USSEC Mr. Kevin Roepke, Regional Director, South Asia & Sub-Saharan Africa, USSEC, Mr. Suresh Deora, Chairman of CLFMA OF INDIA and Ms. Chandrika Venkatesh, Executive Director of CLFMA OF INDIA were present during the meeting.

CLFMA got invitation from Deputy Director (Fodder Development), Office of the Commissioner, Animal Husbandry, M. S. Pune for the Meeting. The subject of the meeting was to discuss on the rates of milk and for that Government invited private / co-operative milk producing organizations and feed manufacturing organizations on 22nd June, 2023 at 11:00am. Hon'ble Minister Shri. Radha Krishna Vikhe Patil, Hon'ble Cabinet Minister of Revenue, Animal Husbandry and Dairy Development, GOI, Farmer Leader Sadabhau Khot, Association of Milk Processors both Private and Co-operative and H S Vasekar IAS posted as Commissioner, Animal Husbandry, Pune were present. Hon'ble Minister Shri. Radha Krishna Vikhe Patil briefed to all the representatives of the dairy sector present for the meeting that feed manufacturers should reduce prices of the feed by almost 25% and all feed bags must have the label of all ingredients percentage and all nutrients specifications. Animal Husbandry Commissioner issued a letter for ingredients percentage. He also made it compulsory for the feed millers, to do sample reports, which is compulsory for them and if they are not doing the same then tehsil level animal husbandry department person will visit them, they will collect the sample, analyze the same and publish the report and keep its record at their end. The same was very well noted by Dr. Devendra Hooda, CLFMA North Zone President - I and Dr. Prashant Shinde, CLFMA Managing Committee Member & on behalf of CLFMA both attended the said meeting. CLFMA Member Godrej Agrovet team was also present for the said meeting.

In order to sensitize Industry Association about the role of the standardization cells in the development and implementation of standards and to work out a road map for the more cohesive association of industry and BIS, BIS organized a full-day workshop for the standardization cells of industry association at NITS, Noida on two days 16th June, 2023 and 23rd June, 2023. CLFMA Technical Committee Head Dr. A. S. Ranade and Dairy Committee Technical Member Dr. R.S. Masali on 23rd June, 2023 attended the same. The meeting at BIS training center was good. Information about the new proposal about preparing new BIS standards was very explained. The need and importance of setting up sub-committee for standardization in every Association were emphasized. Almost 50 plus representatives from various associations were present, it was quite a diverse group. A separate meeting will be organized with individual association now

onwards updated by BIS in the meeting. At CLFMA OF INDIA also, there will be a need to form the committee in near future. The Feed act is likely to be passed by the Government of India by December, 2023. Hence all members need to be sensitized about it. Thereafter they will be lot of changes. BIS has already issued information about Cattle feed. However, very few feed manufacturers have adopted the same. Once the act comes in force, certain things will be mandatory viz. Registration of feed mills, License for feed manufacturing will have to be taken by paying due fees, sticking to the provisions in the act, printing of nutrient levels on all the packaging bags, Regular testing of finished feed samples, Regular testing of raw materials will have to be done and at the end BIS will monitor all activities.

Mycotoxin levels will also have to be monitored, hence raw material suppliers will have to be sensitized about it. May be the intervention of the concerned minister will be required for this.

Raw materials used for feed manufacturing will also have to be printed on packaging bags. After cattle, Poultry Feed will also be likely to be included with a separate act.

Things are going to change in future, and all the concerned will have to be prepared to accept the changes.

CLFMA has a good name and rapport with Government and BIS, so this is the opportunity to further improve relations with the Government of India, by sensitizing members.

CLFMA OF INDIA announced its' 56th Annual General Meeting, 2023 and 64th National Symposium, 2023, which will be held on 18th & 19th August, 2023 at Hotel Le Meridien, Windsor Place Janpath, New Delhi and the process of delegate registration is on.

All members are requested to kindly extend their support by **Sponsoring and participating** in the said annual event. **The Theme of the 64th National Symposium 2023 will be "Livestock Sector: Looking Beyond the Present".** This time, we got confirmation from IFIF, that Ms. Alexandra de Athayde, Executive Director, of International Feed Industry Federation will attend CLFMA's Symposium 2023. We have also invited and expecting the presence of Ambassadors and High Commissioners of various countries for CLFMA's Symposium 2023.

CLFMA OF INDIA has tied up for a discounted stall rates in the Expos viz North East Livestock Aqua-Poultry (NELAP) Expo 2023, scheduled from 18th to 20th April, 2023 at Maniram Dewan Trade Centre, Guwahati, Assam & also in the Livestock Expo, which is scheduled from 3rd to 5th August 2023 at India Expo Centre, Greater Noida, UP and the details of the same has been circulated to all members in regular intervals to avail the discounts on booking of stalls and sponsorships on producing the CLFMA ID to the organizers.

CLFMA OF INDIA in association with Smt. Sarabatibai Deora Memorial Foundation Celebrated World Milk Day at B. Y. L. Nair Hospital, Mumbai on 1st June, 2023



World Milk Day is an international day established by the Food and Agriculture Organization of the United Nations to recognize the importance of milk as a global food. It is observed on June 1 each year since 2001.

Milk proteins are important sources of essential amino acids like tryptophan and lysine. Proteins in the diet supply the amino acids required for the growth of infants and children and for the maintenance of tissues in adults. It is an important component of a balanced diet and contains numerous valuable constituents. Considerable acclaimed health benefits of milk are related to its proteins, not only for their nutritive value but also for their biological properties. Scientific evidence suggests that anticarcinogenic activities, antihypertensive properties, immune system modulation, and other metabolic features of milk, are affiliated with its proteins.

On 1st June, 2023, CLFMA OF INDIA in association with Smt. Sarabatibai Deora Memorial Foundation Celebrated World Milk Day at B. Y. L. Nair Hospital, Mumbai. CLFMA OF INDIA's Chairman Mr. Suresh Deora, B. Y. L. Nair Additional Academic Dean, Dr. Satish Dharap, CLFMA Executive Director Ms. Chandrika Venkatesh and CLFMA team were present in the event.

CLFMA distributed milk tetra packets to the patients and staff of Nair hospital for creating awareness about the importance of protein in the diet.

The initiative was well appreciated by the participants.

CLFMA OF INDIA in association with Smt. Sarabatibai Deora Memorial Foundation Celebrated National Egg Day at B. Y. L. Nair Hospital, Mumbai on 3rd June, 2023



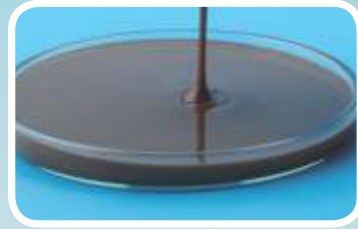
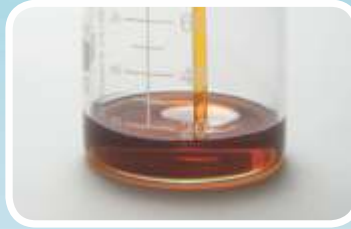
BlueLine Group
Since 1968

BlueLine®
Foods(India)Pvt Ltd

FISHERIES • AGRI • CONSTRUCTION • REAL ESTATE

AN ISO 9001:2015, ISO 22000:2018, ISO 14001:2015 & ISO 45001:2018, HACCP, HALAL, GMP+ & EU CERTIFIED COMPANY

Manufacturers & Exporters Of
**FISH MEAL, FISH OIL, FISH SOLUBLE PASTE
& OTHER MARINE PRODUCTS**



★ TWO STAR EXPORT HOUSE ★



4th Floor, Suite No 406, Crystal Arc, Balmatta Road, Mangalore - 575 001, Karnataka, India

Ph: +91-824-2427744 / 2441466

Email: info@bluelinefoods.in, bluelinefoods@yahoo.in

E-Brochure is available here <http://www.bluelinefoods.in/ebrochure>

www.bluelinefoods.in



Summer stress
may affect the
immunity and
productive
performance
of the bird



Need for
**Natural
Defence**

PHYTOCEE[®]
Natural Defence Enhancer

E-mail : sales@naturalremedy.com,
Website : www.naturalremedy.com





National Egg Day is a day dedicated to recognizing the importance of eggs in our diets and their wide range of culinary uses and is an opportunity to showcase the versatility, nutritional value, and culinary delights.

National Egg Day is celebrated on June 3rd each year and CLFMA OF INDIA celebrated National Egg Day on 3rd June, 2023 at BYL Nair Charitable Hospital, Mumbai. The dean of Nair Hospital Dr. Pravin Rathii was present to grace the occasion. This was a protein awareness program. Ms. Chandrika Venkatesh, Executive Director along with the CLFMA team were present at the event.

CLFMA distributed Eggs to the patients and staff of Nair hospital for creating awareness about the importance of protein in the diet.

The initiative was well appreciated by the participants.

BIS organized a full-day workshop for the standardization cells of industry association at NITS, Noida on two days 16th June, 2023 and 23rd June, 2023.

In order to sensitize Industry Association about the role of the standardization cells in the development and implementation of standards and to work out a road map for the more cohesive association of industry and BIS, BIS organized a full-day workshop for the standardization cells of the industry association at NITS, Noida on two days 16th June, 2023 and 23rd June, 2023. CLFMA Technical Committee Head

Dr. A. S. Ranade and Dairy Committee Technical Member Dr. R.S. Masali on 23rd June, 2023 attended the same. The meeting at BIS training center was good. Information about the new proposal about preparing new BIS standards was very explained. The need and importance of setting up a sub-committee for standardization in every Association were emphasized. Almost 50 plus representatives from various associations were present, it was quite a diverse group.

A separate meeting will be organized with individual association now onwards updated by BIS in the meeting. At CLFMA OF INDIA also, there will be a need to form the committee in near future. The Feed act is likely to be passed by the Government of India by December, 2023. Hence all members need to be sensitized about it. Thereafter they will be lot of changes. BIS has already issued information about Cattle feed. However, very few feed manufacturers have adopted the same. Once the act comes in force, certain things will be mandatory viz. Registration of feed mills, License for feed manufacturing will have to be taken by paying due fees, sticking to the provisions in the act, printing of nutrient levels on all the packaging bags, Regular testing of finished feed samples, Regular testing of raw materials will have to be done and at the end BIS will monitor all activities.

Mycotoxin levels will also have to be monitored, hence raw material suppliers will have to be sensitized about it. May be the intervention of the concerned minister will be required for this.

Raw materials used for feed manufacturing will also have to be printed on packaging bags. After cattle, Poultry Feed will also be likely to be included with a separate act.

Things are going to change in the future, and all the concerned will have to be prepared to accept the changes.

CLFMA has a good name and rapport with Government and BIS, so this is the opportunity to further improve relations with the Government of India, by sensitizing members.



"There is a need to create a world where people pay more attention to the food they consume. We believe that the quality of food (animal protein) begins with the quality of feed."

Protein Positive India

We are one of India's leading commercial animal feed manufacturers with state-of-the-art manufacturing units pan India.

We support our partners with consistent delivery of high-quality products and superior farm services, using the latest technology to grow and prosper together.

Our Speciality
Products include
De-Oiled Rice Bran,
Cotton DOC and
Soya DOC



Rohini Feeds
Doctors' Brand



Noveltech Feeds Pvt.Ltd
Corp Office: Trendz hub, H.No.189/A/8,
Plot No.8,3-5 Floors,Gafoor Nagar,
Madhapur, Hyderabad-500 081 Telangana
Ph: 040-30903600



www.noveltech.in

PRAWN FEED



VANNAMEI FEED



BLACK TIGER SHRIMP FEED



BLACK TIGER SHRIMP FEED



Avanti Feeds Limited

In the business of quality Prawn feed and Prawn Exports

An ISO 9001:2015 Certified Company

Aiding sustainability & reliability to Aquaculture

Shrimp Hatchery



Feed Plant - Gujarat



Prawn Feed & Fish Feed



Prawn Processing & Exports

INNOVATIVE - SCIENTIFICALLY FORMULATED - PROVEN

- GREATER APPETITE • HEALTHY & FASTER GROWTH
- LOW FCR WITH HIGHER RETURNS • FRIENDLY WATER QUALITY

AVANT AQUA HEALTH CARE PRODUCTS

AVANTI A.H.C.P. RANGE



IN COLLABORATION WITH:
THAI UNION FEEDMILL CO., LTD.,
Thailand.



Chelated Trace
Mineral Supplement

Avant Bact

Aiding Sustainability & Reliability to Aquaculture
Gut Probiotic



Marine Mineral

Avant AmmoniAbsorb

AIDING SUSTAINABILITY & RELIABILITY TO AQUACULTURE
Ammonia Absorber

Avant D-Flow

Water Quality Improver

Avant Immupak

AIDING SUSTAINABILITY & RELIABILITY TO AQUACULTURE
Immunity Enhancer

Avant ProW

Aiding Sustainability & Reliability to Aquaculture
Soil & Water Probiotic

Avant Catcher

AIDING SUSTAINABILITY & RELIABILITY TO AQUACULTURE
1

Corporate Office: **Avanti Feeds Limited**

G-2, Concord Apartments, 6-3-658, Somajiguda, Hyderabad - 500 082. India. Ph: 040-2331 0260 / 61, 040-4460 8222. web: www.avantifeeds.com

Regd. Office: **Avanti Feeds Limited**

Flat # 103, Ground Floor, R Square, Pandurangapuram, Visakhapatnam - 530003. Andhra Pradesh. INDIA. Ph: 0891-2555011.

India's Seafood Exports Touch Record USD 8 Billion in FY23

India shipped 17,35,286 metric tonnes (MT) of seafood worth Rs 63,969.14 crore (\$8.09 billion) during 2022-23, an all-time high in terms of both volume as well as value (both USD and INR). Frozen shrimp remained the major export item both in quantity and value. The US and China were major importers of India's seafood. During FY23, export improved by 26.73% in terms of volume, 11.08% in terms of INR, and 4.31% in terms of USD, the Kochi-headquartered Marine Products Export Development Authority (MPEDA) said on June 14. In 2021-22, India exported 13,69,264 MT of seafood worth Rs 57,586.48 crore (\$7.76 billion). MPEDA chairman D V Swamy said India managed to record an all-time high in exports despite several challenges in its major export markets, like the US. Frozen shrimp, which earned Rs 43,135.58 crore (\$5.48 billion), retained its position as the most significant item in the basket of seafood exports, accounting for a share of 40.98% in terms of volume and 67.72% of the total dollar earnings. Frozen shrimp exports increased by 1.01% in rupee value in 2022-23. The overall export of frozen shrimp during 2022-23 was pegged at 7,11,099 MT. The US, India's largest market, imported 2,75,662 MT. China was in second place, exporting 1,45,743 MT of frozen shrimp. It was followed by the European Union (95,377 MT), southeast Asia (65,466 MT), Japan (40,975 MT), and the Middle East (31,647 MT). The export of black tiger shrimp rose by 74.06%, 68.64%, and 55.41% in terms of quantity, rupee value, and USD, respectively, in the last fiscal year. Around 31,213 MT of black tiger shrimp worth Rs 2,564.71 crore (\$321.23 million) were exported. Japan turned out to be the major market for black tiger shrimp, with a share of 25.38% in terms of USD value, followed by the European Union (25.12%) and the US (14.90%). Vannamei shrimp exports declined from \$5.23 billion in 2021-22 to \$4.8 billion in 2022-23, a drop of 8.11%. Frozen fish, the second largest exported item, fetched India Rs 5,503.18 crore (\$687.05 million), accounting for 21.24% in quantity and 8.49% in USD earnings. This year, the export of frozen fish rose by 62.65%, 58.51%, and 45.73% in quantity, rupee, and USD value terms, respectively. As for overseas markets, the US continued to be the major importer of Indian seafood in value terms, with an import worth \$2.63 billion, accounting for a share of 32.52 % in terms of USD value.

Marine Products Export Sector in Kerala will be Strengthened: CM

The marine products export sector in Kerala will be strengthened, Chief Minister Pinarayi Vijayan has said. He was inaugurating a mega food park set up by the Kerala State Industrial Development Corporation (KSIDC) at the Industrial Growth Centre at Pallippuram, near Cherthala, on April 11. Mr. Vijayan said that Kerala had accounted for 14% of India's seafood exports. "The Fisheries department is making efforts to improve fishing techniques using scientific methods like in countries such as Norway. The government will set up laboratories in four airports to check the quality of food items exported from the State," the Chief Minister said, adding that the government would initiate steps to promote the making of value-added products to ensure the growth of the food-processing sector. The mega food park is expected to give a fresh impetus to the food-processing sector in the State, especially to the seafood processing and marketing sector. Once fully operational, the park would garner an investment of ₹ 1,000 crore and generate about 3,000 direct and indirect jobs. The park is coming up on 84.05 acres of land at a cost of ₹128.49 crore, with equity contribution from the KSIDC/State government worth ₹ 72.49 crore, grant-in-aid of ₹ 50 crore from the Union Ministry of Food Processing Industries under the Mega Food Park Scheme, and the rest bank loan. The project's first phase, which was launched by the Chief Minister, was set up on 68 acres of land. According to KSIDC officials, plots have already been allotted to 31 units, mainly those in sectors like seafood and other food processing and packing units. Of these, 12 units have started operations, providing employment to 600 people.

Sri Lanka Ramps Up Egg Imports from Indian Farms in Response to Surging Demand

In response to the economic crisis in Sri Lanka, efforts are being made to ensure the consistent availability of eggs to critical sectors, addressing the impact on people's livelihoods and declining purchasing power. Sri Lanka's State Trading Corporation (STC) has announced plans to import one million eggs per day from five chicken farms in India in order to meet the growing market demand. The decision came after

Virbac

Eliminate Feed Mycotoxins with a solid Punch !

**Cell wall of
Saccharomyces
cerevisiae**

**Complex of
Exogenous
Enzymes**

**Micronized
Algae Meal**

**Modified
HSCAS**

**Free
Nucleotides
and Nucleosides**

Benefits

- ✓ Adsorbs & Detoxify all Toxins
- ✓ Does not interact with Vitamins & Minerals
- ✓ Protects Feed from all Mycotoxins
- ✓ Maintains Ruminal and Intestinal Health
- ✓ Supports Hepatic Regeneration
- ✓ Helps to improve Health & Performance

Usage

Regular uses	0.5 -1 kg / Ton of Feed
Health Challenges	2 kg / Ton of Feed
Top Dressing	10 g / head / day



For further information please contact us:
Virbac Animal Health India Pvt. Ltd.

604, 6th floor, Western Edge - I, Magathane, Western Express Highway, Borivali (E), Mumbai- 400 066
www.in.virbac.com • Phone No. +91-22-4008 1333

Superior Quality Feed for your Poultry!



Established in July 2022, Alpha Feeds is a joint venture between Allanasons Pvt. Ltd. and Premium Chick Feeds Pvt. Ltd., catering to the concentrate business for poultry in India.

With the high quality Poultry Feed Supplement of Allana and technical expertise of Premium's nutrition, Alpha Feeds aims to provide superior quality Poultry Concentrates at an economical cost for better poultry performances. The main products being 5% and 10% Poultry Feed Concentrates.



A JOINT VENTURE OF ALLANASONS AND PREMIUM CHICK FEEDS

MUMBAI REGD. OFFICE: 406, B-Wing, Highway Rose CHS., 92, Dixit Road Extn. Vile Parle (E), Mumbai - 400 057. Maharashtra, India. Tel.: +91 22 2642 4102.

High Protein Poultry Feed, Enhances Poultry Life!

Protein Content: **45%** & Above.

Commercially Sterile Poultry Feed Supplement

Allana[®]
...since 1865



Allana Shakti
Commercially Sterile
Poultry Feed Supplement

Allana Shakti Gold
High Quality Technical Animal Fat
(Buffalo Tallow)

OUR RENDERING PLANTS

Integrated with each of our abattoirs and meat processing complexes at seven locations across the country manufacture high quality commercially Sterile Poultry Feed Supplement, Blood Meal and Technical Animal Fat utilizing fresh and chilled raw materials, derived from inspected healthy livestock fit for human consumption. These modern sophisticated rendering plants have been designed and supplied on a turn key basis by leading International rendering plant manufacturers.

OUR PRODUCTS FOR POULTRY FEEDS

The low temperature rendering, followed by high temperature short time processing fully ensures:

- Commercial sterility in Poultry Feed Supplement, Blood Meal and Technical Animal Fat.
- Retains the nutritive value of native protein intact in the meal

- Ensures high stability against oxidation of Technical Animal Fat, low FFA and very low peroxide value.
- More acceptable light colour in fat.

These unique qualities of our feed ingredients make them very safe and indispensable ingredients in the manufacture of high quality compound feeds for poultry. With the use of our feed ingredients, the birds show improved growth rate.

Uniform drying at high temperatures helps to maintain low moisture in Poultry Feed Supplement which not only ensures the commercial sterility and poultry pathogens control but also eliminates the contamination risk of dangerous Mycotoxins / Aflatoxins of fungal origin.

NOW PURCHASE **Allana** FINEST RANGE OF
BY - PRODUCTS
THROUGH ALLANA MOBILE APPLICATION

Allana
...since 1865
DOWNLOAD APPLICATION
ALLANA PROCESSED FOOD DIVISION



Corporate Office:

Allana Centre, 113 -115, M.G. Road, Abdul Razak Allana Marg, Fort, Mumbai - 400 001, India
Tel : (+ 91-22) 6656 9000 / 2262 8000 Fax : (+ 91-22) 2269 5700 / 2269 5701
E-mail : pfs@allana.com • Website : www.allana.com

AWARDED
By Many Certified Bodies



the severe economic crisis rocked the island nation. The high inflation rates have eroded the purchasing power of the people, resulting in adverse effects on livelihoods and a reversal of past development gains. In April of the previous year, Sri Lanka declared its first-ever debt default, further intensifying the economic challenges. Currently, Sri Lanka has imported 20 million eggs from India, with 10 million eggs already released into the market. These eggs are sourced from two chicken farms in India, and the Animal Production Department has given approval for the purchase of eggs from three additional farms. This decision was made based on the reports provided by the officials from the Animal Production Department and the State Trading Corporation, who visited poultry farms in India. The import of eggs from India will be adjusted based on market demand, as stated by STC Chairman Asiri Valisundara. The imported eggs will be made available to various sectors such as bakeries, biscuit manufacturers, catering services, and restaurants at a price of SLR 35 per egg. The aim of importing eggs from India is to address the shortfall in the local market and ensure a stable supply for the aforementioned sectors. However, it is important to note that this measure is a temporary solution to meet the immediate demand and stabilize the market. Sri Lanka continues to face significant economic challenges and is actively working towards the normalization of its crisis-hit economy.

New Dairy Plants to Boost UP's Milk Production

Chief Minister Yogi Adityanath reviewed the working of the animal husbandry department to work out ways in which UP's milk production can be increased. The state government is working on setting up new dairy plants in Kanpur, Moradabad, Gorakhpur, Azamgarh and Prayagraj districts with the help of the private sector. The CM also focused on the need to work on breed improvement programmes to get a better yield of milk per animal. During the meeting, the CM emphasized on the need to create more milk committees in all districts where he said the role of women could be important. Talking about the impact of the Nand Baba Milk Mission scheme, implemented to provide milk producers the facility of selling their milk at a reasonable price in villages through milk cooperative societies, the CM said that more milk producers should be involved in the scheme. "E-commerce portal paragdairy.com is proving useful for the online sale of milk and milk products. Online milk and milk

products are being sold through Parag Mitra in urban areas and women self-help groups in rural areas. So far, 71,068 consumers, 89 women self-help groups and 215 Parag Mitras have been added through the e-commerce portal. Trade of about Rs 6 crore has been done through e-commerce portal. Necessary efforts should be made to make it stronger," the CM said. He said there is a need to increase programmes for cattle breed improvement and the large cowshelters in development blocks could be useful for this work. He directed the department to hold weekly reviews on animal husbandry, milk production, sale, breed improvement etc. Recently, UP slipped to the second position in milk production in the country, having been replaced by Rajasthan. The state has 11.33 lakh cattle sheltered in 6,719 cattle protection sites. A special campaign was run from January 20 to March 31 under which 1.23 lakh cattle were taken to shelters. Most of these are in Sambhal, Mathura, Mirzapur, Shahjahanpur, Sant Kabir Nagar, Amroha, Gautam Buddha Nagar, Ghaziabad and Farrukhabad districts. Insisting on the correct usage of funds meant for the destitute cattle, the CM said that after the cattle verification drive from the 25th to 30th of every month, a report should be sent to the district administration by the animal husbandry officer and ADO (panchayat) and block development officer at the block level. A report will then be sent to the government by the chief animal husbandry officer and chief development officer by the 5th of the next month. "So far, 274 large cow protection centres have become functional. In the next six months, the remaining 75 large cattle breeding sites should be prepared. Caretakers should be posted at cow shelters. Cows should be taken for a walk from time to time. In case of illness or death of cattle, the caretaker will ensure all necessary arrangements," he said.

UP Plans to Double Maize Production by 2027

LUCKNOW: The state government plans to double the maize production by 2027, increasing it to 27.30 lakh metric tonnes from the current 14.67 lakh metric tonnes. A state government spokesperson said to achieve the target, the area under maize cultivation would be increased, besides stepping up the production per hectare. The farmers have increased the area under maize sowing. As against a target of sowing on 1.71 lakh hectares, the crop was sowed on an area of 1.93 lakh hectare area. The spokesperson said: "The state

government has highlighted that maize can be cultivated in all three crop seasons and on all types of land. The crop is useful in ethanol, animal and poultry feed and medicinal form." The government is constantly making farmers aware about maize cultivation so that the farmers get the maximum benefit of this increased demand. Apart from informing them about advanced methods of farming, seed replacement is also being done speedily, he added. The government has already brought maize under the minimum support price (MSP) so that the farmers get a fair price for their produce.

Shrimp Exports to Witness 5% Revenue Growth in FY24: Crisil Ratings

India's shrimp exporters are expected to witness 5 per cent growth in revenue in 2023-24, mainly driven by an increase in demand from China, a report said on May 02. The report also said that better demand is likely to encourage shrimp processors to expand their capacities. The shrimp sector will see revenue growth of 5 per cent year-on-year in fiscal 2024, driven by increasing demand from China, which will shore up exports to a near lifetime high of USD 5.3 billion seen in fiscal 2022, Crisil Ratings said in a report. This growth will largely be volume-driven, allowing operating margin to bounce back to 7.5 per cent as costs soften, it added. Debt is likely to contract and part-funding such capex and incremental working capital requirements will be comfortably absorbed by the strong balance sheets of the players, it added. India, Ecuador and Vietnam are the top three suppliers of shrimp, while the US, EU and China are the top three consumers. India supplies 70 per cent of its produce to these three regions, the report said. In FY23, Indian shrimp players were impacted due to extreme heat waves affecting production, shortage of containers and higher logistics costs to the US and EU and exports to China were muted amid continued lockdowns there. This has led to Ecuador, one of India's major competitors, seizing the lead in shrimp exports, Crisil Ratings said. In 2023-24, however, good produce backed by normal weather patterns and steady demand from China is expected to drive revenue for the Indian players. India's shrimp exports to China are likely to cross USD 1.2 billion this fiscal compared to USD 0.8 billion in the previous financial year. With logistics costs normalizing, demand from the US and Europe should revive from the lull last season. "Buyers from

the US and Europe prefer shrimps processed in India because of better quality- and disease-control measures. With supply chains getting restored, Indian exporters can replace Ecuadorian suppliers and regain their lost market share. "Revival in the Chinese economy will also aid growth in shrimp exports from India. Revenue will grow 5 per cent in fiscal 2024 on the back of volume growth of 8-10 per cent despite the reduction in realisations," Crisil Ratings Director Himank Sharma said. However, the report said, with the drop in input costs being steeper than that in realisations, the margin may inch up to the erstwhile level of 7.5 per cent. Meanwhile, in anticipation of higher demand, shrimp players are expanding capacities and will add close to 20 per cent of their existing gross block this fiscal.

Poultry Sector Seeks Extension of Infra Development Fund Scheme by 2 Years

The poultry breeders associations have sought extension of Animal Husbandry Infrastructure Development Fund Scheme by two years. The scheme ended on March 31, 2023. The Pan India Broiler Coordination Committee (PIBCC), along with Karnataka Poultry Farmers and Breeders Association (KPFBA), Poultry Farmers & Breeders Association of Maharashtra (PFBA-MH), Telangana Poultry Breeders Association (TPBA), West Bengal Poultry Federation (WBPF), Central India Vencobb Broiler Breeder Hatcheries Association (CIVBBHA) and Broiler Coordination Committee, Tamil Nadu, has written a letter to Rajesh Kumar Singh, Secretary, Department of Animal Husbandry and Dairying, Government of India, seeking an extension of the Animal Husbandry Infrastructure Development Fund Scheme by another two years.

"This scheme will be a boon to the poultry farmers if it is extended further and will definitely boost the poultry production in India," PIBCC Convenor, Mr. Vasanth Kumar Shetty said. As the poultry sector was trying to address the challenges posed by Covid in the past 2-3 years, the farmers could not take advantage of the schemes, he said. Sushanth Rai B, President, KPFBA said the scheme launched as part of the Atmanirbhar Bharat Abhiyan stimulus package, has been highly beneficial to farmers by providing incentives for

investments in animal husbandry infrastructure, including feed mills, hatcheries and processing plants.

The 3 per cent interest subsidy offered through the scheme has been a significant boost for the farmers. Rai said the extension of the scheme, which ended on March 31, 2023, would help more farmers to benefit from establishing infrastructure projects. This initiative, he said, would also help meet the growing demand for quality animal proteins, which is essential for both farmers and consumers. Chairman of the BCC-Tamil Nadu R. Lakshmanan said "by extending the scheme, the government would be helping entrepreneurs to establish infrastructure projects which would generate employment, besides adding to economic growth". President of PFBA Maharashtra Sanjay Nalgirkar expressing his concern, stated that "the poultry industry has suffered significant losses in the last two years due to the impact of the Covid-19 pandemic.

As a result, there has been a lack of expansion in this sector during this period". Additionally, Nalgirkar said, "the government has provided subsidies to support the poultry industry, but unfortunately, no one has availed of them. Therefore, he urged the government to extend this scheme for at least another year to encourage more individuals and businesses to take advantage of this subsidy programme". Sanjay Bramhankar, President of CIVBBHA, said the cost of production of chicken and egg in India is comparatively lower than other producers, which will help tap export market. This is the right time that poultry needs infrastructural support.

ICAR-NIANP Signs MoU for Research in Poultry Sciences

Mangaluru: The Indian Council of Agricultural Research-National Institute of Animal Nutrition and Physiology (ICARNIANP) on May 26 signed a Memorandum of Understanding (MoU) with the Karnataka Poultry Farmers and Breeders Association (KPFBA) to further collaborative research in the field of poultry sciences.

The MoU was signed by Dr Raghavendra Bhatta, director of ICAR-NIANP, Bengaluru and B Sushanth Rai, president of KPFBA. As the poultry sector faces enormous challenges, the need for collaborative research, particularly in the field of animal nutrition is becoming urgent.

Tamil Nadu's Egg Production: Sunny Side up

CHENNAI: Tamil Nadu, the second largest egg producer in India, has seen a consistent increase in output over the past decade and a half. According to data from the RBI handbook of statistics, TN's egg production has grown more than three times since 2004-05 when it produced 63,948 lakh. The tally grew consistently year on year – 62,225 lakh in 2005-06, 80,435 lakh in 2006-07, 83,937 lakh in 2007-08, 88,098 lakh in 2008-09 and 108,476 lakh in 2009-10. In the next ten years egg production doubled to hit 201,208 lakh in 2020-21. This despite disruption in both production and consumption during the pandemic years when misinformation about egg and chicken consumption impacted the sale of poultry in the state. In 2020-21, TN's tally was second only to Andhra Pradesh, which produced 249,639 lakh eggs.

PM Modi Praises Results of Farming, Poultry Rearing Projects in Lakshadweep

Prime Minister Narendra Modi has praised the results of two farming projects -- vegetable growing and poultry rearing, launched in the island archipelago under the 'Atma Nirbhar Bharat' initiative, saying it shows enthusiasm of the Lakshadweep people about learning and adopting new things. The PM conveyed his praise on Twitter in response to a tweet by Praful K Patel, Administrator of the Union Territory of Lakshadweep, about the successful outcome of the 'Nutri Garden Project' which was started in the islands in 2022. To implement the vision and to make the island archipelago self-reliant in production and supply of vegetables, seeds of okra, tomato, brinjal, chilli, amaranthus etc and grow bags and organic fertilizers were distributed to 1,000 farmers selected from the various islands, the release said. Over 8,000 fruit saplings of various varieties like papaya, banana, lemon, sapota, amla, guava etc and spices saplings were also provided to them, it said. "The initiative has reaped very positive results. Supply of fresh vegetables in Lakshadweep has increased for ensuring nutritional security of the local population. The programme has been a huge success resulting in increased supply of fresh vegetables/fruits to the islanders and income guarantee to the farmers. The scheme is being extended further," the administration said in the release.

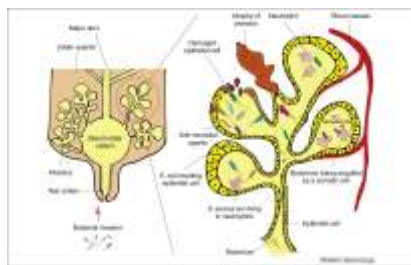
A write-up on the Ethno-Veterinary Medicines for the Control of Clinical Mastitis

Upenderjit Kaur, Rahul Patel, Karanbir Singh and Manget Ram Garg

Abstract: Mastitis is most common disease in livestock causing major expense in treatment often causing anti-biotic residues in milk causing a serious concern of immergence of antibiotic resistant micro-organisms which may cause untreatable infections in animals as well as for humans, due to anti-biotic residues consumers get unhygienic milk and it also interferes with cheese making and curdling process at the processors end, with our focus in improving productivity of dairy animals the problem of mastitis may escalate if appropriate steps are not taken for its prevention. Since old ages people have tried many traditional medicines for mastitis using clay, thyme oil, etc. recent formulation of herbal paste consisting 200g Aloe vera, 50g turmeric powder and 5 g lime proved to be most effective in treatment of Mastitis without using antibiotics and at nominal cost [4].

Introduction:

Mastitis is the mammary gland inflammation caused in response to bacterial invasion of teat canal inducing immune response which results in increased somatic cell count in milk causing udder swelling, redness, hardness, pain and fever. Estimated loss in India due to Mastitis as per 2009 study is 7165 crores per annum [1]. In US alone losses due to mastitis is estimated around 2 billion UDS per annum. Apart from economical concerns major issues with mastitis is discharge of antibiotic residues in milk and microbial resistance to antibiotics. As per a 2011 study out of 152 isolates of *Staphylococcus aureus* resistance was detected in 41.44% for penicillin, 25.65% for streptomycin, 13.81% for erythromycin, 11.84% for tetracycline, 3.94% for ampicillin and 3.28% for Cephalothin, no resistance was detected for Gentamycin [2].



Bacterial cells of *Staphylococcus aureus*, one of the causal

agents of mastitis in dairy cows. Its large capsule protects the organism from attack by the cow's immunological defenses.

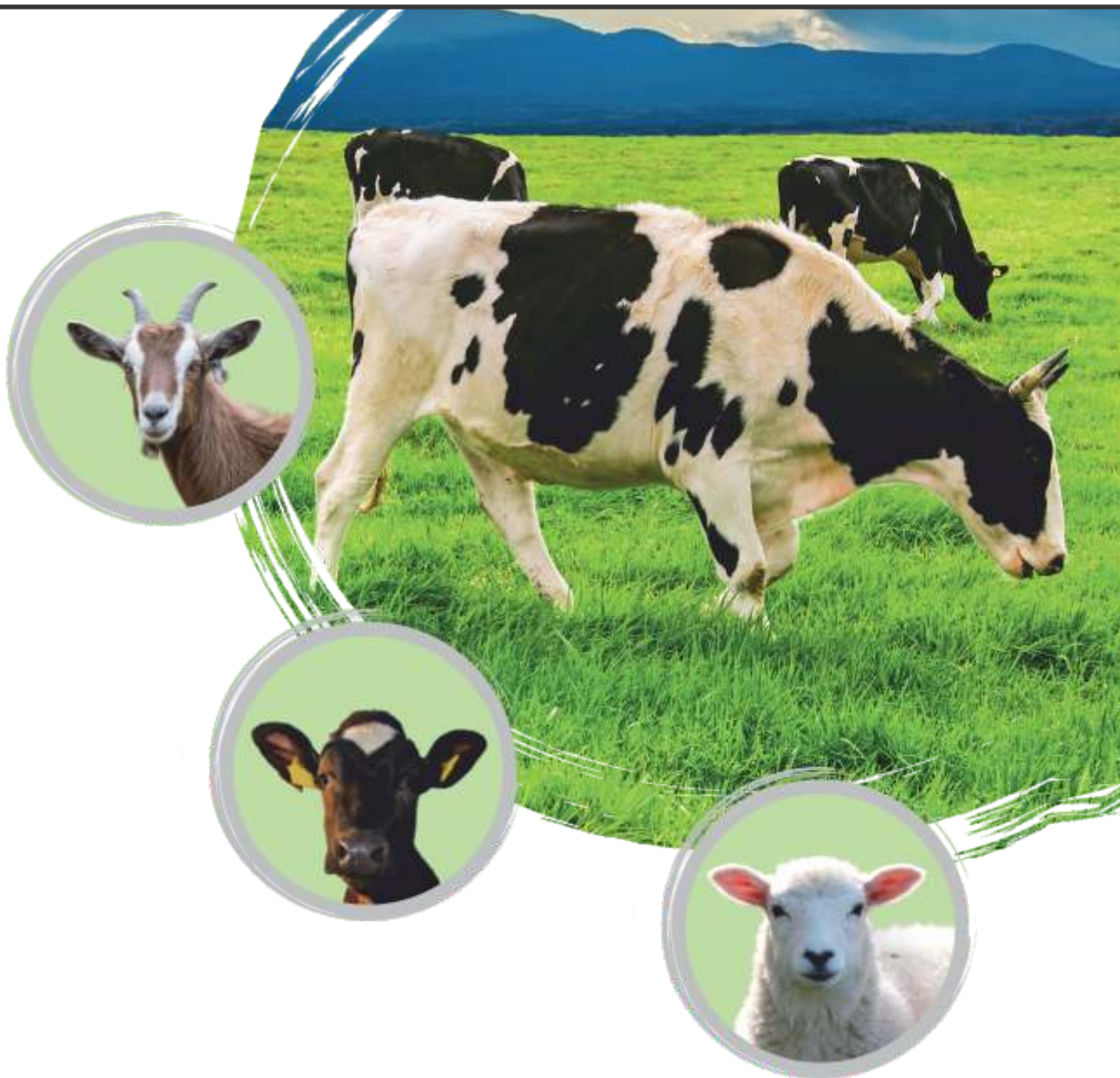
Bacteria that are known to cause mastitis include:

Pseudomonas aeruginosa, *Staphylococcus aureus*, *Staphylococcus epidermidis*, *Streptococcus agalactiae*, *Streptococcus uberis*, *Brucella melitensis*, *Corynebacterium bovis*, *Mycoplasma* spp. (including *Mycoplasma bovis*), *Escherichia coli* (*E. coli*), *Klebsiella pneumoniae*, *Klebsiella oxytoca*, *Enterobacter aerogenes*, *Pasteurella* spp., *Trueperella pyogenes* (previously *Arcanobacterium pyogenes*), *Proteus* spp., *Prototheca zopfii* (achlorophyllic algae), *Prototheca wickerhamii* (achlorophyllic algae)

These bacteria can be classified as environmental or contagious depending on mode and source of transmission and poses threat of getting antibiotic resistant upon regular exposure of antibiotics.

Antibiotic resistant strains cause ineffective treatments and health hazards for humans as well. Antibiotic resistant strains may be transmitted among the individuals via direct contact or indirectly by exchange of resistant genes in the environment. On other hand, antibiotic residues are associated with multiple type of allergic reaction like serum sickness and anaphylaxis, antibiotic residues can cause mutagenic effect, congenital anomalies may occur in newborn by long term exposure of antibiotic residues during gestation period, antibiotic residues may kill normal flora of intestine causing intestinal disturbances, antibiotic residues also interfere with curdling and cheese making process while milk processing [3].

To make judicious use of antibiotics it is important to identify the pathogen causing the mastitis infection because different categories of pathogens require different mastitis management strategies. Without taking the time to determine a diagnosis, there is no way to know if a given antibiotic will work. However, once we know the pathogen, a dairy farmer can work with his or her veterinarian to develop a mastitis control program that fits one's specific operation, but in developing countries like India where dairy farm size are small and marginal farmers depends on one or two animals, getting culture study done for most mastitis cases is




RUMIYEAST[®]

Ruminant specific double strain yeast culture

 **JAYSONS[®]**
Agritech
A  **ZEUS** Group Company
BIOTECH

www.jaysonsagritech.net

For more information contact : info@jaysonsagritech.net



Biotechnology for Animal Health™

- Largest SSF facility for feed supplements manufacturing
- State of the art in house R & D and QC facilities
- 3 manufacturing facilities
- NABL accredited feed testing laboratory
- In house culture collection center with proprietary microbial strains

www.zeusbiotech.com



often practically unviable approach and there is need of more affordable and accessible approach for primary veterinary healthcare which can be achieved by following Ethno Veterinary Practices.

With our vision of increasing milk production to keep dairy environmentally sustainable and fulfill growing demand from the country we will have to focus on increasing milk yield of animals and high producing animals will be more prone to mastitis infection whose treatment with antibiotics may cause elevated antibiotic residues in milk and a risk for biohazard by means of anti-biotic resistant microorganisms.

To prevent and control mastitis, practices such as good nutrition, proper milking hygiene, and segregation of chronically infected cows can help. Ensuring that cows have clean, dry bedding decreases the risk of infection and transmission. Dairy workers should wear rubber gloves while milking, and machines should be cleaned regularly to decrease the incidence of transmission along with above measures good milking routine is vital. This usually consists of applying a pre-milking teat dip or spray, such as an iodine spray, and wiping teats dry prior to milking. The milking machine is then applied. After milking, the teats can be cleaned again to remove any growth medium for bacteria. A post milking product such as iodine-propylene glycol dip is used as a disinfectant and a barrier between the open teat and the bacteria in the air. Mastitis can occur after milking because the teat holes close after 15 minutes if the animal sits in a dirty place with feces and urine but somehow due to lack of awareness, time or efforts in the process precautionary measures for mastitis are often overlooked by the farmers.

In 2017 study, herbal paste containing 200g Aloe vera, 50g

turmeric powder and 5 g lime were blended to obtain a reddish paste, paste was diluted with 100 ml of clean water and applied to udder for 3 hours after draining udder completely and proper cleaning of udder and cleaned, the process was repeated for 8 times a day for 5 days, 100 percent success rate was noticed in the study without any post treatment complications compared to control group [4]. This approach seems to be most sustainable, safe and effective solution for the menace of mastitis.

Moringa oleifera contains an isothiocyanate, 4-(rhamnopyranosyloxybenzyl) isothiocyanate [4RBITC] which is found to be selective and potent against pathogens such as *Staphylococcus aureus* and *Candida albicans* [5] adding *Moringa* extract might make the paste more effective.

Similarly, for Teat obstruction freshly plucked neem leaf stalk is cut as per required teat length and coated with turmeric powder and ghee thoroughly, than it is inserted in affected teat in anti-clock wise direction and fresh neem stalk is been replaced after each milking. These remedies are proven to be highly effective in curing mastitis and it's use should be encouraged.

Conclusion: Along with efforts to generate high yielding animals to meet increasing milk demand we need to take appropriate steps to provide hygienic milk free from any kind of antibiotic residues, this can be achieved by providing animal proper nutrition, clean housing and good milking routine most importantly effective formulations of ethno-veterinary medication should be promoted instead of antibiotics to treat cases of mastitis. Thereby reducing chances of developing Antibiotic Resistant Microorganisms and decreasing treatment costs.

ADVERTISERS INDEX

Allanasons Private Limited.....	36
ARCL Organics Ltd.....	54
Avanti Feeds Limited.....	33
Avitech Nutrition Pvt. Ltd.	48
Blueline Foods India Pvt. Ltd.	29
Evonik India Pvt. Ltd.	47
Fermenta Biotech Limited	23
Godrej Agrovvet Limited.....	04
Godrej Tyson Food Ltd.	11
India Gelatine & Chemicals Ltd.	24
Intervet India Pvt. Ltd.	64
Kemin Industries South Asia Pvt. Ltd.....	17
Nanda Feeds Pvt. Ltd.	03

Natural Remedies Pvt. Ltd.	30
Neospark Drugs & Chemicals Pvt. Ltd.....	57
Noveltech Feeds Pvt. Ltd.	32
Novus Animal Nutrition (India) Pvt. Ltd.	63
Pranav Bitek Agrotech Pvt. Ltd.	62
S. A. Pharmachem Pvt. Ltd.	02
Sarawagi Agrovvet Pvt. Ltd.	12
The Waterbase Limited	53
Trouw Nutrition India Pvt. Ltd.	61
Virbac Animal Health India Pvt. Ltd.	35
Zenex Animal Health India Private Ltd.	18
Zeus Biotech Pvt. Ltd.....	41
Zeus Biotech Pvt. Ltd.....	42

Are we not Neglecting Buffaloes in India? A Study on the Buffalo Calf Rearing Programme in the State of Punjab

Manget Ram Garg, Upenderjit Kaur, Rahul Patel, Daljit Singh and Karanbir Singh

1.0 Introduction

Buffalo has been considered to be the backbone of dairying in India, being so resilient and able to survive under harsh climatic conditions and has the capability to utilize fibrous feeds more efficiently as compared to cows. Recently, several states of India were badly affected by the Lumpy Skin Disease (LSD) which mainly affected cattle and the menace of the disease severely affected milk production across the States, which led to a great loss to the dairy Industry. Surprisingly, buffaloes were the least affected by LSD. Despite various benefits and advantages of buffalo rearing that have been documented from time to time, as per the 2019 Livestock Census data buffalo population in the states of Punjab and Haryana declined by more than 20% in comparison to 2012 Livestock Census data. The main reasons often quoted for not preferring buffalo as a dairy animal in comparison to cow, longer age at first calving, problems of infertility, shorter lactation length etc. To prove that the buffalo calves can also exhibit oestrous at the age of 12 months and can conceive at the age of 14-15 months, a pilot study was undertaken in the State of Punjab and the findings are presented in this article.

2.0 Prevailing Feeding and Management Practices of Calves in India

In India, female calves are generally not fed and managed according to the scientific recommendations (Singh and Ahuja, 1993; Tiwari, et al., 2007). Instead, they are fed on crop residues, some grains or grain by-products and cakes, or they are simply ignored. As a result, most of the young dairy calves suffer from stunted growth, calf scour and parasitic infestations. In addition, there may not be any specific feed or housing available for young calves, and consequently the age at first calving is usually high and lifetime productivity low.

Indigenous cows and buffaloes in India are robust and resilient, endowed with qualities of heat tolerance, resistance to diseases and the ability to thrive under extreme climatic stress and nutrition based on food crop residues (Garg et al., 2014). Generally, feeding and management practices in crossbred calves are well established; however, in most of the parts of India little is known about these practices for indigenous cow calves and buffalo calves. Feeding indigenous

cow calves and buffalo calves on scientific lines, and rearing them using improved management practices to assist the animals reach puberty sooner, are central factors for improving their productivity and productive life. The potential to enhance the productivity of buffaloes through better nutrition and improved management practices is immense. This could be achieved through better feeding and management right from the early stages of life.

Buffalo is an indispensable livestock and serves as a capital reserve or a cash crop to rural folk by providing nutritional security, economic stability as well as a social status (Yadav et al., 2022). Owing to its superior quality of milk, disease resistance ability, longer productive life and higher milk productivity, buffalo is preferred over cattle in several parts of the country (CIRB, 2015). The growth potential of buffalo calf is best 2 upto 2.5½ years of age and half of the mature body weight is attained by 1.5½ years of age. Therefore, this growth has to be exploited by appropriate feeding.



Fig. 1: Prevailing situation of calves under Indian field condition

3.0 Calf Rearing Programme in Punjab

Dairy farmers in India often suffer economic losses because of higher calf mortality, delay in sexual maturity and higher AFC. Thus, it is important that a calf gets all essential nutrients during its foetal phase through its dam and is fed on nutritious feeds and fodders. This will ensure the birth of a healthy calf, which can yield milk in accordance with its genetic potential when it becomes an adult animal. On an average, a buffalo calf attains puberty at about 36-38 months of age and delivers the first calf at 4-5 years of age.

To address the above issues, 'Scientific Nutritional Management' of buffaloes needs to be taken up right from the pregnancy stage of the dams and continued through calf-hood and growth stages of the calves. If executed properly it can lead to higher birth weights of calves, lower calf mortality, earlier puberty, lower AFC and optimal inter-calving periods (NDDDB Annual Report, 2017-18).

4.0 Different types of feeds produced under the programme

4.1 Pregnancy feed

Special type of feed having higher vitamins A, D3 & E, anionic salts, tri-sodium citrate, chelated minerals, quality protein meals, bypass fat & higher level of grains were produced & supplied to milk producers. Daily about 2.5-3.0 kg pregnancy feed was fed for the last 2 months of pregnancy. This helped in reducing metabolic disorders in dams & calf born was healthy with higher birth weight. All information related to calf and dam was recorded.

4.2 Calf starter

Calf starter is a source of energy, protein and minerals for young growing calves. Calf starter was introduced to calves at 4-5 days of age. Calf starter was given in the form of 3.0 mm pellets, starting with 50 g (Bateman, et al., 2009). During this period, adequate consumption of calf starter was ensured, which led to better growth rate. Quantity of calf starter was increased with age and was fed up to 5-6 months of age (Khan, et al., 2007). Feeding calf starter during early age reduces the chances of diarrhoea in young calves as traditional ration causes mostly digestive problems due to high fibre content (Misra and Singh, 1993). Feeding calf starter and good quality leguminous hay from early life, stimulates early development of rumen papillae (rumen wall), essential for optimum rumen functions, which favours digestion of larger proportion of fodder at an early age.

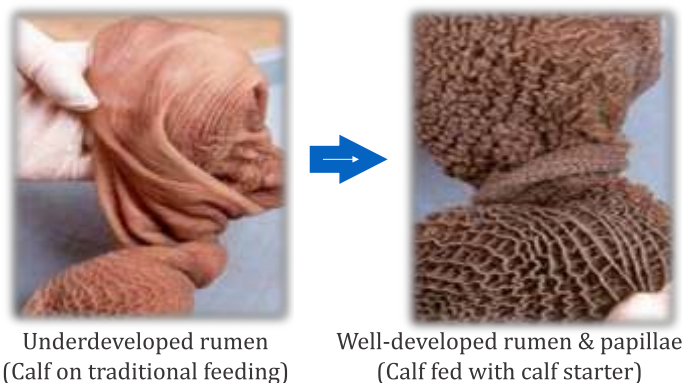


Fig. 2: Development of rumen and papillae fed calf starter

A study conducted by Bhandari et al., (2014) revealed that feeding calf starter helped improving average daily weight gain (0.76 vs 0.56; $P < 0.05$), immune status and feed conversion efficiency (3.13 vs 2.33), while reducing parasitic infestation in growing crossbred calves, which in turn can help in reducing the age at first calving. Similarly, Ahmad et al. (2004) compared starter feed with concentrate as a supplement to nipple feeding of milk in buffalo calves aged 45 days. Although the calf starter and herd concentrate had similar protein contents (18%), starter feed with 5.8% crude fibre resulted in a daily gain of 0.47 kg against 0.34 kg with concentrate containing 11.7% crude fibre, indicating the advantage of restricting crude fibre level in starter feed for calves to not more than 6%. The mean birth weight of indigenous cow calves was 29.92 and 31.62 kg for Group I and II, respectively, with the corresponding average daily gains of 276 and 374 g/day after feeding calf starter for 180 days. The mean serum IgG concentration in the serum of new-born buffalo and cow calves was 18.65 and 17.33, 21.90 and 24.09 mg/ml for Groups I and II, respectively, showing that the dietary treatments had a significant influence on immune status. Days to first oestrus and service period was also reduced significantly in experimental animals after calving.

Table 1: Effect of feeding calf starter on Murrah buffalo calves in Punjab

Particulars	Control (n=6)	Experimental (n=243)
Initial BW (kg)	29.5	38.8
Body weight at 30 days (kg)	44.50	58.30
Body weight at 60 days (kg)	59.5	77.8
Average daily gain (g/day)	500	650
Calf mortality (%)	30%	6.3%



Birthweight: 39Kg, Age at 1st Heat: 11 months, Weight at 1st heat: 258 Kg

Fig. 3: Murrah buffalo calf attained age at 1st heat at 11 months



Birthweight: 35Kg, Age at 1st Heat: 10.5 months, Weight at 1st heat: 265 Kg

Fig. 4: Murrah buffalo calf attained age at 1st heat at 10.5 months

4.3 Calf growth meal

Calf growth meal was produced at the cattle feed plant (CFP). Daily 2.5-3.0 kg calf growth meal was fed to growing calves from 27-108 weeks of age. Calf growth meal helped in achieving desirable body weight at an early age and proper development of reproductive organs & mammary tissue. Unfortunately, at this age buffalo heifers are most neglected on farm due to scarcity of quality fodder as available fodder is mostly offered to milch animals and growth rate of heifers decline on this account due to negative nutrient balance (Bhardwaj and Khanna, 2016).



Birthweight: 38Kg, Age at 1st Heat: 11 months, Weight at 1st heat: 328 Kg

Fig. 5: Buffalo Heifer attained age at 1st heat at 11 months



Birthweight: 34Kg, Age at 1st Heat: 11.5 months, Weight at 1st heat: 265 Kg

Fig. 6: Buffalo Heifer attained age at 1st heat at 10.5 months

5.0 Effect of Calf Rearing Program on Productivity:

Peak milk yield of 18 litres per day was achieved in a buffalo reared through CRP at 2nd Lactation at 45-46 months.



Fig. 7: Buffalo raised through CRP with peak milk yield of 18 litres per day

6.0 Economic Benefits

As discussed, farmers' income is affected by various factors such as poor feeding and care of dam, high calf mortality, slow calf growth rate, delayed age at first heat, delayed age at first calving and longer calving interval. Implementation of such a programme would help dairy farmers to become more

BECAUSE IT'S ABOUT FEED COST

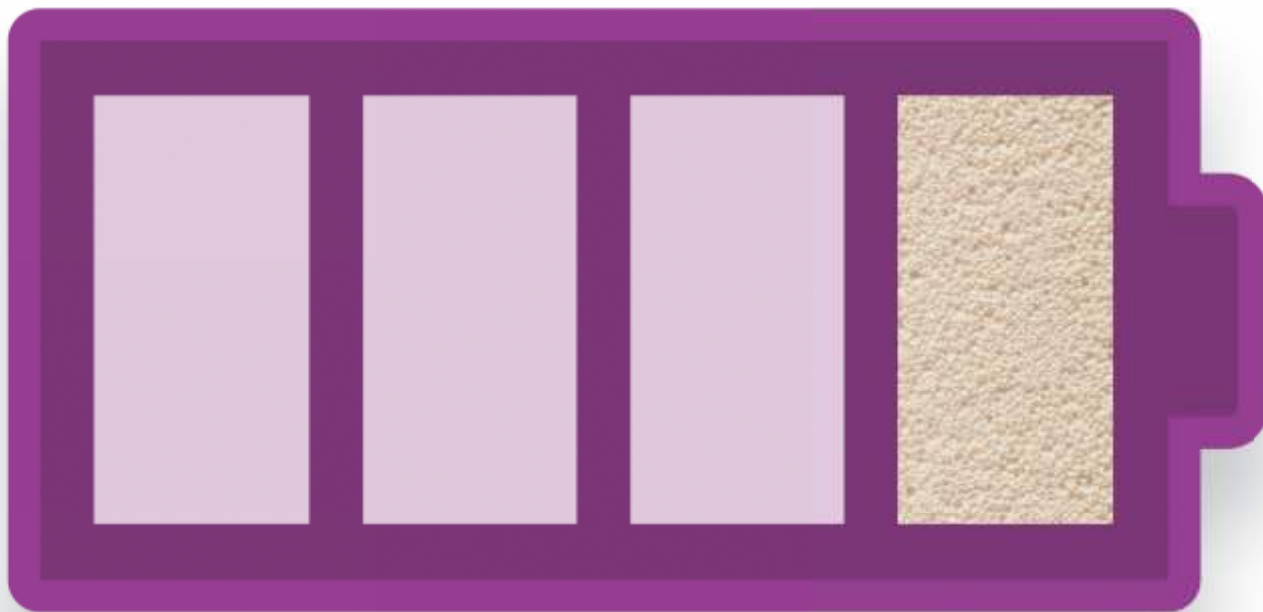
Fully charged, healthy growth!

GuanAMINO® is the best supplemental creatine source which ensures optimized nutrient utilization and feed costs. Furthermore, it spares metabolic energy and works towards an optimized amino acid metabolism. GuanAMINO® supplementation enables improved feed conversion, healthy muscle growth and resilience, and leads to higher income over feed costs.

Sciencing the global food challenge. | evonik.com/guanamino



GuanAMINO®





Avitriol

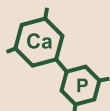
Plant based Bioactive Vitamin D₃
1,25 (OH)₂D₃



Superior bioactivity in
comparison to other
forms of Vitamin D



No metabolic load on liver
and kidney



Optimises Calcium -
Phosphorus homeostasis



Improves immune
response

PhyGeno

(A division of Avitech Nutrition)

✉ connect@phygeno.com

🌐 www.phygeno.com

FAMI QS, GMP &
ISO 22000 Certified

interested in rearing young animals as they get higher price for buffalo milk. If the milk producers can develop their own animals faster, the average production per animal can be raised with improved genetics at a comparatively lower cost. Dairy farmers would be benefited economically by way of reducing age at first calving, increasing lactation length and reducing inter calving interval. Scientific feeding under the programme will encourage milk producers to get two more lactations in dairy animals, which would provide approximate 4500 kg extra milk in its entire life span. Further, implementation of programme can also help the dairy farmers improving their economic index by way of the following:

Factors affecting dairy farmers' income

1. Poor feeding & care of dam
2. High calf mortality
3. Slow calf growth rate
4. Delayed age at first heat
5. Delayed age at first calving
6. Longer calving interval

6.1 Reducing calf mortality

Neonatal calf morbidity and mortality are major causes of economic losses in livestock production. It is roughly estimated that a calf mortality of 20% can reduce the net profit of an enterprise by 60%. Ideally calf mortality should be <5% with growth rates of 0.5–0.7 kg/day (Blood and Radostits, 1989). An average growth rate of female calves of 100 g/h/day resulted in stunted calves at weaning and therefore adversely affecting the age at first breeding and lifetime milk yield (Razzaque, 2001). Very high mortality rates of over 50% have been reported in buffalo calves up to one month of age. The mortality rate of calves with septicaemia is greater (57.4%) than calves only with scours (15.1%); (Fecteau et al., 1997; Lofstedt et al., 1999). Therefore, the goal should be to improve the survival and reduce the mortality rate. Scientific feeding and management under such a programme can help achieving the goal of reducing calf mortality in dairy animals.

6.2 Sale of male buffalo calves

The inadequate feed resources and imbalanced conventional feeding practices have been identified as a major cause of low growth rate. It has been reported that the calves reared conventionally weighed about 60–80 kg after 1.0 year (Younas and Yaqoob, 2002). In India, every year about 10 million male calves are removed from the buffalo production system. They are sometimes killed intentionally as farmers want to save the dam's milk. Male calves could be salvaged for meat production, which would not only improve the economic conditions of the farmers, but would also provide quality meat for domestic consumption at competitive prices and also for export market. Raising male calves would also generate additional employment (Ranjhan, 2013).

With rapidly increasing demands for meat and meat

products, there is a need to focus on efficient growth and production systems. Enormous potential exists for male buffalo calf salvaging and growing them for larger weights with multiple benefits to stakeholders – in particular to the resource-poor buffalo farmers – and to the economies of developing nations in general (Mendiratta and Kondaiah, 2015). In recent years, the Indian government has also started to support the buffalo meat sector by introducing schemes on salvaging and rearing buffalo male calves and modernizing abattoirs. India is becoming a major buffalo meat-producing country and will be a major player in the international market with additional establishment of the state-of-the-art abattoirs-cum-meat processing plants. Implementation of CRP would help achieving more growth rate and thus provide an opportunity for rearing of male buffalo calves by dairy farmers as a means of economic gains.

7.0 Environmental Benefits

The livestock sector is a key contributor to a range of critical environmental problems (Steinfeld et al. 2006). It is documented that meat and dairy products carry the greatest environmental burden, accounting for approximately half of food-generated GHG emissions (European Commission 2006; Jan Kramer et al. 1999). Substantial projected growth in this sector from 2000 to 2050 due to increasing population and per capita demand will effectively double the production of GHG volumes (FAO 2006 a, b; World Bank 2008). A significant share of ruminants' environmental footprint is caused by enteric CH₄ that represents about >25% of the annual anthropogenic CH₄ emitted into the atmosphere with global dairy sector contributing 2.7–4% of the total anthropogenic GHG emissions (FAO 2010).

Improving production and nutrient use efficiencies through balanced nutrition approach is one of the most promising ways to reduce methanogenesis in ruminants.

It is documented that the most relevant methane mitigation strategy for smallholder mixed crop-livestock systems in tropical countries is to increase individual animal productivity as a consequence of providing nutritionally balanced feeds (Bayat and Shingfield 2012; Hristov et al. 2013). As discussed in various sessions in IDF World Dairy Summit 2022 sustainable way to increase farmer's income and reduce GHG emissions is through increased productivity of dairy animals. Thus, implementation of scientific feeding management programme such as Calf Rearing Programme (CRP) helps to mitigate methane emissions from ruminant livestock. It not only helps to enhance feed conversion efficiency and hence animal productivity, but a decrease in CH₄ emissions which reduce the contribution of ruminant livestock to the global GHG emission.

Acknowledgements

Support provided by Milkfed, Punjab is gratefully acknowledged.

Nutrigenomics: A Revolutionary Tool in Aquaculture

Ambika Painkra¹, Sanjay Singh Rathore¹, Vivek Kumar Thakur¹, Nitin K. Suyani²,
Varun Mishra¹, Dushyant Damle¹ and Raju Sharda¹

Introduction

The interaction of nutrients, environment, and genome determines the general physiological functioning and health of an organism. The branch of science which aims to understand these interactions is known as “Nutrigenomics” (Mohanty et al., 2020). The expanding aquaculture industry requires a concomitant increase in the production of aquafeeds. Fish meal and fish oil are the most expensive protein source in animal and aquaculture feeds. However, it was reported that these plant feedstuffs are having several disadvantages in fish diets such as relatively amino acid imbalance, presence of endogenous anti-nutritional factors, low protein content, low palatability, and large amounts of carbohydrates. Partial replacement of fish meal with other plants proteins resulted in excellent growth rates but total replacement of fish meal by plant proteins seems to be linked to lower growth performance in some fishes. (Lende et al., 2014). Recent interest in fish nutrition has been fuelled by the rapid expansion of aquaculture industry, with worldwide fish production continuing to increase at approximately 5% per year (FAO, 2016). Despite nearly 370 fish species (including hybrids) being registered by Food and Agriculture Organization (FAO) as cultured commercially, diet formulations for many of these species are based on limited information about their nutrient requirements (Hamre et al., 2013). Farmed fish are also commonly subjected to short-term food deprivation (fasting) as part of a seasonal feeding pattern and in response to overproduction or disease outbreaks, yet fasting-induced impacts on fish immunity are largely unknown and differ between species (Li et al., 2014). Further complexity is added by the global decrease in the availability of high quality marine ingredients for aquaculture feeds, such as fish meal as a protein source and fish oil as a lipid source (Jobling, 2016).

Overview of genomic resources for aquaculture

One of the central criteria for successful high-throughput genomics is the availability of genomic resources. Until several years ago, there were only genome sequences for a limited number of model species such as zebrafish (Howe et al., 2013) and pufferfish (*Fugu rubripes*) (Aparicio et al., 2002), from which inferences to non-model aquaculture species could be made. The key aquaculture species including Atlantic salmon (Lien et al., 2016), rainbow trout (Berthelot et al., 2014), common carp (*Cyprinus carpio*) (Xu et

al., 2014), tilapia (*Oreochromis niloticus*) (Brawand et al., 2014), grass carp (*Ctenopharyngodon idellus*) and channel catfish (*Ictalurus punctatus*) (Liu and Cao, 2016) are examples of completed genomes, which have also gene models and RNA-sequence resources to define the transcriptome. These resources are being continually annotated to a greater depth and allow for direct mapping of RNA-sequence and gel-free proteomic mass spectrometry outputs to be achieved.

Fig. 1. depicts that once feed is digested and absorbed, nutrients and feed additives influence gene activation and transcription, protein expression, enzyme activities, metabolism as well as gut microbial community (microbiota) and its component genes (microbiome). Gene expression profiling (transcriptomics) along with monitoring of protein expression (proteomics) and metabolites (metabolomics), coupled with microbiome profiling (microbiomics), provide holistic overviews of these diet-induced changes and their impacts on fish health and immunity. (Martin and Krol 2017).

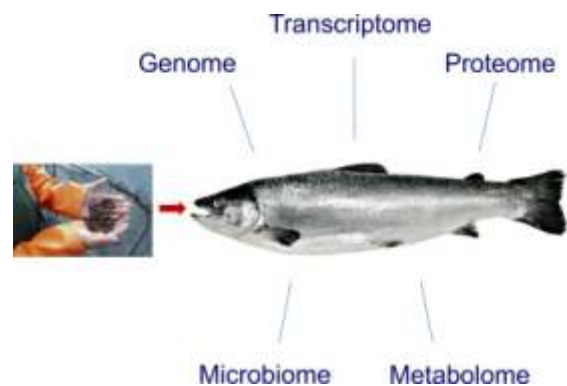


Fig. 1. Influences of feeding in fish nutrigenomics and physiology

How aquaculture can benefit from Nutrigenomics Research

- **For evaluating the response of the organisms to the nutrients:** Certain nutrients elicit particular response in some fish while not in other. For example, a high dietary carbohydrate in mammal usually reduces the gluconeogenic activity but the same is not found in the fish. Nutrigenomic studies help to decipher these variable responses between individuals.

- **Diet development by optimizing the dietary nutrient utilization by a particular species:** For example, in herbivorous fish the dietary carbohydrates can up-regulate both activity as well as expression of carbohydrate digesting enzymes, but this up-regulation is too less when present in the carnivorous fishes. The nutrigenomic studies give us an insight into utilization potential of the dietary nutrient in a fish species.
- **Facilitate thorough understanding about a nutrient response in cell:** For example, when carbohydrates are fed to carnivorous fishes, whether it is the insulin activity uncontrolled gluconeogenesis that is responsible for the inefficient utilization of the carbohydrates.
- **Identify the factors responsible for metabolism:** For example in fish, the adipose tissue lipoprotein lipase gene expression is increased in the muscle, which induces fat catabolism and energy released for growth. During this period, the lipid and the protein content of the feed may be increased at the cost of carbohydrates. In summer season, the muscle lipoprotein lipase content increases which increases carcass fat.
- **Specific metabolic changes as a function of body physiology:** In the smolt stage, the 60% of beta-oxidation in salmon occurs in the red muscle whereas in the adult stage it is only 10%. Nutrigenomics studies help to decipher the actual reason behind this change. (Hakim et al., 2018).

Nutrigenomics research tools

Genomics tools can be used in two different, but complementary, strategies in molecular nutrition research.

- **Traditional hypothesis driven approach:** Specific genes and proteins, the expression of which is influenced by nutrients, are identified using genomics tools such as transcriptomics, proteomics and metabolomics which subsequently allows the regulatory pathways through which diet influences homeostasis to be identified. Functional genomics the combination of genomics, proteomics, genotyping, transcriptomics, and metabolomics has expanded rapidly over the last decade, but research on important aquaculture species is still relatively uncommon.
- **Transcriptomics:** Transcriptomics studies using microarrays represent important components of nutrigenomic research, since they highlight the impacts of different treatments on the activation or silencing of specific genes. Certain affected genes may offer commercial benefits such as enhancement of immune function or stress resistance, and thus may be targeted via nutritional intervention to increase the performance or welfare of the cultured animal.
- **Microarray:** Microarray technologies have examined treatment effects on abalone, shrimp, zebrafish, fugu, medaka, puffer fish, rainbow trout, Atlantic salmon, gilthead sea bream, sea bass, and catfish.

- Metabolomic analysis allowed the detection of changes in the biochemical profiles of plasma and urine from pigs fed different diets and the determination of metabolite profiles in the liver of rats used as an animal model to characterize the toxicity of triazol fungicides. In livestock species, the microarray technology was discussed and reviewed as potential nutrigenomics tools, in context to its economic benefits and improvement of the food quality and safety in dairy and meat industries (Lende et al., 2014).

Candidate Gene Approach in Fish Nutrition

- **Nutritional regulation of digestive physiology at a molecular level:** Suppression of live diets and replacement by inert-formulated diets in marine fish larvae.
- **Nutritional regulation of lipid metabolism:** Suppression of fish oil/fishmeal by vegetable products without negative consequences on fish product quality (Lende et al., 2014).

Future perspectives

Although the interplay between nutrition and immune system is well recognised, basic and applied research on the interactions between diet and health in fish is lagging the mammalian studies. To fully understand the repercussions of aquaculture feeds on fish physiology, a shift in approach is required to determine the molecular and cellular pathways that regulate responses to different diets. The new omics technologies, especially transcriptomics coupled with full genome sequences, offer enormous potential to investigate the complex relationship between fish nutrition and immunity, both in health and disease. The relationship between diet and ontogeny of the immune system will also require the knowledge of both trans-generational epigenetic control of immune gene expression as well as life-long epigenetic control of immune genes expression established during the time of first feeding. The final future perspective is how these omics technologies can be integrated with the ambition of generating predictive models for diet, immune system and health outcomes. Such work requires improved genome annotation, the knowledge of immune cell type-specific responses and mathematical computational expertise, which can then be combined and used to dissect the molecular mechanisms underlying the diet-immunity interactions, leading to improved health of farmed fish and sustainable aquaculture. (Martin and Krol, 2017).

Conclusion

By increasing understanding of dietary manipulation effects on fish production, scientists can develop elite feeds with positive effects on production economics and animal welfare and develop “designer fish” that target specific market demands. One important challenge concerning our future is to establish and maintain sustainable and profitable food production.

¹LSPN College of Fisheries (DSVCKV), Kawardha – 491 995, Chhattisgarh, India

²College of Fisheries Science, Kamdhenu University, Veraval – 362 265, Gujarat, India

Indian Livestock Sector: An Update

Vishal Yadav^{1*}, Abhishek Joshi² and G.N. Purohit³

An important segment of India's agricultural economy is animal husbandry. India is fortunate to have a large population of cattle that is raised using a variety of production techniques and agroclimatic conditions. More than 70% of India's rural population depends on the livestock sector for their livelihood, and it is important for the country's nutritional security. However, there are a number of issues with this live asset, such as a lack of feed and fodder, disease outbreaks, inadequate livestock extension, and the unorganised markets for livestock products, which necessitate serious attention and a shift in perspective to see livestock health and productivity holistically.

Role of livestock in the Indian economy

- 1) According to the Economic Survey-2021, livestock now contributes 28.6% of all agriculture and related sector.
- 2) Livestock also give rural families a consistent source of income and food, serve as insurance against crop failures, and are a good indicator of a farmer's social standing in the community due to the quantity of animals they possess.
- 3) The biggest agricultural product in India is dairy. It directly employs 81 million dairy farmers and has a 5.1% contribution to the national economy.
- 4) It also promotes gender equality by giving women more chances.
- 5) It produces in-situ fertilisers to improve soil fertility and recycles leftovers and waste materials from agricultural and horticultural sectors.

Current Challenges of Livestock sector in India

- 1) There has been an increase in the number of animal communicable diseases. The most recent outbreak of lumpy skin disease in cattle in several Indian states. More than 1.1 million cattle in Rajasthan have been identified as having lumpy skin disease. Kerala in the south has received reports of African swine disease.
- 2) The cattle sector is experiencing a serious feed and fodder scarcity as a result of India's inheritance system, rising urbanisation, and dwindling land areas. Additionally, just 4.99% of India's arable land is used

for the production of feed. While the area covered by permanent pastures and grazing grounds only makes about 3.29 percent of the overall area and has been progressively shrinking. According to a report from the Indian Grassland and Fodder Research Institute (IGFRI), there is a shortage of dry fodder availability of 23.42% and green fodder availability of 11.2%.

- 3) The livestock industry does not get the proper amount of financial and policy attention. In contrast to its contribution to agricultural GDP, the sector only receives roughly 11.98% of all governmental spending on agriculture and related industries.
- 4) Markets for cattle products in India are generally underdeveloped, unreliable, opaque, and frequently dominated by unofficial market middlemen.
- 5) Farmers are discouraged from implementing new technologies and high-quality inputs by a lack of market access; whereas dairy is the only product to experience consistent changes, other goods lag far behind.
- 6) The drawbacks of crossbreeding include increased susceptibility to disease, nutritional inadequacies, and environmental adaptations, even though crossbred dairy cow retain the best traits of the breeds from which they descended.
- 7) The effects of climate change on cattle include metabolic changes in livestock, altered behaviour, and even death due to heat stress. The shifting monsoon season interferes with their gathering period, and during disasters like floods, animals endure the same dreadful consequences as people: harm, malnutrition, thirst, displacement, illness, and stress. They yet lag behind in the rescue queue because they lack a voice.
- 8) Livestock extension services include proper veterinary care (vaccination, disease prevention and control), livestock education, and deworming. Although the importance of extension services in increasing crop production and productivity is well known, livestock extension has not received the proper attention, which has contributed to the low productivity of India's livestock industry.



FEEDING GROWTH SINCE 1993

**Maximise your profits
with Waterbase Shrimp Feed**



BayWhite Advanced

Super Stimulant Vannamei Feed

- ☛ Stimulates the special sensory cells that attracts shrimp to the feed
- ☛ Ensures continuous intake of feed
- ☛ Promotes faster growth and reduces wastage
- ☛ **HP Boost** - Boosts hepatopancreas function with functional ingredients
- ☛ **Healthy Gut** - Maintains healthy microflora in gut and limits Vibro Sp in gut

Tiger XL

Nutrition-Rich Monodon Feed

- ☛ **Vital Nutrients for boosting immunity** - Tiger XL has select marine and plant sources enriched with essential nutrients along with dietary Nucleotides.
- ☛ **Healthy Gut** - Maintains healthy microflora in gut and limits Vibro Sp in gut
- ☛ **HP Boost** - Boosts hepatopancreas function with functional ingredients

Corporate Office: **The Waterbase Limited**, Thapar House, 37 Montieth Road
Egmore, Chennai - 600 008. Tamil Nadu, India.
Ph: +91 44 4566 1700, www.waterbaseindia.com





ARCL ORGANICS LTD

64 years legacy of Bonding

Only manufacturer of Slow Release Nitrogen in India (Urea free)

SPREADING OUT GLOBALLY & INNOVATIVELY

MICROBIAL PROTEIN

**SYNTHESIS is an
IMPORTANT criteria in RUMEN**

Which Slow Release Nitrogen to be used?
Here we have the answer-

mPro

mPro

(ENVIRONMENT FRIENDLY & BIODEGRADABLE)

mPro Contains 38.0 % Nitrogen
mPro plus Contains 34.5 % Nitrogen
& 3.5 % Sulphur



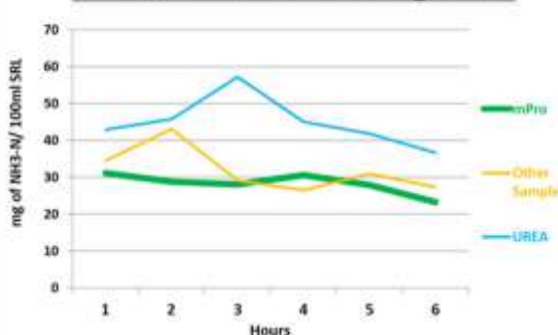
Advantages of **mPro**

- Feeding mPro or mPro plus to ruminants does not increase ammonia in rumen abruptly.
- Maintains rumen ammonia concentration at optimum level.
- Ensures stabilization of rumen pH below 7.
- Increases microbial growth & protein synthesis in rumen.
- Improves fibre digestion in rumen.
- Increases production and absorption of volatile fatty acids.
- Decreases urea concentration in milk.
- Improves reproductive efficiency.
- Environment friendly due to reduction of urinary nitrogen loss.
- Free from Urea & Melamine contents.
- Does not increase urea level in blood and urine.

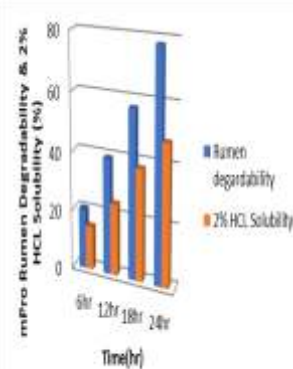
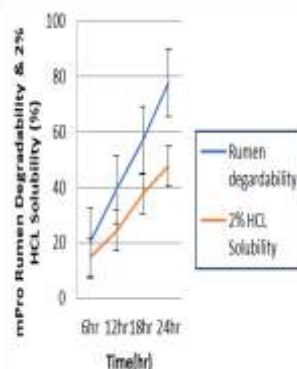
mPro to improve milk yield,
and milk fat & protein contents

- Active Ingredient: Polymethylene Carbonyl Diamide
- Use Level: 1 to 1.25 % of compound feed .
- Packaging: 25 kilogram, tied inner polybag with nylon outer bag.
- Storage: Store in cool and dry place.

In vitro Rumen Ammonia -N Degradation



Test conducted by **NDRI**: mPro showed more stable in-vitro rumen ammonia nitrogen concentration as compared to urea & commercial SRN samples



mPro showed sustained solubility in 2% HCL solution and degradability in rumen liquor

The way ahead

- 1) In addition to ensuring the citizens' food security, it's important to maintain the fodder security's accessibility, availability, and sustainability standards.
- 2) There are already established high yielding varieties of fodder that can be used, as well as technologies like silage making, hay making, and urea-molasses treatment for crop residue, which can be used to potentially use the 502 million tonnes of crop residue that India produces annually, out of which 90 million tonnes are burned, for animal feed.
- 3) For livestock in India, genetic surveillance, particularly for viruses, needs to be strengthened. To effectively combat the breakout of lumpy skin disease, which continues to spread quickly and has a high mortality rate, it is necessary to examine its genetic makeup and conduct behavioural analysis.
- 4) To increase commercialization of livestock production and give farmers more income security so they will also pay more attention to the health of their livestock, it is critical to strengthen industry-farmer links in a variety of livestock products, as in the case of dairy (Amul).
- 5) The ability of the indigenous breed to adapt to diseases, vulnerable climate circumstances, and the nutritional content of its milk make it crucial to conserve the breed.
- 6) Gene banks could be established to aid various research institutions in their work and to aid in the preservation of local breeds.
- 7) Veterinary Ambulance Service and Mandatory Livestock Vaccination: Ambulance services in veterinary facilities should be increased in order to provide prompt primary care for injured animals.
- 8) Primary cattle immunisation should also be made mandatory, and regular, time-bound veterinary surveillance should be carried out.
- 9) It is important to recognise the One Health Approach, comprehend the connections between people, animals, plants, and their shared environment, and promote research collaborations and knowledge sharing across a range of disciplines, including human health, animal health, plants, soil, environmental health, and ecosystem health, which can aid in the sustainability of health and the fight against zoonotic diseases.

¹M.V.Sc. Scholar, Department of Veterinary Gynaecology and Obstetrics, College of Veterinary and Animal Science, Bikaner, Rajasthan University of Veterinary and Animal Sciences, Bikaner-334001 (RAJUVAS-Bikaner), Rajasthan, India

²Field Vet (Ph.D. Scholar, Livestock Production and Management), Department of Animal Husbandry, Government of Rajasthan, India

³Head Clinical Services, Gangangar Veterinary College, Rajasthan, India

Corresponding author: Vishal Yadav (M.V.Sc. Scholar), email: vishalyadav1131997@gmail.com



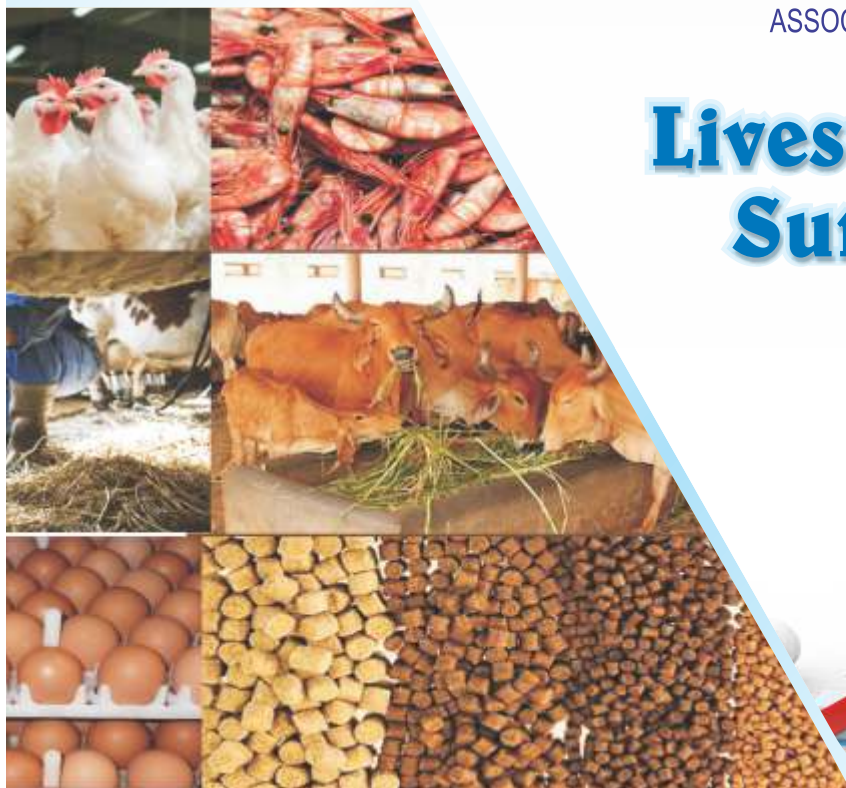
Hurry Up...Only 25 Copies left



ASSOCIATION OF LIVESTOCK INDUSTRY

Livestock Industry Survey Report 2022

VOLUME 1



Sale of Livestock Industry Survey Report 2022
Price Rs. 10,000 /- (Including GST).

US CuraTox- FS

Feed Health
is Vital for
Bird Health

Multi-Spectrum
Toxin Control
Formula



4

Way Action
For
Feed Protection

- Chemisorption
- Biotransformation
- Bioprevention
- Lipotropic Action

www.neospark.com

Neospark

mail@neospark.co.in

A GMP+, FAMIQs, ISO 9001:2015 and EIC Certified Company

AUGUST 2023

03-05 THE LIVESTOCK EXPO 2023

At India Expo Center & Mart,
Greater Noida, Delhi – NCR,
Contact: Pixie Expomedia with Infinity Expo
Rakesh Bhardwaj
Email: rakeshbhardwaj001@gmail.com

18-19 AUGUST 2023

CLFMA 56th AGM & 64th National Symposium 2023

At Hotel Le Meridien, Windsor Place
Janpath, New Delhi
Contact: CLFMA OF INDIA
111, Mittal Chambers, 11th Floor,
228, Nariman Point, Mumbai 400 021
Ph: (91-22) 22026013
Fax: (91-22) 22880128
Email: admin@clfma.org

25-27 11TH INTERNATIONAL POULTRY & LIVESTOCK EXPO 2023

12th DairyTech India 2023 and GrainTech India 2023
At BIEC Bengaluru
Contact: M. B. Naqvi
Chief Coordinator
Tel: 011-46081634 / 9811152139
Email: iplexpo@gmail.com
Website: www.iplexpo.com

SEPTEMBER 2023

12-14 SPACE 2023 ANIMAL HUSBANDRY EXPO 2023

At Rennes, France
Kuntal DESAI
Kuntal Consulting Pvt. Ltd., Chennai.
Coordinator for SPACE in India
Mobile No: (+91) 9884221118
Email : kuntal@atelierkuntal.com

15-17 DAIRY LIVESTOCK & POULTRY EXPO ASIA 2023

At Helipad Exhibition Centre,
Gandhinagar, Gujarat
Contact: Mr. Sanyal
Radeecal Communications
Mobile: +919974009653 / 75670 75522
Email: sanyal@radeecal.in;
asia@dlpexpo.com

20-22 23RD INDIA POULTRY EXPO

At Namakkal
Nala Hotel, Trichy Road, Namakkal
Contact : B V Shiv Shankar
Organizer
Mobile: 98493 68003, 93940 37347
Email: tezasvievents@gmail.com

OCTOBER 2023

03-05 VICTAM LATAM

At Expo Center Norte,
Red Pavilion, Sao Paulo, Brazil
Ph : +31 6 2126 4398
Email: nickmouthaan@victam.com
Website: www.victamlatam.com

27-29 FEED TECH EXPO 2023

At Auto Cluster Exhibition Center, Pune
Contact: Prachi Arora,
Managing Partner, Benison Media
Ph:+91 8607463377 | +91 184 4047817
Email: info@feedtechexpo.com
Website: www.feedtechexpo.com

NOVEMBER 2023

22-24 15TH POULTRY INDIA 2023

Indian Poultry Equipment Manufacturers Association (IPEMA)
At Hyderabad International Convention Centre
HITEX Exhibition Centre, Izzat Nagar,
Hyderabad - 500 084, A.P.
Contact: Ms. Sandhya Rani
Ph: 040 2414 2413 /10/20
Email: info@poultryindia.co.in
Website: www.poultryindia.co.in

JANUARY 2024

20-22 INDIA INTERNATIONAL POULTRY SHOW 2024

At Codissia Trade Fairs Complex,
Coimbatore
Contract: Lizzy
Prompt Trade Fairs Pvt. Ltd.
Event Co-ordinator
Mobile: 7305099925
Email: info@indiapoultryshow.com



CLFMA 56th AGM & 64th NATIONAL SYMPOSIUM 2023

Dear All,

We are pleased to inform you that the 56th Annual General Meeting (AGM) and 64th National Symposium 2023 which will be held on August 18 & 19, 2023 at Hotel Le Meridien, Windsor Place Janpath, New Delhi 110001.

The theme of the symposium is **"Livestock Sector: Looking Beyond the Present."**

Please find attached Delegate Registration Form.

Our bank details are as follows.

Name of the Association : CLFMA OF INDIA

Name of the Bank & Branch : **HDFC Bank**
Ground Floor, Express Towers,
Landmark – Next to Air India Building,
Nariman Point, Mumbai - 400 021

Saving Bank Account No. : 50100236210752
NEFT / RTGS IFSC Code : HDFC0000291

CLFMA GSTN Number : 27AAATC0153C1ZF

Meanwhile please reserve your dates for AGM and National Symposium and reply to **admin@clfma.org** for any query related to the matter above.

With warm regards,

Suresh Deora
Chairman

CLFMA OF INDIA
Mittal Chambers, 111, 11th Floor, Nariman Point, Mumbai - 400 021
Tel: 022 22026103 / www.clfma.org

DELEGATE REGISTRATION FORM

CLFMA OF INDIA

111, Mittal Chambers 11th Floor,
Nariman Point, Mumbai – 400 021

Tel: (022) 2202 6103 / Email: admin@clfma.org
Website: www.clfma.org
Date :

Sub: CLFMA 56th AGM & 64rd National Symposium – 2023
“Livestock Sector: Looking Beyond the Present.”
18th & 19th August 2023 at Hotel Le Meridien, Windsor Place Janpath,
New Delhi - 110001.

Dear Sir / Madam,

I / We wish to participate in the above Symposium as delegate.

1. Mr. / Dr. _____
Mr. / Dr. _____
2. Designation(s) _____
3. Name of the organisation _____
4. Company GST No. _____
5. Address _____

6. Telephone No. _____ E- mail ID _____
7. Mobile No. _____

Please find Enclosed Cheque/NEFT/RTGS reference _____ dated _____ for
Rs. _____ drawn in favour of 'CLFMA OF INDIA' payable at Mumbai, towards Registration
Fee(s) for _____ delegates.

Please confirm my/our registration.

Thanking you,

(Signature)

REGISTRATION FEES

CLFMA of India Member

Details	Amount INR
From 16 th July 2023 - same till date 19 th August 2023	11,000/- Plus 18% GST

CLFMA of India Non-Member/Member Guest

Details	Amount INR
From 16 th July 2023 - same till date 19 th August 2023	15,000/- Plus 18% GST

Note: No Delegate Fees refund will be entertained

* Members mean the companies who renewed their membership for the year 2023-2024.

Harnessing the power of plants



Targeted
Solutions



Designed for
profitability



Quality without
compromises

Fytera Perform

Phytogenic solutions harness the power of plants by providing a holistic approach to optimal performance, health & profitability.



Scan the
code for
latest updates

Trouw Nutrition India Pvt. Ltd

Unit no. L4 04, SLN Terminus, Beside Botanical Garden,

Gachibowli, Hyderabad, Telangana – 500032 T. +91 40 2988 0258

E: customercareindia@trouwnutrition.com W: www.trouwnutrition.in

Your Bird

Cannot Handle The

HEAT

THERM-ACE

Heat Intervention, Naturally



PRANAV
BİTEK
FEED SCIENCE

Responsible Innovation

PRANAV BİTEK AGROTECH PVT. LTD.

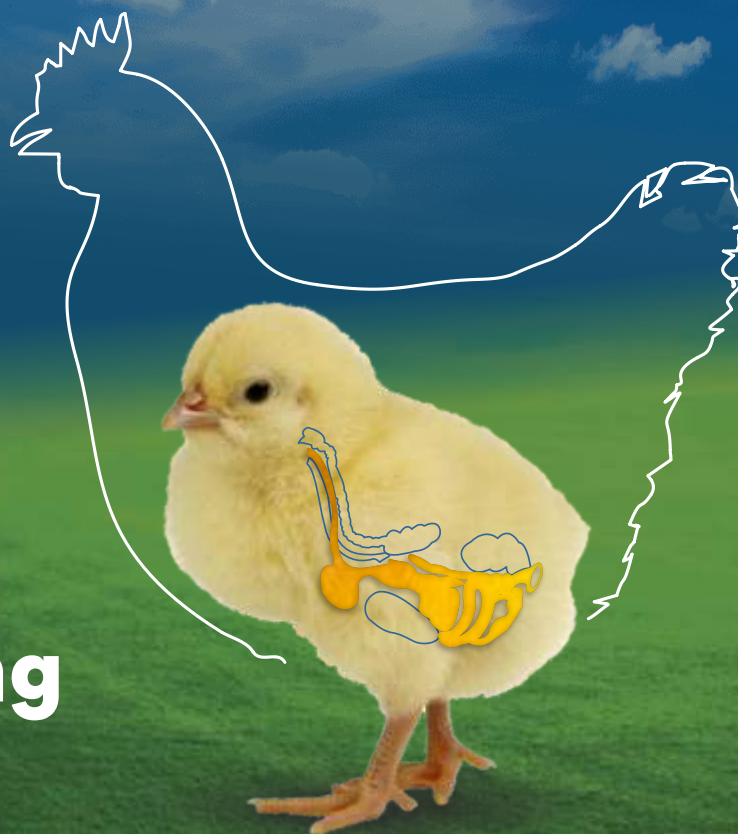
Bungalow No. 5, Acacia Garden 1, Magarpatta City
Pune 411028, Customer Care No: 020-61096718

E-mail: sales@pranavbitek.in

Website: www.pranavbitek.in



Get That Good gut Feeling



We understand that 70% of production comes from the animal diet and that is why it is important to make sure that the gut is in a well-balanced state, ready to combat pathogens and ensure maximum growth.



PROVENIA is a coated blend of organic acids which is formulated to effectively reduce pathogenic bacteria and manufactured using a patented embedded matrix technology to make sure that the acids are released at the right place and right time inside the gut. This helps promote a balanced microbiota to provide good gut health and cost-effective performance enhancer.

www.novusint.com

Novus and PROVENIA* trademarks of Novus International and are registered in the United States and other countries. 2023 Novus International, Inc. All rights reserved

NOVUS®



innovax[®]
ND-IBD

MORE POWER TO YOU

INNOVAX[®]-ND-IBD - PUTTING YOU IN CONTROL OF WELFARE & PRODUCTIVITY

MSD Animal Health is helping to shape the future of the poultry industry through continuous innovation.

Innovations such as Innovax[®]-ND-IBD the world's first dual-construct HVT vaccine that offers 3-in-1 protection in a single injection - safeguarding your birds from infection challenges before they even leave the hatchery, without the risks of bursal atrophy or interference with infectious bronchitis vaccination and MDA levels.

To find out more please contact your local MSD Animal Health Innovator today.

ALWAYS PRODUCING MORE