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From the Pen of Chief Editor



Unlocking the Potential of Dairy Byproducts: A Hidden Goldmine

Dairy has been a dietary staple for centuries, providing us with milk, cheese, and yogurt, to name a few. It is the treasure trove of valuable byproducts that dairy production generates. These often-overlooked byproducts, like whey, whey protein, and lactose, possess immense untapped potential.

Whey, a watery substance separated during cheese and yogurt production, has long been seen as a waste product, in recent years is being hailed as a protein-rich superfood, packed with essential amino acids. As consumers become increasingly health-conscious, whey protein has gained prominence, not only in fitness circles but also as an ingredient in a wide range of food products. The dairy industry can capitalize on this growing demand, turning whey into a lucrative revenue stream.

Lactose, primarily known as the sugar found in milk, is extensively used in pharmaceuticals, cosmetics, and the food industry as a source of energy and as a binding agent in tablet formulations. Its applications are diverse, and the dairy industry could foster partnerships with these sectors to further enhance its economic prospects.

Beyond the economic aspects, the dairy industry's recognition of the potential of its byproducts holds significant environmental benefits. By repurposing these materials, we can reduce waste, limit the strain on landfills, and lower our carbon footprint. Additionally, the repurposing of dairy byproducts aligns with the principles of a circular economy, fostering a more sustainable and responsible approach to resource management.

Permeate, a byproduct derived from the removal of proteins and minerals from milk, is an emerging star in the food industry. It is being used as a clean-label, natural flavor enhancer and a sodium reducer in various processed foods, contributing to healthier dietary choices.

While the potential of dairy byproducts is undeniable, challenges remain. To harness their full potential, the dairy industry must invest in research and development to explore new applications and technologies. They should also work closely with other sectors to develop value-added products and collaborate on reducing waste.

In conclusion, the dairy industry is sitting on a goldmine of potential in its byproducts. Whey protein, lactose, permeate, and others have evolved from mere waste to valuable commodities with significant health, economic, and environmental benefits. To truly unlock this potential, the dairy industry must invest in innovation, research, and collaboration. This not only secures its future but also contributes to a more sustainable and responsible approach to resource management. As consumers continue to seek healthier options and environmentally conscious products, dairy byproducts offer a promising solution, making it an exciting area for growth and transformation in the industry.

Vixual

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Current Concerns of Antibiotic Residues in Milk

Introduction

Consumers want to be confident that their food supply is free of contamination by herbicides, pesticides, drugs, or antibiotics. The presence of any drugs or antibiotic residues in any livestock product is illegal. Milk supplies containing detectable concentrations of any drugs are not acceptable. Unless drug residues are avoided to protect milk's reputation as a healthy, safe food, the market becomes jeopardized. Approximately 5-10 percent of the consumer population is hypersensitive to penicillin or other antibiotics and suffers allergic reactions (skin rashes, hives, asthma, anaphylactic shock) at concentrations as low as 1 ppb penicillin. There is concern that small amounts of certain antimicrobial agents may significantly shift the resistance patterns in the microbial population in the human intestinal tract.

Most of the antibiotics are known to interfere with the manufacture of several dairy products. Antimicrobial concentrations of 1 ppb delay starter activity for cheese, butter, and yogurt and of other fermented dairy products. Antibiotics also decrease the acid and flavor production associated with butter manufacture, and they reduce the curdling of milk and cause improper ripening of cheeses. Antibiotic residues in milk and milk products may lead to: severe allergic reactions in sensitive consumers, culture failure and subsequent loss of product, a change in consumer perception of milk being a pure, unadulterated, natural product. All of these concerns may result in major economic losses to the dairy industry.

Need of hour to overcome the effects of antibiotic residue in dairy products:

1. To protect consumers' health

Antibiotics entering the food chain through dairy products may lead to allergic reactions in humans and antibiotic resistant strains of bacteria.

2. To safeguard

It is essential that the dairy industry as a whole produces high quality milk which is free from antibiotic residues.

3. To avoid heavy penalties for producers

In future, losses incurred by processors having to

discard milk or may be passed back to the producer, while meeting the legal requirements of drug residue as prescribed by food standard authorities producer may penalizes.

4. To prevent losses to processors

Production of cultured dairy products can be adversely affected by traces of antibiotics, resulting in sub-standard product. Specifications for valuable home and export markets require dairy products to be free from antibiotics.

5. To comply with current legislation

Contamination of milk is an offence liable to prosecution, to ensure that food producers and handlers are not convicted of an offence which they took all reasonable care to avoid. It is therefore important that all milk producers are able to show that they have taken all reasonable precautions to ensure the safety of milk being sold by them.

Source of drug residues in Dairy Products

To the dairy animals for disease therapy the drugs are administered via intramuscular or intravenous injections, oral administration, feed supplementation, or reproductive infusions. While the treating of mammary gland infections through intramammary or intravenous infusions. A FDA surveys indicate that improper use of drugs in the control of mastitis is the major source of residues found in the milk supply. Many drugs are retained in the animal body for longer times than indicated by label discard times. Consequently, milk samples remain positive for residues. A good example is penicillin with a recommended milk discard time of 72 hours. However, penicillin residue has persisted in milk for as long as 18 days. Some of the cephapirin treated cows were still positive at 48 hours after the recommended milk discard time.

Antimicrobial drugs administered for dry cow therapy do not appear to cause drug residues if milk is not shipped for the first four days after calving, if dry periods are recommendations are followed, dry cow therapy should not result in residues after calving. However, residues are possible and fresh cows should be tested, especially cows with short dry periods. Intrauterine infusions of drugs have caused detectable residues in milk. Few studies have reported residues caused by intrauterine treatment with tetracycline,

dihydrostreptomycin, benzyl penicillin, oxytetracycline,

sulfamethazine, penicillin and streptomycin. Even combiotic (procaine penicillin and dihydrostreptomycin) has been detected in milk for 24-48 hours after intrauterine infusion.

Possible reasons for drug residues:

- Extended usage or excessive dosage of approved drugs.
- Poor records of treatment.
- Milker or producer mistakes accidental transfer into bulk tank.
- Failure to observe recommended label withdrawal time.
- Lack of advice on withdrawal period.
- Prolonged drug clearance.
- Treated-animal identification problems.
- Multiple dosing.
- Products not used according to label directions.
- Withholding milk from treated quarters only.
- Contaminated milking equipment.
- Early calving or short dry periods.
- Purchase of treated cows.
- Use of dry cow therapy to lactating cows.

Recommended use of onfarm drug residue testing

Certain situations have greater

risks for residues. Withholding times on the label may have been established with healthy or high producing cows where the drug retention is less than occurs in sick or diseased cows. Consider using a drug residue screening test as follows:

- 1. Fresh cows, especially those dry treated and with dry periods of six weeks or less, cows that freshen early, cows which had been treated shortly before calving, or cows whose treatment status was unknown. Discard milk for the first three days after calving. This includes first lactation cows who had been treated with either a lactating or dry cow mastitis treatment prior to calving. Also, test cows that received intrauterine drug infusions.
- 2. At the end of the recommended milk discard time and after the milk becomes visually normal, test milk from any lactating cow treated for mastitis.
- At the end of the veterinarian's recommended withholding time, which should be stated on the drug label, test any cows treated "extra-label." Also, test problem cows that have been treated longer than recommended, or with

higher doses, or with combinations of drugs or special mixes.

- All new additions to the herd including purchased cows or first lactation animals should be tested before their milk is added to the bulk tank.
- 5. Any cull cows that have been treated or baby calves that have been fed milk from treated cows should not be sold until the end of the withdrawal time for meat animals. Calves born to cows treated during the dry period may acquire tissue drug residues prior to birth or from drinking colostrums

Conclusion

Therefore the utmost care should be taken during the milking routine to minimize the risk of antibiotics entering the food chain. Milk of the highest quality is necessary to meet present and future market requirements and consumers now demand milk products of the highest quality and safety. Where drugs are used on the dairy herd there is always a risk of antibiotic contamination of milk. Therefore the utmost care should be taken during the milking routine to minimize the risk of antibiotics entering the food chain. All these must be checked as it causes health concerns in humans.

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Article

How Dairy Farms Can Benefit by Setting up Biogas Plant

To reduce emissions of greenhouse gases, related global warming, and dependency on fossil fuels, it is very important to promote the use of renewable energy, and in many parts of the world, in order to reduce GHG, they are taking efforts to convert biomass and organic waste into energy. Biogas technology plays a vital role in this, as livestock waste is considered to be a substantial source of ambient greenhouse gases, which causes climate change. In most developing and developed

countries, Biomethanation technology has been promoted for the same.

As per data in 2019 provided by National Dairy Development Board, India sheltered 192.5 million castles and 109.9 million buffalos.

According to the United Nations Food and Agriculture Organisation, the animal waste on this planet produces around 55-65% of methane, which when released into the atmosphere can cause global warming 21 times higher than the rate of CO2. Cow dung is a







very serious problem for people around the farm. The problem is often caused by cow dung which is not handled professionally. Its existence pollutes the environment and can act as a transmitter of disease.

The proper management of livestock manure has a much greater potential to reduce methane emissions, especially in the case of cattle manure, It should be emphasized that manure stored in piles is a source of important methane emissions, the scale of which may reach tens of thousands of tons per year.

Biomethanation Plant

Biogas plants can be designed and constructed as per the requirement, depending upon the amount of and the type of waste available and the amount



of gas needed.

The unprocessed cattle dung or burning of the cattle dung is more dangerous as it emits greenhouse gases and CO2 and thus polluting the environment. Whereas the combustion of biogas provides a clean source of energy, as it does not produce soot, like firewood. This helps reduce indoor air pollution, which in turn prevents respiratory infections and associated diseases. It can be a good alternative to LPG which is getting costlier.

Biogas plants significantly curb the greenhouse effect: the plants lower methane emissions by capturing this harmful gas and using it as fuel. Biogas generation helps cut reliance on the use of fossil fuels, such as oil and coal, the most important of its many advantages is that biogas can offer a decentralized energy solution.

Economic Viability

Generally setting up Biogas plants is considered expensive, to promote and support sustainability, Govt. of Inda is supporting by providing subsidies for setting up biogas plants, which may range from 25000 to 5cr, and the payback period of a biogas plant is generally considered to be 3-4yrs. Besides supplying energy and manure, provides an excellent opportunity for mitigation of greenhouse gas emissions and reducing global warming and thereby earning carbon credit, which in turn can be encashed on a yearly basis, thus making biogas plants economically viable.

Biogas as an alternative to LPG for cooking

As the price of conventional cooking gas (LPG), is constantly increasing and becoming unaffordable for the major population, The gas produced from the biogas plant can be used as an alternative and thus affordable, as the gas is produced by the digestion of cattle dung, it is more economical and environment friendly.

Biogas as an alternative to electricity

The expenses on power used in a dairy processing unit are so huge as they must food processing units, and other major electrical appliances, the major expenses on the electricity can be reduced by converting the biogas produced to electricity by installing a

biogas Genset.

Biogas as an alternative for pollution-free fuel

If the biogas produced from the dairy farm which may include the cattle dung and any organic wastes generated in the farm, is considerably high, it can be further purified to CBG, which is equivalent to CNG and can be used in vehicles or filled in cylinders and sold to restaurants and other industries.

Nutrient Rich BioManure and other Bioproducts

The slurry that is produced post the anaerobic digestion process, is considered black gold as it is very much rich in N, P, and K a very good fertilizer that can be sold to farmers.

Table – I Composition of Biogas Slurry/Vermicompost/ Cow Dung

Slurry Type	Nitrogen (%)	Phosphorus (%)	Potash (%)
Digested Slurry	1.5 – 2.0	1.0	1.0
Vermicompost	0.5-1.5	0.1 – 0.30	0.15 – 0.56
Cow Dung	1.19	0.3	0.48

The nutrient-rich bio manure can be further processed into Phosphate Rich Manure (PROM), which can be used as an contribute to the reduction of GHG and also fall in line with the different laws imposed by the pollution control board.

alternative to DAP and thus

maintain the fertility of the soil

without adding any chemicals.

The electricity produced, and

the sale of organic fertilizers

either raw manure or processed

manure as PROM are the most

important sources of income

that are expected from the

These biodigesters can offer

farms. They can use the gas

biogas generators, and

waste or sell them.

benefits to all spheres of society

but are more beneficial to dairy

produced for cooking, running

fertilizing crops with the residual

A farm with 100 cows can be

benefited from the following.

can be efficiently handled which

Thus, cow dung management

can help the farm owners

benefit economically and

biogas system.

16kg/ day
60 Units of Power per day
3.5 Lakhs (approx.)
0.20 Lakhs
2400 kg/yr.
INR 24000/ yr.



Siddhi Gupta

Co-Editor

Unlocking the Potential of Dairy By-Products: A Sustainable Path to Innovation

Dairy production has been a cornerstone of agriculture and human nutrition for centuries. The primary goal of dairy farming is to produce milk, which serves as a vital source of nutrition for people across the globe. However, the dairy industry generates not only milk but a plethora of by-products with significant economic, environmental, and nutritional potential.

The Dairy Industry: Beyond Milk

The dairy industry, like any other agricultural sector, faces challenges related to waste management, resource conservation, and sustainable practices. Dairy farms produce much more than just milk; they generate an array of valuable by-products that can be harnessed for various purposes. These byproducts include whey, buttermilk, whey protein, lactose, and more.

Whey: The Liquid Gold

Whey, a watery residue separated during the cheese-making process, is one of the most significant dairy by-products. It constitutes approximately 80% of milk and has various applications.

Whey Protein

Whey protein is a well-known and highly sought-after by-product. It is a complete protein containing all essential amino acids, making it a staple in the fitness and sports nutrition industry. Whey protein is used in the production of protein supplements, functional foods, and beverages. Its versatility extends to being a vital ingredient in baby formulas and medical nutrition products.

Lactose

Lactose, the sugar found in whey,

has applications beyond food. It is used in the pharmaceutical industry to make tablets and pills, acting as a binder and diluent in drug formulations.

Whey-based Fermented Beverages

Whey can also be utilized to make fermented beverages. Products like kefir and kvass are traditionally made using whey as a base, highlighting the sustainability of these by-products in traditional food production.

Buttermilk: Beyond Pancakes

Buttermilk is another dairy byproduct that has gained popularity as a nutritious ingredient.

Food Processing

It is often used in baking to enhance the texture and flavor of various goods, from pancakes and biscuits to marinades and salad dressings. Additionally, buttermilk can be utilized as a starter culture in the production of fermented dairy products like yogurt.

Cosmetic Industry

Buttermilk contains lactic acid, which is a natural exfoliant. As a result, it has found its way into the cosmetic industry as a key ingredient in skincare products. It is used in face masks, cleansers, and lotions, promoting the idea of utilizing dairy by-products in non-food applications.

Casein and Whey: The Cheese Connection

Cheese production generates not only delicious cheeses but also valuable by-products, namely casein and whey.

Casein

Casein is a protein obtained by precipitating it from milk with acid or enzymes. It has various applications, such as in the manufacture of adhesives, paints, and as a key component in some plastics. The cosmetic industry also utilizes casein in some hair care products.

Whey Permeate

Whey permeate, a by-product of whey processing, contains milk sugars, minerals, and some proteins. It is used as a flavor enhancer and carrier in the food industry, reducing the need for sodium while adding a creamy and salty taste to a wide range of products.

Lactose and Lactulose: Sweet and Functional

Lactose, a sugar found in milk, and its derivative, lactulose, also hold great potential beyond their primary role in the dairy industry.

Pharmaceutical Uses

Lactulose, a derivative of lactose, is widely used in the pharmaceutical industry as a laxative and for the treatment of hepatic encephalopathy. Lactose serves as a filler and diluent in pharmaceutical tablets and capsules.

Nutritional Applications

Lactose is a source of carbohydrate and an important energy source in infant formulas. It plays a critical role in providing essential nutrients to infants, ensuring their healthy development.

Manure: A Valuable By-Product

Beyond the kitchen and the pharmacy, the dairy industry also produces valuable by-products in the form of manure.

Fertilizer

Dairy manure is a rich source of nutrients, including nitrogen, phosphorus, and potassium. It can be processed and used as an organic fertilizer, providing a sustainable alternative to chemical fertilizers. This reduces the environmental impact of agriculture and closes the nutrient loop in the farming system.

Biogas Production

Manure can also be used for biogas production. Anaerobic digestion of manure yields biogas, a renewable source of energy. Biogas can be used for electricity generation, heating, or as an alternative fuel for vehicles.

Environmental Benefits of Dairy By-Products

The utilization of dairy by-products is not just economically valuable but also environmentally friendly. By repurposing these by-products, the dairy industry contributes to waste reduction and resource efficiency.

Reducing Food Waste

By utilizing by-products such as whey, buttermilk, and lactose, the dairy industry plays a role in reducing food waste. It maximizes the utilization of raw materials, leading to a more sustainable production cycle.

Resource Conservation

The dairy industry consumes a significant amount of resources, from water and energy to land and feed. By effectively using dairy byproducts, these resources are conserved. For example, using whey as a source of whey protein reduces the need for additional protein sources, which may have a larger environmental footprint.

Energy Recovery

Biogas production from dairy manure not only provides a renewable energy source but also reduces the release of methane, a potent greenhouse gas, into the atmosphere. This makes it an environmentally friendly approach to waste management.

Challenges and Future Directions

While the potential of dairy by-

products is vast, several challenges need to be addressed for their optimal utilization.

Economic Viability

The economic viability of processing and utilizing by-products can be a significant hurdle. Efficient extraction, processing, and distribution of these by-products require investment and technological innovation.

Quality Control

Ensuring the quality and safety of by-products, especially in non-food applications like cosmetics or pharmaceuticals, is crucial. Stringent quality control and adherence to regulatory standards are necessary.

Consumer Awareness

Many consumers are unaware of the value and potential uses of dairy byproducts. Raising awareness about these by-products and their applications can drive demand and encourage innovation.

Sustainability Practices

Sustainable farming practices play a vital role in enhancing the potential of dairy by-products. Practices like organic farming and responsible waste management contribute to the environmental benefits of byproduct utilization.

Dairy by-products are an oftenoverlooked goldmine of value. From whey protein and lactose to buttermilk and casein, these byproducts have applications across various industries, including food, pharmaceuticals, cosmetics, and energy production. Their utilization not only presents economic opportunities but also contributes to environmental sustainability by reducing waste and resource consumption. The dairy industry, with its long history and deep roots in agriculture, has the potential to lead the way in sustainable practices and innovative product development.

REPORT ON COMPREHENSIVE REFRESHER PROGRAMME (CRP-9) CONDUCTED BY CENTRE OF EXCELLENCE FOR AHIMAL HUSBANDRY (CEAH), **HESSARGHATTA, BENGALURU, 560088**

FROM 07TH TO 11th SEPTEMBER, 2023 FOR ASSISTANT PROFESSORS OF TAMILNADU **UNIVERSITY OF VETERINARY& ANIMAL SCIENCES (TANUVAS), TAMILNADU**



CEAH-Bengaluru – Animal

Husbandry Academy of India is setup under Government of India, Ministry of Fisheries, Animal Husbandry & Dairying, and Department of Animal Husbandry & Dairying as a consortium of 5 organizations at Hessarghatta vide Order No. F.A-430011/3/2023-Estt(HQs), dated, 14th March, 2023. This Academy is formed as per the guidelines of DoPT for National Programme for Civil Service Capacity Building (NPCSCB) under "Mission Karmayogi" of Government of India.

CEAH-Bengaluru is spread over 642 acres distributed in four campuses at Hessarghatta. Campus - 1 consists of Central Poultry Development Organization & Training Institute (CPDO&TI), Campus - 2 consists of Central Frozen Semen Production & Training Institute (CFSPTI) and Central Cattle Breeding Farm(CCBF), Campus -3 consists of Animal Quarantine and Certification Services(AQCS) and Campus - 4 consists of Regional Fodder Station(RFS).

automation units at poultry, Modern dairy sheds, ET lab, Sex-sorted semen lab, International Animal Quarantine facility, biggest fodder unit in the country with latest technology adoption for irrigation. The Academy consists of four campuses with conference halls, class rooms, officers and farmers hostels with boarding and lodging facilities.

CEAH Bengaluru Academy organized its Ninth Comprehensive Refresher Programme (CRP-9) for Assistant Professors of TANUVAS, Tamilnadu from 07th to 11th September, 2023. This course is planned with a 360 degree approach for knowledge enrichment and generic issues with the following outcomes expected to be covered:

Candidates were exposed to information on Govt. institutions of State and Central of Department of Animal Husbandry & Dairying across the country. Latest innovations, govt. schemes of both state and central sector, soft skills for adoption in service delivery, successful business models,

Certificate Distribution

project report analysis, activity based learning including pre-training and post-training analysis. The young veterinary professionals will be motivated and trained in the modern challenges of Animal Husbandry Sector.

On 04th September, 2023, Dr. P.S. Mahesh, Joint Commissioner & Director, CEAH inaugurated the programme. In his inaugural address, he briefed the mandates of CEAH Bengaluru the consortium of 5 organizations to aspire to be best Animal Husbandry Academy in India with state of art infrastructure facilities and a robust revenue model. Later, All trainees were given a digital pretraining analysis through Google Forms by Sri. S.M. Anwar Basha with a predesigned format to understand the training needs of officers in various subjects.

Dr. Mahesh P.S. Joint Commissioner & Director of CEAH academy made a presentation on Prospects of Indian Animal Husbandry Sector which is estimated to be double the Automobile sector (7.5 lakh crores) contributing



Guest Lecture by Prof. Isloor

CEAH Bengaluru has state of art



about 15 lakh crores to the Indian GDP. The Dairy sector is estimated to be about 8 to 10 lakh crores, poultry 2 lakh crores and rest three lakh crores is from small ruminants etc. Indian Animal Husbandry Sector is most promising with a sustained growth for rural economy, employment and nutritional security.

In the afternoon, trainees **Dr. Sonali Nanda**, Assistant Director made a presentation on the activities of CPDO&TI including the future proposed activities at CPDO&TI. Later the trainee officers were taken to **CEAH Campus-1** CPDO&TI to visit automation units in poultry, feed mill, hatchery and demo unit. They were briefed by **Dr. Abhinav Choudhary** and **Dr. S. Balraj** about requirements of Automation, Functioning of Feed Mill and Hatchery at the field.

On 05th September, 2023 being **TEACHERS DAY**, a grand celebration was made by cutting a cake in the lawns of CPDO&TI. This was followed by Dr. Abhinav Choudhary, Livestock Officer who gave an insight of practical aspects of Sheep Rearing and management of Sheep Farm. Later, Dr. P. Nallappa, Managing Director, Jagadish Poultry Farm, a successful entrepreneur in poultry made elaborate presentation on Economics of Broiler and Broiler Breeding Farms with unit cost and suggestions for adaptation to make poultry enterprise most profitable venture. Sri. S.M. Anwar Basha made a presentation on

Basics of Animal Nutrition and importance of Quality Control in Livestock Feeds.

In the afternoon, trainees visited **CEAH Campus-4** to visit Regional Fodder Station, wherein they were exposed to fodder demo plots, fodder seeds display with a brand "Fodder Gold" followed by demonstration of Rhodes cultivation. The trainees were taken to artificial irrigation pond which is recently developed at this centre with 100ft x 100ft x 12 ft depth holding more than 20 lakh liters of water for sprinkler irrigation. **Dr. Aditya and Sri. Ashwathappa** made presentations about fodder management for the trainees.

On 06th September, 2023, Wednesday, Mr. Santosh, a sheep entrepreneur presented the success story with interesting facts of Nomadic Herds of Sheep across India with very sustainable profitable sheep farming. He mentioned in his address that money saved is money made in sheep farming with greater control on inputs. The stall feeding of sheep farming has its own challenges that require higher cost, commitment and proper marketing strategy. Later this session was followed by Mr. V. Sudhindranath, Desi Cow farming entrepreneur of "Naati Hasu Goshala" with a brand name "Pashu Thai" for the products of the organization. He is maintaining more than 500 desi breeds with more than 10 breeds of desi origin. He has been very successful in

producing various products under his venture namely, Panchagavya, Agnihastra, Balms, Phenyls, Health products etc., by adopting innovative interventions like chalf cutting, silage making, gobar gas production, multistoried cow sheds, solar adaptations etc. This session was followed by **Dr. Mahesh P.S.** guided the trainees on the topic of Communication and Presentation Skills.

In the afternoon, Trainee officers visited **CEAH campus-2** to visit facilities of Central Frozen Semen Production and Training Institute(CFSPTI) and Central Cattle Breeding Farm(CCBF). They appreciated the facilities of Semen Lab, ET lab, cattle sheds, milk collection etc . **Dr. Bhaskar**, Deputy Commissioner, **Dr. Atulya M.**, Asst. Commissioner and **Dr. Abdul Salam**, Livestock Officer explained the facilities. This was followed by presentations by **Dr. Arun Prasad**, Joint Commissioner. CFSPTI on activities of CFSPTI.

On 07th September, 2023, the session started at 9.00 am with **Dr. Gopakumar**, CEO and Managing Director of DLG farms India (USA) on successful piggery enterprise in detail with ideal 3 way crossing, breeder model, franchise model, piglet fattening model etc to make piggery one of the most successful enterprise. Later the trainee officers visited **National Institute of Veterinary Epidemiology & Disease Informatics** (NIVEDI), Yelahanka Bengaluru.





Valedictory Group Photo





Prof. Dr. Vivek Patil from KVAFSU, Bengaluru dealing on Animal Husbandry Projects and analysis online deliberation, he demonstrated salient features of Dairy Project in detail including calculation of ratios and feasibility concerns.

In the afternoon, trainees visited **CEAH** Campus-3 Animal Quarantine Certification Services (AQCS). Dr. Tapan Kumar Sahu, Deputy Commissioner along with Dr. Nivedita, Quarantine Inspector made presentations about requirements of export / import of livestock products through AQCS Bengaluru and provisions of Livestock Importation Act. Later they were shown all the facilities of AQCS. In the evening for the first time CEAH Academy introduced "Activity Based Learning" which was conducted by Dr. Abirami from, NSB Academy Bengaluru. Trainee officers along with CEAH academy team participated with highest enthusiasm.

On the last day, 08th September, 2023, trainees visited "Naati Hasu Goshala" at Kakolu early in the morning 7.00 am to appreciate the activities at the Desi Cattle Farm. This is followed by Dr. Vinod Bhat, Joint Commissioner, Govt. of India and Secretary Veterinary Council of India joined online for the presentation on Veterinary Council of India and issues of Veterinary profession. The last session was presented by Dr. Mahesh P.S. with a future vision of Animal Husbandry Sector and Vet as a successful entrepreneur. Mr. S.M. Anwar Basha

issued trainees Post Training google forms to seek their feedback in both google forms and written form.

This Special program for Assistant Professors of TANUVAS was well received and requested to increase it to 10 days so that it will meet their requirement for career advancement. "The Teachers became well motivated Students & inspired to create Future Leaders in their University"

The CRP-9 programme concluded with a Valedictory Function. Each trainee officer were given with Kit consisting of (Executive Bag, CEAH memento, Certificate, Group Photograph and Card

Teachers Day

Drive(pen drive) consisting of all the presentations made during the five days. The trainee officers expressed their satisfaction and they rated the programme as Excellent in both "Google forms under post-training analysis and written feedback).

Dr. Mahesh P.S., Joint Commissioner & Director, acknowledged the tireless efforts of the entire Academy Team both the front end and back end consisting of logistics, hotel arrangements, outdoor team, etc for making this programme very successful.





Visit to NIVEDI Lab



Teacher Day Celebration

Visit to NIVEDI Bangalore

INDIAN FEDERATION OF ANIMAL HEALTH COMPANIES (INFAH) ORGANISED 12th Annual General Meeting on 23rd September 2023, at Mumbai



Indian Federation of Animal Health Companies (INFAH) held its 12th Annual General Body Meeting on 23rd Sep 2023 at "Hotel The West in Mumbai Garden City". Emerging trends in AH sector & a picture gallery showcasing key INFAH activities for 2022-2023 were displayed at the venue. The AGM was attended by ~ 100 industry colleagues representing Indian animal health industry.

On 23rd Sep 2023 during the Inaugural session Dr Ram Prakash delivered a welcome note. He appreciated the enthusiastic participation of members & the delegates.

Presidential address was given by Dr Vijay Makhija reinforcing the INFAHs motto of Healthy Animals, Healthier India. INFAH is recognized as unified force of AH companies having member strength as 57. INFAH plays the role of a catalyst in shaping policy framework to unlock and unleash the potential of the Indian Animal Husbandry and Animal Health sector in line with the National Priorities of Atma Nirbharta, ensuring the access of all classes of veterinary medicines and animal health products to the benefit of animal health and welfare promoting their responsible use. INFAHs objective has been that the Animal owners especially the Farmers should stand to be benefitted and in the process their income levels should go up significantly. INFAHs focus

has been to foster a greater understanding of animal health and the importance of the 'One Health' approach & focus on preventing Zoonosis. INFAH is committed to work closely with Government and Research Institutions to promote seamless availability of Vaccines and newer Technology Solutions focused on disease prevention and mitigation.

The inaugural session was addressed by Chief Guest Dr. Abhijit Mitra Animal Husbandry Commissioner DADF, New Delhi. Dr. Mitra highlighted the various initiatives undertaken by the Government towards Disease Mitigation & Improving Farm Productivity. Dr. Mitra stressed on collaboration between INFAH and DADF for enhancing Animal Husbandry and Animal Health in India. INFAH members had the unique opportunity of listening & interacting with Animal Husbandry Commissioner.

Dr P S Mahesh Joint Commissioner & Director of Centre of Excellence of Animal husbandry (CEAH) shared his views on the topic of Future Trends in Indian Poultry Sector ,Mr Shiva Mudgil , Food & Agri Business Services , International Finance Corporation (World Bank) shared insights on Growth Opportunities in Animal Husbandry Sector ,Mr Manish Singh QSRC Advisor Consumer & Food Services Global Markets Fonterra Brands Singapore Pte Ltd shared experiences regards to Dairy Value Chain – Evolution & Challenges .

In the post lunch session, John Rollins Director Pharmexcil shared insights on Export Opportunities for Indian Animal Health Companies, a presentation on Talent & Reward Trends in Animal Health was made by Mr Arvind Ladha, Ms. Nidhi Lal & Mr Adrish Singh the Team from Mercer, and Dr D K Dey delivered a presentation about Data Manthan - Veterinary Market Research.

Delegates got an opportunity to interact with the invited speakers during the networking session.

Two distinguished personalities, **Dr T.G Chandramohan** and **Mr Sunil Madhok**, were conferred with INFAH Awards 2023. Delegates were enlightened & felt inspired to learn the spectacular journeys of these two leaders.

Dr. Shirish Nigam General Secretary INFAH presented the full year activity report for 2022-2023. Key achievements as under:

 Successful Organization of National Seminar on theme Disease Mitigation & Farm Productivity engaging Ministry of Fisheries, Animal Husbandry and Dairying, Drug Controller General of India office, Principal Scientific Advisor Office, Veterinary Council of India, Indian Pharmacopeia Commission, ICAR, IVRI, FSSAI, Health for Animals, GALVmed

- Published White Paper on Veterinary use of Antibiotics vis-a-vis emergence of AMR-Indian Animal Healthcare Industry Perspective by INFAH, having estimation of Antimicrobial Usage (AMU) in India for animal use.
- Published Vision Document Ayurveda in Animal Health Care, released during 9th World Ayurveda Congress and International conclave on Pashu Ayurveda
- Contributed towards policy initiative of DADF on National Action Plan on AMR 2.0 (2022-2026)
- INFAHs recommendations for Pre Budget proposals 2023-2024: Seeking clarity on classification of animal feed supplements and feed additives under correct Chapter Headings of the Customs Tariff Act, 1975 and request for release of Bank Guarantees submitted by importers.
- Representations to DADF: on inclusion of additional Animal Feed Supplements / Additives for facilitating swift importation, INFAH members comments on Guideline for conducting clinical trial/field trial pertaining to the vaccines for veterinary use.
- Representations to IPC: Veterinary Vaccines General Chapter Requirements, Deletion / Waiver of Target Animal Batch Safety Tests (TABST)
- Representation to VCI: addendum to be incorporated in the Draft Minimum Standards of Veterinary Practice

Regulation 2023 (MSVPR)

- INFAH Outreach Programme in collaboration with VCI
- Development of Draft Standard Operating Procedures for Good Marketing Practices
- Enhancing Market Access & boosting exports of Animal Health Care products in Collaboration with Pharmexcil, showcased INFAH at Pet Fair Southeast Asia organized by VNU Exhibitions at Thailand
- INFAH Connect Digital initiatives – Successfully conducted Webinars- Impact of Union Budget 2023-2024 on Animal Husbandry sector, AMR-An Animal Healthcare Perspective.
- Presented INFAH views at the launch of Animal Pandemic
 Preparedness Initiative (APPI) and Animal Health System
 Support for One Health
 (AHSSOH), Why ONE HEALTH matters at IPR Radio Podcast
- INFAH presentation at the ICAR-Industry Stakeholder Consultation meet by Agrinnovate India Ltd
- Presented INFAH views on the Role of Animal Health in Achieving Sustainable Development Goals
- INFAH received Indian Poultry Journalist Association of India (IPJA) Appreciation Award for the year 2022, in recognition of significant contribution to the Indian Poultry Industry

Dr. P.G. Phalke, Treasurer conducted the AGM proceedings & thanked members for exemplary support. INFAH Members participated in the electoral process for selecting Managing Committee for the year 2023-2025 term. Mr. N. M Sampat Returning Officer conducted the electoral process. During the Members Forum a wide range of topics were discussed by members for Ease of Doing Business & towards the betterment of AH sector.

AGM concluded on a very positive note with a resolve to continue the contribution of INFAH towards betterment of the Industry and Society.

Post AGM Managing Committee members selected the Office Bearers & the Managing Committee Members for the term 2023-2025, details are as under:

- 1) Dr Shirish Nigam (President)
- 2) Dr Aman Sayed (Vice President)
- 3) Dr Ram Prakash (General Secretary)
- 4) Dr Anup Kalra (Joint Secretary)
- 5) Dr Manoj Sood (Treasurer)
- 6) Mr Gautam Chatterjee
- 7) Dr Vinayak Surve
- 8) Mr Sushanta Dey
- 9) Ms. Ashwini Deshpande
- 10) Dr Vijay Makhija
- 11) Mr Vijay Teng
- 12) Dr Arun Atrey
- 13) Mr Satish Pasrija

It was also decided that Dr P.G. Phalke shall function as Director-INFAH Secretariat.

Moreover Dr D. K. Dey was nominated as Honorary Member of INFAH, and his expertise shall be utilized as an Advisor to INFAH / Subcommittees.





ICFA launches World's First International Agro Arbitration Centre in New Delhi IAAC will fulfil the need of India's and global disputes settlement in food and agriculture sector



Ms. Shamshravish Rein Executive Director, IAACAdvocate, Supreme Court of India shamshravish.rein@agroarbitration.com

IAAC is set to emerge as a trustworthy global institution with an expert panel comprising legal, financial, and agro-trade professionals at its core, Justice P. Sathasivam

Launching the world's first agro focussed dispute

settlement body, International Agro Arbitration Centre (IAAC), promoted by the Indian Chamber of Food and Agriculture, Justice P. Sathasivam, Former Chief Justice of India and Former Governor of Kerala, said that IAAC is poised to revolutionize dispute resolution mechanism within the agricultural and food sector in India and worldwide.

Agriculture is an incredibly diverse sector. Post WTO food and agro trade has significantly grown to over \$2 trillion and a large number of companies have gone global today with trade, technologies and businesses. While USA, Netherlands, Germany and Brazil occupy top positions in agro food exports, India is fast catching up, exporting agri products to more than 150 countries in the world, accounting for more than \$55 billion and importing close to \$25 billion. Such rapid growth in trade gives rise to many issues and trade disputes, which need to be promptly and cost-effectively addressed, said Justice P. Sathasivam.

Domestic agro sector is also huge and different businesses from inputs to output and services are rapidly expanding with innovation and new products and technologies. While the rising business and trade of agriculture comes with its own benefits, the disputes arising within the agro trade industry can hinder its efficiency in several ways. These disputes may crop up for a variety of reasons; contract disputes, nuisance claims, produce quality, patent and IPR infringements, payments and debt recovery, among others, Said Mr. Justice

Anil R Dave, former Judge, Supreme Court, while highlighting the vacuum felt for long time of sector specific arbitration centre with domain expertise.

Bearing in mind the gravity of such issues, IAAC, a unique agro sector focused arbitration centre, has been incepted to provide a forum to address the challenges and mitigate the negative effects that disputes can have on productivity, relationships, costs, ultimately promoting a more productive and efficient agro trade and businesses globally, asserted Dr. MJ Khan, Chairman of IAAC and also the chairman of parent body, ICFA.

Recognizing the critical need for dedicated dispute resolution in the fields of agriculture and food, IAAC is set to emerge as a trustworthy global institution with an expert panel comprising legal, financial, and agro-trade professionals at its core. The International Agro Arbitration Centre is an India based leading institution that provides alternative dispute resolution services to the agro food industry worldwide, said Dr. Ashok Dalwai, Chairman, PM Task Force of Doubling Farmers Income.

The IAAC shall offer arbitration, mediation, and expert determination services to resolve disputes that may arise in the agro sector with the country or outside. IAAC promotes the peaceful resolution of disputes in the agro and food industry and trade through alternative dispute resolution mechanisms. The Centre seeks to provide cost-effective, efficient, and impartial dispute resolution services that enable parties to resolve their disputes quickly and effectively, said Mr. Siraj Chowdhary, Board Member, Tata Group and former Chairman, Cargill India Limited.

The Indian policy and judicial system also encourages commercial disputes to be resolved through the mediation process and arbitration, before approaching the Courts. IAAC's commitment extends to providing equal opportunities to parties across the globe, transcending geographical, linguistic, and financial boundaries, said Justice Sathasivam in his closing remarks.

The launch program was joined online by IAAC's global board members. Ms. Khairul Nessa, Executive Director, World Trade Centre and Vice Chair, WTC Global Agriculture Committee, Mr. Tarun Shridhar, Member, CAT and former Union Secretary, Dr. Abusaleh Shariff, Chairman, US-India Policy Institute, Mr. Harikshan Rankawat, President, Federation of Indian Industries, UAE and Dr. Vikas Chaturvedi, Chairman, Institute of Chartered Accountants of India, Amsterdam



SPACE 2023 At The Heart of The Global Food Challenge



Mexique

The 37th edition of SPACE was held from Tuesday 12 to Thursday 14 September at the Rennes Exhibition Centre, featuring 1,207 exhibitors. Among them, 241 were exhibiting at SPACE for the first time and 365 were international companies from 39 different countries. These exhibitors welcomed 90,771 visitors, including 12,125 international visitors from 122 countries. Overall, these figures reflect a 23% increase in the number of international visitors, as well as a record number of countries represented.

The three-day Exhibition, which took place in a warm and positive atmosphere, reflects the healthy economic situation of the farming industry, but also its concerns regarding the future, as production volumes for beef, milk, pork and poultry are falling. At the same time, consumer demand for quality food at affordable prices has never been higher. The three days of intense activity were therefore more necessary than ever for all those involved in the dynamics of animal farming, to allow them to address these issues, to alert political leaders to this unprecedented situation and to reflect together on solutions for the future. Once again, SPACE exercised its role to the full as a highquality event that is vital for the future of animal farming. As the geopolitical context becomes increasingly unstable, it is essential that we do not develop a tendency to depend on third countries to fill our plates.

Energy as a major theme

This edition was also dedicated to energy. This central theme of SPACE was explored in numerous discussions, conferences and debates. It was the focus of the Espace for the Future organised by the Chambers of Agriculture. This area, which was redesigned for this year's edition, provided SPACE visitors with all the necessary information to help them reduce their energy bills and diversify their activities around the opportunities offered by this market. Photovoltaics, wind power, methanatisation, biomass... there are many avenues to explore and keeping informed is essential to maintain a profitable balance with the farm's main production. At a time when strategic decisions need to be taken to meet the dual challenge of energy and food sovereignty, SPACE was a key opportunity to prepare for the future in this area. The new Experts' Area within the Espace for the Future provided animal farmers with very practical and useful information on subjects such as fuel consumption, hydrogen, reducing energy consumption in buildings, the law on renewable energies, etc.

Innov'Space

Innovation is one of the hallmarks of





SPACE, and exhibitors' enthusiasm for the Innov'SPACE label remains undiminished. A total of 118 applications were submitted, and were rigorously examined by a jury of over 50 members. 37 companies were awarded one or two stars depending on the degree of interest for the farmer or end user. Four winners received the special three-star distinction: Kverneland Group France's Pudama, which applies fertiliser to each individual seed: Leretrif Rossard Bâtiment's Watt'N'Wall, which consists of prefabricated walls for pigsties equipped with a hydraulic network to heat part of the space; and finally Mastaplex's Mastatest and Zoetis's Vetscan MastiGram+, both of which diagnose mastitis quickly, so the animals affected can be treated more efficiently.

The World of Animal Farming, a record number of countries attended

SPACE attracted an unprecedented number of international visitors, with 122 countries represented by the 12,125 visitors who came to Brittany looking for solutions to help them develop or improve their farms. The many delegations from Africa (Benin, Cameroon, Côte d'Ivoire, DRC,



Senegal, Togo, etc.) confirmed their growing interest in the solutions presented at SPACE to help them achieve food sovereignty. BPI's official participation alongside them encourages our companies to open up and develop their business in these new markets. Top buyers, invited to SPACE as part of Business France's "Export Begins in France" programme, were fascinated by the diversity and quality of the products and services offered by SPACE exhibitors. These investors and leading companies in their own countries, came from Angola, Ethiopia, Kenya, Romania, Tunisia and Turkey to find new technologies in the fields of hygiene, health, genetics and breeding equipment at the Exhibition.

The European Association of Agricultural Journalists (ENAJ) also took part in this year's edition and held its Annual General Meeting there.

Once again this year, the World of Animal Farming played to its full potential in Rennes, despite many professionals being unable to come due to visa refusals. This year saw an even greater number of such cases. A large number of applications were refused, particularly in India, Algeria, West Africa, etc., which has a significant impact on potential or existing business flows between France and the rest of the world. **The Youth Forum and the Tech'Agri Challenge**

Once again this year, SPACE focused its attention on young people, highlighting the value of animal farming trades in order to further boost their attractiveness. The Youth Forum welcomed around a hundred students each day to discuss their concerns: the path to setting up a business, time devoted to holidays, income, the ability to maintain agriculture-related employment, internships, etc. A wall displaying job and internship offers, as well as a job dating event, also provided young visitors with concrete opportunities to build their future.

The first Tech'Agri Challenge by Innov'Space was organised this year. HND and engineering students from the agricultural and digital sectors reflected on and developed technical solutions to issues encountered by farmers (digital identification cards for cattle, automated headlocks for remote opening, etc.). This new project, initiated by



^B Allees du hall 5 ppement Innovation and Innozh and supported by SPACE, was a great success and demonstrated the skills of the new generation in coming up with innovative and practical solutions to improve working conditions for farmers.

The closing ceremony, organised for the first time by the Young Farmers of Brittany, was another great opportunity to bring together its members to enjoy a convivial evening.

Conferences

SPACE continues to offer its participants knowledge-rich content in the hundred or so conferences included in its programme. Together, these presentations are what make SPACE a unique platform for the development and progress of the animal farming industry. This dimension was confirmed once again this year.

The genetic showcase

SPACE is a unique showcase for dairy and suckler breed presentations and competitions. 500 cattle from 13 different breeds provided a continuous spectacle in the main ring during the three-day Exhibition. This year's edition of the Genetics Show featured two major events: the National Charolais Breed Competition and the European Simmental Breed Challenge. Ten other inter-regional competitions and genetic presentations complemented the programme. The "Meat Excellence" beef cattle auction, dedicated entirely to suckler breeds, and the inter-breed "Genomic Elite Auction", a unique event in Europe, dedicated to dairy and mixed breeds, were a great success. SPACE also featured a large number of sheep, with 120 animals from 10 different breeds. Competitions and the Sheep Olympics were held throughout the day, with 136 young learners taking part.

For the second year running, the



32,000 litres of milk collected at SPACE will be donated to the Food Banks via SOLAAL, whose 10th anniversary we celebrated.

SPACE 2023: a political highlight for animal farming

SPACE's key role in the start of the new agricultural policy season was further accentuated this year with the launch of the Exhibition by the French Minister for Agriculture and Food Sovereignty, Marc FESNEAU, the visit of Denise BAUER, Ambassador of the United States, the conference on the Common Agricultural Policy (CAP) by Véronique DREZET-HUMET, Head of Representation of the European Commission in France, followed by her tour of the Exhibition stands, and the meeting of the Agricultural Commission for the French Regions meeting chaired by Loïg CHESNAIS-GIRARD, President of the Brittany Region, who addressed young people with the following message: "Tomorrow you will be at the heart of Europe's food strategy". Ms Arooj MEHWISH RIZVI, Trade and Investment Counsellor at the Embassy of Pakistan in France, also met a number of people involved in cattle farming on behalf of her country, which is the world's fourth-largest dairy producer.

The 37th edition of SPACE, with its

abundance of opportunities to meet and share ideas, its highly committed exhibitors, its dynamic and enthusiastic visitors all keen to maintain and develop animal farming in our regions and around the world, was a fantastic platform for all these players to find the keys to feeding the world's 10 billion people in the next 30 years, in an increasingly carbonfree economy.





We look forward to seeing you at SPACE 2024: from Tuesday 17 to Thursday 19 September.





In 2023, Vetoquinol Celebrates Its 90th Anniversary

Sustainable development, an integral part of Vetoquinol Vetoquinol's corporate vision underlines its ambition for its entire ecosystem. This vision creates a dynamic for sustainable development by stating that by 2033 the company will be "the most agile animal health laboratory where employees, experts, partners, and customers work together to create customized solutions dedicated to animal health for a better planet". This desire has been expressed for a long time and in many ways, through concrete actions. The company is thus demonstrating its unwavering determination to positively support sustainable development.

"One Health"

Most infectious human diseases have an animal origin. The recent health crisis has highlighted the need to adopt a "One Health" approach, promoting an integrated, systemic, and unified approach to public, animal, and environmental health, locally and globally. The well-being of humans and animals is at the heart of Vetoquinol's business. This is the raison d'être of its products, which cover most of the needs of veterinarians in numerous segments such as parasiticides, mobility, dermatology, and treatments for dairy cows. These are all areas in which Vetoquinol has recognized expertise.

Vetoquinol's commitment

Vetoquinol has been committed to sustainable development for several years now. This commitment is reaffirmed in the new AMBITION 2026 strategic plan. Vetoquinol's teams are mobilized around actions that make up the company's sustainable development roadmap. First and foremost, employee safety is the company's top priority. Vetoquinol is committed to preserving the health and safety of its teams and works to achieve a shared culture of vigilance in this area.

In addition, Vetoquinol aspires to control its carbon footprint by reducing CO2 emissions per million euros of sales. The company also aims to reduce its industrial waste and increase its waste recycling rate while improving the management and consumption of water in the manufacture of its products. The company is also pursuing its eco-design and packaging management initiatives for its products. Finally, Vetoquinol is committed to implementing a sustainable, ethical, and responsible sourcing policy.

IN ANIMAL HEALTH,

A FUTURE TO BUILD

TOGETHER

Vetoquinol is a leading global animal health company that supplies drugs and nonmedicinal products for the farm animals (cattle and pigs) and pet (dogs and cats) markets. As an independent pure player, Vetoquinol designs, develops and sells veterinary drugs and non-medicinal products in Europe, the Americas and the Asia Pacific region. Since its foundation in 1933, Vetoquinol has pursued a strategy combining innovation with geographical diversification. The Group's hybrid growth is driven by the reinforcement of its product portfolio coupled with acquisitions in high potential growth markets. Vetoquinol employed more than 2,500 people as of December 31st, 2022.

Yogi govt announces 50% subsidy on dairy farms under Nandini Krishak Samriddhi Yojana Prayagraj, Lucknow, Kanpur, Jhansi, Meerut, Agra, and Bareilly.

The scheme's benefits will be delivered in three stages. In the first phase, a subsidy of 25% of the project cost will be provided for unit construction. In the second phase, a 12.5% subsidy will be provided for the purchase of 25 milch cows, as well as their three-year insurance and transportation costs. In the third phase, the remaining 12.5% of



The Uttar Pradesh government, led by Chief Minister Yogi Adityanath, has launched the Nandini Krishak Samriddhi Yojana as part of the Nand Baba Mission to improve cattle breeding and milk production in the state.

The scheme aims to improve cow breeds in order to increase milk production and dairy farmers' income.

The scheme includes the milch cow breeds Sahiwal, Gir, Tharparkar, and Gangatiri. The Yogi government has estimated that establishing a unit of 25 milch cows under the scheme will cost Rs 62.5 lakh. As a result, the Yogi government will provide a 50% subsidy on total expenses, up to a maximum of Rs 31.25 lakh to the beneficiaries.

In the first phase of the scheme, the Yogi government will provide subsidies to those beneficiaries who establish 35 units of 25 milch cows, including the purchase of cows, conservation, and maintenance. This subsidy will be distributed in three stages.

Furthermore, in the beginning, this scheme will be implemented in the state's ten divisional headquarters, namely Ayodhya, Gorakhpur, Varanasi, the project cost will be subsidised. Beneficiaries may be chosen through an e-lottery system. To be eligible for the scheme's benefits, the beneficiary must have at least three years of cattle farming experience. Additionally, ear-tagging is required for the cattle. In addition, the beneficiary must own at least 0.5 acres of land on which to build the unit.

Naveen Patnaik Flags Off 181 Mobile Veterinary Vehicles to Boost Rural Animal Welfare

Odisha Chief Minister Naveen Patnaik has flagged off 181 mobile veterinary vehicles to provide livestock healthcare services in the state as part of the Mukhyamntri Bhramyaman Pranichikitsa Seva.

On the occasion, the Chief Minister stated that mobile veterinary units are being provided to livestock keepers and farmers in villages located far from veterinary institutions to provide veterinary services at their doorstep.

The state government is constantly working to improve livestock farmers' lives, increase their income, and put a smile on their faces. The Animal Resources Development sector, has been identified as the next level of growth for farmers, Women Self Help Groups, and entrepreneurs. Veterinary healthcare and advisory services are critical for managing animal health and rural people's livelihoods.

Previously, mobile veterinary units were operated using hired vehicles. In the first phase, the state government spent approximately Rs 30 crore and provided its own vehicles for use in 181 mobile veterinary units across all districts. Mobile Veterinary Units will provide farmers with veterinary healthcare and animal husbandry advisory services, including basic animal healthcare, complex surgery, vaccination, and diagnostic services in livestock healthcare, as well as farmer awareness camps.

The Chief Minister stated that the state government is dedicated to animal welfare. Through the Animal Helpline, these mobile veterinary units will provide emergency veterinary health care to stray and abandoned animals in need. In these mobile veterinary units, new technologies will be used to provide veterinary services. The vehicles' locations will be tracked using the Global Positioning System.



The use of such technology will increase transparency in the operation of units based on our government's '5 T' programme. Minister for Fisheries and Animal Resources Development Ranendra Pratap Swain stated that mobile veterinary units will be able to propel animal resource development in the state to new heights.

Indian Institute of Veterinary Sciences (IIVS) similar to AIIMS to be established

The Indian Institute of Veterinary Sciences aspires to be the AIIMS of animals, with 200-500 seats and advanced animal care departments. The institute prioritises education, research, and animal epidemic response.

The Centre is reportedly working on establishing an animal equivalent of the All India Institute of Medical Sciences (AIIMS). The government has prepared a draught and has requested significant suggestions from various institutions. This institute's goal is to treat all animal species.

According to reports, the Indian Institute of Veterinary Sciences will treat all animals with 200 to 500 seats. For surgery, ophthalmology, orthopaedics, anaesthesia, soft tissue culture, neuter surgery, oncology, and cardiology, the hospital will have cutting-edge native and exotic animal care departments.

In addition to animal care, this veterinary institute will prioritise education and research. This implies that veterinary doctors will study and conduct research here. Candidates will be accepted based on the outcomes of an entrance exam, such as the NEET. Preparations will be made to address the animal epidemic.

The Indian Institute of Veterinary Sciences was established to protect numerous animals from epidemics each year. Furthermore, research on various animal diseases can be conducted here, with the goal of discovering a cure.

It is worth noting that the Veterinary

Council of India sent this proposal to the All India Institute of Veterinary Sciences. The draught proposal will be presented to the Union Cabinet for official approval. Work on it will then begin, along with the total cost, funding, and other requirements.

Mother Dairy's new-age facility inaugurated in Noida

Dairy's diverse product range.

GADVASU holds feeding camp on dairy animals

The Guru Angad Dev Veterinary and Animal Sciences University (GDVASU) in Ludhiana organised a trace mineral feeding camp in Hamidi village. The initiative is part of the Farmer FIRST Project (FFP) sponsored by the Indian Council of Agricultural Research (ICAR).



Mother Dairy's new-age Booth design was inaugurated by Meenesh Shah, Chairman of NDDB, in Sector-79, Noida.

Mother Dairy, Delhi NCR's beloved milk and milk product major, has embarked on a journey to transform the consumer shopping experience across its booths in the Delhi NCR region and has introduced a contemporary structure developed in collaboration with the National Institute of Design -India's premier design institute.

Major General Sharad Kapur, YSM, SM, Director General, Resettlement, Department of Ex-Servicemen Welfare (Ministry of Defence), and Mr. Manish Bandlish, Managing Director, Mother Dairy, dedicated the newly designed booth.

The newly designed Booth, created in Mother Dairy's brand colours of blue and white, is all set to provide better visibility, identity, and an immersive experience to consumers in the Delhi NCR region, while offering Mother The project is being organised under the supervision and guidance of Dr PS Brar, Director of Extension Education and FFP Nodal Officer.

Dr. Parminder Singh, the project's Principal Investigator, spoke about the role of trace minerals in strengthening udder health and boosting immunity in dairy animals to reduce the risk of mastitis. Iron, manganese, copper, iodine, and zinc are examples of trace minerals.

He emphasised the importance of good udder health in ensuring clean milk production and overall productivity of the dairy animal while educating farmers on the importance of better animal husbandry practises such as cleanliness of the farmer, animals, and surroundings. Dr Singh interacted with the farmers and answered all of their questions about incorporating trace minerals into livestock feed.

Trace mineral packets were also distributed to the farmers who benefited from the event.

Fodder Production Training Program by ICAR-IGFRI for agriculture officers and veterinarians of Tamil Nadu appropriate disciplines through visits to experimental fields and lectures on the subject by distinguished scientists.

To provide technical knowledge and practical experience for different fodder production systems and mechanisation, the training programme covered all of the important aspects of fodder production, conservation, and utilisation for improved livestock production.



The ICAR-Indian Grassland and Fodder Research Institute, Jhansi, is implementing the National Initiatives on Accelerating Fodder Technology Adoption (NIAFTA), as part of which the institute has developed a fodder plan for the country's 28 states.

The Tamil Nadu government has launched a training programme for agricultural officers and veterinarians. In this regard, ICAR-IGFRI, Jhansi has organised a 'Training on Fodder Production, Conservation, and Utilisation' for 60 veterinarians and agricultural officers from Tamil Nadu, sponsored by the Directorate of Animal Husbandry and Veterinary Services, Government of Tamil Nadu, in three batches between 11-15 September, 18-22 September, and 09-13 October 2023.

The programme was inaugurated by Dr. Amaresh Chandra, Director of ICAR-IGFRI, Jhansi.

The training's goals were to expose participants to current techniques/methodologies in

Alltech Collaborates with National and Masaken Dairy Farms to Advance Sustainable Farming in the UAE

Alltech is collaborating on carbon footprint benchmarking and methanereducing technologies with National Dairy Farms (NDF) and Masaken Dairy Farms (MDF), two of the largest standalone dairy farms in the United Arab Emirates (UAE). Emirates Food Industries (EFI) owns both dairy companies and is looking to measure and reduce their carbon footprints. NDF and MDF are located in Al Ain and have a total herd of around 5,000 cows that produce around 30 million litres of milk per year, supplying some of the

region's largest dairy companies. EFI was founded in Abu Dhabi to support the Abu Dhabi government's agricultural road map and food security programme. In addition to the dairy farm business, National Feed and Flour Production and Marketing (NFFPM), a feed producer and distributor, is a key division of that organisation. NFFPM owns and runs two of the largest fully automated feed plants in the UAE. Alltech E-CO2 will provide the farms with access to a variety of carbon footprint benchmarking technologies, including a tool to evaluate the carbon footprint per kg of milk produced or emissions intensity. Dairies can also use Alltech nutritional technologies to reduce methane emissions and increase farm profitability by increasing feed efficiency and milk production, such as essential oil blends, which the company claims are scientifically proven to optimise feed intake and performance, including milk and meat production. According to Paul McVeigh, regional manager of Alltech Middle East, these blends complement the company's other products such as Yea-Sacc and Optigen.

The collaboration with the UAE farms will demonstrate what is possible in the Middle East region when companies work together towards a common goal. We are committed to providing them with the best nutritional technologies available to help them produce more milk while reducing their environmental impact, said McVeigh.

ICAR-NRC on Yak Launches 'Yukmadung Dairy' to Boost Yak Farming Profits

ICAR-NRC on yak is working in this area to prepare diverse products with and add value to yak milk, such as designer paneer, yak ghee, dahi, ripened and mozzarella cheese, churkham, and so on. The institute intended to open a milk parlour in its yak farm at Nyukmadung to produce value-added yak milk products, as well as to conduct



capacity-building programmes for tribal yak farmers, including training with hands-on-practices on value addition of yak milk and preparation of diversified yak milk products, in order to provide yak herders with more incentives from yak herds and make yak farming more profitable.

Accordingly, a milk parlour, named 'Yukmadung Dairy' has been set up at Nyukmadung yak farm to make yak milk more remunerative for the grazers, which was inaugurated in presence of ASRB member Dr. S. P. Kimothi, ICAR-NRCY director Dr. S. P. Kimothi, ICAR-NRCY director Dr. Mihir Sarkar, Guwahati's ICAR-NRC on Pig director Dr. V. K. Gupta and Nagaland's ICAR-NRC on Mithun director Dr. G. Patil besides yak farmers and dignitaries.

Dr. Kimothi presided over an interactive session between scientists and farmers, which was followed by input distribution to tribal farmers through the Schedule Tribe Component (STC). All mentioned the scope and prospects of yak milk, as well as the importance of value addition and diverse product preparation. According to an official release, they all advised yak herders to take advantage of the opportunity to receive yak training from ICAR-NRC and make their yak farming more profitable.

Yak is the lifeline of highland ethnic communities living in the Himalayan and Trans-Himalayan regions, but it is not conducive to any agrarian activities. It is vital to the livelihood of the highlanders, providing them with essentials such as milk, meat, fibre, hide, and dung, as well as serving as a mode of transportation.

Yak milk and milk products are essential components of the diet of these highland communities that live a healthy and productive life in an extreme hypoxic and harsh environment with no vitamin and mineral supplementation. The unique amino acids, fatty acids, high levels of vitamins and specific enzymes, as well as the beneficial microbes present in yak milk, have a positive impact on the health of high-altitude yak herders.

Yak milk is creamier, thicker, sweeter, and more fragrant than cow milk, and it contains more protein, fat, lactose, minerals, and total solids. It has a total solids content of 15.63-19.63%, 5.29-8.73% fat, 3.45-4.27% protein, and 0.64-0.82% ash. Yak milk is generally regarded as naturally concentrated milk with a higher nutrient density and high levels of omega 3 fatty acids, amino acids, and antioxidants; it also contains vitamins and minerals.

Although raw yak is insufficiently available for consumption due to the remote habitat of yak rearing, the majority of it is processed into various traditional products such as chhurpi (wet soft cheese), churkam (hard cheese), and Mar (butter), as well as a small portion of raw milk in the form of butter tea for their own consumption with a small portion for sale.

NDDB Signs MoU to Strengthen Ladakh Dairy Cooperative Federation

The milk will be processed and sold under the 'Oma' brand name. Ladakh Dairy Federation has been awarded a grant of Rs.40 lakh to help it get up and running.

Dr Meenesh Shah, chairman of the National Dairy Development Board (NDDB), said on Wednesday that the organisation is planning to establish an in Ladakh that will generate profitable returns for the region's milk producers.

Customers will also be able to purchase high-quality milk and milk products at reasonable prices. The milk will be processed and sold under the 'Oma' brand name. Ladakh Federation will



also supply fresh pasteurised milk to the Indian Army base in Ladakh, said Shah on Wednesday at the inauguration of the Ladakh Dairy Cooperative Federation's newly refurbished dairy plant in Leh.

The plant was inaugurated by Dr. DB Mishra, Lieutenant Governor of the Union Territory of Ladakh, and was refurbished by NDDB, which has its headquarters in Gujarat's Anand.

Ladakh Dairy Federation has been awarded a grant of Rs.40 lakh to help it get up and running. The dairy plant has been renovated by IDMC Ltd, an NDDB wholly owned subsidiary. Until now, the region's procurement and distribution were conducted in an unorganised manner.

According to an NDDB media release, the NDDB has signed a five-year memorandum of understanding (MoU) with the Union Territory of Ladakh and the Ladakh Autonomous Hill Development Council (LAHDC) to provide managerial and technical support to the Ladakh Dairy Cooperative Federation. According to the agreement, the focus of the MoU was to increase market access while also ensuring the Federation's overall sustainability and economic viability.

According to the release, the NDDBmanaged Ladakh Dairy Federation will work to establish a transparent and remunerative milk procurement system for dairy farmers.

John Deere and DeLaval Unveil Innovative Milk Sustainability Centre for Dairy Farmers

John Deere and DeLaval have collaborated to create the Milk Sustainability Centre (MSC), a digital ecosystem designed to assist dairy farmers in improving the efficiency and sustainability of their operations. The ecosystem will be open to partners, with the goal of providing farmers with the data they need for a comprehensive view of their dairy operations.

Dairy farmers will use the Milk Sustainability Centre to track nitrogen, phosphorous, potassium, and carbon dioxide equivalent (CO2e) use efficiency (NUE) for their entire farm, specific fields, or herd. The MSC will also provide data to dairy farmers so that they can compare their performance to that of other dairy operations and identify key areas for improvement. MSC's goal is to serve dairy farmers regardless of farm machinery or herd management software.

Data from DeLaval Plus and John Deere Operations Centre will be automatically pulled into the Milk Sustainability Centre after farmer authorization. Manual data entry will be reduced, resulting in higher data quality and, ultimately, assisting an entire farm system - fields, cows, employees, advisors, machines, and other assets - in working more efficiently together.

MSC is built and powered by Dairy Data Warehouse BV (DDW), a Dutchbased company that has been providing data solutions for sustainable dairy for the last ten years. Dairy farmers, consultants, dealers, and other partners can be invited to access their data in MSC as well.

The announcement of the John Deere-DeLaval partnership will be a key focus in the John Deere booth at the AGRITECHNICA 2023 trade show, which will be held November 12-18 in Hanover, Germany.

The first version of MSC will be available for free in North America and selected European Union countries in Summer 2024. A premium version with expanded capabilities will be available later.

Smaxtec's AI-Powered Truadvice Takes Mastitis Detection to the Next Level

Smaxtec, a software company based

in the United States, is introducing artificial intelligence capabilities for managing the health of dairy cows. Truadvice, the company's new system, provides farmers with greater accuracy in detecting and preventing mastitis, a common and costly disease in dairy herds. Smaxtec is working on bolus technology and is integrating Truadvice into its existing system.

Truadvice, powered by AI, uses extensive research data from experts, veterinarians, and institutions to provide dairy farmers with a precise mastitis probability measurement.

Cow disease can be difficult for farmers. Despite the fact that milk and dairy from animals with subclinical mastitis infections are marketable, mastitis in dairy cows, which is typically caused by bacteria, raises customer concerns about milk quality.

Severe clinical mastitis can even result in complete loss of milk production, sometimes even resulting in dairy cow death. The disease, however, can be detected at an early stage before symptoms appear. As a result, timely intervention is critical to minimising the economic impact on dairy farms.

Truadvice provides farmers with the tools they need to take proactive disease control measures. Because of the early detection, supportive therapies such as anti-inflammatories and drenches can be used to aid in the recovery process and reduce the need for antibiotics.

Truadvice not only helps experienced farmers but also less-experienced staff provide optimal care for dairy cows, resulting in faster recovery and improved animal welfare.

With previous projects such as "level zero," which detects mastitis through precise inner body temperature measurements, Smaxtec has been working on innovation in cow health monitoring.

The industry is currently working on an AI-driven solution that streamlines data management and empowers dairy farmers to proactively manage the health of their herd.

Editorial Calendar 2023

Dah Bahiran Manatha	Dublishing Menths	Dublishing Magatha	Dala Balais an Manada
Publishing Month:	Publishing Month: February	Publishing Month: March	Publishing Month: April
January Acticle Decelling a	Article Deadline :	Article Deadline :	Article Deadline :
Article Deadline :	28 th , Jan. 2023	26 th , Feb. 2023	28 th , March 2023
28 th , Dec. 2022	Advertising Deadline :	Advertising Deadline :	Advertising Deadline :
Advertising Deadline :	30 th , Jan. 2023	28th, Feb. 2023 Focus :	30 th , March 2023
30 th , Dec. 2023	Focus :	Herd / Breed Management	Focus :
Focus :	Nutritional Deficiency	- Fertility, Breeding &	Disease Prevention/
Climate Management	Effects	Reproduction	Risk Assessment
Publishing Month:	Publishing Month:	Publishing Month:	Publishing Month:
Мау	June	July	August
Article Deadline : 28 th , April 2023	Article Deadline :	Article Deadline : 28 th , June 2023	Article Deadline :
Advertising Deadline :	28 th , May 2023	Advertising Deadline :	28 th , July 2023
30 th , April 2023	Advertising Deadline : 30th, May 2023	30 th , June 2023	Advertising Deadline :
Focus :	Focus :	Focus :	30 th , July 2023
Small Ruminants Management (Sheep,	Calf & Heifer	Milk Production Management/ Milking	Focus :
Goat etc)	Management	Practices	Feed & Fodder
Publishing Month:	Publishing Month:	Publishing Month:	Publishing Month:
September	October	November	December
Article Deadline :	Article Deadline :	Article Deadline :	Article Deadline :
28 th , August 2023	28 th , September 2023	28 th , October 2023	28 th , November 2023
Advertising Deadline : 30th, August 2023	Advertising Deadline :	Advertising Deadline :	Advertising Deadline :
Focus :	30 th , September 2023	30th, October 2023 Focus :	30 th , November 2023
Vaccination Protocols/	Focus :	Potential of Dairy	Focus :
Cattle Herd Immunization	Dairy By-products	Farming	Calf Management
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